F

Fair Trade in Food and Agricultural Products

Neal H. Hooker
John Glenn School of Public Affairs, The Ohio State University, Columbus, OH, USA

Synonyms

Development; Food labels; International trade

Introduction

The value, variety, and source of fair trade food and agricultural products have grown significantly over the past few years. In 2010, global retail sales topped $5.8 billion, a 5-year compound annual growth rate of nearly 30 %. The USA accounted for more than $21 million in 2011, yet remains relatively underdeveloped compared to key European nations (particularly the UK and Germany). The most commonly sold Fair Trade products at the consumer level are coffee, bananas, and chocolate (or rather cocoa as the primary Fair Trade ingredient), followed by tea, fresh fruit, and cane sugar. Flowers and plants, cotton, wine, and honey have also seen sales growth over recent years. The top source nations in Latin America are Peru, Dominican Republic, Columbia, Honduras, and Mexico, and in Africa Kenya and Ethiopia generate significant sales. This entry introduces the reader to the scope of food Fair Trade and its documented impact. So informed the reader is encouraged to ask ethical questions about the merits of Fair Trade.

Scope: When, What, and Who?

Producers of raw agricultural imports from the developing "south" are challenged by geography, market structure, and size of operations. They are distant from their mostly developed northern consumers, their products pass through multiple stages of supply chains some with processing and value adding but not all, and generally these producers are small scale though often also horizontally aligned in cooperatives or marketing organizations. Fair Trade takes these three disadvantages and switches them around into advantages; place, exchange, and smallness are celebrated by traceability systems built around the notion of a fair price for farmers.

Under third-party international food quality certification systems that promote fair over free trade, agricultural producers generally receive higher compensation for their goods than if they were to sell them in open markets. Supply chains tend to be shorter (i.e., they involve few exchanges and fewer intermediaries), and consumers who purchase Fair Trade products typically pay more than for conventional substitutes. To be eligible to receive these increased prices, or more correctly assured minimum farm gate prices, agricultural producers in developing nations must adhere to Fair Trade sourcing

P.B. Thompson, D.M. Kaplan (eds.), *Encyclopedia of Food and Agricultural Ethics*,
DOI 10.1007/978-94-007-0929-4,

standards managed by private third-party certification organizations. The elements of these production and processing criteria and nature of audits operated under these standards vary, based on the type of production, region, and third-party system/certification organization.

The Fairtrade Labelling Organizations International (FLO-I) serves as an umbrella organization for many certifiers, setting minimum standards for members and then owning and managing the marketing of the Fairtrade™ claim which can be used on certified food products at the consumer level. Alternative Fair Trade certification systems exist, some adding on elements other than a fair price such as organic and some choosing other sourcing, supply chain, or processing standards such as requiring cooperative membership, social and environmental criteria, or minimum content levels for multi-ingredient foods. Certain producers may choose to comply with one Fair Trade standard, while others need to adopt several systems (not always harmonized in nature) if they are active in multiple supply chains. Producers can still usually sell products into the conventional channels if prices or other market conditions are preferable. Thus Fair Trade certification acts as a price risk management tool.

Fair Trade USA is the leading third-party certifier in North America and was a member of FLO-I until 2012. Fair Trade USA chose to adopt standards that differ to FLO-I in two key dimensions: the labeling and marketing of multi-ingredient products and inclusion of eligibility into the program for producers not in a cooperative. This strategy raises interesting ethical questions, including is it "better" to provide market opportunities to a larger number of producers, even if the standard is "lower"? and do consumers distinguish between the various levels of Fair Trade claims? Other key third-party certification systems, each based in Europe and including various environmental criteria, are Ecocert and IMO.

Does Fair Trade Make a Difference?

Several case studies, many concentrating on coffee production, have explored the benefits of Fair Trade on communities and individuals. The most comprehensive review of a Fair Trade system is presented by Nelson and Pound (2009) who assess the impacts of the FLO-I/Fairtrade™ standard. Their literature review of some 33 empirical published case studies suggests producers certified under this standard do receive higher returns and more stable incomes compared to those selling into conventional markets. The authors report strong evidence of social benefits in producing communities too. A lack of quantitative evidence remains about the role of other Fair Trade standards, environmental/sustainability metrics, the impact on hired labor and differences in more diverse production systems (crops and regions).

As with many Corporate Social Responsibility (CSR) efforts by food and retail firms it is important to separate the "promise" from the "practice" and question if a guaranteed minimum price at one point in a supply chain actually changes anything? Indeed, it is fair to ask what behavior is the particular Fair Trade certification system trying to change – consumers, firms, and/or stakeholders? The management of differences between the various Fair Trade standards has not been elevated to a food policy discussion anywhere globally. Thus it is unlikely that significant market distortions or externalities exist (Arnould et al. 2009). Labeling claims of Fair Trade are generally governed like any other – that is they must be "true" but how impactful is not addressed by any government agency.

Ethical Questions

Regional consumer differences in interest, understanding, and willingness to pay a premium price for Fair Trade food appear to exist. This said, it should not be surprising that, like other CSR issues (e.g., organic food), various distinct consumer market segments exist. There is not just one type of Fair Trade customers (Brown 2013). Certain European and North American consumers value Fair Trade products but do not always understand the nuances of the various standards and claims. This leads to further questions surrounding the role of education: who

should inform consumers and other stakeholders about these certification systems?

An important aspect of Fair Trade certification systems is the guaranteed minimum (farm gate) price. How far above a "free" trade (international market) price should this premium lie? How are production, processing, and distribution differences (such as environmental protection, social investments, and market development) "valued" within this pricing model? As Fair Trade certification systems develop to include a greater variety of (multi-ingredient) foods and more hired labor production systems over individual farmers or cooperatives, how does the notion of a living or "fair" wage differ to that of a fair price? Costs of living differ by country, and then within countries living costs differ regionally. How can these nuances be identified and rewarded through a Fair Trade system?

Some critics of Fair Trade suggest more harm than good results from certain systems particularly if money is merely redistributed from other planned charitable giving at an institutional, government or consumer level. The proportion of any consumer price premium returned to the poorest farmers is argued to be too small to be impactful, particularly when compared to the costs of compliance with Fair Trade standards (Griffiths 2012). Questionable political motives may also underlie the targeted development activity embedded within individual Fair Trade certification systems.

Clearly, there are several inherent ethical issues captured within the increasing use and diversity of Fair Trade claims. Caution is recommended in the interpretation of these standards. Transparency should be enhanced else consumers may question the merits of such sourcing certifications and move their dollars or euros on to other causes.

Summary

As the value, variety, and source of food Fair Trade products increase, so a more complex set of ethical questions become more prevalent and pressing. Third-party certification standards offer a range of criteria, use different audit procedures, and have idiosyncratic approaches to market development. These differences might gain the attention of food policy makers in the future particularly if market share, consumer confusion or political pressure from key stakeholder groups reaches a critical point.

Cross-References

- ▶ Corporate Social Responsibility and Food
- ▶ Food Labeling
- ▶ International Food Quality Standards
- ▶ Private Food Governance

References

Arnould, E. J., Plastina, A., & Ball, D. (2009). Does fair trade deliver on its core value proposition? Effects on income, educational attainment, and health in three countries. *Journal of Public Policy & Marketing, 28*(2), 186–201.

Brown, K. R. (2013). *Buying into fair trade: Culture, morality and consumption*. New York: New York University Press.

Griffiths, P. (2012). Ethical objections to fairtrade. *Journal of Business Ethics, 105*, 357–373.

Nelson, V., & Pound, B. (2009). *The last ten years: A comprehensive review of the literature on the impact of Fairtrade* (48 pp). UK: Natural Resources Institute, University of Greenwich. September. Available online http://www.fairtrade.org.uk/resources/natural_resources_institute.aspx

Farm Management

Janna Berger
SARE, University of Maryland, College Park, MD, USA

Synonyms

Agricultural systems; Farmers' choices

Introduction

Interest in agricultural systems has surged in recent years for the eating public. Bestsellers

like The Omnivore's Dilemma and Food Inc. are household names, and most Americans have considered the meaning of food terms like "organic," "conventional," and "GMOs."

Behind the neatly packaged terms is a complex web of management choices about such details as labor practices, soil fertility, and pest invasion. The set of choices available to a modern farm manager is heavily shaped by government policies and corporate influence, while the specific choices they make are based on his/her resources, skills, climate, land base, economic situation, and social context.

This entry endeavors to paint, with a very broad brush, a picture of the kinds of decisions farm managers face and the larger implications of those choices.

Decisions Faced by Farmers

Managers create systems to control the following primary factors that affect farm success.

Farm Labor: Who Will Do the Farm Work and How?

In the simplest subsistence farming scenario, the caloric yield of the food produced by farm laborers must at least be equal to the caloric output they and their nonworking family members use to live. Specialized economies require that the productivity of farm laborers exceeds the needs of their families such that there is enough leftover yield to feed additional individuals who do not produce food.

A society in which there are some well-fed people who do not work on the farm requires that farm managers maximize the margin between the value put into each hour of farm labor and the corresponding yield per hour worked.

Chattel slavery on American plantations is one extreme example in which farm managers minimized the value spent on each hour of farm labor in order to maintain that margin between expenditures on labor and yield per hours worked. Today, many farm managers pay low wages and avoid legally mandated worker protections by employing undocumented workers with the same goal in mind.

These examples have clear ethical consequences that must be considered by farm managers, consumers, and policy makers alike. Cheap farm labor is one of two major factors that keep food prices low, allowing for the existence of well-fed members of society who do not engage in the work that feeds them (Mazoyer and Roudart 2006).

The second major factor in maintaining this distance between the value put into each hour of farm labor and the corresponding yield per hour worked is the maximization of yield, a factor that informs the decisions that face farm managers in the categories of soil fertility, pests, climate control, and what to grow as described below.

Fertility: How Will Crops Receive the Nutrients They Need to Grow?

Human beings cannot manufacture their own sustenance but rather must rely on the ability of plants to convert carbon dioxide and water into carbohydrates with the use of light energy.

The photosynthetic process is not only the basis of our diets, whether we eat plants or the meat of animals that eat plants. It also creates the biomass (organic matter) necessary to maintain a soil's capacity to produce food. When farmers harvest crops or graze livestock, they remove both biomass and minerals from the land in order to feed people. They must then make a choice of how to return biomass and minerals to the soil in order to produce successive crops (Mazoyer and Roudart 2006).

While modern farmers tend to choose fertilizers based on available resources, climate, land type, and experience, those choices have larger implications for the food systems and ecosystems they are a part of. The range of strategies for fertilizing soils that is available in modern agriculture includes the following:

- *Manure and Compost* – The nutritional profile of a particular animal waste sample will reflect the food source of that animal. Most livestock manures used in agricultural production contain both macro and micro mineral nutrients as well as diverse organic molecules. Compost is

fully decomposed manure or other biomass and is a very stable form of fertility that is easily tied up in soils (Coleman 1989).

- *Green Manure* – Planting green manures (also called cover crops) adds biomass to the soil and, in the case of legume plantings, can fix nitrogen from the atmosphere. Farmers plant cover crops in between cash crops either temporally or spatially (Coleman 1989).
- *Fallowing* – The "resting" of land between crop productions serves many of the same functions that cover crops do in that the regrowth of vegetation on fallowed land replenishes organic matter in the soil. Slash and burn techniques (Mazoyer and Roudart 2006) as well as Shmita fallowing (Deutscher and Hanau 2012) fall under this category.
- *Manufactured Fertilizers* – The Haber-Bosch process developed after World War II pulls nitrogen out of the atmosphere and concentrates it into shippable, spreadable pellets under high heat and pressure. Other mineral nutrients are processed from ores into soluble forms. These procedures are fossil fuel intensive and rely on industrial factories for their production (Mazoyer and Roudart 2006).
- *Rocks, Bones, and Shells* – Many essential plant minerals can be depleted from agricultural soils over time and may be sourced from elsewhere and reintroduced, either from powdered ores or animal processing by-products (Mazoyer and Roudart 2006).

Solubility of Fertilizers

When fertilizers are lost from a farm ecosystem through leaching, the long-term viability of farm soils is reduced and broad implications are triggered off the farm. Nitrogen and phosphorus pollution can cause eutrophication in surface waters making them inhospitable to many life forms. This is strikingly visible in many lakes in agricultural areas and at the mouth of the Mississippi River (Mazoyer and Roudart 2006).

Green manuring is the most complicated fertility system to manage, yet the organic matter it produces is readily tied up in the soil food web which increases the long-term productivity of soil and reduces the possibility for pollution. Ammonia fertilizers, on the other hand, are the most soluble and thus provide a quick food source for plants but no long-term fertility to soils while contributing significantly to nitrate pollution. Manure, if applied at the wrong time or excessively, can also run off as nitrate pollution but is more easily tied up in the soil food web than ammonia fertilizers (Coleman 1989).

Economics of Choosing a Fertilizer

There is also the factor of expense and economic relationships to consider. Manure is a by-product of livestock production that is free on farms that raise animals. Compost is also easily produced on farms from available materials. Both manuring and composting reappropriate materials that are already in existence for fertilizers. Green manuring requires the initial purchase or growing of cover crop seed. Manufactured fertilizers are by far the most expensive way to renew fertility on the farm and require the most reliance on annual purchase from the large corporations that produce them (Mazoyer and Roudart 2006).

Fossil Fuel and Carbon Emission Considerations in Fertilizer Choices

The production of manufactured ammonia fertilizer is by far the largest contributor to agricultural fossil fuel use. Transportation of fertilizers across long distances is also a contributor.

Competition: How to Favor Crops over Other Species of Pests, Weeds, and Disease?

Farmers manipulate ecosystems to tip the competitive balance in favor of the plants and animals they hope to harvest. Pests, weeds, and disease are all organisms that attempt to grow in a farm ecosystem and must be minimized by farm managers using the following available strategies:

- *Biological Diversity* – The competition between organisms in an ecosystem can keep any individual pest or disease. Farmers try to increase biological diversity and specifically try to increase the number of predator species who feed on pests by:
  - Planting flowers or hedge rows to create habitat for beneficial insects like parasitic wasps or lady bugs

  - Releasing large numbers of predator species
  - Aerating soil and adding organic matter to create habitat for beneficial microbes
  - Applying foliar sprays that are rich in diverse microbes (Coleman 1989)
- *Climate Control* – Plants and animals are more likely to thrive in the face of competition when their needs for appropriate temperatures and water quantities are met. Farmers use irrigation and grow varieties that are well adapted to their climate to give crops an advantage (Coleman 1989).
- *Chemicals* – Insecticides, herbicides, and fungicides are all methods for coping with unwanted competition. While some chemicals target specific problematic organisms, others, called *broad spectrum* products, affect a wider range of organisms. These may be extracted from plants and microbes or designed from scratch in laboratories (Coleman 1989).
- *Mechanical Means* – Hand removal of pests, hand weeding, hoeing, tractor cultivation, and physical barriers are all examples of mechanical solutions to unwanted organisms (Coleman 1989).
- *Plant and Animal Breeding* – Throughout agricultural history, farmers have selected for varieties that resist local competition. The three common methods for breeding today are:
  - Classical Selection – The best plants from each generation are bred together leading to an improved population. Novel traits may be added from other populations or genetic mutation.
  - Hybridization – Unlike in classical selection, the breeder develops two crop lines and then breeds them to each other before use in normal crop production. This requires greater specialization in breeding and seed distribution infrastructure and generally does not allow for farmers to save their own seeds effectively.
  - Genetic Modification – While other breeding techniques are limited to closely related species, genetic modification allows genes from distantly related organisms, like plants and bacteria, to be combined in a crop variety. The process can be done in a number of ways, all of which must be done off the farm and are dependent on modern scientific expertise (Capon 1990).

Many of the above strategies conflict with the effectiveness of the others. For example, a farmer using broad spectrum insecticides will reduce biological diversity on his/her farm and may need to increase their use of chemicals each year. Similarly, a farmer who rids his/her fields of weeds through mechanical tillage may find that they continually introduce weed seeds from lower soil horizons while making a perfect seed bed for incoming weeds to germinate, requiring continued tillage.

Not only must farmers balance these potential conflicts when designing systems, they are often asked to consider other implications of their choices. Many chemicals are toxic to workers, compromising their health and requiring attention from the health-care system, and to wild species such as pollinators and birds that have wider implications for other farms and wild ecosystems. The use of fossil fuel powered machines contributes to greenhouse gases. Tillage releases carbon from soil while also freeing up nitrogen and phosphorus rich topsoil to flow into surface waters and cause pollution. Research on the ecosystem effects of GMOs interbreeding with other species is still incomplete.

Climate: How Can Water Availability and Weather Be Influenced to Favor Crops?

Farmers manipulate the water and microclimates on their farm as much as possible to create ideal conditions in which their plants and animals can thrive. Farmers irrigate from wells or water bodies such as rivers and ponds. They extend the length of their seasons using technologies such as greenhouses, barns, watering during late or early frosts, choosing hardy breeds, and mulching.

Crop or Animal Selection: What Should Be Raised on the Farm?

The landscapes of the world are shaped by the decisions farmers make around how to manage

their land. The following factors may affect a farmer's decision of what to raise:

- Climate – As discussed above, farm success is largely dependent on how well adapted a crop or animal is to a particular climate. Farmers in the tropics are likely to raise a very different set of plants and animals than those in desert or cold temperate regions due to variation in temperature and rain fall. Certain crops and animals, like cows and corn, are more versatile than others and are thus present in a wider range of climates (Soloman 2005).
- Slope – Flat lands are much better suited to annual production of grains and vegetables than steep lands, which are better suited to grazing of perennial grasses or growing of perennial crops, due to risk of erosion (Soloman 2005).
- Soil Type – Soil texture (sand, silt, or clay), organic matter content, and nutrient profile are all factors that affect the decision of what to grow (Magdoff and Van Es 2009).
- Rotation Opportunities – The range of crops and animals raised on a given farm may be influenced by the ways in which the landscape and markets are conducive to crop rotation (Mohler and Johnson 2009).
- Available Resources – Capital, equipment, irrigation, fertilizers, labor, and seed are all examples of resources whose availability or lack of availability will affect a farmer's decision of what to raise (Byczynski 2006).
- Markets – If prices of a particular crop are high, farmers may be particularly motivated to grow that crop. Similarly, if the prices of inputs necessary for a particular crop are low, that may also affect a farmer's decision (Byczynski 2006). Agricultural prices are largely related to government policy, subsidies, international trade rules, commodity futures markets, demand set by the food manufacturing industry, and fossil fuel prices (NSAC 2008).
- Transportation – Fossil fuel prices and shipping availability impact whether a farmer will grow large quantities of a commodity or specialty crop that will not be used locally (NSAC 2008).
- Experience, Education, and Skills – A farmer can only choose a farming system that they have learned. Culture, government extension efforts, and nonprofit education initiatives all affect the sea of choices a farmer has to decide from.
- Pest, Disease, and Weed Pressure – Competitor species may limit the range of crops grown on a particular farm.
- Values – A farmer's ethical or religious beliefs may affect their decision of what to grow when deciding between plant or animal agriculture, diverse systems or monocultures, or fossil fuel-intensive systems or low input systems.

Off-Farm Dynamics That Affect Farm Decisions

Government Policies

The likelihood of a farmer to make any particular decision is affected by government policies in ways demonstrated by the following examples:

Access to cheap oil is maintained by government support via trade agreements, tax policy, and regulation. Systems that rely on manufactured fertilizers, long-distance food transport, diesel tractors, and heated greenhouses are only viable in a world where oil is inexpensive.

Commodity monocultures are a frequently chosen farm system in the USA, largely due to the subsidies offered by the federal government to corn, soy, and cotton farmers who grow wide acreage.

Public research and extension education has a vast impact on which farming systems are most developed and widely known to farmers.

In the USA, the Farm Bill largely shapes the management decisions farmers end up making. This large piece of legislation affects commodity prices through subsidies and government purchases for food aid, crop insurance availability, conservation incentives, farm credit availability, rural development, research, agroforestry, biofuel use, organic agriculture, meat processing, and access to land and education for beginning farmers (NSAC 2008).

Corporate Influence

Most American farmers receive a lot of information from large corporations like Monsanto, ConAgra, and Pioneer about farming systems that rely on the products those companies either sell (like fertilizers, GMO seeds, or chemical sprays) or want to buy (like cheap corn to make processed food).

Agribusiness affects farm management choices through its heavy lobbying efforts over the Farm Bill, patenting, control over research dollars, and marketing campaigns (NSAC 2008).

Culture

Farmers' choices are informed by cultural factors including generational wisdom passed down over time, expectations from community members, values and religious beliefs, and history of land use. There are vast difference between the farm management decisions made on an Amish farm, where tradition and low use of technology are highly emphasized, and those made on a large industrial monoculture farm, where high yields and expensive inputs are preferred.

Targeted Versus Systemic Approaches to Farm Decisions

Targeted Approach

Modern industrial agricultural systems tend to target individual biological problems with a great degree of effectiveness. Examples include the following:

- Chemical insecticide sprays that solve the problem of pest damage
- Monocultures that solve the problem of mechanical inefficiency in polycultures
- Antibiotics that solve the problem of livestock illness
- Tillage that solves the problem of opening up new ground for crop production
- Glyphosate resistance in GMO corn that solves the problem of weed management

In general, these targeted approaches allow for short-term high yields while creating new problems that compromise the potential longevity of the farming systems in which they are used and impacting the ecosystems and societies they are part of. This dynamic can be seen with the above examples in the following ways:

Chemical insecticide sprays may reduce biodiversity in the farm ecosystem eliminating the checks and balances that pest predators would otherwise provide and requiring an increase in spray schedule and quantities. They may also harm pollinators and wildlife that provide other ecosystem services in the area.

Monocultures tend to reduce biodiversity and thus require management from farmers that might otherwise be provided by ecosystem services in a polyculture.

Antibiotics can cause the microbes they target to evolve resistance, making their long-term use ineffective. They can also have negative effects on the humans that consume them or to wildlife who encounter them through ground water.

Tillage can cause widespread erosion such as in the case of the American dust bowl in the 1920s when deep-rooted grasses were tilled up, exposing fresh top soil to massively destructive winds and causing dust storms that devastated the region and lead to widespread lung disease.

Glyphosate resistance in GMO corn has allowed farmers to spray high dosages of glyphosate (an herbicide) and, in turn, enabled weeds to evolve resistance to the chemical.

Many of the long-term problems with targeted approaches to farm management stem from the fact that they do not work with the nature of evolution which demonstrates that species succeed when they find a niche in which they are not outcompeted by other species *and* benefit from relationships with other species.

Systemic Approaches

Farm managers who choose a more systemic approach to decision making take into account the interplay of different species and parts of the food system. Examples of management choices that take a systemic approach include the cultivation of crop diversity, integration of plants and animals, reduced tillage, cultivation of

wild habitat, cover cropping, and crop rotation (Coleman 1989). These approaches often result in lower annual yields as well, a need for higher labor input per caloric output, and reduced efficiencies compared to that achieved by larger-scale agriculture.

Gender Dynamics in Farm Management

Gender dynamics affect farm management decisions and the involvement of different farmers in those decisions in many ways. Below is a brief introduction to a few of the myriad ways in which this can happen.

Child Care Responsibilities – These have often traditionally fallen to women, limiting their ability to be physically present or fully engaged in farm decisions in some cases and/or shaping their opinions of how the farm should run in some cases. Pregnancy and breastfeeding can limit a woman's physical capacity for farm work for periods of time.

Training and Tools – American women often find it difficult to access training in traditionally male-dominated areas such as carpentry, mechanics, and heavy equipment operation. The tendency in American culture is for girls to have less exposure to tools than boys – sometime setting them up for a lifetime of low-confidence and lesser skills in those areas. Men are sometimes shut out of traditionally female aspects of farm life including family management and customer interface.

Gender Binaries in Farm Management – The cultural separation of women's work and men's work persists on many farms. In some cases, this narrows farmer's capacity for nuanced gender expression.

Discrimination – Women long experienced discrimination in receiving farm credit through government programs (Zeuli and King 1998).

Summary

The primary factors that farm managers control to enhance the success of their farms are labor; fertility; competition from pests, weeds, and disease; climate; and end products. They do so through some combination of a targeted and systemic approach. Government policy, corporate influence, and culture are larger societal forces that affect the specific decisions made by farm managers. Child care, training, gender binaries, and discrimination are all aspects of the gender dynamics influencing farm management decisions.

Cross-References

- Agricultural Ethics
- Agricultural Science and Ethics
- Agriculture and Ethical Change
- Agriculture and Finance
- Biodiversity
- Farms: Small Versus Large
- Sustainability of Food Production and Consumption

References

Byczynski, L. (2006). *Market farming success*. Lawrence: Fairplain Publications.

Capon, B. (1990). *Botany for gardeners: An introduction and guide*. Portland: Timber Press.

Coleman, E. (1989). *The new organic grower*. White River Junction: Chelsea Green Publishing.

Deutscher, Y., & Hanau, A. (2012). *Shmita: A supplement to food for thought*. http://www.hazon.org/wp-content/uploads/2012/12/Shmita-Booklet.pdf

Magdoff, F., & Van Es, H. (2009). *Building soils for better crops*. Waldorf: SARE Outreach Publications.

Mazoyer, M., & Roudart, L. (2006). *A history of world agriculture: From the neolithic age to the current crisis*. New York: Monthly Review Press.

Mohler, C. L., & Johnson, S. E. (2009). *Crop rotation on organic farms: A planning manual*. Ithaca: Natural Resource, Agriculture, and Engineering Service.

National Sustainable Agriculture Coalition. (2008). *Grassroots guide to the farm bill*. http://sustainable-agriculture.net/wp-content/uploads/2008/11/sac-farm-bill-guide.pdf

Soloman, S. (2005). *Gardening when it counts: Growing food in hard times*. Gabriola Island: New Society Publishers.

Zeuli, K., & King, R. (1998). Gender differences in farm management. http://aepp.oxfordjournals.org/content/20/2/513.full.pdf+html

Farmer Types and Motivation

Ika Darnhofer and Peter Walder
Institute of Agricultural and Forestry Economics, Department of Economic and Social Sciences, BOKU – University of Natural Resources and Life Sciences, Vienna, Austria

Synonyms

Economic versus noneconomic motives; Farmer attitudes/preferences/goals/reasons/values; Farmer decision making, decision criteria, strategy, rationale; Farmer heterogeneity/diversity; Farmer types/groups/categories; Management styles; Mental framework; Normative assumptions; Perception of constraints and opportunities; Perspectives on agricultural stewardship; Styles of farming; Typology

Introduction

Building on the diversity of agricultural practices and the observation that even under similar conditions, not all farmers make similar choices, farmer types are often used to distinguish between groups (or types) of farmers. A farmer type is usually described through the interrelationships between attributes, e.g., farmers' socioeconomic characteristics, their values, the characteristics of their enterprises, and their biophysical assets. Farmer types are thus a means to make sense of the complex relationships between multiple factors that can influence farmer behavior.

This entry illustrates how typologies have been used in a range of studies, e.g., on how farmer types differ in their motivation to adopt technologies or to implement a voluntary policy measure. But first the notion of typologies is presented and some limitations pointed out.

Of Typologies. . .

Typologies are well-established analytic tools in the social sciences. They are used to form concepts, to explore dimensions of these concepts, or to organize explanatory claims. While they can be used to describe diversity, the aim of building typologies is usually to explain a phenomenon, e.g., nonadoption of a technology that seemed promising. They are also used to customize recommendations, e.g., how a policy measure should be designed to increase the likelihood that it will be adopted by the target farmer group.

Every typology is the result of a **grouping process**: a population of farmers is divided into types which are distinct from each other regarding the issue under consideration. The main requirement is to form types so that the farmers within a type are as similar as possible and the differences between the types are as strong as possible. A farmer type is thus a constructed subgroup that is described by a particular combination of the value or expression of the attributes. The attributes used to group farmers are usually based on the researcher's theoretical understanding of the issue of interest (Kluge 2000). These attributes should be linked not only by empirical correlation but by meaningful relationships. The farmer type is then described by the "typical" combination of attributes, e.g., practices and attitudes. Usually, each farmer type is labeled using terms that evoke relevant concepts, e.g., "productivist" and "lifestyler."

A farmer typology is often based on survey **data** which may include quantitative, ordinal, or nominal data, e.g., farm size and farmer characteristics such as gender, age, education, and attitudes. This approach allows the identification of farmer types using statistical methods, such as multivariate analysis and clustering (e.g., Mann and Gairing 2012). However, farmer types may also be built using qualitative data, e.g., from interviews focusing on the farmer's perception and declared strategy (e.g., Fairweather and Keating 1994). Whereas many typologies are constructed by the researcher, there are also participatory approaches to identifying farmer types, often in the form of an iterative process where potential types are built using the multivariate analysis and then refined in discussion with farmers or extension agents (e.g. Girard 2006).

In the latter approach, the goal is not only to capture farm diversity but also to enhance mutual understanding and stimulate collective learning.

. . .And Their Limitations

Typologies can be useful to establish informative connections between attributes and highlighting how the values of the attributes are similar or different between types. As such they allow identifying differences and pointing out conceptual structures. However, some words of caution are in order. First, as usual, care needs to be taken to clarify to what extent the **correlations** on which a typology is built are linked to causation of the outcome. In other words, to achieve a suitable interpretation, it must be ascertained that the empirical regularities build on meaningful relationships.

Also, identifying and describing a "handful" of farmer types (typically three to five) tend to emphasize differences between types and to imply homogeneity within a type. However, while differentiating between farmer types has clear **heuristic value**, in practice each farmer is in a unique situation. As such it is likely that a number of farmers will display characteristics of several types, making it a challenge to assign him/her to one type. Empirically the problem is solved by either assigning an individual case to the farmer type of which he/she displays most characteristics or creating a separate farmer type for all those cases that cannot unequivocally be classified to any of the farmer types. However, once the empirical problem has been solved and the types look neat, it is easy to downplay the fitting process and highlight the differences between the types. Two forms of reification can thus be distinguished: on the one hand, it should not be (implicitly or explicitly) suggested that the types defined in the study describe types of farmers as they exist in the world. On the other hand, the label assigned to each farmer type should not become a free-standing "explanation," leading to simplification and stereotyping. In other words, it is important to keep in mind that while typologies are useful as epistemological devices – i.e., as a means of engaging with a situation so as to better inquire it – they should not be given ontological status.

Finally, typologies are necessarily a snapshot at a **one point in time**, capturing a specific configuration of options, perceptions, and relationships. However, farm strategies and farmer motivations are not static. They are dependent on farmer preferences, which change, e.g., in the course of the life cycle, and on how farmers perceive the opportunities and constraints of the context in which they act. Given that this context is constantly evolving, it is unclear to what extent a typology will hold over time, i.e., whether the identified attributes remain the most salient ones. Indeed, based on a systemic understanding of farming, every change (e.g., in prices, networks, regulations, family labor availability) will change the configuration of the system and thus the "option space" and may well have an impact on how an opportunity is perceived or on the motivation to adopt a specific practice.

Farmer Types and Motivation

Research on farmer types was initiated as a result of the observation that new technologies or practices were not evenly adopted, and the heterogeneity could not satisfactorily be explained by farm structure (e.g., farm size, farm ownership, labor availability, agroecosystem). This challenged the concepts of economically rational choice and technological determinism, thus highlighting **farmer agency**. It increasingly became clear that farmers' perception of a technology and the degree to which it fit with his/her personal farming aspirations play an important role on whether and how it is adopted. Indeed, even once adopted, a technology is not uniformly implemented, as farmers use it to different ends depending on their individual understanding and preferences (Glenna et al. 2011).

Attention was given to farmer perceptions and farming goals as possible influencing factors, as well as to understanding various reasons for and perceived constraints against adoption. Researchers thus increasingly took into

consideration **motivation**, i.e., attempted to understand how different cognitive frames inform and shape attitudes. The aim was to provide insights into why, when two farmers in seemingly identical situations are confronted with the same opportunity, one farmer elects to pursue it and the other does not.

The interest in farmer types and motivation was initially linked to research on **adoption of new technologies** such as improved seeds, agrichemicals, machinery, or irrigation. Indeed, in the 1960s and 1970s, the notion of progress built on farmers adopting the technologies developed by researchers; thus, high adoption rates were the prime indicator of progress and success. Since the 1980s research on farmer types is often linked to understanding which type of farmer does (not) adopt environmentally friendly practices, e.g., cover crops to prevent soil erosion or careful management of water in irrigation schemes (Emtage et al. 2006). This topic of research rose in prominence with the advent of policies seeking to induce farmers to implement practices that are publicly desirable, esp. in the context of environmental protection. For example, in the European Union, voluntary **agri-environmental measures** are a key policy instrument within the Common Agricultural Policy. But such policy measures have no impact per se: they are mediated through farmers' perceptions and practices. Thus, understanding farmers' motivations for participation in these voluntary schemes is crucial to understand their effectiveness (Morris and Potter 1995; Riley 2011).

In the context of technology adoption, research was often based on **theories of innovation**. For example, the diffusion of innovation emphasizes the role of information, risk, and the social position of the farmers, distinguishing between "early adopters" and "laggards." Generally, this approach highlights the role of farmers and their predisposition to accept change and to innovate (Morris et al. 2000). A number of studies on technology adoption focus on the perception of **risk and uncertainty** linked with the new technology. Indeed, even if the general properties of a technology are known, the consequences and outcomes for a specific farm can never be certain. As such the perception of riskiness of a technology, attitudes to risk, and the role of trialing and learning have been shown to play a role in the adoption of a technology (Greiner et al. 2009).

In the context of modernization, i.e., the overall process of intensification, specialization, and mechanization, attention has been given to the process of structural change and strategy adjustment. Here the debate tends to center on the extent to which farmer motivation and strategy can be linked to an approach termed "**productivism**" (Walford 2003; Soini et al. 2012). Farmers following a "productivist" strategy tend to be committed to an intensive, industrially driven, and expansionist agriculture. On the other hand, "post-productivist" (or "multifunctional") farmers are oriented towards extensification and diversification, targeting some of their activities towards the production of public goods, e.g., in the framework of area-based payments. While the discourse regarding productivism versus post-productivism often focuses on structures and practices, these are also understood as an expression of the values and motivations which underlie behavior.

Focusing on the fundamental aspirations linked to farming, which is one of the key determinants for farmers' strategies, a number of studies have focused on farmer types based on the relative importance of farming for **family income**. In this context, farmer types range from those who manage agricultural land as a recreational activity (i.e., "hobby" and "lifestyle" farmers), those who mainly aim to produce food for their family (subsistence farmers), and those for whom farming is a source of income (i.e., part- and full-time farmers). These types are linked to differences in values and objectives, e.g., the relative importance of economic, environmental conservation, and community values. For example, a study by Kuehne et al. (2007) distinguishes between three farmer types: the "lifestyler" who has a strong relationship with the local community and to the land, and may not expect an income from farming; the "custodian" who focuses on the continuation of a (reasonably profitable) family business and

wants to work with family members; and the "investor" who emphasizes economic considerations when making farming decisions. Thus, as in most typologies, economic, environmental, and community values are not mutually exclusive, but rather emphasized to varying degrees.

An approach to avoid reducing farming strategy to economic and technical rationality is to focus on how farmers mediate external pressures and construct a room for maneuver. The "**styles of farming**" approach (van der Ploeg 1993) highlights different farmer types, depending on the extent to which they choose to rely on markets for inputs and to selectively enroll technologies. This approach distinguishes several farmer types by identifying the logic underlying their practices. For example, the "economical farmers" strive to minimize monetary costs, rely on their skill, and maximize labor productivity, whereas "intensive farmers" specialize, mobilize resources through markets, and rely on mechanization. Importantly, the styles of farming are emic types and thus refer to a cultural repertoire and to normative ideas how farming "should" be done. They are also understood as expressions of farmers struggling to realize their own projects and resist external pressures. Indeed, markets and technology are seldom perceived in a neutral manner by farmers, especially since policy and agribusiness endeavor to bend the relations involved to their own particular development projects.

Another application of farmer typologies is explaining the multiple goals of the varying **management styles**, not least because this approach may help to understand their strategic orientation. For example, Fairweather and Keating (1994) describe three types of farmers: firstly, the "dedicated producer" who thrives on farm work, whose goal is to achieve a quality product, who emphasizes planning and financial management and has the goal of being the best farmer possible. Secondly, the "flexible strategist" who sees marketing as a key element in the success of the farm and who looks beyond the farm gate for both effective marketing and pursuing off-farm activities. Thirdly, the "environmentalist" who is most concerned by the environmental impacts farming may have and values working with family members. The management styles highlight how farmers combine both business and way of life goals in complex and personal ways. They also highlight the diversity of resources that can be mobilized and that can contribute to the resilience of farms in turbulent times.

Regarding the environmental values of farmers, a number of studies have tried to assess its role, especially in the context of the adoption of voluntarily policy measures: do farmers enter a contractual agreement because they seek to increase their income or because it is in accordance with their environmental values? In this context conversion to **organic farming** has been a popular study topic, not least because it is one of the more demanding approaches to environmentally friendly farming. Such studies tend to distinguish between farmers who are "loyal" and "optimizers" (Mann and Gairing 2012) or between "committed" and "pragmatic" farmer types (e.g., Darnhofer et al. 2005). For "committed" or "loyal" farmers, conversion to organic farming was mostly driven by environmental values or health reasons, and they are seen as committed to the principles of organic farming and animal welfare. For "pragmatic" farmers, conversion to organic farming allowed them to implement their goal, e.g., an increased autonomy, the search for a professional challenge, or an increase in their farm income. This goal was enabled by the direct payments or higher prices for organic food, so that economic rationality played an important role in the conversion, rather than adherence to organic principles.

More generally, studies have assessed farmers' perceptions of their environmental rights and responsibilities, not least given that the public debate increasingly prioritizes amenity provision and the recreation value of rural landscapes. One such study (Davies and Hodge 2007) identifies five notions of agricultural **stewardship**: the "environmentalists," "Jeffersonians," "yeomen," "commodity conservationists," and "progressives." The stewardship position of these farmer types ranges from ecocentric, i.e., a respect for nature that is opposed to an exclusively utilitarian approach to the use of living

things, to a concern to maintain an aesthetically appealing countryside and to a robust support for modern farming methods and a rejection of the premise that agriculture is causing environmental damage. Such studies can inform policy makers concerned with the effectiveness of policy measures. Indeed, if the design and communication of regulations take into account how they will be perceived by the target groups, it can increase their acceptance and the legitimacy of controls, thus reducing the monitoring and enforcement costs.

While many studies take a static approach that sees motivations and practices as present-centered issues, other studies attempt to capture the **dynamic nature** of motivations affecting farmer's choices (Farmar-Bowers and Lane 2009). Indeed, adoption of a technology or of a policy measure is most likely the culmination of various interrelated factors and motivations, all of which change over time. This temporal dimension is of particular importance in family farms, where farm continuity and succession play a key role, and thus a long-term perspective is integrated in strategic decisions, shaping farm development pathways. The question then is: how can technologies or policy measures be incorporated into dynamic farm development pathways to enable this continuity (Ingram et al. 2013). Farmers' motivations for ensuring the continuity of the farm are wrapped up with those for ensuring the continuity of their farming values. Thus, adoption or participation decisions are taken in the context of comparing other possible future options and at the same time referencing them to the past, both with respect to what is perceived as possible and as acceptable. Farmer types thus benefit from taking into account that farm strategies emerge in response to a continuously changing context as farmers actively create and exploit opportunities in their desire to sustain and shape the future of the family farm.

Summary

Farmer types aim at explaining differential responses to similar structural circumstances. Research shows both the influence of extrinsic and intrinsic motivations, e.g., financial rewards, and the satisfaction of personal values, goals, and self-fulfillment. They have also shown the influence of cultural norms, identity, social, and cultural context. As such farmer types highlight the **interplay and mutual influence of internal and external factors** and relationships, recognizing the central role played by farmer agency. Yet, while typologies are a useful way to structure the empirical heterogeneity, it is important to keep in mind that there is a wide diversity within each farmer type. Also, the label chosen for a farmer type tends to highlight one characteristic of the type, which might be getting more prominence than it deserves and might convey a one-dimensional concept, masking both the complexity and the dynamic of farmers' motives.

Research on farmer types is usually situated within the **actor-oriented paradigm**: farmers are not simply seen as passive recipients of intervention, but as active participants who process information and strategize. Thus, typologies build on the assumption that the differential farming patterns that arise are in part the creation of the farmers themselves. Yet, there is a tendency to build farmer types in terms of individual motivations, intensions, and interests. While this might be an improvement compared to studies that build on structural determinism and rational economic choice, the voluntaristic view of decision making tends to give insufficient attention to examining how individual choices are shaped by larger frames of meaning and action, by the distribution of power and resources in the wider context.

Cross-References

- ▶ Agricultural Ethics
- ▶ Agriculture and Environmentalism
- ▶ Conventionalization Hypothesis
- ▶ Corporate Farms
- ▶ Environmental Ethics
- ▶ Farms: Small Versus Large
- ▶ Multifunctional Agriculture

References

Darnhofer, I., Schneeberger, W., & Freyer, B. (2005). Converting or not converting to organic farming in Austria: Farmer types and their rationale. *Agriculture and Human Values, 22*, 39–52.

Davies, B. B., & Hodge, I. D. (2007). Exploring environmental perspectives in lowland agriculture: A Q methodology study in East Anglia, UK. *Ecological Economics, 61*, 323–333.

Emtage, N., Herbohn, H., & Harrison, S. (2006). Landholder typologies used in the development of natural resource management programs in Australia. A review. *Australasian Journal of Environmental Management, 13*, 79–94.

Fairweather, J., & Keating, N. (1994). Goals and management styles of New Zealand farmers. *Agricultural Systems, 44*, 181–200.

Farmar-Bowers, Q., & Lane, R. (2009). Understanding farmers' strategic decision-making processes and the implications for biodiversity conservation policy. *Journal of Environmental Management, 90*, 1135–1144.

Girard, N. (2006). Catégoriser les pratiques d'agriculteurs pour reformuler un problème en partenariat. Une proposition méthodologique [Categorising farmers' practices to reformulate a problem in partnership: A method for building situation-specific typologies]. *Cahiers Agriculture, 15*, 261–272.

Glenna, L., Jussaume, R., & Dawson, J. (2011). How farmers matter in shaping agricultural technologies: Social and structural characteristics of wheat growers and wheat varieties. *Agriculture and Human Values, 28*, 213–224.

Greiner, R., Patterson, L., & Miller, O. (2009). Motivations, risk perception and adoption of conservation practices by farmers. *Agricultural Systems, 99*, 86–104.

Ingram, J., Gaskell, P., Mills, J., & Short, C. (2013). Incorporating agri-environment schemes into farm development pathways: A temporal analysis of farmer motivation. *Land Use Policy, 31*, 267–279.

Kluge, S. (2000). Empirically grounded construction of types and typologies in qualitative social research. *Forum: Qualitative Social Research*. http://www.qualitative-research.net/index.php/fqs/article/view/1124/2499

Kuehne, G., Bjornlund, H., & Cheers, B. (2007). There's more than one type of farmer: Acknowledging farmers' diversity – An Australian perspective. *The International Journal of Interdisciplinary Social Sciences, 2*, 179–186.

Mann, S., & Gairing, M. (2012). 'Loyals' and 'optimizers': Shedding light on the decision for or against organic agriculture among Swiss farmers. *Journal of Agricultural and Environmental Ethics, 25*, 365–376.

Morris, C., & Potter, C. (1995). Recruiting the new conservationists: Farmers' adoption of agri-environmental schemes in the U.K. *Journal of Rural Studies, 11*, 51–63.

Morris, J., Mills, J., & Crawford, I. (2000). Promoting farmer uptake of agri-environment schemes: The Countryside Stewardship Arable Options Scheme. *Land Use Policy, 17*, 241–254.

Riley, M. (2011). Turning farmers into conservationists? Progress and prospects. *Geography Compass, 5*, 369–389.

Soini, K., Diaz, C., Gandini, G., de Haas, Y., Lilja, T., Martin-Collado, D., Pizzi, F., & Hiemstra, S. J. (2012). Developing a typology for local cattle breed farmers in Europe. *Journal of Animal Breeding and Genetics, 129*, 436–447.

van der Ploeg, J. D. (1993). Rural sociology and the new agrarian question. A perspective from the Netherlands. *Sociologia Ruralis, 33*, 240–260.

Walford, N. (2003). Productivism is allegedly dead, long live productivism. Evidence of continued productivist attitudes and decision-making in South-East England. *Journal of Rural Studies, 19*, 491–502.

Farmers' Markets

John Smithers
Department of Geography, University of Guelph, Guelph, ON, Canada

Synonyms

Direct marketing; Growers' market; Producers' market

Introduction

It has been observed recently that there is a growing social appetite for the "story" that surrounds food products and the modern food system. Part of this unfolding and evolving story involves a resurgence of interest in foods and farm commodities of local and regional provenance (Feagan 2007). The reasons for this are rehearsed elsewhere in this volume in relation to local food and in an expansive and expanding literature on Alternative Agri-Food Networks. However, it is in this context that there is renewed interest in one long-standing feature of the North American food retail landscape, in particular, the **farmers' market**. While there is much variation in the scale, structure, and organizational details

among and between specific iterations of this form of food marketing, a farmers' market is generally understood to be a regularly recurring market at a fixed geographical location (with or without associated infrastructure) where farmer/producers and consumers engage in direct exchange for agricultural products. The degree to which specific markets hold to this simple formula is a matter of considerable interest and at times consternation, and elements of this tension will be highlighted subsequently.

Though farmers' markets have a long history in North America, mainstream interest in them generally spans on a period of expansion, decline, and revival through the mid-twentieth century and into the current era. In its early incarnations in this period, the role of the farmers' market was basic and seemingly straightforward – to provide a regular venue for local farmers and consumers to congregate and engage in the sale and procurement of food staples. In this sense they were "everyday" places where food producers sold the fruit of their labors to householders in their communities and regions. However, farmers' markets faced a decline following WWII due to the increasing mobility of people, the proliferation of processing and refrigeration technologies, the advent of supermarket chains, and the shifting public sensibilities concerning what constituted "good" food. Over time, the role of farmers' markets in the food landscape became less certain, and many of them were relegated to the economic margins or disappeared completely. Readers wishing more specific details of the rise, fall, and reinvigoration of farmers' markets in America should consult an excellent review by Brown (2002) that traces this evolution.

Over recent decades farmers' markets have been resurgent across North America and have emerged and grown rapidly as a *new* innovation in countries such as Australia and New Zealand. In other "old world" regions too, farmers' markets remain alive and well but now much invigorated through strategic alliances with local and slow food movements and a variety of state-sponsored rural regional development initiatives. The so-called *new generation* farmers' market is an exciting, and at times contested, arena in which values, beliefs, preferences, and aspirations around farming and food are finding expression market day by market day (Holloway and Kneafsey 2000). In practical terms they serve as an intuitively obvious site for food producers and consumers to find each other – physical spaces in which immediacy and directness can be (re)introduced into transactions around food. For producers, this presents the possibility of capturing greater value from the food product being sold; for consumers, the chance to obtain products with (allegedly) enhanced qualities; and for organizational actors, the chance to operationalize trade in local and quality food on terms that they can dictate and attempt to regulate. A more analytical view sees them not just as a site of economic transactions but also as a venue for negotiated meaning, value, and, perhaps, common purpose in the local food landscape – a space for the expression and development of community. In light of this complexity and nuance, the approach taken in this entry is to rehearse some of the most frequently arising themes, claims, and tensions in relation to contemporary farmers' markets with attention paid to four elements: producer benefits, consumer expectations and experiences, contested authenticity, and community building.

The Farmers' Market as an Economic Space: Producer Motives and Benefits

At or near the top of the list of alleged benefits and opportunities associated with the contemporary farmers' market is the assertion that they represent for some farmers an alternative to the corporatized, vertically integrated, and highly consolidated conventional food supply chain and its associated marketing structures. Indeed, a large body of literature has traced the causes and motivations for producers' migration to alternative commodities, enterprises, and markets. Not surprisingly, these derive strongly from the ongoing structural changes associated with the industrialization of farming and include producer recognition of the environmental consequences of intensive agriculture, poor profitability in the conventional farm sector, loss of autonomy and

control over production and marketing practices (either because of formal or de facto subsumption by agrobusiness), and a strong sense of a deteriorating quality of life as the stresses associated with intensive agriculture find their way inside the farm family. As a consequence of these and other causal factors, growing numbers of farmers in North America and elsewhere have sought out opportunities for change with the intent of at least partially, if not completely, decoupling from the industrial model.

Research on the producer side of the farmers' market scene has found that growers are frequently motivated by perceived economic opportunities (more sales, better prices, etc.) and a greater sense of control in their initial decision to attend, but eventually acknowledge the importance of collaboration and (healthy) competition with fellow vendors. Brown (2002) surveyed the literature on FMs in the United States spanning a 60-year period and summarized certain empirical regularities concerning both farmer/vendors and consumers. Those findings revealed that, in many instances, farmers participating in FMs were more likely to be operating on a comparatively small scale and reporting benefits in terms of reduced transport costs, the ability to deliver food quality and to lay claim to more benign environmental practices. The economic benefits of the markets to farmers themselves relate to comparatively low barriers to entry for farmers, the ability to capture and retain a greater portion of the selling price of goods, and, of course, the market's creation of a fixed (and in some instances fitted out) space for trading that provides easy access to food purchasers.

Beyond producer-direct benefits, a number of studies, particularly in North America, have examined the wider economic impact of farmers' markets in terms of job creation, aggregate agricultural sales, and related multiplier effects in regional economies. While the figures between regions and studies vary widely, the results do indeed show impressive impacts both within and beyond the farm sector in the form of job creation and associated earnings, total farm receipts, and new business start-ups (see, e.g., Brown and Miller 2008). Impacts annually in some US states such as Iowa are reported to exceed 20 million dollars. Though no one has yet suggested that the days of the supermarket and the vertically integrated commodity sectors are numbered, the economic impact of farmers' markets is real and rising steadily.

Among these wider economic benefits, much recent discussion of the future potential of farmers' markets concerns their ability to act as incubators for new farm and food ventures (Guthrie et al. 2006). Some or all of the following may provide impetus for this effect. First, there are increasing uncertainties and concerns in some quarters for the emergence of the next generation of farmers in North America. In Canada, for example, based on recent national census data, the average age of farmers has risen steadily over recent decades and sat at 54 years of age in 2006. This, together with the fact that recent studies indicate that the majority of farmers today have no clearly developed plans for farm succession, raises questions about the face(s) of farming in the not too distant future. Given the well-documented exodus of youth from rural regions and the long-standing economic struggles of the traditional family farm, historical patterns of predominantly within-family farm succession may be no longer hold. The question then arises, "might farmers' markets and other local food marketing initiatives become a catalyst for a new vision of farming and the food system that supports the entry of new farmers and the (re)emergence of smaller more locally focused farm enterprises?" Second, it is now well recognized that the conventional food system, and indeed many farmers' markets, does not reflect in their food offerings, the expanding ethnocultural diversity of their community and region. Across North America and presumably elsewhere, there is increasing recognition of the market opportunity presented by ethno-cultural consumers and the new farms and farmers they might support. Farmers' markets are seen as a natural outlet, both economically and socially, for these new types of foods and farmers. Third, many smaller producers, particularly in the livestock sector, currently lament the absence of processing and packaging infrastructure as

much of this capacity is taken up by actors in the industrial food system – either through direct ownership or dominance through volume. It has been speculated that the rise of popularity in farmers' markets, and their associated implications for the viability of small- and medium-scale farms, may also trigger the development of new local food system infrastructure in support of a sustainable alternative farm and food sector (Gillespie et al. 2007; Hinrichs et al. 2004). Given these possibilities, it is not surprising that the farmers' market is now seen as a potential catalyst for positive change on the supply side of the local food equation.

Consumer Expectations (Big and Small): Marketing Quality and Experience

It has been suggested that the growing popularity of local food and venues such as the farmers' market reflect the outcome of both a critical public assessment of the conventional food supply chain and an expanding consciousness of the potential to connect food choices and social values. Some academic literature has invoked the term "the concerned consumer" in reference to what is frequently believed about local food supporters. The assertion is that for at least some shoppers, the farmers' market is an opportunity and a space in which they can pursue (either explicitly or implicitly) high-level goals such as sustainability, equity, social justice, and community. In this sense local food venues such as farmers' markets can be seen as spaces of expression and opposition in a new and emerging *politics* of food. The degree to which this is accurate or evident at specific markets and among shoppers is amenable to friendly debate, but what can safely be said is that an important and recurrent part of the farmers' market narrative (i.e., its story) is that it is different and distinct from the food retailing mainstream – a mainstream that has been accused of being often nonaligned with the social values noted above. Aside from these somewhat philosophical matters, there are a wide variety of other known and well-documented reasons why increasing numbers of people are being drawn to the farmers' markets. In North America these include the so-called push factors such as the recurrence of well-documented food scares (with associated human health implications), the rejection of genetically modified foods by some food consumers, concerns over the environmental and ethical implications of intensive agriculture, and the decline of the family farm. Included among the most often noted pull factors are the revival of interest in fresh and freshly prepared food over processed commodities, the prospect of personal connection and a sense of belonging, and the lure of conviviality. Taken together, the bases for farmers' market patronage span a wide array of material and symbolic demands and values – many of which hold closely to the alleged tenets of local food systems.

Notwithstanding the high-level concerns and interests above, on any given market day, shoppers will express a far more pragmatic set of expectations, beliefs, and desired benefits regarding farmers' markets in general and their own market in particular. Studies indicate that perceptions of superior quality, freshness, and flavor are paramount with diversity and distinctiveness of product, price competitiveness, and the generally strong presence of organics as additional strong motivating factors (Smithers et al. 2008; Wolf et al. 2005). Beyond the sensory elements of food, consumer surveys at farmers' markets also confirm the importance of consumer confidence with respect to such matters as food safety and traceability and the methods of production. The presence of producers creates opportunity for information exchange on these important questions and creates also the possibility of sharing more general knowledge about food products and the nature of farming. A final, alleged consumer expectation is that they use the opportunity of conversation and clear signage to confirm the geographical provenance of the foods they purchase. While it is clearly believed, and the literature supports, that local *matters*, it has emerged in some studies that the geographical size of *local* varies according to region, season, and commodity and that, on the basis of other trust factors, shoppers may exhibit considerable flexibility in their demands so long as the spirit of local food is observed. Such flexibility can clearly be seen in

the regulations and rules of engagement across jurisdictions and makes for spirited debate and at times tension at specific markets (see comments on Authenticity below)!

Before leaving the topic of consumer wants and expectations, it is important to note briefly one final and increasingly noticeable commodity at the market. In both scholarly writing and at the organizational level in farmers' market organizations, it is well recognized that one of the things being most actively consumed at many farmers' markets is the market experience itself. In this sense it has been suggested that at least some farmers' markets have become commodified – something to be experienced and consumed quite apart from any considerations pertaining to the specifics of farmers and food or the lofty social goals noted earlier (see Miele 2006). This phenomenon is by no means universal but is clearly evident in an increasing number of markets – more so in urban and/or amenity-rich settings than in less affluent locations. For example, Thomas Tiemann (2008) provides a vivid depiction of the famous Pike Place Farmers' Market in Seattle, Washington, where souvenir-seeking tourist shoppers have neither the opportunity nor the inclination to know one another. In a similar vein, some markets in New Zealand have established strong links with wine tourism and the slow food movement as key components of their identity and attraction (Joseph et al. 2013). Indeed, on any given market day, there may be as much trade in cappuccino coffee and freshly shucked oysters as beans and potatoes! For some, such developments do not accord well with their vision of farmers' markets and their place in local food systems; for others this differentiation and distinction is essential. At a minimum, what is apparent is that the contemporary farmers' market is a diverse and multifunctional entity with a range of forms that defy easy or simplistic categorization. The same is true of its patrons.

The Meaning and Management of Authenticity

As the viability and visibility of farmers' markets continues to advance, there have been more concerted efforts in recent years to manage the brand. Front and center in this effort has been an attempt to frame the concept of authenticity as a core feature of "real" farmers' markets. As an entrepreneurial consideration, there is value in confirming and communicating the alterity of the farmers' market – establishing a difference that makes a difference (Kirwan 2004). From a strategic marketing perspective, the key points in defining alterity are usually (i) the opportunity for direct engagement with producers; (ii) access to local, fresh products in season; (iii) assurance of food quality; and (iv) the ability to partake in the cultural capital attached to the market as a distinctly recognizable community institution. Such criteria are important as they not only form the basis for the constitution and organization of the farmers' market by local managers but also lead to the rules of conduct for vendors.

Recently it has been suggested that the issue of authenticity can be seen from both the "bottom up" and the "top down" and that this distinction helps explain some of the tensions seen at some markets. At the level of daily practice, individual markets navigate a series of issues relating to the simultaneous desires for diversity and regularity of food products, the building of consumer confidence concerning the provenance of food and the identity of the producer, the need to create a climate for business that provides adequate returns for vendor participants and the market itself, and an experience that meets the expectations of consumers. This both permits and even encourages diversity in the characteristics of farmers' markets as individual markets find their own comfort level in the presence of different types of producers and sellers of food – a situation that is welcomed by some and highly problematic for others. From above, it has been suggested that these complexities are too often dismissed in favor of an approach that seeks to impose uniformity as a way of guaranteeing success as a *real* farmers' market. Hence, there is debate in some quarters about whether or not flexibility should or does exist around some of these requirements and whether that flexibility threatens authenticity as a defining quality of

farmers' markets (see, e.g., Smithers and Joseph 2010; Wittman et al. 2012).

Unfortunately the question of authenticity is not merely about semantics. At the level of farmers' market associations and at many individual farmers' markets, one of the most visible flashpoints seems to concern who *is*, and *is not*, a *real* farmer and thus a legitimate vendor with *authentic* local food. The concern in some markets is that the presence of the so-called resellers cheapens the brand and undermines the identity and validity of the entire venture. It is perhaps not surprising then that there have been recent attempts to more stringently define and even regulate authenticity in relation to farmers' markets. Taken to its logical conclusion, the process of defining and verifying authenticity ends with the desire to regulate authenticity through formal certification – and indeed, this has happened in several jurisdictions including the United Kingdom and the Province of Ontario in Canada.

The concept of third party certification is, of course, fraught with complications and consequences of its own (Friedmann and McNair 2008). Inasmuch as certification has the power to confirm which markets are in compliance with requirements and thus "legitimate," the absence of certification has the potential to imply the opposite. The broad rationale for certification is well established and has been played out in detail in the realm of organic food. Its purpose is to provide assurance to consumers that the food product they are purchasing is what it purports to be – and to protect certified farmer-vendors from the fraudulent actions of competitors who may claim they are something they are not. Yet attention to the politics of certification in the organic farm sector also reveals that some organic farmers, notwithstanding their adherence to the principles and practices of organic (and related) agriculture, have elected to forego formal certification for a wide variety of reasons – sometimes in the conviction that neither they nor their food products require the bestowing of legitimacy from an outside authority whose *authority* they do not accept. It is precisely in this context that reports have emerged of a small number of farmers' markets in Canada and New Zealand actually braking away from a parent farmers' market organization – the dispute over legitimacy and a claim to the brand (Joseph et al. 2013). The process and protocols of certifying farmers' markets as *real* will make for interesting watching by both analysts and farmers' market actors in the next several years.

The Farmers' Market as a Community-Building Institution

The concept of third places has been invoked recently in relation to farmers' markets (Tiemann 2008). Third places are sites of informal association with opportunities for fellowship and exchange with diverse others. In North America the traditional general store has been seen historically as a third place. In Great Britain the same might be said about *the local* (i.e., the corner pub). More generally farmers' markets are seen as civic spaces. The inference is that they are public sites where community values are defined, shared, and debated and where community is "performed." They are community institutions with long histories in some regions – very short histories in others. But in both cases, they are a meeting place – places where products, people, and diverse personalities come together. In this sense, the farmers' market is often seen as much as a social phenomenon as it is an economic enterprise. Much international research into consumer experiences at farmers' market has confirmed that shoppers place the opportunity for meeting and associating with vendors and other visitors as being among the most important reasons for their patronage. This stands in sharp contrast to the experience of the grocery store. Indeed, some research has suggested that some shoppers actually place the opportunity for relationship building (often expressed as loyalty to specific vendors) ahead of some of the core authenticity attributes noted above. The term social capital has been invoked to describe this particular facet of the farmers' market experience. It is not that shoppers do not care about local or fresh or spray-free per se, but rather that these food attributes are sometimes taken for

granted (sometimes even set aside) based on the trust accruing from valued relationships with particular vendors. Indeed, a few minutes of casual observation at virtually any farmers' market will be sufficient for most readers to spot these so-called *relations of regard*. Interestingly, they serve as both a strong rationale and a source of complication for ongoing efforts to define and regulate qualities such as authenticity and legitimacy in the actual performance of specific markets across North America and elsewhere. In other words, sometimes relationships trump rules.

The version of community noted above speaks to *communities of place* – local people making connections with each other and, in so doing, building community. In a different vein it might be said that the farmers' market is seen as holding potential for linking various *communities of interest*. Two possibilities are noted but many others exist. It has been suggested that the farmers' market has at least the potential to form common ground for rural and urban interests and values and, by so doing, help alleviate the disconnect that some feel has arisen between these two sectors during the era of industrial agriculture and global food . The prospect of personal interaction between parties and the visible presence of diverse and differentiated food products provide a rare opportunity for eaters to learn about the challenges and realities of farming and growers to hear first-hand consumer perceptions (and perhaps misconceptions) about agriculture. Second, for many people, the farmers' market provides the opportunity to feel part of a wider change in the food system (Gillespie et al. 2007). As noted above, part of the farmers' market story is its differentiation from the conventional food system and its inextricable link to the local food movement. For an increasing number of people, the farmers' market has emerged as a place where consumption needs and personal values coexist comfortably.

Summary

The intention in this entry has been to both summarize and problematize the revival of the farmers' market as a key element in the growth of local and alternative food systems. They are places of commerce, consumption, community, and at times contestation. For farmers, the revival and now rapid growth of farmers' markets provides the prospect of capturing greater value and developing a different pathway for their enterprise. Consumers are extracting value in the form of food they trust, relationships they value, and the sense of supporting not only a food business but also a food idea – or perhaps more accurately a food ideal. Those on the governance side are working to define principles and guide practice. The contemporary farmers' market is a constructed and complex space where philosophy and practice collide and where specific food choices reflect both values and accommodations. Uncertainties aside, it does seem that the farmers' market has reclaimed a place for itself on the food landscape with a future that will be interesting to watch unfold.

Cross-References

- ▶ Authenticity in Food
- ▶ Food and Place
- ▶ Local and Regional Food Systems

References

Brown, A. (2002). Farmers' market research 1940–2000: An inventory and review. *American Journal of Alternative Agriculture, 17*, 167–176.

Brown, C., & Miller, S. (2008). The impacts of local markets: A review of research on farmers markets and community supported agriculture. *American Journal of Agricultural Economics, 90*(5), 1296–1302.

Feagan, R. (2007). The place of food: Mapping out the 'Local' in local food systems. *Progress in Human Geography, 31*(1), 23–42.

Friedmann, H., & McNair, A. (2008). Whose rules rule? Contested projects to certify 'Local Production for Distant Consumers'. *Journal of Agrarian Change, 8* (2–3), 408–434.

Gillespie, G., Hilchey, D., Hinrichs, C., & Feenstra, G. (2007). Farmers' markets as keystones in rebuilding local and regional food systems. In C. Hinrichs & T. Lyson (Eds.), *Remaking the North American food system: Strategies for sustainability* (pp. 65–83). Lincoln: University of Nebraska Press.

Guthrie, J., Guthrie, A., Lawson, R., & Cameron, A. (2006). Farmers' markets: The small business counter-revolution in food production and retailing. *British Food Journal, 108*(7), 560–573.
Hinrichs, C., Gillespie, G., & Feenstra, G. (2004). Social learning and innovation at retail farmers' markets. *Rural Sociology, 69*, 31–58.
Holloway, L., & Kneafsey, M. (2000). Reading the space of the farmers' market: A case study from the United Kingdom. *Sociologia Ruralis, 40*, 285–299.
Joseph, A., Chalmers, L., & Smithers, J. (2013). Contested and congested spaces: Exploring authenticity in New Zealand farmers' markets. *New Zealand Geographer, 69*, 52–62.
Kirwan, J. (2004). Alternative strategies in the UK agro-food system: Interrogating the alterity of farmers' markets. *Sociologia Ruralis, 44*, 395–415.
Miele, M. (2006). Consumption culture: The case of food. In P. Cloke, T. Marsden, & P. Mooney (Eds.), *Handbook of rural studies* (pp. 344–354). London: Sage.
Smithers, J., & Joseph, A. (2010). The trouble with authenticity: Separating ideology from practice at the farmers market. *Agriculture and Human Values, 27*, 239–247.
Smithers, J., Lamarche, J., & Joseph, A. E. (2008). Unpacking the terms of engagement with local food at the farmers' market: Insights from Ontario. *Journal of Rural Studies, 24*(3), 337–350.
Tiemann, T. K. (2008). Grower-only farmers' markets: Public spaces and third places. *The Journal of Popular Culture, 41*(3), 467–487.
Wittman, H., Beckie, M., & Hergesheimer, C. (2012). Linking local food systems and the social economy? Future roles for farmers' markets in Alberta and British Columbia. *Rural Sociology, 77*(1), 36–61.
Wolf, M., Spittler, A., & Ahern, J. (2005). Profile of farmers' market consumers and the perceived advantages of produce sold at farmers' markets. *Journal of Food Distribution Research, 36*, 192–202.

Farmer-Scientist Knowledge Exchange

Julie Ingram
Countryside and Community Research Institute, University of Gloucestershire, Gloucester, Gloucestershire, UK

Synonyms

Extension; Farmer knowledge; Knowledge; Knowledge exchange; Learning; Scientific knowledge

Introduction

The last 25 years has seen a paradigm shift in the understanding of the nature of knowledge and how it is exchanged in the agricultural context. A changing backdrop, with the move towards multifunctional land management, persistent environmental problems, and the search for sustainable agricultural approaches, has brought new challenges. At the same time, the research agenda on knowledge has changed as an era of positivism, during which science and scientific experts were given unrivaled authority, were challenged by social studies of science that began to question the superiority of scientific knowledge, and value alternative forms of knowledge such as those held by farmers. Theory and practice of knowledge exchange in agriculture have evolved in line with this, shifting from a linear model of knowledge transfer to a perspective that integrates knowledge from multiple actors through facilitation and participation and emphasizes learning in a social context. The attention paid to knowledge within agricultural research is part of a wider consideration of contested knowledges and expert-lay divides and the democratization of expertise in science and environmental studies. These developments are indicative of wider changes in the rural development, natural resource management, and science in society perspectives and of changes that have taken place in intellectual debates, where postmodern concerns for pluralism have enabled marginalized groups to become stakeholders.

In the agricultural setting, the tensions at the interface between farmers and scientists have been the focus of much scholastic work, with attention given to how the two groups construct issues relating to agriculture (new technologies and sustainable agriculture), conservation, and environmental management and to how they communicate with each other. Farmer-science relations, specifically the *nature* of the knowledge they hold and the *processes* involved in the *exchange of this knowledge*, have provided a useful context for situating these discussions.

Nature of Knowledge

Scientific and Local Knowledge

A range of analysts have explored distinctive ways of knowing the world through elaboration of paired concepts such as codified/tacit knowledge, scientific/local, scientific/indigenous knowledge, expert/lay, and explicit/tacit. Terms such as local or indigenous knowledge have different connotations; however, they all indicate the types of knowledge that culminate through the experience of social groups embedded in specific localities and cultural contexts. Scholars have typically juxtaposed such constructs against Western, scientific, instrumentally rational knowledge (Richards 1985) and extensively debated the epistemological distinctions between them.

Those critiquing scientific knowledge have emphasized its universal, objective, and decontextualized character. It is referred to as codified, expert, formal, standardized, institutionally legitimate, and explicit in that it can be systematized, written, stored, and transferred (Norgaard 1984). Understandings of scientific knowledge have been embedded in a realist-positivist perspective which regards scientific knowledge as produced through a process of reductionism, derived from data verified by independent observers under controlled conditions. According to this perspective, science is viewed as open, systematic, and analytical, advancing by building rigorously on prior achievements. The relationship with participants is regarded as detached, the methods are regarded as value-neutral, cases are treated as representative rather than having intrinsic value, the approach is deductive, and the aim is to develop predictive criteria that provide a basis for universal and context-free generalization.

With respect to knowledge exchange, as discussed below, scientific knowledge is regarded as discrete, tangible, and transferable.

The term 'local knowledge' came from the international development and anthropology literatures. Such knowledge has been described as fundamentally linked to direct experience and the practical, sensuous, and personal skill that develops with attention to a specific place. Scholars have emphasized the attributes of local knowledge that distinguish it from scientific knowledge, describing it as closed, non-systematic, and holistic rather than analytical and without an overall conceptual framework, advancing on the basis of new experiences, not on the basis of a deductive logic. Where science is regarded as universal, local knowledge is strongly rooted in place, anchored to a particular social group in a particular setting at a particular time. Due to its tacit nature, local knowledge is seen to rely on social processes for knowledge exchange.

Criticism of Scientific Agriculture

Over the last 25 years, criticism of scientific agriculture, in particular focusing on the authority given to scientific knowledge and the neglect of local forms of knowledge, has emerged as a strong force within both developing and developed countries. Scholars point to science's privileged role in the development of agriculture and agricultural policy in Western countries, particularly in the post-war period, as scientists were charged with modernizing agriculture and increasing food production. Critics have argued that there was an assumption of superiority of scientific knowledge developed in controlled research settings over knowledge developed through practice in less controlled settings as on farms. They consider that the status accorded to scientific knowledge, by virtue of its rigor, systemic approach, and rationality, effectively allowed science to stand apart from other knowledge systems and enabled science to be the standard paradigm against which all other forms of knowledge were to be assessed. Philosophical perspectives on science and its dominance come from scholars who argue that science constitutes institutionalized power because scientists impose a system of ordered procedures for the production, regulation, circulation, and operation of statements.

Consequently, scholars argued that non-institutional forms of knowledge, perceived as lacking the rigor, rationality, and logic of science and categorized as backward, primitive, irrational, or parochial, have been ignored,

marginalized, or underrepresented in society as a whole and specifically in agriculture. As such local farmer knowledge in both developing and developed countries was seen as being denied legitimacy. This criticism is aligned to debates about expert and lay knowledge where the deficit model of scientific understanding deems non-scientists ignorant when it comes to scientific and technical matters and where lay knowledge is assessed and judged from the scientific point view. In the environment management context, similarly policy makers are described as using the discourses of certainty and technical expertise to maintain their privileged status as legitimate arbiters of environmental standards (Whatmore 2009).

As part of the criticism of agricultural science, it was argued that, as scientific knowledge and practice were applied in new situations, the complexity which has co-evolved in many areas over long time periods between local agricultural practices and local natural environments was often destroyed (Kloppenburg 1991). Scholars, particularly those from the Wageningen School, have documented this displacement of local knowledge and cultural practices by 'alien' scientific techniques (Long and Long 1992). With this, displacement science was seen as a new form of colonialism, and for some commentators, this imposition of Western scientific knowledge explained why development had become unsustainable. Debate about the disregard for local knowledge was not restricted to developing countries. A seminal study by Wynne (1996) in England documented how, in the aftermath of the Chernobyl nuclear disaster in 1986, scientists ignored local farmers' knowledge in their research in the Cumbrian hills to find out how to protect sheep from radioactive contamination.

The Rise of Local Knowledge

These criticisms and debates heralded a shift in thinking about traditional knowledge. Whereas previously many theorists regarded it as an obstacle to development, today indigenous knowledge is seen as pivotal in sustainable resource use and development predominantly in less industrialized countries. In works such as Richards' *Indigenous Agricultural Revolution* (1985), researchers have attempted to validate the existence and utility of indigenous knowledge systems. The Farmer First movement launched in 1987, which questioned the scientific "way of knowing" as an appropriate model for future sustainable development and for the extension of democratic principles, was a landmark in this shift towards valuing farmers' knowledge (Chambers et al. 1989) and heralded two decades or more of farmer-centered research and development in international development. Central to this rediscovery of the concept of local knowledge was the continued critical examination of the impacts of orthodox science. The body of work grew documenting farmers' local knowledge of soils, pests, varieties, etc. This work claimed that farmers have an intimate and intuitive knowledge of their farms and a refined understanding of local spatial and temporal processes, gained through years of walking and cultivating the land. This work has also shown that local knowledge is, characteristically, related to use rather than the standardized categorization criteria derived from science.

In the Western world, local knowledges have long been denied a legitimate status. Since the 1990s, however there has been growing interest in farmer knowledge in developed countries fueled by debates about the epistemological distinction between local and scientific knowledge systems, the changing role of farmers and scientists in research and extension, and the need for environmental and social change. In the context of economic crises in agriculture, environmental pollution, agribusiness domination, and concerns about food quality, it was considered that new insights and perspectives which valued alternative knowledge forms were needed. Exponents of this view also agreed that local knowledge, being more ecosystem-sensitive and context-dependent, was more relevant to sustainable practices than decontextualized scientific knowledge. As such the term 'local knowledge' entered the sustainability discourse in developing countries. A number of studies have demonstrated how sustainable knowledge and practice have developed outside of conventional knowledge systems, for example, Kloppenburg's (1991) analysis of rotational grazing in Wisconsin, USA.

The changing attitudes towards, and relevance of, local knowledge are apparent in the increasing number of research, development, and management models that include farmers as active participants and knowledgeable stakeholders. However, as interest has turned to farmers' knowledge as part of resource management and environmental disputes, this has highlighted the contentious nature of the relationship between local and scientific knowledge (Whatmore 2009). Authors have described the way in which farmers draw on context-specific experiential understandings in completing their practices and how these understandings can conflict with, and are negotiated alongside, those understandings embedded within science, with technologies, and with conservation practices (Eshuis and Stuiver 2005).

Advocates of farmers' knowledge, however, have been criticized as naive and guilty of distorting and exaggerating its value while neglecting its limitations. Critics warned against mythologizing local knowledge suggesting that it can often be nothing more than a set of improvisational capacities summoned by needs (Molnar et al. 1992). With respect to the argument that local knowledge is sustainable knowledge, critics point to the fact that some indigenous people in fact degrade their own land. Scholars argued that scientific agriculture may be just as capable as local knowledge of finding sustainable solutions. Indigenous knowledge, although still of great value in developing countries, is thought to have no relevance to modern Westernized agriculture where farmers have come to rely heavily on scientific applications in agriculture.

These debates have culminated in an acceptance that it is unhelpful to reduce the discussion to one that distinguishes scientific or local knowledge as the "right" or "wrong" sorts of knowledge and that instead there is a need to understand the processes that bring about integration of different knowledges.

Knowledge Processes

Over recent years the concept of knowledge in the singular has been increasingly challenged by ideas of differentiated, contextualized knowledges. Debates about the dichotomy between local and scientific knowledge and their respective values have led many researchers to criticize this categorization and argue that conventional distinctions between the two no longer hold. It has been argued that these knowledge forms are fundamentally complementary, that knowledge is composed of blends of all knowledge forms, and that it is heterogeneously constituted (Long and Long 1992). Equally others have suggested caution should be exercised in the use of prefixes such as 'expert' and 'lay' when talking about knowledges as this strengthens the processes keeping them apart.

The distinctiveness of different forms of knowledge has also been challenged within the social sciences where there has been a growing conviction that knowledge is the outcome of social processes. Sociological interpretations of science challenged ideas about the distinctiveness of scientific knowledge, and ideas by Knorr-Cetina (1981) were developed in a number of empirical studies that followed. These have shown that science is socially constructed in a specific location and as such is achieved in much the same way as other kinds of knowledge. As a consequence social scientists have argued that the distinction between universal knowledge and local knowledge is weakened. There has also been support for theoretical criticisms of what has been called the "rise of indigenous knowledge" which argues that the classification into indigenous and Western knowledge fails because there are not only similarities across these categories but also differences within them. This science philosophical approach is called social constructivism and has become a main paradigm from which many social scientists analyze the role of knowledge. However, as with distinguishing forms of knowledge, other academics have argued that it is better to integrate this social-constructivist view with the positivist approach of knowledge development which aims at finding measurable parts of reality to validate knowledge claims.

Given these theoretical and philosophical arguments, many scholars have concluded that it makes much more sense to describe knowledge,

not as a fixed thing, but as fluid and changing, the outcome of a set of processes where social processes are central (Murdoch and Clark 1994; Scoones and Thompson 1994).

Knowledge Exchange

There has been increasing emphasis on the need to find effective ways of exchanging knowledge between farmers/land managers and the many actors they interact with to enhance sustainable agriculture and environmental management. Many different terms are used to describe knowledge exchange processes; these include knowledge sharing, generation, co-production, co-management, transfer, brokerage, storage, exchange, transformation, mobilization, and translation, but knowledge exchange can be simply understood as constituting the processes that generate, share, and/or use knowledge through various methods appropriate to the context, purpose, and participants involved. While early models of knowledge exchange focused on linear processes of knowledge production and consumption, a shift towards more systemic approaches provided frameworks for understanding knowledge exchange as multiple processes operating between multiple actors (Roling 1992).

As with the nature of knowledge, the last 25 years has seen major debate and changes in thinking about the knowledge exchange processes in the agricultural context. This is the main part that has been undertaken within the discipline of agricultural extension, both scholastically and in practice, although contributions have come from a number of other disciplines including environmental management, rural sociology, development studies, and communication science. These have all tended to highlight issues such as legitimacy of different knowledge forms, inequality, and power dynamics, including the effect of relative position or status of those generating and using knowledge.

Knowledge Transfer Models

In the agricultural extension literature, it is possible to document an evolution in theory and practice from persuasive knowledge transfer approaches to more facilitative human development perspectives (Roling 1992). Theory and methodology have traditionally been predicated on the promotion of technological innovations with a reliance on the top-down, unilinear model of transfer from science to practice (the knowledge transfer model). This notion of a one-way path was developed and adapted by a number of authors, the most pervasive being Roger's (1995) diffusion of innovation theory and the technology transfer (TOT) model which has underpinned the activities of many extension services and development activities. The large literature on adoption of innovations has been reviewed in general (Rogers 2003) and for extension (Black 2000). This knowledge transfer approach is analogous to the technical-rational model of policy development. The knowledge transfer paradigm as the dominant model of knowledge production in conventional agriculture captured the concerns of the so-called productivist era of the 1970s and 1980s in industrialized countries when the focus was on food production (Buttel 2001). However, it has since been found limiting.

Academics from rural sociology within the USA and European schools of international development argued that, because the model was embedded within realist-positivist theoretical view of scientific knowledge (seen as a discrete, tangible entity which can be transferred between actors), it did not accord with new interpretative views of knowledge, as discussed above. They also argued that the unilinear approach failed to represent the many different sources from which knowledge is generated and that it was irrelevant to modern agriculture, which has multiple goals and demands more stakeholder negotiation and agreement. Concerns were raised about equality specifically with reference to the adoption/diffusion model which ignored many of the important social issues such as the unequal distribution of impacts and benefits of the technology, as the service provided by the extension agencies reached, differentially, the better educated and more economically powerful farmers. Those adopting new technologies were seen as 'innovators' and held in

high regard, while those not adopting (and/or rejecting) new technologies were labeled as 'laggards' and viewed disparagingly. This dominating techno-strategic discourse according to critics such as Kloppenburg (1991) assumed that farmers had nothing to contribute; their knowledge and skills were marginalized and discredited. Agricultural extension was seen in these terms as espousing, uncritically, pro-corporate ideology and was criticized as being the handmaiden of the scientific-industrial agribusiness complex in that it accepted that all farming problems could be overcome by the continued application of conventional science. Furthermore, research institutions were also criticized as developing technologies that were not value-neutral and often resulted in creating greater social and economic inequalities. Thus, the knowledge transfer approach to science as the domain of knowledge elites was seen as problematic for the inclusionary ethos of the human development paradigm.

Human Development Approaches

These criticisms have led to the waning of this dominant paradigm in research and theory and to the formulation of human development approaches based on the principles of participation, empowerment, and ownership of the problem. Increasing interest in multifunctional land management – a general challenge to technocracy and scientific superiority – persistent environmental problems, and the need to develop more sustainable agriculture provided the backdrop for this paradigm shift. With human development approaches, the implication was that, given the right conditions, information, mutual interaction, and opportunity, land managers will use their own knowledge and develop their own appropriate solutions to their problems. These approaches view the extension process as facilitation of social learning, a philosophy focusing on participatory processes of social change. They give validity to expert and non-expert forms of knowledge and are thought more likely to lead to adaptive forms of environmental management and longer-lasting or more effective outcomes. Scholars also argue that such approaches are particularly suited to understanding the transformation towards more sustainable agriculture, a process that they thought to require mutual interaction between actors. The Wageningen School (Roling 1992; Roling and Wagemaker 2000) was central in providing theoretical conceptualizations to underpin these developments and in using systemic approaches (Agricultural Knowledge Systems) as frameworks for understanding the multiple actors and processes of knowledge exchange they were involved in. The human development approach is analogous with theories of negotiated knowledge in the broader field of deliberative governance, whereby intersubjective judgment is regarded as essential to effective decision making. This paradigm shift reflects wider changes in the disciplines of rural and development sociology and rural geography during the 1980s and 1990s where culturalist or subjectivist views emerged in a post-Marxist era to counter the perceived determinism of political economy.

Agricultural research and extension organizations have, to a varying degree, become involved in various human development approaches. Research and development in developing countries embraced participatory methodologies such as the farming systems approach (FSA), participatory rural appraisal (PRA), and participatory technology development (PTD). Chambers et al. (1989) were the early exponents of these participatory approaches. These approaches have been reviewed extensively (see Garforth and Usher 1997; Black 2000). In extension, Farmer Field Schools, where participatory training and hands-on experimentation are a key principle, gained prominence in many developing countries. Scholars and policy makers have also documented a number of cases which exemplify effective facilitation of farmer learning, such as the Australian Landcare initiative and farmer learning groups in the Netherlands.

Although seen as an improvement on the failings of the knowledge transfer model, scholars have voiced a number of criticisms of human development models and methodologies. These have been divided under five main themes (Black 2000): firstly, the lack of a coherent theoretical foundation; secondly, the lack of attention to

issues of legitimacy, accountability, and representation; thirdly, the problems associated with poor participation practices; fourthly, the difficulties and dangers in working with multiple forms of knowledge; and finally, the political dangers inherent in shifting responsibilities from the state to civic society. Issues such as the professional identity of scientists, the skills base and available human resources, and perceptions concerning the validity of research methods have arisen in practice. Most researchers argue that participation involves ensuring the knowledge and views of people that are more equitably incorporated in decisions and consider that this requires managing and reforming the power relationships.

Summary

Today there is recognition that sustainable agriculture, which encompasses balancing agricultural production with elements such as ecosystem protection, the continuing supply of natural resources, and the well-being of rural communities, needs to be supported by diverse knowledge systems which draw on both local and scientific knowledge. In policy circles in industrialized countries, the language and discourse are changing from one of knowledge transfer to one of knowledge exchange which is seen as a key device for achieving change in the agricultural context, particularly where voluntary participation for environmental protection is encouraged. However, issues still remain in effectively implementing knowledge exchange such as how to evaluate the outcome of knowledge exchange activities, how to accommodate different cultures, how to deal with power relationships, and how to develop effective techniques and tools (Fazey 2012).

In agricultural development arenas, the social and political dimensions of knowledge generation and exchange remain the focus of interest but with a move towards improving understanding of knowledge entrepreneurship and marketing, knowledge brokerage, governance and networks and alliances which can reconcile the needs of scientists and of locals through new forms of equitable collaboration which go beyond what some observe to be the somewhat "tired discourse of participation" (Scoones and Thompson 2009). The debate has moved on from a concentration on the interaction between farmers and technologies/science to incorporate wider perspectives of institutional change. The concept of the Agricultural Innovation Systems is becoming popular as a way of framing the processes of networking and interactive learning among a heterogeneous set of actors, which go beyond knowledge producers and consumers.

Cross-References

► Agricultural Ethics

References

Black, A. W. (2000). Extension theory and practice: a review. *Australian Journal of Experimental Agriculture, 40*(4), 493–502.

Buttel, F. (2001). Some reflections on later twentieth century agrarian political economy. *Sociologia Ruralis, 4*(2), 165–181.

Chambers, R., Pacey, A., & Thrupp, L. A. (Eds.). (1989). *Farmer first, farmer innovation and agricultural research*. London: Intermediate Technology Publications.

Eshuis, J., & Stuiver, M. (2005). Learning in context through conflict and alignment: farmers and scientists in search of sustainable agriculture. *Agriculture and Human Values, 22*, 137–148. doi:10.1007/s10460-004-8274-0.

Fazey, I., Evely, A., Reed, M., Stringer, C. , Kruijsen, J., White, P., Newsham, A., Jin, L., Cortazzi, M., Phillipson, J., Blackstock, K., Entwistle, N., Sheate, W, Armstrong, F., Blackmore, C., Fazey, J., Ingram, J, Gregson, J., Lowe, P., Morton, S. and Trevitt, C. (2012). Knowledge Exchange: a Research Agenda for Environmental Management. *Environmental Conservation 40*(1), 19–36.

Garforth, C., & Usher, R. (1997). Promotion and uptake pathways for research output: a review of analytical frameworks and communication channels. *Agricultural Systems, 55*(2), 301–322.

Kloppenburg, J., Jr. (1991). Social theory and the de/reconstruction of agricultural science: local knowledge for and alternative agriculture. *Rural Sociology, 56*(4), 519–548.

Knorr-Cetina, K. D. (1981). *The manufacture of knowledge: an essay on the constructivist and contextual nature of science*. Oxford: Pergamon Press.

Long, N., & Long, A. (Eds.). (1992). *Battlefields of knowledge: the interlocking theory and practice of social research and development*. London: Routledge.
Molnar, J. J., Duffy, P. A., Cummins, K. A., & Vam Santen, E. (1992). Agricultural science and agricultural counterculture: paradigms in search of a future. *Rural Sociology, 57*(1), 83–91.
Murdoch, J., & Clark, J. (1994). Sustainable knowledge. *Geoforum, 25*(2), 115–132.
Norgaard, R. (1984). Traditional agricultural knowledge: past performance, future prospects and institutional implications. *American Agricultural Economics Association, 66*, 874–878.
Richards, P. (1985). *Indigenous agricultural revolution*. London: Hutchinson.
Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
Roling, N. (1992). The emergence of knowledge systems thinking: a changing perception of relationships among innovation, knowledge process and configuration. *Knowledge and Policy, 5*(1), 42–64.
Roling, N. G., & Wagemaker, M. A. E. (Eds.). (2000). *Facilitating sustainable agriculture* (pp. 232–249). Cambridge: Cambridge University Press.
Scoones, I., & Thompson, J. (Eds.). (1994). *Beyond farmer first: rural people's knowledge, agricultural research and extension practice*. London: Intermediate Technology.
Scoones, I., & Thompson, J. (Eds.). (2009). *Farmer first revisited: innovation for agricultural research and development*. Oxford: ITDG Publishing.
Whatmore, S. J. (2009). Mapping knowledge controversies: science, democracy and the redistribution of expertise. *Progress in Human Geography, 33*, 587–598.
Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. In S. Lash, B. Szerszynski, & B. Wynne (Eds.), *Risk, environment and modernity: towards a new ecology* (pp. 44–83). London: Sage.

Farms: Small Versus Large

Douglas H. Constance
Department of Sociology, Sam Houston State University, Huntsville, TX, USA

Synonyms

Farms: operations; Large: corporate; Small: hobby

Introduction

The industrialization of agriculture has created a farm structure where a small percentage of large farms account for a large percentage of sales and a large percentage of small farms account for a small percentage of sales. In general, these large farms produce for indirect global commodity markets, while the small farms participate in direct sales markets. In between are the shrinking mid-sized farms that are too small for commodity markets but too large for direct markets. While explained by some scientists as progress and supported by productivist perspectives of agrifood production, the industrialization of agriculture has important negative implications for the quality of life in rural communities in particular and society in general. This entry applies a Sociology of Agriculture conceptual frame to the case of the changing structure of agriculture in the USA to inform discussions regarding ethical dimensions of the industrialization and globalization of the agrifood system. First, the information and data regarding changing farm structure are reviewed. Next, the salient Sociology of Agriculture literature is presented to context and evaluate the data. Finally, a summary is provided.

The Data on Farm Structure and Size

Farm numbers decreased as average farm size increased during the twentieth century. In 1945 there were over 5.8 M farms, with an average size of 195 acres; in 2002 the total was just over 2.1 M farms averaging 441 acres. From 2002 to 2007, the number of farms increased by 75,810, with a stabilization of farm size at 400+ acres. Most of this growth came from an increase in small operations; farms with $1,000 in sales or less increased by 118,000, while those with more than $500 K in sales increased by 46,000. The mid-sized operations decreased. US agriculture is characterized by a dual structure whereby a few very large farms have a large percentage of sales and many small farms have a small percentage of sales. In the 2007 Census of Agriculture, the only

farm categories that increased in number were the smallest (less than 2.5 K sales) and the largest (more than $500 K sales) (USDA 2012).

Total agricultural sales increased significantly from $200.6B in 2002 to $297.3B in 2007. Commodity sales are ranked: cattle/calves (20.6 %), corn (13.4 %), poultry/eggs (12.5 %), milk/dairy (10.7 %), soybeans (6.8 %), fruits/nuts/berries (6.3 %), hogs/pigs (6.1 %), nursery/floriculture (5.6 %), asst. fruits/veggies (4.9 %), and others (12.0 %). The largest operations increased their share of production from 2002 to 2007. Farms with more than $1 M in sales increased their share from 47 % to 59 %. The number of farms that accounted for 75 % of total sales decreased from 144 K to 125 K farms. Using the USDA typology, large family farms ($250–500 K sales) and very large family farms (greater than $500 K sales) made up 9 % of farms but accounted for 63 % of sales. The larger the operation, the less likely it engaged in off-farm work and more likely it hired labor and received government commodity payments. These data from the 2007 Census of Agriculture confirm the continuation of a trend toward more small and very large farms and fewer mid-sized farms (USDA 2012).

The steady decline in the number of small farms stabilized in the 1992 Census. In 2007 small farms made up 91 % of farms and accounted for 37 % of sales. All of the increase is at the bottom of the "small farm" category (less than $10 K sales). At the high end, farms with sales between $100 K and $250 K decreased by 7 %. Using the USDA typology, the high percentage of "residential/lifestyle" (36 %) combined with "retirement" (21 %) and "limited resource" (12 %) types of small farms are increasing, but the "farming occupation/lower sales" (11 %) category is decreasing. Keeping in mind the differences in the small farm category, small farms tend to rely on off-farm income, not hire labor, not rely on government commodity payments, but do rely on government transfer payments (such as social security). The higher end in sales are commercial operations, just smaller; the lower end in sales are noncommercial, in that there are usually other forms of income. The groups in the middle ($10–100 K) are the most likely to engage in direct sales (USDA 2012).

Direct sales operations tended to be small farms with less than $250 K sales. The number of direct sales farms increased by 17.2 % to 136,817 farms, but accounted for only $1.21B in sales (of the total $297.2B), only 0.4 % to total farm sales. The limited resource, retirement, and residential/lifestyle types accounted for 93.3 % of direct sales. A majority of "new farms" are smaller and also rely on off-farm income. Since the 2002 Census, 291 K new farms started operations. New farms tend to be about ½ as big as national average (201 vs. 418 acres; $71 K vs. $135 K in sales). The small and new farmers tend to report that farming is not their primary occupation (USDA 2012).

In summary, the consolidation trend continues as the largest operations gain market share. But there is also growth in the small farm category linked to new farms and direct sales. The mid-sized farms continue to decline in numbers. There also appears to be a stabilization of average farm size.

The Discourse on Farm Structure and Size

Previous to the 1970s, discussions about farm structure and size were couched in a functionalist language that saw the growth of large farms as a natural evolution of economies of scale and a specialized division of labor. The adoption-diffusion framework was embraced uncritically assuming that the implementation of scientific agriculture based on technological innovations improved efficiency and enhanced the quality of life for society. Technologies such as machinery, synthetic fertilizers, and pesticides allowed agriculture to break free of the historical metabolic constraint that limited farm size. As long as animals were the primary source of fertility for crops, farm size and crop specialization were constrained. Synthetic fertilizers, combined with synthetic pesticides, allowed large-scale monoculture and rapid advancement of industrial agriculture and farm size.

Any negative impacts on rural communities were interpreted as creative destruction as simple social systems based on moderate-sized diversified operations evolved into large-scale specialized operations. It was the Land Grant University system's mandate to modernize agriculture by providing public education to the common people and then extending that research and education to farmers. Progressive farmers should adopt the technologies for the benefit of society. Social movement activity and concerns about rural quality of life prompted the US government to pass legislation during the New Deal Era to support family farms with subsidies. Even as agrarian social movements attempted to stem the tide of industrial agriculture, the modernist project was solidifying its institutional agenda in the Land Grants, USDA, agricultural committees in Congress, and commodity organizations. From the industrial perspective, science and industrial agriculture were about to end world hunger and develop all nations.

Although scientific agriculture generated a huge increase in productivity per acre, in the 1970s this productivist paradigm came into question as the unintended consequences and negative externalities of industrial agriculture became apparent. Rural social scientists embraced critical frameworks to interpret the impacts of industrial agriculture on rural America. A Sociology of Agriculture literature was rediscovered and enhanced. First, the ecological crisis of industrial agriculture manifested in the form of ecosystem degradation, particularly the effects of chemical-intensive agriculture. The productivity gains, and associated profits, were subsidized by externalizing costs onto the environment. This crisis generated a literature that addressed the Environmental Question: What is the relationship between industrial agriculture and environmental quality? Political ecology perspectives (Buttel 1987) exposed industrial agriculture as an extractive, chemical-intensive, monoculture system with negative impacts of soil erosion, water quantity and quality degradation, species depletion, and pest resistance. While industrial agriculture increased productivity and lowered food costs, the metabolic rift removed animals as the source of crop fertility and thereby generated unintended environmental consequences. This research documented that industrial agriculture was unsustainable ecologically.

Second, a Sociology of Agriculture literature emerged in the 1980s around the Agrarian Question (Buttel and Newby 1980). The Agrarian Question asks: What is the relationship between the structure of agriculture and the quality of life in rural communities? The Farm Debt Crisis of the 1980s accelerated the historical trend (noted above with USDA data) of a bifurcation of agriculture into a small percentage of large farms that produce most of the agrifood commodities and a large percentage of small farms that produce a small percentage of the foodstuffs. The mid-sized farms were disappearing. Large farms linked to global commodity chains found themselves on a technology and debt treadmill that forced them to expand acreage to capture decreasing per acre profits, while smaller operations were either forced out of farming or relegated to the margins as hobby farms. Mid-sized family farms survived through super-exploitation of family labor and off-farm income. Rural communities made up of mid-sized farms were often decimated in the process of farm consolidation (Magdoff et al. 2000).

As the Agrarian Question gained traction, a political economy of agriculture perspective rediscovered the works of Walter Goldschmidt (1947) on the relationship between farm structure and community quality of life. Those studies revealed that middle-class, family-farm systems of agriculture contributed to a higher community quality of life than industrial systems based on absentee ownership and hired labor. The Goldschmidt findings were supported by recent research (Lobao 1990; Lyson 2004). During this time the works of Aldo Leopold and Wendell Berry provided an alternative philosophical position grounded in Jeffersonian Agrarianism. While many in the agricultural community, such as agricultural economists at the Land Grant Universities, the commodity associations, and the USDA, continued to support industrial agriculture, the legitimation crisis was building as

farmers and environmental organizations criticized industrial agriculture as unsustainable.

Guided by the Agrarian Question, rural social scientists investigated the impacts of farm size and structure on rural quality of life. While one has to be careful not to conflate size and scale, they are often related. Farm structure refers to the ownership pattern in agriculture. For example, is the structure based on independent producers (family farmers), contract farmers (such as in poultry or hogs), or corporate farms (separation of ownership and management/labor)? As noted above, following Goldschmidt and others, a middle-class, family-farm-based system of agriculture made up of independent producers supports rural quality of life. Contract farming is seen as an intermediary step toward a corporate structure, where integrators control the labor process without direct ownership. Family-farm systems of agriculture create a more vibrant community system that generates social capital, community attachment, and socioeconomic development. As agriculture moves from an independent to a corporate structure, there is a weakening of community attachment and a transfer of wealth from the producer to the corporate shareholder, decreasing the quality of life in rural areas. Additionally, farm structure includes the relationship between the farm operation and the input and output markets. Agribusiness vertical and horizontal integration accelerated in the 1980s leading to input and processing oligopolies. Farmers were increasingly at an economic disadvantage as they bought from and sold to concentrated markets (Heffernan 2000). The ecological metabolic rift made possible by industrial agriculture also generated negative impacts on rural social well-being.

Farm size, as measured by gross sales, intersects with structure as the larger operations sell a few undifferentiated commodities in indirect markets in the global agrifood system. Many of these operations are family-owned but are incorporated due to their large size (USDA typology: large and very large family farms). These large operations, both family-based operations and corporate, are linked to agrifood TNCs through commodity chains, increasingly "driven" by large retailers such as Walmart and McDonald's. With the increasing globalization of the agrifood system, these operations compete as lowest-cost producers in global commodity chains and again find themselves caught between powerful input (fertilizer, pesticides, and seed) suppliers and processing corporations (wheat, soybean, corn, meat) such as ADM, Cargill, JBS, Monsanto, and Tyson (Magdoff et al. 2000). A caveat is needed here. Not all large farms are large in size of acreage. Fresh fruit and vegetable operations can be small in size but large in sales and still tend to produce for commodity markets. Furthermore, these operations rely heavily on farm labor, often undocumented, which returns us to negative community impacts of the Goldschmidt findings.

The legitimation crisis associated with negative impacts of industrial agriculture also reached consumers. The Food Question asks: What is the relationship between industrial agriculture and the quality of the food we eat? Consumers and producers are concerned about the poor quality of the highly processed industrial food. Concerns about animal welfare, pesticide contamination, antibiotics overuse, *E. coli* and salmonella, and an "empty calories" diet generated a demand for healthier food, referred to as the "quality turn" in agrifood studies. Consumers want scientifically grown food, but want it grown reflexively, with more concern for the ecological, social, and economic impacts. The fact that sustainable agriculture is discussed in the mainstream validates the crisis of industrial agriculture (Allen 2005). This body of research documented that industrial agriculture was unsustainable socially.

Small farms became the site to produce this healthier food. Beginning with the organic movement, small agro-ecological producers became linked to political consumers and began to build an alternative agrifood system (Guthman 2004). This alternative agrifood movement expanded to include community-supported agriculture (CSA), Slow Food, farmers markets, Chef's Collaboration, fair trade, farm to institution, agritourism, and Agriculture of the Middle (Morgan et al. 2006; Hinrichs and Lyson 2009). Small farms tend to operate in direct-sale value chains

that support social capital and retain more wealth in the community.

Some explanation is necessary. Commodity chain analysis (Gereffi and Korzeniewiez 1994) identifies which actors along the supply chain generate value and drive the chain. Those actors who drive the chain tend to capture a disproportionate share of the value along the chain. For example, undifferentiated commodity chains, such as number 2 yellow corn, include thousands of producers and a few large input suppliers and processing firms. Most of the value in the chain is generated by the producers through their labor value, but because the corporations "drive the chain," they extract a greater share of the value due to their market power. Commodity chain analysis reveals that it can be hazardous for farmers to attach themselves to global commodity chains where they are sourced as low-cost suppliers. As mentioned above, these operations must expand and capture economies of scale to survive in concentrated markets linked to food retailers that increasingly drive the global commodity chains.

Supporters of alternative agrifood systems delink from this commodity system and operate in value chains based on identity preserved and/or direct sales. Value chains return a higher proportion of the value to the producer. Organics provided the ecological basis for this system (Guthman 2004), and fair trade provides the ideological underpinnings (Raynolds et al. 2007). Organics is a value chain where producers are rewarded for ecological production. Fair trade is an attempt to create transparent and cooperative relationships that reveal where the value is generated and apportioned along the chain. It began as a way to link producers in the global South with consumers in the global North and eliminate the corporate middlemen that extracted an unfair share of the value along the commodity chain. Coffee and bananas are early examples of the fair trade initiative. Fair trade repossesses the value that was taken by the corporate drivers of the commodity chains.

Agricultural ethicists have provided a philosophical framing of these dual agrifood systems (Thompson 2010). The industrial perspective sees agriculture as just another part of industrial society where commodities are produced at the lowest cost; the trend to consolidation is just economies of scale at work to lower cost. This system must be exported to ensure sustainable food production for the world. Landscapes are viewed in terms of the commodities they can produce, and while there are some concerns with labor, community, environment, and animal welfare, these externalities can be addressed. From this view, sustainable equals produce more with less. The agrarian perspective views agriculture as having important social functions beyond efficient commodity production, such as providing ecological services and ecosystem functional integrity. Agriculture should be embedded in the local community, and consolidation negatively impacts the sustainability of local community quality of life. This view includes arguments of fair trade, fair labor, and animal welfare and asserts that a major departure from industrial agriculture is needed because that model is extractive and not sustainable.

Summary

The USDA provides interesting data to engage the Sociology of Agriculture literature. There is a dual agriculture in the USA with a few large farms dominating sales in global markets and numerous small farms expanding direct sales at the local/regional level. These trends are both concerning and encouraging. Industrial agriculture is problematic for many rural communities. Where agriculture is an important component of the economic base of a region, the quality of life in rural America is influenced by the size and structure of agriculture. Farmers and communities linked by agrifood corporations to global commodity chains are in precarious positions where the firms driving those chains can use their market power to extract surplus value along the chain and whipsaw them as lowest-cost producers. Arrangements that benefit the commodity farmers are temporal; vertical and horizontal integration will push toward

economics of scale and lowest-cost producer survival. Corporate quarterly return on investment drives the global commodity chains. Because of its market power and profit logic, it often extracts instead of contributes to wealth in rural communities. The technological focus maintains the productivist approach as the industrial model is diffused globally.

It is encouraging that the beyond organic system of smaller-scale agrifood production has expanded to include thousands of CSAs, multiple food to institution initiatives, an explosion of farmers markets, and a Slow Food movement as part of a local-food resurgence. The USDA data presented above quantifies the growth of small farms and direct sales that support these local and regional agrifood systems. Food policy councils have emerged to provide a governance function to the alternative agrifood movement. The region is the optimal unit of analysis as it is big enough for some economies of scale for Agriculture of the Middle producers and small enough for relationship marketing by smaller producers. Informed by civic agriculture, the optimal model is regional fair trade value chains with governance provided by regional food policy councils. This reflexive form of agrifood production acknowledges the mistakes of the past associated with uncritical adoption of agricultural technologies and attempts to internalize the externalities through the creation of sustainable agriculture (Allen 2005; Beck 1992).

Following the agrarians Leopold, Goldschmidt, and Berry, the erosion of agrarian values accompanied by the ascent of industrial philosophy and declining social well-being has been traced (Thompson 2010). A distancing from the roots of agrarian culture grounded in land, hard work, own boss, and community creates selfishness and decreased quality of life. Industrial values create instrumental over substantive forms of rationality, a focus on maximizing self-interest in econometric relationships with little concern for the public good. To fix the problem, farmers, rural communities, and citizen consumers should delink from the global agrifood system and create sovereign agrifood systems based on agrarian philosophies and civic agriculture. Building upon civic agriculture (Lyson 2004) as the production model, a "culture of the table" is a place where people can rebuild agrarian values (Borgmann 2006), a place where stories about where the food came from are told slowly and substantively.

Transformative change is needed to make the agrifood system sustainable (National Research Council 2010). Alternative agriculture is the transformative dimension. Re-embedding agriculture in community through local and regional agrifood systems organized as regional fair trade value chains can revitalize parts of rural America. While currently only a tiny fraction of total agrifood production is accounted for by alternative value chains, there is substantial movement in this direction. The small farms expansion in the USA is part of the growing resistance to industrial agriculture, part of the global food sovereignty movement for farmers, consumers, and indigenous peoples (Wittman et al. 2010). The alternative system is diffusing across the USA and the world, and rural social scientists should provide support to the movement. The discourse on sustainability around food security (industrial) and food sovereignty (agrarian) models provides teachable moments. Food sovereignty movements such as Via Campesina are social justice movements. They challenge the neoliberal restructuring of civil society in favor of capital over people (Harvey 2005). The fourth question in agrifood studies, the Emancipatory Question (Constance 2008) asks, "What is the relationship between industrial agriculture and social justice?" An ethical agrifood system would minimize environmental, economic, and social forms of injustice.

Organics engages the environmental injustice dimension. But conventionalization has blunted the early transformative dimensions of organics, as evidenced by the trends toward larger operations using hired labor and organic input substitution practices to produce for global commodity markets and plus market consolidation (Guthman 2004). The small farms movement has potential to avoid market power dimensions and allow producers to get fair value for their production. Fair wages for farm labor are a more difficult

dimension. Local food is surging, but local may include unethical dispositions to racism or sexism. The class dimension of quality foods also has to be resolved.

Although many of the actors participating in the alternative agrifood movement are not informed by agrarian values, such as the pragmatic conventional farmers growing organics, their actions are creating the desired result. There is movement in a more ethical direction for the agrifood system, and small farms are leading the way. This movement is encouraging for ecological, economic, and social sustainability and quality of life.

Cross-References

- ▶ Community-Supported Agriculture
- ▶ Corporate Farms
- ▶ Economy of Agriculture and Food
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Jefferson's Moral Agrarianism
- ▶ Sustainability of Food Production and Consumption

References

Allen, P. (2005). *Together at the table: Sustenance and sustainability in the American agrifood system*. University Park, PA: The Pennsylvania State University Press.

Beck, U. (1992). *Risk society: Towards a new modernity*. Thousand Oaks, CA: Sage.

Borgmann, A. (2006). *Real American ethics: Taking responsibility for our country*. Chicago, IL: University of Chicago Press.

Buttel, F. H. (1987). New directions in environmental sociology. *Annual Review of Sociology, 13*, 465–488.

Buttel, F., & Newby, H. (Eds.). (1980). *The rural sociology of advanced societies: Critical perspectives*. Montclair, NJ: Allanheld and Osmun.

Constance, D. (2008). The emancipatory question: The next step in the sociology of agrifood systems. *Agriculture, Food, and Human Values, 25*, 151–155.

Gereffi, G., & Korzeniewiez, M. (1994). *Commodity chains and global capitalism*. Westport, CT: Praeger Press.

Goldschmidt, W. (1947). *As you sow*. Glencoe, IL: The Free Press.

Guthman, J. (2004). *Agrarian dreams: The paradox of organic farming in California*. Berkeley, CA: University of California Press.

Harvey, D. (2005). *A brief history of neoliberalism*. Oxford, UK: Oxford University Press.

Heffernan, W. D. (2000). Concentration of ownership in agriculture. In F. Magdoff, J. B. Foster, & F. H. Buttel (Eds.), *Hungry for profit: The agribusiness threat to farmers, food, and the environment*. New York: Monthly Review Press.

Hinrichs, C. C., & Lyson, T. (Eds.). (2009). *Remaking the North American food system: Strategies for sustainability*. Lincoln, NE: University of Nebraska Press.

Lobao, L. (1990). *Locality and inequality: Farm structure, industry structure, and socioeconomic conditions*. Albany, NY: The State University of New York Press.

Lyson, T. (2004). *Civic agriculture: Reconnecting farm, food, and community*. Medford, MA: Tufts University Press.

Lyson, T., Stevenson, G. W., & Welsh, R. (Eds.). (2010). *Food and the mid-level farm: Renewing an agriculture of the middle*. Cambridge, MA: MIT Press.

Magdoff, F., Bellamy Foster, J., & Buttel, F. H. (Eds.). (2000). *Hungry for profit: The agribusiness threat to farmers, food, and the environment*. New York: Monthly Review Press.

Morgan, K., Marsden, T., & Murdoch, J. (2006). *Worlds of food: Place, provenance, and power in the food chain*. Oxford, UK: Oxford University Press.

National Research Council. (2010). *Toward sustainable agricultural systems in the 21st century*. Washington, DC: National Academies Press.

Raynolds, L., Murray, D., & Wilkinson, J. (Eds.). (2007). *Fair trade: The challenges of transforming globalization*. New York: Routledge.

Thompson, P. (2010). *The agrarian vision: Sustainability and environmental ethics*. Lexington, KY: University of Kentucky Press.

USDA (United States Department of Agriculture). (2012). *2007 census of agriculture*. http://www.agcensus.usda.gov

Wittman, H., Desmarais, A., & Wiebe, N. (Eds.). (2010). *Food sovereignty: Reconnecting food, nature and community*. Black Point, NS: Fernwood Publishing.

Fasting

Ken Albala
Library Reference, University of the Pacific, Stockton, CA, USA

Synonyms

Abstinence; Asceticism; Inedia; Mortification; Penitence; Purgation

Introduction

Voluntary fasting as opposed to inedia induced by psychological disorder or famine poses a number of ethical quandaries. First, since eating is a biological prerequisite for life, it would appear contrary to the dictates of survival that fasting could be used to promote health. Yet from a purely evolutionary vantage point, as gatherers and hunters, our bodies have adapted to an unpredictable food supply and even flourish without regularly scheduled meals, which are the product of a sedentary lifestyle and comparatively dependable food supply, fairly recent in the history of our species. Moreover, in the past ten millenia, the possibility of overeating has given fasting a purgative function for those able to overindulge. Several days without food has been considered physically cleansing, but obviously, there is a limit to the extent humans can go without food before wasting away and dying.

Fasting Through History

In addition, fasting has been thought to provide a form of spiritual refreshment by shedding excess corpulence, denigrating the body, and thereby strengthening the soul. In many religious traditions, fasting is an act of penitence, a form of contrition, intended to punish the body and impress upon supernatural beings the earnestness of human endeavors and willingness to reform. Both the individual occasional fast and the communally prescribed fast held on regular holy days or emergent situations such as impending disaster, war, disease, or even, oddly enough, famine were believed to communicate directly to God and appease his wrath. That is, assuming such calamities were sent as a form of punishment, the fast thus becomes a means of regaining favor.

Likewise, for the disempowered, fasting has been a means of exerting the human will when no other recourse is possible. The slave who refuses food and prefers death to submission, the prisoner who fasts as a form of political protest, and, even on a less ostensibly intentional level, the anorexic whose life is completely at the mercy of superiors has one last means of empowerment in controlling food intake, often to pathological extremes. Whether for health, spirituality, or gaining power over oppressors, fasting is nonetheless a potentially dangerous practice, and despite heroic feats of going without food attributed to holy figures and medical marvels, the human body is gradually destroyed without suitable sustenance.

This entry will recount numerous examples of fasting drawn from history and the present, to provide both a taxonomy of the practice and an inquiry into the ethical ramifications of going without food, how it impinges on our existence as individuals, and the many benefits it has been thought to confer.

In the Jewish tradition, there are two principle types of fast although both are intended to be a means of communicating with God contrition and atonement. The book of Leviticus (XXIII, 26–32; XVI, 29–31) specifies that on the seventh month on the tenth day "ye shall inflict your souls" meaning no work can be done and no food eaten. The intention is to cleanse the soul by meditating on one's sins and separating from them. This holy day, which extends from sundown to sundown, called Yom Kippur, is still practiced even by many completely secular-minded Jews. There are several other fasts, usually observed strictly only by Orthodox Jews: Tisha B'Av commemorates the destruction of the First (586 BC) and Second Temple (70 AD) as well as the expulsion from Spain (1492) and the Holocaust, as well as other calamities. There are also lesser fasts such as the Fast of Esther before Purim, the fast of the first born before Passover, and a few others (Cooper 1993).

There are also voluntary individual fasts in the Jewish tradition, such as when Moses fasted 40 days and nights, when Joel tried to avert God's wrath, or when David repented for his adulterous relationship with Bathsheba. Similar acts of repentance were performed by Jesus and his disciples and the question of whether fasts should be regularly scheduled, should consist of complete abstinence from food or only from certain foods and for certain hours, remained a major question throughout the history of Christianity.

In biblical Judaism, there were also public fasts for emergencies, when invading armies threatened or some other impending disaster.

The larger question though is why would abstinence from food please God? Why would intentional suffering constitute a meritorious act – in Hebrew a *mitzvah*? Eating is certainly pleasant and a distraction from more serious matters. But more importantly, fasting is a sign of remorse, to show seriousness of purpose and true contrition. Going through the formal motion, the empty ritual itself, is to no avail, and in fact biblical fasting would have been accompanied by weeping, beating the chest, tearing one's clothes, and strewing ashes on one's head. Most importantly, the act of fasting is meaningless unless accompanied by a true intention to improve one's ways. This is why Isaiah recommended fasting in private, so as not to draw attention or praise from others.

The Hindu tradition also embraces many fasts, and devotees to a particular God often fast on a certain day: followers of Shiva on Mondays and Vishnu on Thursdays. Festivals such as Maha Shivratri (Shiva's Day) or the week before Diwali are also fast days. Other fasts are performed in specific localities in honor of various deities and may entail complete abstinence from food or of meat only. These are considered *vrata*, an obligation or promise intended to gain blessings and favor with the Gods. The word *vrata* is cognate with vow, and thus it is a kind of stated agreement between the individual and deity to perform certain actions such as fasting, in return for benefits.

Asceticism, including fasting, is also a major current in Hindu worship, accompanied by meditation, yogic practice, and sometimes bodily mortification. These are intended as means to spiritual purification, renouncing worldly pleasures to attain wisdom. Jains also practice asceticism, along with nonviolence, giving up possessions, and other austerities including celibacy for monks. It was this tradition of asceticism that Siddhartha Gautama tried after leaving home in his search for wisdom but eventually rejected in favor of the "middle way" by which one neither longs for pleasures nor seeks merit in extreme self-denial – but rather detaches from such matters as essentially unimportant and eating merely to live. The Theravada Buddhist traditions follow this middle way, whereas the Mahayana of China and Japan, monks are usually vegetarian. Many Buddhist monks do not eat a meal in the evening, though this is primarily for health reasons and not considered a proper fast. These interdenominational or confessional disagreements over fasting are common in most religious traditions.

As Christianity began to define itself as separate from Judaism, the question of fasting was seriously considered by authors such as Tertullian and Basil. While it was clear that the kosher laws of the Old Testament had been abrogated and there were occasions when Jesus and his disciples consciously ignored Jewish custom, they did fast for emergent occasions. Jesus, like Moses, fasted 40 days and nights in the desert. His disciples did likewise to atone for sins. Early Christianity also embraced asceticism which stressed physical denial as a path to spiritual strength. But these were acts of holy men and sometimes women, certainly not possible for ordinary people. Gradually the church instituted regular days of fasting, every Saturday, starting on sundown Friday night; the vigils of saints' days; the so-called quatuor tempori or Ember Days; and most importantly Lent, the 40 days between Ash Wednesday and Easter minus Sundays. The evening before particular saint's days might be set aside for fasting, in some places, Wednesdays as well. There was wide divergence in practice (Henisch 1976).

These fasts did not involve total abstinence from food, merely one meal a day before sundown and sometimes smaller collations or snacks in the morning or evening, but no meat or meat products were allowed. The original logic was primarily medical: meat was categorized as hot and moist and very nutritious. It increases the libido and therefore inclines one to sin (Shaw 1998). Contrariwise, fish and vegetables are cold and aid in sexual abstinence. Many monastic orders inclined toward vegetarianism for these reasons, though in the course of the Middle Ages, this position became suspect as heresy.

The Albigensians had declared all matter sinful and refused to eat meat and eventually all food, some adherents starving themselves to death. This was obviously considered a sin, but so too was permanent avoidance of flesh since the New Testament says in many places that all food is good.

Fasting regulations applied to all people with exceptions for illness, pregnancy, and age, but individuals and sometimes whole towns could purchase exemptions allowing them to consume some meat products, perhaps butter, or even meat on fast days. By the sixteenth century, there was perceived to be widespread abuse of these regulations. Moreover by turning to the scripture as a higher authority over tradition, many Protestant reformers found no biblical warrant for regularly scheduled fasts. For Martin Luther, private individual fasts were fine, since they are found throughout the Bible, but not the complex regulations that had arisen since. In the Reformed tradition, public fasts were imposed, exactly as in the Old Testament, to avert God's wrath during war and epidemics. Although most Protestant churches abandoned regular fasts, the Calvinist churches, along with public fasts, introduced a kind of year-round austerity in food and mode of living as an ideal. The Catholic Church retained earlier fasting practices and they stood in place, with traditions such as fish on Fridays, until the 1960s when the restrictions were loosened. Yet many Catholics still give up meat during Lent and on Friday nights.

Fasting in the Eastern Orthodox Churches is rather more rigorous, though it still involves giving up meat and meat products as well as oil and for some fasts fish as well and alcohol. There are also many more days through the calendar still observed as fasts, not only Lent but holy days throughout the calendar and normally any day at sundown the day before one intends to receive communion. The Pentecostal Church and the Mormons also have regularly scheduled fast days.

Muslims also fast, during the entire month of Ramadan, taking no food or drink from sunrise to sundown. It is considered one of the pillars of Islam, along with charity. The practice is intended to bring the faithful closer to Allah, through purification of both mind and body, since no negative thoughts or words are to be expressed either. A sumptuous meal often closes the observance in the evening.

Fasting for religious purposes in all cases assumes a certain relationship to God which can be improved. The Gods must be appeased, or in a certain sense convinced of sincerity and contrition before one can be absolved of sins. In most cases, the body is seen as a distraction hindering the full development of the spirit, which grows stronger through self-denial. Secular fasts are entirely different, though the motivation may be similar. Fasting is essentially a means of empowerment. Asserting control over the body gives one a sense of accomplishment and purpose and the ability to make negative situations better. Thus both religious and secular fasting may spring from similar psychological urges common to all people.

As Nietzsche described it, in the face of strong and powerful people whose values are strength and beauty, as well as eating meat in heroic portions, the weak and oppressed use abstinence as a kind of secret ethical weapon. The reward for such righteousness comes in the afterlife, in salvation. But Nietzsche saw it springing from a kind of spite directed at the powerful. Building on these ideas, Freud postulated that ordering and controlling the body is a substitution for not being able to act on our libidinal urges, so it makes perfect sense that the holiest of people, who deny themselves the most, would also be the most rigorous in self-chastisement, the ascetic in the past and the present. Both thinkers see fasting as a form of empowerment, but it is only one that could have been devised by the disenfranchised.

The empowering nature of fasting might even be true of the purgative fast intended only for improving health. A sense of bodily pollution, whether it be excess fat or a feeling of having consumed too many intoxicating substances, is a feeling of inadequacy that originates in the mind. It may be strongly influenced by cultural signals such as advertisements for weight loss or images of ideal bodies. At root this is similar to the sense of guilt and shame arising from ethical

failings. The body thus needs to be purged of sin – whether this is a sense of moral failing stemming from wrongdoings or from having consumed the "wrong" foods and drinks. The fast in both cases washes sins away, with divine intervention in one case and through scientific or quasi-scientific means in the other. The goal is the same, righteousness, happiness, and social approval.

There are several different varieties of therapeutic fasting, though they overlap in many respects. For example, an individual may undertake a voluntary weight loss fast, but a similar kind of fast or drastic reduction in food and abstinence from certain types of food might be prescribed by a physician. There are also fasts as part of standard regimens, before anesthesia or before testing for cholesterol levels. But these should be kept distinct from the fast which purports in and of itself to maintain health or affect cures. Such therapeutic fasts are nothing new, and even in ancient medicine, Hippocrates and Galen prescribed them for certain ailments. The former contended that people have a "physician within" or a certain internal force that heals when the body is not taxed by digesting food. Popular weight loss fasting regimens began to proliferate in the eighteenth century, the most renowned devised by George Cheyne, though it was mixed directly with a kind of religious purification as well (Guerini 2000). The secular fast as a form of therapy ran through medical thought for centuries, but fasting was not usually recommended for those in good health.

This changed in the late nineteenth century when the modern fasting fad spread in the wake of Dr. Henry S. Tanner's remarkable feat of going without food for 40 days. Physicians were present to monitor his health throughout the fast. It was staged at Clarendon Hall in New York City in 1880, and though he did lose about a pound a day, he came out of the experiment otherwise in good health. Edward Hooker Dewey thereafter published several books on the *Fasting Cure* and *No Breakfast Plan*. In these he described his experience curing people of ailments as diverse as melancholia, obesity, insanity, and chronic alcoholism. This was the era of rampant diet fads and health cures, the most famous advocated by John Harvey Kellogg. But fasting per se had its own enthusiastic adherents. Bernarr Macfadden, the body building guru, pushed fasting in his popular book *Fasting for Health* published in 1923. It was meant not as a curative but a general practice for all people. Herbert M. Shelton was probably the best-known advocate of "Natural Hygiene" in the twentieth century, and his book *The Science and Art of Fasting* was very popular, despite his being arrested many times for practicing medicine without a license. Although the motivations and goals of these figures may have differed, they all brought the idea of fasting in the popular imagination, as part of alternative medicine, dieting, and body building, and it remains a legacy of these people today. There are also many mainstream physicians today researching the effects of reduced calorie diets on longevity and the role that periodic fasting may play in maintaining health.

Another species of fasting which can also be therapeutic is the fast intended to aid in harnessing supernatural forces. Fasting is a part of most traditions of magic, here defined as an individual's ability by means of spells, amulets, incantations, and rituals to make use of occult powers to achieve specific tangible ends. That is, a purification ritual involving fasting usually precedes the magic ritual. Whether the individual starts hallucinating after prolonged abstinence, really believes he or she is controlling supernatural powers, or is a simple charlatan is irrelevant. Going without food is often believed to make that connection to unseen forces possible. This might be the alchemist seeking spiritual perfection, the shaman contacting spirits to cure a sickness, or a magus in any tradition.

The serious ethical dilemmas posed by fasting naturally grow with the extended duration of the fast. A day or two without food, or even several weeks without meat, will not destroy the body, but over a week without food and especially without water can have permanently damaging consequences including death. Whether any goal can justify self-destruction cannot be answered

here, though many individuals who have fasted as a form of protest have gained popular sympathy.

The most renowned example of a hunger strike was Bobby Sands, a Northern Irish activist working for the IRA who was imprisoned in the 1970s. From prison he wrote poetry and opinion articles and was even elected to Parliament. In 1981 he went on a hunger strike essentially demanding that prisoners such as himself be treated as political prisoners of war rather than common criminals. After 66 days without food, he died, gaining wide publicity and sympathy for the movement. Nine other hunger strikers followed to their deaths. These events raised many questions. They certainly increased awareness of the war in Northern Ireland, and recruits to the IRA increased in the following years, ultimately escalating violence. To some Sands was a hero fighting for freedom, to others a terrorist directly supporting the killing of innocent people.

From an ethical standpoint, the famous hunger strikes of Mahatma Gandhi against British rule of India, which took place from the 1920s to 1940s, were much more straightforward. As a revered public figure, the British were anxious not to let Gandhi die in prison and gain greater support. More importantly, these were calls to acts of nonviolent resistance and they of course ultimately achieved their goal of independence.

There have been many examples of hunger strikes among political prisoners since the 1980s, most recently among Palestinian prisoners in Israeli jails. The real ethical question is not whether damaging or killing yourself for a larger cause is justified, but whether a person fasting can be force-fed to save their life. A physician's duty is simply to save lives regardless of contingent circumstances, and while the World Medical Association has declared force-feeding degrading and inhumane, a physician may still follow his or her own conscience in saving a dying person. The negative stigma associated with force-feeding stretches back to the era of the women's suffrage movement when imprisoned women would be tied down and force-fed and even further back to African slaves who would be shackled and have food crammed through a funnel to prevent them from starving themselves. The question still remains though, is it ethical to fast to the point of death, to avoid enslavement, to gain rights, or as a form of political protest against oppression?

Similar ethical issues are raised by cases of miraculous fasting. There were several celebrated young women in the middle ages and early modern era who went for remarkable lengths of time without eating (Bell 1985). Some historians consider these cases of anorexia nervosa, though they might also be considered hunger artists, since they sometimes seemed to thrive on attention and notoriety. In either case, the root cause is similar to other fasts as well as to anorexia in general; they are an attempt to become empowered for those who feel out of control or helpless. In the medieval examples such as Lidwina of Schiedam who suffered a terrible skating accident, lost her appetite, and eventually gave up eating altogether for many years, the fasting was considered miraculous and she was later made a saint.

In later examples, observers seem to have been more skeptical, though physicians did often vouch for the truth of some amazing claims. Catharina Binder of Schmidweiler in Germany was still venerated in the 1580s, but in later examples, increasingly physicians sought natural causes or simply dismissed these cases as fraud. There was a celebrated case of one Barbara Kremer that was exposed as a sham in a book by Johannes Weir in the late sixteenth century. There were French cases, Jeanne Balam, and English ones, Martha Taylor, in the 1660s, and increasingly, scientific verification or explanation was sought. By the early nineteenth century, the celebrated fasting girl Anne Moore was uncovered as a fake. In these examples, it is clear that the typology of a "fasting girl" became so familiar that many young women could pretend, presumably as a way to get attention.

In the late nineteenth century, there was a further string of renowned fasting girls; the most infamous was that of the young Welsh girl Sarah Jacob, whose parents allowed her to be supervised in a hospital to verify the claim that she did not eat at all. Despite signs of starvation, her parents insisted they keep watching and the

girl eventually died. The parents were sent to prison for manslaughter (Jacobs-Brumberg 2000). There is no doubt that many of these cases were simply anorexia and that, rather than intentional deceit, the young women were merely exploited by others for fame and profit.

Profit is also very clearly the motive for the so-called hunger artist, and by the late nineteenth century, this was a recognized genre of performance with many well-known stars such as Giovanni Succi. The short story by Franz Kafka published in 1922 recounts an artist who fasts for entertainment in a cage, who despite his popularity is forced to stop after 40 days. Later he gets a job at a circus where he can break his own record, but no one is interested any more, and he eventually dies. Whatever the meaning of the story, it does coincide with the lack of interest in fasting as performance art in the modern era. On the other hand, magician and endurance artist David Blaine did fast for 44 days suspended in a plexiglass box near the Thames in 2003. Despite heckling, Blaine emerged as a hero, providing an example of human endurance, but one wonders what else?

In all cases mentioned, the great paradox of fasting is that the goal is to gain power, notoriety, and sanctity. By denying a fundamental physical requirement, which scientifically is known to be dangerous if prolonged, somehow people are thought to become stronger, more just, cleaner, or simply in greater control.

Summary

Throughout history and in many religious and secular contexts, fasting is a phenomenon which is believed to empower people either through divine intervention or by gaining control over the body. Fasting has also been used therapeutically for promoting health and longevity, which is ironic since especially in excess, fasting causes direct physical harm. Fasting can also be used as a tool of political protest and as entertainment in the case of hunger artists. Miraculous fasts may be seen either as a form of anorexia or as closely related to religious fasts.

Cross-References

- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Food-Body Relationship
- ▶ Food Preparation, Cooking, and Ritual in Judaism
- ▶ Hinduism and Food
- ▶ Islam and Food
- ▶ Jainism and Food

References

Bell, R. A. (1985). *Holy anorexia*. Chicago: Chicago University Press.

Bynum, C. W. (1987). *Holy feast and holy fast: The religious significance of food to medieval women*. Berkeley: University of California Press.

Cooper, J. (1993). *Eat and be satisfied: A social history of Jewish food*. Northvale: Jason Aronson.

Feeley-Harnik, G. (1981). *The Lord's table*. Philadelphia: University of Pennsylvania Press.

Grimm, V. E. (1996). *From feasting to fasting, the evolution of a sin: Attitudes to food in late antiquity*. London: Routledge.

Guerini, A. (2000). *Obesity and depression in the enlightenment*. Norman: University of Oklahoma Press.

Henisch, B. A. (1976). *Fast and feast*. State College: Pennsylvania State College Press.

Jacobs-Brumberg, J. (2000). *Fasting girls*. New York: Vintage.

Shaw, T. M. (1998). *The burden of the flesh*. Minneapolis: Fortress Press.

Vandereycken, W., & van Deth, R. (1996). *From fasting saints to anorexic girls*. London: Athlone Press.

Feeding Children

Emily J. H. Contois
Brown University, American Studies, Providence, RI, USA

Synonyms

Adolescents; Child feeding; Child nutrition; Children; Children's menu; Kid cuisine

Introduction

Starting as early as conception, parents are intimately responsible for the feeding of infants,

ensuring their sustenance, survival, and ability to thrive. Due to the biological phenomena of pregnancy and breastfeeding, mothers often hold the initial responsibility for feeding infants and continue to provide, purchase, prepare, and serve food for their children. Fathers are also involved to a degree that varies by culture and even from family to family. As babies grow into toddlers, children, and adolescents, parents continue to exert control and demonstrate care in child-feeding practices. Children also express their own food preferences, which change over time and are greatly shaped by parental role modeling and parenting style. Particularly as childhood obesity rates have increased in many countries across the globe, questions of how and what to feed children have garnered heightened attention.

Starting with a short history of philosophical approaches to feeding children, this entry then employs studies and examples from the United States, Canada, and the United Kingdom to explore a variety of factors that currently influence the feeding of children, particularly in the modern West. The entry begins by examining the role of parents, starting with the politics of breastfeeding and then outlining the influence of role modeling, parenting style, and sources of parental motivation. The entry then turns to children themselves, examining the agency and decision making of children to influence family food decisions and to feed themselves. Child-centric food marketing, children and supermarket shopping, and the evolution of children's cuisine and menus are each discussed as case studies that embody the ethics of feeding children.

Philosophical Approaches to Feeding Children

While philosophers have more rarely discussed feeding children, they have discussed feeding infants at length. For example, writing near 350 B.C., Aristotle covers in great detail the nourishment of children in the womb via the mother's blood. As Bergès (2013) discusses, Aristotle strongly promoted breastfeeding in Book VII of the *Politics* to the extent of legislating adequate maternal diets and breastfeeding adherence. In his history of breastfeeding, Short (1992) not only emphasizes Aristotle's breastfeeding promotion, but also reveals Pliny, Plutarch, and Tacitus' opposition to wet nursing, as they argued it decreased the bonding between mother and child that breastfeeding naturally facilitates.

Similarly, Jean-Jacques Rousseau, whose eighteenth-century philosophies informed the French Revolution, strongly promoted breastfeeding, arguing that it naturally awakens and instills morality in children. Mary Wollstonecraft, an eighteenth-century British philosopher, also supported requiring women to breastfeed, believing not only that the care of children was a woman's duty, but also that the contraceptive properties of breastfeeding benefited women (Bergès 2013). Bergès also discusses how in more recent years philosophers have debated if women should be required by law to breastfeed, discussing the balance between an infant's right to nutritional sustenance through breast milk and a woman's right to choose how she uses her body.

Throughout the history of civilization, philosophers have acknowledged the role of women in feeding infants and children. While Aristotle argued that women feel greater concern to feed children than men – rooted in either gender-specific compassion or the fact that mothers tend to spend more time with their children than fathers do (Mayhew 2004) – a woman's role in feeding children is even more complicated in contemporary societies. Nel Nodding's work around the ethics of care also provides an example of contemporary thinking on gender, ethics, and moral actions (Smith 2004), which could be applied to the feeding of children. In such a way, parents feeding children can be understood as an expression of care that according to Nodding is basic to human life and thus requires no ethical effort, particularly in women's experiences (Smith 2004).

The Role of Parents in Feeding Children

As food providers, role models, and guides, parents powerfully influence the taste preferences,

eating behavior, food views, health, and weight of their children. While most humans exhibit early on a genetically determined predisposition to prefer sweet and salty flavors and to dislike bitter and sour ones, these preferences are also modified by life experience and environmental context. It can be argued that the feeding of children begins in the womb, as a mother's dietary choices during pregnancy shape not only a child's health, but may also influence taste preferences. Once a child is born, feeding continues by means of breastfeeding or bottle-feeding. As Van Esterik (2013) shows, women have throughout history had choices when it comes to feeding infants. Her work demonstrates, however, that in present day societies, political, economic, and cultural issues surround breastfeeding, revealing the intersecting, and at times competing, interests of parents, children, governments, health professionals, and the infant formula industry. For example, while significant research has proven the health benefits of breastfeeding for both mother and child, breastfeeding is not always a feasible option for working mothers. Furthermore, based upon cultural views and societal standards, breastfeeding a child, particularly in public, can be viewed by some as maternal and natural and by others as taboo behavior. Especially in countries like the United States where breasts are highly sexualized, particularly in the media, breastfeeding can elicit conflicting perceptions of cultural appropriateness, which mothers must navigate. These are but a few examples of the myriad factors that influence a mother's choice to breastfeed or bottle-feed her child.

As children grow, begin to eat solid foods, and are weaned, they observe, and to a certain extent absorb, the eating practices of parents and caregivers. Whether they frequently eat and enjoy high-calorie foods or diet in order to maintain or lose weight, parental eating behavior may influence both the eating habits and perceptions of their children. Most generally, however, children eat differently than adults. From early on, children tend to prefer familiar foods. A certain amount of *neophobia* (the tendency to reject new foods) is common among children, particularly between 18 and 24 months of age. As Benton (2004) discusses, this phenomenon appears to be relatively consistent across cultures, as it is of arguably evolutionary importance, protecting newly walking children from potentially poisonous foodstuffs. While neophobia can be worrisome and frustrating for modern day parents, it is possible to guide children in their exposure to new foods. For example, repeatedly exposing a child to an initially disliked food can overcome resistance. While each child is different, studies show that children refuse a new food a median of 11 times (Benton 2004). Forcing a child to eat a food, however, will only increase dislike for that food. In addition, restricting access to certain foods, such as junk foods, increases rather than decreases a child's desire and preference for these foods (Benton 2004).

Beyond role modeling and guiding, parenting style also greatly affects child feeding (Hubbs-Tait et al. 2008). While there are multiple theories and a variety of categories demarcating parenting styles, studies that explore the influence of parenting style on child-feeding practices typically employ the following categories: authoritative (high control and high warmth), authoritarian (high control and low warmth), and permissive (low control and low or high warmth). The research of Hubbs-Tait et al. (2008) confirmed that these general parenting styles correlate with feeding practices. Generally, authors found that authoritative parents encourage a child to eat a healthy diet while also considering a child's taste preferences. Authoritarian parents attempt to control a child's food intake with little consideration for the child's preferences, often restricting specific foods. Permissive parents allow the child to control what, where, and how much he or she eats, a style that can be characterized as either more indulgent or more neglectful compared to other styles. Trends in parenting styles reveal a shift away from restrictive parenting, privileging a more permissive approach. Notably in a contemporary context, both permissive and authoritative parenting styles appear to grant requests for food (O'Dougherty et al. 2006).

Parenting style and child-feeding practices greatly shape what and how a child eats, particularly when certain foods are restricted or promoted. Parents may restrict foods considered unhealthy, such as fast food or sweets, in order to nurture a child and ensure his or her health and safety. This restriction, however, can cause a child to more strongly desire these forbidden foods. In addition, parents who are concerned by a child's weight status may limit a child's access to food in an effort to help the child lose weight. Current evidence reveals, however, that such a strategy may prevent a child from learning to regulate his or her own intake, thus causing longer-term harm (Benton 2004). Conversely, parents may also use food as a reward, which reinforces taste preferences for sweet and fatty foods. Parents may also use specific foods as a form of punishment, which can further reinforce dislike for particular foods, such as vegetables.

Whether promoting broccoli or restricting candy, a variety of factors motivate parents when feeding children. In their study of the mother plus child "new super consumer," Coffey et al. (2006) posit that mothers are stimulated by a combination of four major motivators. First, mothers desire a positive self-image, aspiring to be good mothers. Second, they must balance the needs for convenience and time management, feeding children alongside other daily duties. Third, mothers desire and feel responsible for nurturing their children and keeping them safe. And, finally, mothers want to make their children happy.

Children, Agency, and Food Choice

While parents play a significant role in feeding children, children past a certain age also exert their own agency as they develop food preferences, make their own food choices, and influence the food choices of their family. While food preferences vary from child to child, recent studies from the United States and Canada have found that junk food holds a special place in the food life of children. For example, in focus groups, Canadian children consistently identified the same favorite foods – pizza, French fries, and junk food – specifically because they were considered unhealthy and were perceived as in opposition to adult foods (Elliott 2009). Furthermore, for children in the United States, Namie (2011) concluded that junk food carries multifaceted meaning and appeal for children in several ways. Purchasing junk food, such as candy, with their own limited money, makes these foods status objects for children and purchasing them, an expression of agency. Often ingested within view of peers, eating junk food not only represents a sort of conspicuous consumption, but also demonstrates belonging to a group. When given to a child, junk food also symbolizes and communicates caring.

Beyond the many meanings of junk food, a variety of factors influence children's food choices. Children are often drawn to fun, an element of lesser importance to adolescents and adults. For example, in a US study focused on vegetable consumption, children were found to eat 50 % more when the foods were fun in name, shape, or design (Wansink et al. 2011). Linked to a sense of fun, children are also uniquely influenced by the role of play in eating. Take for example the tactile play of eating a cookie or gelatin. The way foods look also influences a child's food choice, whether attracted by cartoons, pretty designs, or images of food that look good to eat (Elliott 2009).

The school environment is one in which children may exercise more control over their own eating, as they make food choices without the supervision of parents or caregivers. When bringing a lunch from home, a child can choose whether or not to eat the provided foods or to "trade" them with a friend. If purchasing a lunch at school, children can exert negligible or considerable agency in selecting what foods to eat, depending upon the serving method. In their study of school food in London, Daniel and Gustafsson (2010) argue that adult attention and governmental policy alike have focused on the nutritional aspects of school food while ignoring elements that are likely of greater importance to children, such as social aspects. In their study of

children's food culture in a school lunchroom in the United States, Salazar et al. (2008) also concluded that there are distinct differences between how adults and children form food rules, norms, and values around eating. These authors studied the lunches that children created at a school salad bar, concluding that children enjoyed the freedom of choosing their own foods and arranging them in ways that they found appropriate, pleasing, and tasty.

Feeding Children: Case Studies

Food Marketing to Children

For child health advocates and parents alike, a serious ethical consideration in feeding children is the direct marketing of food products to children as autonomous consumers. Children have increasingly become consumers unto themselves, influencing family purchases of many products, including food. Termed "pester power," "the nag factor," and "kid influence," this influence describes the persistent nagging and whining that can accompany children's requests for items that they desire. Advocates argue that marketers exploit children's pester power in an effort to sell products that children want.

In the United States in the 1970s and 1980s, the Federal Trade Commission considered restrictions on the advertising of junk foods to children, but no rules were enacted. Those in public health, policy, and advocacy argue that regulatory efforts were thwarted by the food, toy, broadcasting, and advertising industries, which stand to make significant financial gains by advertising to children. These groups argue that they have the right to market to children under the First Amendment and proposed self-regulation as a solution. There has been a resurgence in efforts to police the food industry in this area, in part due to the 2005 Institute of Medicine of the National Academies review, which concluded that food marketing influences child food preferences, consumption, and health.

Much research has focused on food advertising during children's television programming. In a 2005 study of Saturday morning children's television programming on air in the United States, researchers found that approximately half of all advertisements were for food and nearly all (91 %) were for foods or beverages high in fat, sodium, or added sugars or were low in nutrients (Batada et al. 2008). The advertisements were most commonly for ready-to-eat breakfast cereal and cereal bars, restaurants, and snack foods. Food advertisements also featured cartoon characters (74 %) and toy or other giveaways (26 %) (Batada et al. 2008).

While traditionally appearing in television advertisements and on product packages, food marketing now takes a variety of forms. In the United States, companies market to children in myriad ways: online; through social media; in games; with product placements in popular television programs, movies, and video games; and even in their schools. The December 2012 Federal Trade Commission Report on food marketing to children and adolescents in the United States found that while the funds spent on television advertising decreased during the period 2006–2009, dollars spent in new media increased by 50 % (Nestle 2012). Furthermore, Elliott (2012) argues that marketing unhealthy foods to children constitutes a "dual ethical transgression". She argues that child-centric marketing manipulates a young target audience without the cognitive ability to understand the marketing techniques and in some cases lacks the ability to distinguish advertising from scheduled entertainment, such as television programming. Secondly, Elliott argues that because a significant portion of child-centric marketing encourages the consumption of unhealthy foods, this marketing contributes to the desire for and potential subsequent consumption of a diet that may have detrimental effects in the short and long term.

Children and Supermarket Shopping

The supermarket is an environment in which food marketing to children comes into play, as children assert their own agency to significantly influence and control their own and their family's food selection. Parents have been shown to give in to child food purchase requests as much as 45–65 % of the time (O'Dougherty et al. 2006).

In this way, parents can be both a "strong" and a "weak" link in a child's food chain at the supermarket in the promotion of a healthy diet (O'Dougherty et al. 2006). Illustrating this point, Berry and McMullen (2008) studied the visual landscape of the breakfast cereal aisle at a Toronto supermarket, seeking to understand how marketers engage children, who have been found to influence half of all breakfast cereal purchases. The authors concluded that the least healthy cereals – those containing more sugar, refined grains, and trans fats – were more likely to feature child-centric marketing, such as cartoon spokes-characters, themed cereal shapes and colors, and incentives on the cereal boxes.

Given that children do influence purchases, researchers find that parents typically involve children in food shopping in a variety of ways, ranging from conflict-ridden negotiation to "co-shopping" in an effort to increase a child's food knowledge and interest. Food shopping can also be a learning opportunity, engaging children in not only food knowledge, but also other educational acts, such as practicing counting and reading. In such a way, the supermarket provides a test environment in which the multiple ethical considerations of feeding children play out. Within this public microcosm, parents balance their own motivations when food shopping with the health, desires, and development of their children, as well as with the motives of the food industry.

Children's Cuisine and Menus

In the countries addressed in this entry, children's culture increasingly exists within popular culture, along with it a type of "kid-friendly" cuisine. Within families, children's food is often differentiated from adult food, at times holding a lesser place. Children's snack foods and treats in particular are "othered" compared to the "proper" foods that constitute family meals (Curtis et al. 2010). Within the consumer culture, a plethora of child-specific products are available, including food products designed for and marketed directly to children. For example, in the United States, the overtly and aptly named Kid Cuisine brand by ConAgra Foods strongly promotes fun. Packages feature bold colors and cartoon penguins. Meal options include "Mini Corn Dogs" and "Fun Shaped Chicken Breast Nuggets." Lunchables, a Kraft Brand, also promotes fun, offering up finger foods that combine eating with play. Interestingly, both Kid Cuisine and Lunchables have modified their product offerings in recent years, adding options with at least one serving of fruits, vegetables, or whole grains.

Across the United States, special "kid-friendly" meals are made available at local, chain, and fast food restaurants. Meal options generally consist of foods such as chicken nuggets or fingers, hot dogs, grilled cheese sandwiches, macaroni and cheese, hamburgers, and French fries. Some chains offer a thematic children's menu, such as the iconic McDonald's Happy Meal. Such options demonstrate a cultural interpretation of a child's palate and gastronomic preferences. Furthermore, a 2008 study found that 99 % of the children's meals served at the top 50 largest chain restaurants in the United States were of poor nutritional quality (Batada et al. 2012).

The unhealthy nature of children's menus is concerning to public health advocates as, like adults, children consume an increasing number of meals outside of the home. These meals tend to be less healthy and larger in portion size than meals eaten at home. Specific interventions have focused on improving the quality of children's fast food meals, which are generally high calorie and low in nutrients. In 2010, Santa Clara County in California became the first US jurisdiction to implement an ordinance that allowed toys to accompany only meals that met minimal nutritional criteria for calories, fat, sugar, and sodium (Otten et al. 2012). Though this example has its limitations, such ordinances appear to positively influence the marketing of healthful menu items and are currently being enacted in other cities and states.

As childhood obesity and overall health remain a key concern, myriad strategies have been explored to shape and modify the feeding of children within families at home, as well as in schools and at restaurants. A variety of ethical

questions also remain. Should soft drinks be sold in schools? Should extremely obese children be taken from their parents? Should restaurants be required to sell healthy meal options for children? Should cartoon characters be used to promote the sale of unhealthy foods? And should they be used to sell healthy foods? Each of these questions comes with its own ethical considerations, balancing the needs and desires of children with those of parents, governments, and societies as a whole.

Summary

As babies are born without the ability to feed themselves, parents are intimately involved in feeding children throughout their young lives. Parenting styles and the eating behaviors of parents themselves greatly influence feeding practices, as do the needs and desires of children. Within the context of childhood obesity, feeding children becomes not only a social and familial process, but also a public health issue with myriad ethical implications, ranging from food marketing to children to the construct of children's culture and cuisine.

References

Batada, A., Dock Seitz, M., Wootan, M., & Story, M. (2008). Nine out of 10 food advertisements shown during Saturday morning children's television programming are for foods high in fat, sodium, or added sugars, or low in nutrients. *Journal of the American Dietetic Association, 108*, 673–678.

Batada, A., Bruening, M., Marchlewicz, E., Story, M., & Wootan, M. (2012). Poor nutrition on the menu: Children's meals at America's top chain restaurants. *Childhood Obesity, 8*(3), 251–254.

Benton, D. (2004). Role of parents in the determination of the food preferences of children and the development of obesity. *International Journal of Obesity, 28*, 858–869.

Bergès, S. (2013). *The Routledge guidebook to Wollstonecraft's a vindication of the rights of woman*. New York: Routledge.

Berry, B., & McMullen, T. (2008). Visual communication to children in the supermarket context: Health protective or exploitive? *Agriculture and Human Values, 25*, 333–348.

Coffey, T., Siegel, D., & Livingston, G. (2006). *Marketing to the new super consumer: Mom & kid*. Ithaca: Paramount Market Publishing, Inc.

Curtis, P., James, A., & Ellis, K. (2010). Children's snacking, children's food: Food moralities and family life. *Children's Geographies, 8*(3), 291–302.

Daniel, P., & Gustafsson, U. (2010). School lunches: Children's services or children's spaces? *Children's Geographies, 8*(3), 265–274.

Elliott, C. (2009). Healthy food looks serious: How children interpret packaged food products. *Canadian Journal of Communication, 34*, 359–380.

Elliott, C. (2012). Marketing foods to children: Are we asking the right questions? *Childhood Obesity, 8*(3), 191–194.

Hubbs-Tait, L., Kennedy, T. S., Page, M., Topham, G., & Harrist, A. (2008). Parental feeding practices predict authoritative, authoritarian, and permissive parenting styles. *Journal of the American Dietetic Association, 108*, 1154–1161.

Mayhew, R. (2004). *The female in Aristotle's biology: Reason or rationalization*. Chicago: The University of Chicago Press.

Namie, J. (2011). Public displays of affection: Mothers, children, and requests for junk food. *Food, Culture and Society, 14*(3), 393–411.

Nestle, M. (2012). The FTC's latest report on food marketing to kids: Glass half full or empty? *Food Politics* (blog). http://www.foodpolitics.com/2012/12/the-ftcs-latest-report-on-food-marketing-to-kids-glass-half-full-or-empty/. Retrieved 28 Dec 2012.

O'Dougherty, M., Story, M., & Stang, J. (2006). Observations of parent–child co-shoppers in supermarkets: Children's involvement in food selections, parental yielding, and refusal strategies. *Journal of Nutrition Education and Behavior, 38*, 183–188.

Otten, J., Hekler, E., Krukowski, R., Buman, M., Saelens, B., Gardner, C., & King, A. (2012). Food marketing to children through toys response of restaurants to the first U.S. toy ordinance. *American Journal of Preventive Medicine, 42*(1), 56–60.

Salazr, M., Feenstra, G., & Ohmart, J. (2008). Salad days: A visual study of children's food culture. In C. Counihan & P. Van Estrick (Eds.), *Food and culture: A reader* (2nd ed., pp. 423–437). New York: Routledge.

Short, R. (1992). Chapter 4: Breastfeeding, fertility and population growth. *Papers from the ACC/SCN 18th session symposium*. http://www.unsystem.org/scn/archives/npp11/begin.htm#Contents. Retrieved 25 Feb 2013.

Smith, M. K. (2004). Nel Noddings, the ethics of care and education. *The encyclopedia of informal education*. www.infed.org/thinkers/noddings.htm. Retrieved 28 Feb 2103.

Van Esterik, P. (2013 [1995]). The politics of breastfeeding. In C. Counihan & P. Van Estrick (Eds.), *Food and culture: A reader* (3rd ed., pp. 510–530). New York: Routledge.

Wansink, B., Just, D., & Smith, L. (2011). What is in a name? Giving descriptive names to vegetables increases lunchroom sales. *Journal of Nutrition Education and Behavior, 43*, s1.

Food "Porn" in Media

Signe Rousseau
School of Management Studies, University of Cape Town, Tamboerskloof, Cape Town, South Africa

Synonyms

Gastro porn

Introduction

The term food "porn" can refer to still or moving images of food and/or eating across various media, including cookbooks, magazines, television, blogs, websites, and social media platforms like Twitter, Facebook, Instagram, and Pinterest. Evocative descriptions of food and eating in literature can also be described as food porn. The term is often used positively, to suggest that the food depicted is desirable or is depicted in a way that makes it desirable – the latter of which could depend on the aesthetics of composition (including lighting, extreme close-ups, color saturation) or on the person or people preparing or eating the food. While the connotation is often of "guilty pleasure," or allowable "indulgence," the term can also (sometimes simultaneously) negatively connote food which is regarded as "bad" and which should be avoided.

Not unlike the now-famous definition of pornography – "I know it when I see it" (uttered by Supreme Court Justice Potter Stewart in the 1964 "Jacobellis v. Ohio" case regarding whether or not the French film *Les Amants* should be considered pornographic) – the term's application is therefore very broad, ranging from playful referrals to food that looks particularly appetizing to what are intended as more serious warnings about the possible implications of eating particular foods. Its widespread presence in popular media suggests that there is less stigma attached to consuming food porn than there continues to be attached to consuming non-food or "traditional" pornography (debates around which include the question of whether pornography represents and encourages violence against women or whether it functions as a "sex-positive" means of feminist expression). Rather, its vicarious, or unreal, component arguably fuels a perception that consuming food porn is safer than consuming real food. The extreme of this is borne out by sufferers of eating disorders who rely on images of food as a substitute (within limits) for eating. But food porn is not without its own stigma, and ethical considerations related to its production and consumption include examining its role in a culture which accommodates and produces "foodies" and at the same time various crises of overeating and undereating. Some critics suggest that each of these patterns of consumption represent various degrees of disordered eating. From this perspective, and echoing the argument that pornography contributes to a distorted and unrealistic view of sexuality and sexual behaviors, the market for and widespread "use" of food porn potentially fuels an obsessive and, in some cases, "unhealthy" relationship to food.

This entry begins with the background of the use of food porn, including some technical shortcomings of the analogy between food porn and non-food pornography. It then offers a number of examples of its widespread use to indicate the "normality" of the concept in contemporary popular and food media cultures. It then reviews satirical and critical responses to the concept before concluding with a summary of the key ethical considerations related to the production and consumption of food porn.

Background

"Gastro porn," a variant of food porn, was first used in print in the *New York Review of Books* in 1977, when a cookbook review reflected that "True gastro-porn heightens the excitement and also the sense of the unattainable by proffering colored photographs of various completed recipes" (Cockburn 1977). Here both the "excitement" and the "unattainable" allude to the element of fantasy which is a key commodity in

non-food pornography. Food-related fantasies were not confined to cookbooks: after decades of enjoying a postwar "luxury diet" (Belasco 2006), many Americans turned their attention in the 1980s to diet, fitness, and which foods to avoid to maintain a lean and fit body. This period also saw a sharp simultaneous rise in obesity rates, in the incidence of eating disorders, and in food-related media (e.g., magazine articles and cooking shows on television) which provided voyeuristic escapes into worlds of food and eating where money and calories were of no consequence (O'Neill 2003). From its first manifestations, what is now referred to as food porn thereby occupies a contested space between cultural constructions of "legitimate" and "illegitimate" desires when it comes to eating. By providing various forms of food fantasies, it also reflects a growing appetite for the vicarious and "guilt-free" consumption of food.

As a reflection of the increasing guilt associated with consuming certain foods, the Center for Science in the Public Interest (CSPI) launched its monthly "Nutrition Action Health Letter" in the 1990s, a key feature of which was, and continues to be, exposing food identified as the "Right Stuff" vs. "Food Porn." Their November 2012 newsletter, for instance, offers Cascadian Farm Organic Harvest Berries as the Right Stuff, while Quiznos Chicken Carbonara Sub is dubbed porn for offering (among other "bad" qualities) "close to a day's saturated fat (17 g), and nearly 2 days worth of sodium (2,610 mg)."

Far more prevalent than the CSPI's unambiguous use of the term "food porn" as something to be avoided, however, is its ubiquity in popular food-related media channels. This includes using the pornography analogy to explain the recent explosion in food-related media and, particularly, food television as a substitute for cooking. According to celebrity chef Anthony Bourdain at a 2009 "Food for Thought" panel held in Connecticut (featuring several food media personalities conversing on stage about the exponential rise in food media), "It's the new pornography. It's people seeing things on TV, watching people make things on TV, that they're not going to be doing themselves any time soon." From this view, food porn exists less as a manifestation of the vicarious consumption of "guilty" pleasures than as a comment on the general public's apparent lack of competence in the kitchen. Yet the limitations of the food porn-as-substitution analogy are summarized by a former pornography production assistant who points out that "Porn incites to action and is worthless if it does not" (McBride 2010) and by a reminder that even in gastronomy, "vicarious enjoyment is more definitely intended to be a prelude to, not a substitute for, direct and actual enjoyment" (Mennell 1985).

Beyond the historical and philosophical relationship between food and sex (both are driven by appetites which can be "overindulged or denied," and both can be represented either as "playful and witty and teasing" or "somewhat menacing," Korsmeyer 1999), the analogy between food media and pornography also includes technological similarities between the two industries. One such similarity is the use of extreme close-ups and, in food television, manipulating and extending the "climactic" moment of a cooking segment (Kaufman 2005).

Embracing the Trend

Despite the limitations and possible negative connotations of the analogy, popular and professional acceptance of the term is reflected in its widespread use. British chef Nigel Slater has what one writer calls a "virtually pornographic recipe for Purple Figs with Warm Honey" (Humble 2005) – though here the association between food and sex is made plainer than most, with the opening lines of the recipe advising that the dish is "A snack to share with someone special, in bed, on a cold winter's night." A review of *Tortilla Soup* describes the "comestible-filled" film as "almost foodie-porn. The camera lingers over such dishes as tangerine glazed lamb . . . like a lecher over a glistening naked body" (O'Sullivan 2001).

Websites include personal food blogs like Foodporn.com (with sections labelled "barley legal," "hardcore," "lebanese," and a subtitle claiming to have been "Redirecting Perverts to

the Refrigerator Since 1999"), FoodPornDaily.com (subtitled "click, drool, repeat"), and FoodPorn.net (simply billed as "food photography," but with the promise that "If we don't make you hungry, no one will"). Professional productions include those like the "Food Porn"-themed episode in Season 6 of celebrity chef Anthony Bourdain's *No Reservations* show, hosted by veteran pornography actor Ron Jeremy and sold as "a XXX selection of all that's lip-smacking and luscious in the world of food. For hardcore viewers only." When Bourdain cuts into a piece of beef he describes as "twenty-four frikkin pounds of slow roasted, melt-in-your mouth, slightly bleeding love," the event is billed as "totally the money shot." These references not only confirm food porn as an accepted genre, but also rely on at least some consumer knowledge of the actual pornography industry for their understanding.

More representative of its general use, the term is widely employed to describe any food that looks good to eat, even if it is only an illusion. The popular competition show *Top Chef* features a named food porn dish on each show and has a dedicated "Food Porn room" equipped with various tools to make the food look picture-perfect, such as Windex (used to clear fingerprints off the plate) and beet juice, used to restore a "touch up meat that has lost its rosy glow" (Keller 2012). These modifications – some of which likely contribute to rendering the food inedible while making it look better – reinforce the priority of fantasy, or unreality, rather than any perceived eroticism or explicit sexuality of food porn. According to one early commenter on the rise of food television, "It's not erotic… that's not why it's called food porn. It's just unreal. You will never meet a Playmate of the Month; you will never eat the red, juicy tomato that you see on 'Barefoot Contessa'" (Buford 2006).

It is true that the precise tomato seen on television will always, and necessarily, be unattainable. Yet it remains arguable that a close enough proxy can be attained, as the growth in food media has seen a simultaneous growth in the availability of "gourmet" and "foodie" ingredients – often through non-corporate retail spaces such as farmers' markets – indicating at least some degree of overlap between on- and off-screen culinary activity (which also counts as evidence against the food porn-as-substitution argument). At their most extreme, these overlaps are often described as the "effect" of (typically) a particular celebrity chef whose televised demonstrations have resulted in direct and measurable sales spikes in specific ingredients. (The term "Delia effect" was included in the *Collins English Dictionary* in 2001 following a 200 % rise in the sale of cranberries in the UK thanks to a recipe from celebrity chef Delia Smith. Similar effects have been noted following the publication and/or broadcasting of recipes by celebrity chef Jamie Oliver, while the hit baking-competition television show *The Great British Bake-Off* is correlated with a marked increase in the sales of baking equipment in that country.) And given that many, if not most, of the pictures posted as food porn on blogs and websites are generated by non-professionals, there is ample evidence that plenty of cooking activity is taking place. But it is impossible that all food porn incites to action because there is simply too much of it available for us to "click, drool, repeat."

Pinterest is notable as one of the fastest growing Web-based sharing sites, with food-related content the most popular among consumers. Other popular sites and tools for viewing and sharing food porn include Instagram, food pictures shared through which are collected on a dedicated "foodies" site, Instagram Foodies, and Tastespotting, notable for being subject to editorial vetting to ensure that "what finally gets served up on the site is a beautifully refined set of the community's contributions." As an index of the importance attached not only to sharing food photographs – because social media tools allow anyone to self-publish – but of the community recognition that comes from being published on other sites is Tastestopping, subtitled "Feasting on Seconds," which "offers a second home for food photography that has been rejected by other sites" (such as Tastespotting). While sites like Instagram Foodies and Tastespotting do not bill

themselves explicitly as food porn, they exist thanks to and as part of the same market that equates appealing pictures of food with food porn. When a New York restaurant created an "Instagram menu" using photographs of their food taken by customers and uploaded to Twitter using a certain hashtag, the decision was reported under the headline "Restaurants Use Instagram To Tap Into Food Porn Obsession." Media texts in this way contribute to consolidating the notion of any image of food as "porn" and of the trend as "obsessive." The term also exists as a widely used hashtag on Twitter (#foodporn) and tag for blogposts and YouTube videos to provide more searchable content. (It should be noted that blind searches for anything which includes the word "porn" is likely to yield at least some non-food-related pornographic content.)

A final popular manifestation of the food porn trope is in the representation of food media personalities in sexually suggestive poses. This includes single features, for example, the spread in *FHM* in 2003 featuring US celebrity chef and talk-show host Rachael Ray wearing very little in a series of kitchen scenarios (holding a pie, taking a turkey out the oven, licking a wooden spoon). British celebrity chef Nigella Lawson, who is routinely referred to as the "queen of food porn" (Rousseau 2012), appeared in December 2007 on the front cover of *Stylist* magazine with caramel dripping down her face and hands (the story was a feature on Lawson's "love affair with salted caramel"). The trend is not confined to women. Anthony Bourdain posed naked holding only a large bone for *My Last Supper*, a book on chefs and their ideal final meals by Melanie Dunea. (Despite his early moniker of "The Naked Chef," Jamie Oliver has not posed or appeared naked in public.)

Satire and Criticism

Despite the lack of a single definition of food porn, and some debatable arguments about its function, its existence as a cultural phenomenon is incontrovertible. This is indicated both by its widespread positive use, and also by satirical and critical responses to the trend.

In 2006, British journalist and broadcaster Charlie Brooker presented a segment on his *Screenwipe* television show in which he sits in front of the television and questions whether it is true that "food is the new porn" (Season 2, Episode 3). Interspersed with Brooker's dialogue are sights and sounds from a television advert for a "gourmet salad with caramelized pears and creamy Stilton," which includes said ingredients falling into a bowl. "Oh, you dirty piece of cheese," offers Brooker, before the advert introduces "pork pie in rich crust paste" and "extra sweet handpicked fresh cherries." As voice-over concludes that "this is not just food," Brooker responds by standing up abruptly, unfastening his belt and saying "You're damn right it's not, it's food that about to be f**ked silly." While consistent with Brooker's provocative style, by intentionally misinterpreting the trend as encouraging actual sexual activity with food, the segment challenges what food porn actually means and what an appropriate response to it is, or should be.

Other examples of criticism include implications that food porn exists as an index of inappropriate and uncritical adulation of food and cooks. Commenting on the language used in one restaurant review, UK restaurant critic AA Gill concluded that "That's not a review of Chef's Table at Brooklyn Fare – it's a handjob" (Gill 2012), while the food critic for *The New York Times* has indicated that seeing words like "sinful" to describe food makes his "skin crawl" and that "The Times would probably frown on orgasmic, with good reason" (Wells 2012). Regarding this "sexualisation of food in our culture," one argument holds that rather than representing the "pornification of everything," food porn represents the "foodification of everything" (Poole 2011). This notion of over-attention to food is satirized in a song titled "Eat It Don't Tweet It," also billed as the "Instagram Food Porn Anthem," and on the website Pictures of Hipsters Taking Pictures of Food (pohtpof.tumblr.com).

Academic criticism includes the view that because "representations of sex combined with

food are not per se transgressive," food porn is "boring" (Probyn 2000), and the argument that the term's critical usefulness lies in recognizing the potentially problematic relationships with food concealed beneath the "playful banner" of food porn (Rousseau 2012).

Artistic responses have included series of photographs like those by artist Laura Letinsky which, contra the prevailing style of "flawless" food, depict scenes of half-eaten food and stained tablecloths designed to explore the "problem of the illusion of perfection," while Stephanie Gonot's "Fad Diets" comprises representations of popular dieting trends, for example, a dirty ashtray and a Diet Coke can or lemons, maple syrup, and cayenne (ingredients of the "Master Cleanse" diet).

Food Porn, Disordered Eating, and Ethical Considerations

A more serious form of criticism of the food porn trend are numerous suggestions that its ubiquity reflect and contribute to a widespread disordered relationship to food. In some cases this extends to what are recognized as bona fide eating disorders like anorexia, bulimia, binge-eating disorder, and EDNOS (Eating Disorder Not Otherwise Specified), used to describe individuals who do not meet the diagnostic criteria of eating disorders listed in the current DSM (Diagnostic and Statistical Manual of Mental Disorders).

A YouTube video posted in April 2012 features Kati Morton, an "Eating Disorder Specialist," on the topic of food porn. She introduces the topic as one which may "sound a little weird, maybe even creepy or dirty" and then qualifies that she is "calling it food porn, but you could also call it eating disorder porn in general: things that we do to feed our eating disorder." She further distinguishes between behavioral activity such as bingeing, restricting, or purging and the activity of seeking out "external stimuli" or "any kind of media" to fuel an eating disorder. Cooking shows are noted as a prime example, followed by recipe websites, filled with recipes of things "we will probably make but maybe never eat." It is the facility of media to induce the activity of "just fantasizing about food" that qualifies it as "porn" (in Morton's definition, eating disorder porn is not limited to food media, but also includes, e.g., fashion magazines featuring underweight models). In this context, food porn is registered as potentially harmful to the eating disorder sufferer because it really is intended as a substitute for eating. Morton's advice to viewers is not to stop the activity of consuming food porn "cold turkey," but rather to register the behavior as an unhealthy activity.

More directly critical of the industry that produces food media is surgeon, author, and television personality "Dr. Oz," who in a 2012 episode of his talk show invited food media personalities to debate the "dangers of food porn," which in his view include that it can "make you fat." To this end, he introduced someone he described as a "victim of food porn," who had allegedly gained 20 lbs as a result of her "addiction" to food television. The opening voice-over explained the "science" behind the argument, namely, that it "turns out, simply looking at tantalizing foods lights up the same pleasure centers in your brain as sex, making you yearn for the pleasure of those high calorie, indulgent dishes you see. And just seeing images of luscious, delicious food releases the hunger hormone ghrelin, which drives you to devour those same foods." Dr. Oz further claimed that popular competition shows like *Top Chef* and *Masterchef* leads viewers to falsely believe that they can recreate a "food porn fantasy," just as consumers of pornography could be led to think that they can recreate unrealistic sexual scenes (this is the argument that pornography normalizes a distorted view of sexuality). But whereas pornography is "self-limiting" – because sexual climax is typically an end point – what he sees as the "danger" with food porn is that people can return countless times to food to reenact that "orgasmic response" and, in so doing, eat to excess.

Restaurateur Joe Bastianich, one of Dr. Oz's invited guests, raised the definitional problem of whether any "beautiful picture of food" is "necessarily food pornography" and, touching on some of the ethical debates also surrounding the

consumption of non-food pornography, whether food porn has a "necessarily negative connotation" (there exists a noteworthy schism between feminist philosophers who are "anti-porn," viewing the industry as negative and damaging, and those who are "sex positive," or "pro-sex," who see both consuming and taking part in pornography as a means of self-assertion). Arguing that it is ultimately up to the consumer to choose what and how to consume, Bastianich pointed out that First Amendment protects both the right to engage in S&M and to enjoy "double cheeseburgers with bacon." But he added that if what is celebrated as American food culture is a culture of excess – competitive eating, 8,000 cal dishes, and the like – then "we do ourselves and our country, where childhood obesity is an epidemic, a great disservice."

These examples and debates suggest that ethical issues related to the production and consumption of food porn share some of the considerations related to non-food pornography. This broadly relates to function: does either serve a purpose? If so, is it a "good," "useful," or "bad" function? (Conversely, is it acceptable to be interested in something with no discernible purpose?) Further interrogating function includes questions about health and well-being: critics of pornography are concerned with whether its consumption contributes to sustaining an unhealthy relationship to sex. Similarly, does enjoyment of images of food in any way contribute to disabling rather than enabling a particular person? Also pertinent are questions of control and responsibility: some argue that pornography incites to violent and destructive behaviors. When it comes to food porn, if images and descriptions of food tempt someone to eat, can they control their urges? Should they need to? Whether yes or no, can they take responsibility for their actions? If they cannot, who should? Finally relevant is the value attached to freedom of speech and choice: does anyone have the right to interfere with a person's decision to consume whatever he or she wants, whether on a screen or on a plate?

It should finally be noted that various categories of pornography involving food do exist, which should not be confused with food porn as discussed in this entry: feeding porn comprises pictures and videos of overweight and obese women (men rarely feature) in provocative poses. Feeding porn is a subgenre of "fat fetishism" and is distinct from the phenomenon of "belly stuffing," featuring thin women eating until their bellies are distended.

Summary

A 2012 advertisement for Sugar In The Raw (a brand which includes an "all-natural" sugar and non-nutritional sweetener) features a picture of two cupcakes on a plate with the cherries on top censored as if they were nipples on a pair of breasts. The image – one in a series of similar photographs – does well to summarize the key features of food "porn" in media. Firstly, it is ubiquitous, meaning it has strong enough cultural currency to be exploited in advertising. Secondly, like pornography, it operates largely on the provision of illusion and on the generation of fantasy. Whether intended as prelude to, or substitute for, actual enjoyment of food remains debatable. Thirdly, while playing on the association between the shared pleasures of food and sex, it simultaneously reinforces various stigmas attached to both.

Cross-References

- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Gluttony
- ▶ Gustatory Pleasure and Food
- ▶ Medicalization of Eating and Feeding

References

Belasco, W. J. (2006). *Meals to come: A history of the future of food*. Berkeley: University of California Press.

Buford, B. (2006). TV dinners: The rise of food television. *The New Yorker*. http://www.newyorker.com/archive/2006/10/02/061002fa_fact. Retrieved 2 Oct 2006.

Cockburn, A. (1977). Gastro-porn. In *New York review of books* (Vol. 20).

Gill, A. A. (2012). Michelin, get out of the kitchen! *Vanity Fair*. http://www.vanityfair.com/culture/2012/11/whats-wrong-with-the-michelin-guide. Retrieved Nov 2012.
Humble, N. (2005). *Culinary pleasures: Cookbooks and the transformation of British food*. London: Faber & Faber.
Kaufman, F. (2005). Debbie does salad: The food network at the frontiers of pornography'. *Harpers*, 1865. http://www.barbaranitke.com/harpersmag.html. Accessed 10 Aug 2007.
Keller, J. (2012). Creating "Food Porn": How "Top Chef" makes viewers love food they can't taste. *Fast Co. Create*. http://www.fastcocreate.com/1681880/creating-food-porn-how-top-chef-makes-viewers-love-food-they-cant-taste#1. Retrieved 7 Nov 2012.
Korsmeyer, C. (1999). *Making sense of taste: Food and philosophy*. Ithaca/London: Cornell University Press.
McBride, A. E. (2010). Forum: Food porn. *Gastronomica, 10*(1), 38–46.
Mennell, S. (1985). *All manners of food: Eating and taste in England and France from the middle ages to the present*. Oxford: Basil Blackwell.
O'Neill, M. (2003). Food porn. *Columbia Journalism Review, 5*, 38–45.
O'Sullivan, M. (2001). Tortilla Soup. *The Washington Post, 23*, WE43.
Poole, S. (2011). Let's end our obsession with making food sexy. *The Guardian*. http://www.guardian.co.uk/lifeandstyle/2011/dec/11/sex-food-obsession-nigella-steven-poole. Retrieved 11 Dec 2011.
Probyn, E. (2000). *Carnal appetites: FoodSexIdentities*. London/New York: Routledge.
Rousseau, S. (2012). *Food media: Celebrity chefs and the politics of everyday interference*. Oxford: Berg.
Wells, P. (2012). Pete wells, restaurant critic, answers reader's questions. *New York Times*. http://www.nytimes.com/2012/12/03/dining/questions-for-pete-wells-restaurant-critic.html. Retrieved 3 Dec 2012.

Food Addiction

Peg O'Connor
Philosophy, and Gender, Women and Sexuality Studies, Gustavus Adolphus College, St. Peter, MN, USA

Synonyms

Abuse; Addiction; Alcohol; Dependency; Food

Introduction

This entry examines the question whether foods can be substances to which people become addicted. Is "food addiction" a defensible and plausible concept? Immediately several important questions and concerns arise. The first is the more general question: "What is addiction?" The second is whether certain foods or their "use" fall within accepted models of addiction. Can foods be "used" and have similar deleterious effects as the more paradigmatic drugs of alcohol, cocaine, and nicotine? The third concern involves the sorts of food that can be addictive. Fourth and fifth are the health implications for individuals and the public health implications that food addiction is causing an obesity epidemic. The sixth concern involves individual, social, and corporate responsibility for the causes and consequences of food addiction. The entry ends with a discussion of what food advocates and the food industry might learn from the Tobacco Master Settlement Agreement in 1998 that effected a significant cultural shift about smoking.

What Is Addiction?

This is the perennial question that has most often been framed in terms of alcohol use and then extended to other drugs such as cocaine, heroin, nicotine, or methamphetamine. For this discussion, the focus is solely on particular substances as addictive, thus sidestepping the question whether behaviors or processes such as shopping, having sex, or gambling can be addictive.

"Addiction" is a remarkably connoted concept that is used with a fair amount of elasticity by neuroscientists, medical doctors, psychology, addiction counselors, and lay people who identify as addicted. Psychologists and psychiatrists tend to rely on the Diagnostic and Statistical Manual of Mental Disorders-IV where the terms "substance abuse" and "substance dependency" are used (American Psychiatric Association 2000). In terms of diagnosing substance abuse or dependency, the focus is primarily on the worsening effects the drug use has over time. With substance abuse a person may over the course of a year fail to meet important social or professional obligations, find herself in more physically hazardous conditions, face legal problems from her use, or

experience social and interpersonal troubles. A person who becomes dependent has problems that exceed these and experiences at least three of the following in the course of a year: a higher tolerance, which in turn requires greater amounts of the drug to achieve the desired high, withdrawal in the absence of the drug, an inability to control consumption, attempts to control or cut down, more time spent managing drug use, and continued use despite increasing physical and psychological costs. If individuals' consumption of food begins to follow similar patterns, this is evidence for the claim that food is a substance that people can consume abusively and dependently.

Neuroscientists are more inclined to use the term "addiction," tying the term to responses in the brain. Neuroscientific studies on addiction generally characterize addiction as involving two distinct behavioral traits: compulsion to use and impulsivity. Compulsion is often taken as cravings (in the case of humans) and drug-seeking behavior (in mice). These are regarded as quantifiable in both animals and humans.

Scientists draw a distinction between cognitive impulsivity (delayed gratification) and behavioral impulsivity (inability to withhold a response). Cognitive impulsivity is measured as the increased choice of small immediate over large delayed rewards (Olmstead 2006). The working hypothesis now is that impulsivity is largely governed by both serotonin and the prefrontal cortex systems. When the serotonin level is too low, chances are greater that there will be less impulse control, and thus a higher chance of addiction. If the serotonin levels can be manipulated in the brain, there is a greater chance of heading off addiction. While these studies are in their infancy, this emerging explanation for why some people become addicts hypothesizes that the brain's pleasure circuitry is malfunctioning. This circuitry is largely a matter of dopamine; those who have addictions seem to have a suppressed dopamine signaling ability. This means that it takes much higher levels of stimulation to reach the level of satisfaction that others reach with moderate indulgence. Many substances and circumstances can bring about pleasurable responses, but alcohol, cocaine, and nicotine seem especially to light up the pleasure circuitry, hence their addictive allure for some. This allure prompts many researchers to describe the brain as being "hijacked" by these drugs. Can certain foods cause the same responses? If so, then this is an argument for the concept of "food addiction."

For the purposes of this entry, "dependency" as described in the DSM-IV and "addiction" understood in terms of impulsivity and craving are complementary if not identical. The terms pick out the same phenomena but perhaps highlight different features. Tolerance, for example, is a physiological response. Attempts to curtail drug use and fail may well be a consequence compulsion and a lack of impulse control. Thus, for the remainder of this entry, the term "addiction" shall be used since that is the term that has been attached to "food."

Food as Addictive

Does the consumption or use of food produce corresponding behavior for a diagnosis for dependence and/or biochemical reactions in the brain? If the consumption of food fits within both the DSM-IV model and the one emerging in brain science, this is a compelling case for food addiction. Should the consumption of certain foods fit these two models, it is appropriate to shift language from "consumption" to "use." Beginning with the DSM-IV criterion concerning tolerance, studies show that individuals come to require greater amounts of food to reach a point of satiation. There are also reports of dysphoria and anhedonism that follow from stopping or curtailing food consumption. One recent study showed that lab rats addicted to sugar water showed significant withdrawal symptoms including shakes and tremors and anxiety when researchers were able to block the sugar high via a drug (Avena et al. 2008). Additionally, the attempts to curtail or cease the consumption of certain foods become more frequent even as a person becomes more aware of the risks and hazards that follow from the overconsumption of

certain foods (Gearhardt et al. 2009). Thus, there is a prima facie case for food consumption becoming addictive.

With respect to neuroscientific approaches to addiction that center on brain function and particular regions of the brain, food consumption produces similar responses in the pleasure circuitry. Laboratory animals preferred intense sweetness over cocaine (Lenoir et al. 2007). Additionally, experiments with laboratory animals demonstrate strong physical cravings (Cheren et al. 2009). And more recently, brain imaging has shown that the pleasure circuitry in the brain can be affected by certain foods in the same way as alcohol and other drugs (Cheren et al. 2009). The brain may become desensitized as a consequence of reduced activity in the region of the brain that registers reward. Impulse control is hampered and the ability to inhibit behavior is diminished. In people who identify as having troubles with food, photographs of the foods on which they binge may act as a trigger (Wang et al. 2011). Additionally, the physical symptoms of withdrawal mentioned above provide evidence for the claim that the consumption of certain foods produce biochemical responses in the brain that are analogous to the responses produced by drugs such as alcohol and cocaine.

Are All Foods Addictive?

Do all foods have the same potential to be consumed in deleterious ways in ways noted in the DSM-IV and adversely affect the brain's pleasure systems? Not all foods are created equal in this regard, with emphasis on "created." Some foods are what researchers have called "hyperpalatable" (Gearhardt et al. 2011). Foods in this category are highly processed foods with significantly elevated amounts of salt, fat, sugar, or other sweeteners and with many added ingredients for preservation and appearance. An apple, for example, is one thing/has one ingredient which is "apple." A medium apple has 19 g of naturally occurring sugar, 0 g of fat, and 2 mg of sodium. Eating an apple will produce some pleasure. A medium chocolate ice cream cone from Dairy Queen has 22 ingredients and has 34 g of sugar, 10 g of fat, and 160 mg of sodium, making it a hyperpalatable food for many persons. In these people, consumption of that ice cream cone will produce a far more pleasurable response than eating an apple. Humans produce opiods, the active ingredient in cocaine, for example, when digesting excess amounts of sugar and fat (Cheren et al. 2009). Many people eat not just for sustenance but for pleasure, and opiods provide pleasure. On either addiction model, the tolerance of people who are progressing toward addiction will increase, beginning the cycle of needing to eat greater quantities of certain foods or find new and different foods with greater amounts of sugar, fat, and salt in order to reach satiation and their pleasure threshold.

It is important to note that there are arguments against food addiction. The scientific study of addiction in general and food in particular is still in their infancy. Given that neuroscience has only recently entered the scene and has not yet offered a definitive explanation of the effects of drugs such as alcohol or cocaine, one ought to be very cautious in extending the concept of addiction to food. Someone might also object to the extension of addiction to food on the basis of the DSM-IV criteria. One might ask if people truly experience an "increased tolerance" that is truly measurable. One might also ask if there is a viable comparison between the suffering of the heroin addict in withdrawal and withdrawing from hyperpalatable foods. These two criticisms are important and ought to have a proper airing. They do rest, however, on the assumption that there are "real" or "true" addictions that serve as the model for other substances. The most radical challenge to food addiction would take the form of denying the reality of any addictions.

Implications for Individuals

Discussions of addiction are almost always accompanied by questions about choice and responsibility. While "addiction" is a relatively new term, "drunkenness" and "inebriety" are not.

Typically drunkenness was regarded as a character flaw in a person who suffered from weakness of will. While psychiatry, psychology, self-help groups, and most recently neuroscience have effected a shift away from this view, there are still strong vestiges of it. Alcoholics and drug addicts, especially in contexts framed by the 12-step approach of Alcoholics Anonymous, recommend total abstinence in order to recover or have sobriety. This raises the question of what is the equivalent of sobriety for food addiction. It is possible to live without alcohol or nicotine but not so with food; total abstinence is not an option. This is where a model of harm reduction might be helpful. Harm reduction focuses on lessening the harm or injury caused by alcohol or drugs through moderation. Moderation may lead to abstinence, though it may not be necessary for all. With respect to food addiction, a harm reduction program may prompt one to eliminate certain categories of food while allowing others in moderation.

Food addiction may also lead to major health concerns including diabetes, hypertension, and short life expectancies. When considered from not just the perspective of individuals but from the perspective of the population as a whole, there are potentially significant public health concerns.

Public Health Policy Implications of Food Addiction

Some argue that "the obesity epidemic" is a consequence of food addiction (Cocores and Gold 2009; Gold et al. 2009). The assumption is that an individual becomes obese because he eats compulsively and is unable to refrain from doing so even or especially when he has a desire to do so. He may be motivated by significant physical cravings. A recent study show that overconsumption of fat may further stimulate the intake of fat (Cheren et al. 2009).

While individuals are obese, the "obesity epidemic" is understood as a condition or disease of a culture or society. The "epidemic" is considered as real/has the same ontological standing as individuals who have the illness. Calling something an epidemic carries with it the assumption that a culture or society is at great risk from that illness. Arguing for or against the obesity epidemic is beyond the scope of this entry. Regardless of the reality of the "epidemic," these costs – economic, social, political, and ethical – raise important questions about responsibility.

Responsibility for the Consumption and Production of Hyperpalatable Foods

If certain highly processed foods have the potential to be as addictive as cocaine and heroin, then how should the production, distribution, and consumption of these foods be conceived? Where does responsibility for food addiction rest? The question about responsibility with respect to other addictions has always been a contentious one. For quite some time, addiction was thought to be a matter of choice and that people choose whether and how to consume a particular substance. If a person develops into an addict, the typical thinking that he has been making choices along the way and responsibility rests firmly with him.

Responses to food addiction and public health concerns about obesity have largely been directed to individuals and their choices and actions. The argument goes: Were individuals to eat less and exercise more and enjoy food in moderation, then there would not be the same overconsumption that causes people to become obese. The source of the problem is identified as overconsumption and other lifestyle choices that individuals make. On this view, weight gain, loss, and maintenance is a consequence of calories used and calories burned. The food industry argues that a calorie is a calorie, regardless of the package in which it comes. While it is possible for some to strike the right balance between calorie consumption and expenditure by making all the necessary lifestyle changes, it may be so labor and time intensive that most people are unable or unwilling to do so. This focus on individuals changing their lifestyles and their behaviors and attitudes about food might mirror the experiences of alcoholics in recovery. If food addiction is as real as alcohol

addiction, then the means and methods for recovery or sobriety might be similar. Overeaters Anonymous, for example, formulates its 12 steps on the basis of Alcoholics Anonymous. A harm reduction approach, as discussed above, recommends moderation.

The issue of choice, however, has come under greater scrutiny against the backdrop of addiction as a matter of biochemical responses in the brain. If some people are born with or come to have lower levels of serotonin or dopamine, their chances of developing an addiction are greater. If these levels are not within an individual's control, then in some sense she is not responsible for developing an addiction. The chemistry deck was stacked against her, perhaps even before she took her first drink or puff of a cigarette. On the pains of inconsistency, one would need to hold that the same holds true for food addiction.

There has always been a strong link between choice and responsibility. A traditional approach is that people are responsible to the degree to which they can make choices when they are reasonably fully informed and acting in the absence of coercion. Where information is lacking or there is some element of coercion, responsibility is mitigated. Instead of conceiving of responsibility as it relates to addiction as being a toggle switch having only two positions (on = total responsibility and off = no responsibility), responsibility for addiction rests in many places to varying degrees. Yes, individuals do make many choices along the way about what they eat, for example. People choose to eat foods they know are high in fat or calories. They choose to eat these foods often and to excess. But individual actions do not exhaust the domain of responsibility.

Another dimension of responsibility involves the content of the choices and the conditions under which choices or options are made possible. In terms of food, the contents of the choices are quite literally the ingredients. If the industrial food complex is creating more and more of the hyperpalatable foods and these foods have been shown to be potentially as addictive as illegal drugs such as cocaine and heroin and a legal drug such as alcohol, then what responsibility do these food companies bear? This question will make many people uncomfortable since it would appear to indict much of the food industry from the producers and distributors of food products to the grocers who sell these foods. As more hyperpalatable foods are produced and sold at affordable prices, the demand for them will grow, thus diminishing the demand for regular or traditional foods. In the face of declining demand, more space will be allocated for foodstuffs that sell. Thus, there is an appearance of more options on your grocer's shelves due to market segmentation of these hyperpalatable foods, but in reality, choices have constricted when traditional or less highly processed foods disappear.

To many people, conceiving commercial food creators and producers as drug pushers is incendiary and polemical. But if it is granted that certain foods can be addictive because they are hyperpalatable and the research and development divisions of companies are constantly increasing this level of hyperpalatability, then the space to discuss the responsibility that companies bear for the significant monetary and health costs that follow from food addiction needs to be opened. Many argue that this requires more robust accounts of corporate responsibility.

Learning from the Tobacco Industry

Moving concerns about the creation, production, distribution, and consumption of addictive foods into a public health model may be helpful for developing a multiprong approach to lessen the potential health crisis. This was the case with tobacco products. For years, tobacco companies were aware of the addictive qualities of nicotine and the harmful effects of smoking. Tobacco companies used chemical additives to enhance the pleasure of smoking tobacco. In effect, they created hyperpalatable tobacco products. Companies created more products that were aimed at particular demographics in order to cultivate brand loyalty. Prior to 1998, the tobacco industry had won the vast majority of individual lawsuits filed against it because they could claim that

smokers chose to smoke knowing the dangers. The Attorney General from the state of Mississippi sued because the state was paying for the healthcare of sick smokers. Soon, the Attorneys General of several states filed suit as well. Ultimately, the industry settled for $246 billion dollars to be paid out over 25 years to the states. It was also the death knell for Joe Camel and the Marlboro Man in cigarette advertising. Might Tony the Tiger meet a similar fate? Should the estimated healthcare costs even come close to actuality, Attorneys General may find themselves filing suits against many of the giants of the food industry.

Legislation also plays a role in the regulation of tobacco. The cost of tobacco products has increased significantly for at least two reasons. The first is a lack of governmental subsidies and the second is taxation. While the term "vice tax" is problematic, certain products such as cigarettes and alcohol are taxed at higher rates with the hope that expense will keep some people from buying and using the products. At present, corn and sugar, two of the most common ingredients in hyperpalatable foods, receive government subsidies. Government subsidies are always a contentious issue, and these subsidies in particular might be subject to closer scrutiny. Additional taxation on hyperpalatable foods may also be an option.

Advertising is also subject to regulations. Advertising plays an important role in cultivating brand loyalty and building a solid customer base. Joe Camel and the Marlboro Man were the two most readily identified icons of the smoking industry, each having its own product line. Each pack of Camel cigarettes earned the buyer points that he could use to "purchase" Camel products such as tee shirts, hats, and drink cozies. Tobacco advertising now is very strictly regulated and where they do appear, they appear with health warnings. Advertising for hyperpalatable foods may also be subject to more stringent regulation, particularly those products aimed at children.

Consumer education meets nutritional values of foods in the form of labeling on prepared foods (calories fat, fiber, protein, vitamins, number of servings). While the US Food and Drug Administration requires nutrition labels, companies have discretion over the size of a serving. Most consumers are not aware of this fact, assuming that a serving size meets an industry standard. Companies can frame the serving size for their product and then claim, for example, "Only 100 calories per serving." This "health-framing" is a successful marketing technique, since consumers may pick up two different brands of a product and simply compare calories, not recognizing that the serving sizes vary significantly. A study found that the most nutritionally vigilant consumers were most affected by health-framing, as counterintuitive as that may seem. The hypothesis is that guilt motivates shoppers to select the product advertising the lowest number of fat grams and calories without attending to the number of servings. One recommendation is that the FDA mandates all nutritional information be presented in a standardized way in terms of grams or ounces, for example. Such standardization would make it easier for consumers to compare across products (Mohr et al. 2012). Something similar happened in the alcohol industry in the United States. A standard drink is 12 oz beer, 8 oz malt liquor, 5 oz wine, and 1.5 oz (a shot) or 80 proof distilled liquor. The standardization in principle allows people to more accurately monitor and perhaps moderate consumption.

Federal and state governments singled out children smoking for educational and policy intervention. The same is happening with children's food choices and eating habits. Studies have shown a relationship between first use of alcohol and the likelihood of developing alcoholism (Agrawal et al. 2009). The claim that a similar relationship might hold with food is more contentious, because there seems not to be a food equivalent of "first use" since humans eat from birth. State governments, in response to rising concerns about the health of young people, have become more involved in regulating the types of food available in schools.

California banned the sale of soda drinks from grade schools in 2002 and then later extended that ban to high schools. The state also initiated rules about the nutritional value of foods that students

could have at schools, especially what was available in vending machines. A recent study found that California students have the lowest intake levels of sugar, fat, and calories than students in other states (Taber et al. 2012).

Summary

This entry has explored the question whether food like other substances such as alcohol, cocaine, and nicotine can be addictive. An affirmative answer to this question raises important implications for individuals as well as for the population as a whole. Questions of responsibility are addressed both at the level of an individual's consumption of food and at the level of the manufacture of food. Finally, the Tobacco Master Settlement may provide some lessons for a multiprong approach to food addiction.

Cross-References

- ▶ Alcohol Abstinence and Sobriety
- ▶ Alcohol as Food and the Good Life
- ▶ Corporate Social Responsibility and Food
- ▶ Food Labeling

References

Agrawal, A., Sartor, C., Lynskey, M., Grant, J., Pergadia, M., Grucza, R., Bucholz, K., Nelson, E., Madden, P., Martin, N., & Heath, A. (2009). Evidence for an interaction between age at first use and genetic influence on DSM-IV alcohol dependence symptoms. *Alcoholism: Clinical and Experimental Research, 30*(12), 2047–2056.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Avena, N. M., Rada, P., & Hoebel, B. B. (2008). Evidence for sugar addiction: Behavioral and neurochemical effects of intermittent, excessive sugar intake. *Neuroscience and Behavioral Reviews, 32*, 20–39.

Cheren, M., Foushi, M., Gudmundsdotter, E. H., Hillock, C., Lerner, M., Prager, M., Rice, M., Walsh, L., & Werdell, P. (2009). *Physical craving and food addiction: A scientific review*. Food Addiction Institute. Retrieved from http://foodaddictioninstitute.org/scientific-research/physical-craving-and-food-addiction-a-scientific-review/

Cocores, J., & Gold, M. (2009). The salted food addiction may explain overeating and the obesity epidemic. *Medical Hypotheses, 73*(6), 892–899.

Gearhardt, A. N., Corbin, W. R., & Brownell, K. D. (2009). Food addiction: An examination of the diagnostic criteria for dependence. *Journal of Addiction Medicine, 3*, 31–37.

Gearhardt, A., Grilo, C., DiLeone, R., Brownell, K., & Potenza, M. (2011). Can food be addictive? Public health and policy implications. *Addiction, 106*(7), 1208–1212.

Gold, M., Graham, N., Cocres, J., & Nixon, S. (2009). Food addiction? *Journal of Addiction Medicine, 3*(1), 42–45.

Lenoir, M., Serre, F., Cantin, L., & Ahmed, S. H. (2007). Intense sweetness surpasses cocaine reward. *PLoS One, 2*(8), e698. doi:10.1371/journal.pone.0000698.

Mohr, G., Lichtenstein, D., & Janiszewski, C. (2012). The effect of marketer-suggested serving size on consumer responses. *Journal of Marketing, 76*(1), 59–75.

Olmstead, M. (2006). Animal models of drug addiction: Where do we go from here? *The Quarterly Journal of Experimental Psychology, 59*(4), 625–653.

Taber, D. R., Chriqui, J. F., & Chaloupka, F. J. (2012). Differences in nutrient intake associated with state laws regarding fat, sugar, and caloric content of competitive foods. *Archives of Pediatrics and Adolescent Medicine, 166*(5), 452–458.

Wang, G. J1., Geliebter, A., Volkow, N. D., Telang, F. W., Logan, J., Jayne, M. C., Galanti, K., Selig, P. A., Han, H., Zhu, W., Wong, C. T., Fowler, J. S. (2011). Enhanced striatal dopamine release during food stimulation in binge eating disorder. *Obesity (Silver Spring), 19*(8), 1601–1608. doi:10.1038/oby.2011.27. Epub 2011 Feb 24.

Food Additives and International Trade

Ben Mepham
University of Nottingahm, School of Biosciences, Sutton Bonington Campus, Loughborough, UK

Synonyms

ADHD; Cancer; Consumer sovereignty; Food ethics; Food safety; Precautionary principle; Toxicology tests

Introduction

This entry aims to outline major ethical concerns relating to food additives and to identify the consequent trade-related issues. It begins with a brief account of the functional and economic rationales for using food additives in processed foods, proceeds to an identification of the ethical concerns associated with their use, and then examines the ways in which these concerns have been addressed. In conclusion, the entry discusses some implications of the ethical analysis presented for international trade in foods containing additives.

Background

Several thousand different chemicals are currently added to processed food. The use of food additives has been integral to developments in the global food industry over recent decades, which are characterized by terms such as "agribusiness" and "food processing." In consequence, the traditional links between agricultural raw materials and food products have been progressively eroded in a process in which farm products are reduced to simple industrial inputs such as proteins, carbohydrates, and fats. These inputs are then reconstituted in "manufactured" foods, which possess many commercial advantages, e.g., longer shelf life, convenience in processing, and standardized composition. As a result, food has become more heterogeneous, with specific products formulated by novel processing techniques that impart the products with "added value," i.e., they are more commercially profitable.

According to Roberts, "as production has become almost entirely automated, with vegetables diced, meats ground, batters mixed, doughs extruded, and ready-to-serve dinners assembled, all by computer-controlled robots at rates of thousands of units per minute, the food itself has had to be amended, often significantly, to tolerate the process." The use of additives has thus served to "repair the damage done to the food during manufacturing," e.g., with artificial colors added to restore those lost in cooking and pulverizing and synthetic flavors used to replace easily damaged natural flavors. Often addition of a single substance, like monosodium glutamate, can substitute for the range of natural flavors of meat without most consumers noticing the difference.

Additives also allow manufacturers to economize on the cost of natural ingredients by avoiding the problem of their frequently limited supply. Moreover, the shelf life of foods can be extended and considerable economic savings made by simplifying the complex procedures involved in cooking. These commercial advantages apply particularly to "fast food."

Categories of Food Additive

European Community (EC) legislation defines a food additive as "any substance not normally consumed as a food in itself ... the intentional addition of which to food for a technological purpose ... results ... in it or its by-products becoming directly or indirectly a component of such foods." In the European Union (EU), all additives are assigned E numbers (Table 1).

Some additives are natural substances and others synthetic, but the distinction is blurred when naturally occurring substances are

Food Additives and International Trade, Table 1 Categories and examples of food additives regulated for use in the EU

E numbers	Category	Examples
100–199	Colorants	Sunset yellow, tartrazine
200–299	Preservatives	Sulfites, benzoates
300–399	Antioxidants, acidity regulators	Ascorbates, phosphates
400–499	Thickeners, stabilizers, emulsifiers	Alginates, natural gums
500–599	Acidity regulators, anticaking agents	Mineral acids and bases
600–699	Flavor enhancers	Glutamates, inosinates
700–999	Miscellaneous	Waxes, cyclamates, saccharine
1000–1999	Additional chemicals	Lipases, ethanol

synthesized in the laboratory and might thereby acquire unwelcome contamination. Perhaps more problematical are those additives that are xenobiotics, i.e., substances not normally produced or present in the human body, the metabolism of which might be considered of greater concern for consumers' health.

Millstone and Lang (2008) reported that, in terms of global market share, approx. 40 % of additives were used to affect the taste, 30 % the texture, and 5 % the appearance of food. Nearly 20 % served as processing aids, and only about 5 % were added for safety reasons to protect consumers from bacterial food poisoning and rapid deterioration of food quality. The latter are crucially important, e.g., in inhibiting the growth of bacteria causing conditions such as botulism, which is a serious form of food poisoning. On average, in industrialized countries, each consumer ingests 7–8 kg of food additives p.a., an amount costing food manufacturers about US$20.

However, recently, EU regulations on additives have changed to include food flavorings. Formerly, several thousand artificial flavorings were permitted largely according to the same criterion that the US Food and Drugs Administration (FDA) designated "generally recognized as safe" (GRAS). But EC regulations are currently being amended to establish a common authorization procedure for food additives, food enzymes, and food flavorings.

The term "additive" does not generally apply to substances added to food unintentionally, such as packaging migrants, agrochemicals used in crop production, or drug residues resulting from treatment of farm animals. Although these substances are often matters of ethical concern, neither they nor substances intentionally added to so-called functional foods (Mepham 2011a) are discussed here. Moreover, while not classed as food additives, sugar and salt are also added substantially to many foods, and it is arguable that the resulting adverse public health consequences, e.g., in terms of heart disease and obesity, may be far more serious than for many of the food additives discussed in this chapter.

The vast majority of additives raise few concerns in terms of consumer health, but for a significant number, their use is ethically problematical. According to Millstone and Lang (2008), doubts have been raised about approximately 200 food additives, which are claimed to cause acute intolerance or allergic reactions in certain consumers or to increase the risks of serious long-term harms, such as cancer. Unsurprisingly, such claims result in a significant level of public concern. For example, in the EU, 25 % of people surveyed in 2010 were "very worried" about food additives, and a further 41 % were "fairly worried" (Eurobarometer 2010) – data that show a significant increase from an equivalent survey in 2005.

In response to these findings, in 2012 it was reported that it was proposed to reevaluate all existing additives with an E number, a task which was planned to be completed by 2020 (European Food Safety Authority 2012).

Regulation of Food Additives in the EU

EU legislation on food additives requires that their use be explicitly authorized, which itself depends on satisfying three conditions (European Commission 2011), viz.:

- There is a technological need for their use.
- Potential consumers are not misled.
- The additive presents no hazard to consumers' health.

Authorization for the sale of foods containing additives is only granted after they have been evaluated for their safety by expert panels, e.g., that advising EFSA. But outside the EU, other regulatory bodies not only define additives differently but also set standards that may differ appreciably from each other, a situation that inevitably complicates matters in a globalized food market.

For the discussion of ethical concerns relating to food additives, reference is here made, in the first instance, to the situation in the EU. The implications for international trade in foods of the different arrangements in other nation states are discussed in a later Section.

Ethical Concerns

Whether the three preconditions for authorization of food additives in the EU, listed above, are always adequately observed is subject to debate. Thus, crucial ethical issues concerning food additives may be classed as:

- Consumer sovereignty, i.e., consumers' ability to act on their informed judgments about additives
- Risks of any harms to consumers' health resulting from additive consumption
- The adequacy (and usually adverse effects on laboratory animals) of mandatory safety evaluation procedures

These issues, with the exception of that concerning effects on laboratory animals (recently addressed by Mepham 2011b), are now discussed in turn.

Consumer Sovereignty

This refers to individuals' status in respect of their informed choices over what they consume, the term implicitly echoing the time-honored maxim "the consumer is king." It is thus one aspect of the broader concept of autonomy, a vital feature of human rights. In relation to food, there are strong reasons why consumer sovereignty demands explicit respect. Thus, (i) food has the capacity to profoundly affect consumers' well-being, positively or negatively; (ii) any effects may not be evident until a food has been consumed for a long period (e.g., over many years); (iii) sensory inspection is not always a reliable means of assessing food safety; and (iv) the complex ways nutrition interacts with other factors, such as individual genetic predispositions or lifestyles, coupled with the low precision with which outcomes can be forecast, mean that informed food choices are intrinsically difficult.

Currently, many widely consumed foods contain several food additives, which it is necessary to assess in the context of consumer sovereignty. Three ethical principles are customarily taken to define consumer sovereignty, viz., the target consumer should have:

- The capability of understanding the product and any associated risks
- A choice of goods, provided by competition
- Sufficient information to judge how expectations of the goods are satisfied

Whether these principles are adequately respected spans a range from, at one extreme, a familiar, naturally occurring, additive raising no safety concerns to, at the other extreme, a case in which the additive is an unfamiliar, synthetic chemical, and employed, e.g., to give the food a vivid color.

But many consumers are often not in a position to make sound decisions on such matters. This is because food preparation and distribution in the form of prepared meals often deny them realistic opportunities of making informed choices. Arguably in such cases, consumers might be said to forfeit their autonomy. But an alternative interpretation is that their autonomous actions involve placing trust in the regulatory bodies that governments invest with the authority to adjudicate on food safety. The crucial question then becomes whether the trust demonstrated is justified by the trustworthiness of the appointed trustees.

Several factors affect trustworthiness. Notably, consumers' opinions depend on perceptions of the competence and motivation of regulatory authorities. But large numbers of other individuals are also involved in ensuring food safety, e.g., scientists and technicians performing tests on laboratory animals and administrative staff responsible for collating results. The evidence obtained is then subject to the judgments of government advisory committees pronouncing on acceptable safety standards, the accuracy of quality control procedures in food manufacturing establishments, and the effectiveness of trading standards officers in monitoring international transactions. Skeptical consumers might perhaps question the intrinsic instability of such long chains of responsibility.

Arguably, the central problem of consumer trust is one of the trustworthiness of regulatory authorities, and recent history has unfortunately provided numerous examples in which they have fallen short of consumers' expectations.

Thus, before the link with new variant Creutzfeldt-Jakob disease (nvCJD) in some British consumers was established, there were repeated governmental assertions that beef from BSE-infected cattle (i.e., with bovine spongiform encephalopathy) was safe for human consumption. And globally, there have been many other reports of defective food safety regulation. Hence, the public trust sought by the policy-makers (the trustees) will only be achieved when trustworthiness is *won*: people cannot simply *decide* to trust others.

These difficulties are undoubtedly compounded by the effects of food advertising. For example, the Yale Rudd Center estimated that $4.2 billion was spent in 2009 on fast-food advertising in the USA, an amount vastly exceeding the $6.5 million budget of the USDA's (United States Department of Agriculture) Center for Nutrition Policy and Promotion – the remit of which is to "improve the health and well-being of Americans by developing and promoting dietary guidance" (Harris et al 2010). Given the enormous disparity in financial investments, the authenticity of the concept of consumer sovereignty must surely be questionable.

In summary, critical ethical issues concern (a) the extent to which all consumers are able to make, and act on, sound judgments concerning the safety and acceptability of food and (b) the perceived trustworthiness of regulatory authorities and of the many components of the food supply chain.

Risks of Harm to Consumers

Claims have been made that additives are directly responsible for a wide range of disease conditions. Although some alleged associations are probably ill-founded, there seems to be strong prima facie evidence for certain claims. Several public interest groups have drawn up lists of additives they consider should generally be avoided or treated with caution, especially by sensitive individuals, e.g., the US Center for Science in the Public Interest.

In theory, safety assessments of food additives might be based on two types of evidence, viz., epidemiological data and results of toxicological tests. In practice, because of the complexity of people's diets, lifestyles, and genetic predispositions, it is only rarely possible to derive useful data from epidemiological studies. Exceptions to this generalization almost prove the rule. For example, acute adverse reactions to foods known to contain certain substances (as in the rapid onset of asthma attacks or other allergic reactions to certain colorants) may be strongly suggestive of causal links.

Acute Effects

Ben Feingold, a Californian pediatric allergist, proposed in the 1970s that certain artificial colors and flavors cause hyperactivity in children, now classed as "attention deficit hyperactivity disorder" (ADHD). His recommended additive-free diets found support from many, but were often disparaged by mainstream medical practitioners.

Recently, more substantial evidence for such neurotoxic effects has been provided, notably by a dietary intervention study funded by the UK Food Standards Agency (FSA). The study involved healthy children who received fruit drinks containing various levels of six colorants and one preservative additive. The authors concluded that, in contrast to consumption of placebos, "artificial colours or a sodium benzoate preservative (or both) in the diet result in increased hyperactivity in 3-year-old and 8/9-year-old children in the general population" (McCann et al 2007). The colorant additives identified as potential causal factors in ADHD responses were sunset yellow (E110), quinoline yellow (E104), carmoisine (E122), allura red (E129), tartrazine (E102), and poinceau 4R (E124).

Consequently, the FSA recommended that manufacturers and retailers find alternatives and that carers avoid them if concerned about their children's behavior. Although, initially, the EFSA was skeptical, after performing a reevaluation of several sets of data, the recommended acceptable daily intakes (ADI) of

E104, E110, and E124 have now been reduced (European Food Safety Authority 2010).

Soft drinks are also the subject of much concern because there is recent neurophysiological evidence that, in addition to their neurotoxicity, additives can become addictive (Gearhardt et al. 2011), which might well be a critical factor in the rapidly increasing incidence of obesity that is evident worldwide.

Chronic Effects

If establishing causal factors of acute effects is problematical, doing so for chronic effects is usually even more difficult, and the intrinsic imprecision of many evaluations is compounded by the fact that tests on individual additives take no account of synergies with other additives and dietary components. Consequently, there is an almost complete reliance on toxicological studies on animals to provide quantitative evidence.

The Delaney Clause, introduced into US food safety legislature in 1958, which stipulated that "no additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal," has been a matter of contention ever since. In part, this is because it is now realized that virtually any chemical, even at a low level of exposure, might prove carcinogenic in some individuals. But, in practice, the de minimis principle is now often applied, whereby a risk of less than one in one million is considered negligible.

However, a recent illustration of the possible relevance of animal studies is the report that high dietary inorganic phosphate (Pi) levels in mice stimulate tumorigenesis by influencing the activity of pivotal genes for lung cancer (Jin et al 2009). These appear to be important findings, firstly because this condition has the highest global mortality rate of all cancers and secondly, because between 1983 and 1993 there was a 17 % increase in addition of Pi to processed foods (e.g., meats and cheeses) to increase water retention and texture – a trend that seems likely to continue.

In fact, a large number of other food additives (or their metabolites) have also been alleged to be potential carcinogens in humans, including sweeteners (like saccharine, cyclamates, and aspartame), xenobiotic colorants (including the six listed above), and preservatives (such as nitrates and nitrites, which by reacting with amino acids form carcinogenic nitrosamines) (Rock et al. 2000).

Risk Assessment

The standard approach to addressing the safety of chemical hazards comprises four elements: (i) hazard identification, (ii) risk assessment, (iii) risk management, and (iv) risk communication. Historically, the elements were thought to provide a necessary separation between the scientific domain (i and ii) and the policy-makers' domain (iii and iv), thus leaving politicians with the task of managing the policy implications of the, allegedly objective, facts the scientists produce.

Accepting the insight of Paracelsus (dubbed "the father of toxicology") that everything is a *potential* poison – the dose being the crucial factor – means that risk assessment is a major concern, on which subsequent elements are highly dependent. However, the body reacts to ingestion of a chemical in diverse ways. Thus, toxicokinetic studies reveal that different dose levels can produce varying responses in factors such as stability, solubility, absorption, protein binding, and metabolism – which may elicit markedly different end results. Moreover, there are serious concerns over whether, in extrapolating from results of animal tests, the arbitrary safety factor of 100 (expressed per kg body weight) is always adequate (Mepham 2011b).

Defined as "the probability of harm," the significance of risk is most meaningfully expressed as the product of probability and severity, but other relevant features include the intensity, duration, and reversibility of the harm. An important consideration is the manner in which scientific assessments of risk are employed in circumstances in which legal criteria might be more appropriate. For example, it is generally accepted that in law, it would be a more grievous error to

convict one innocent person of a serious crime than to acquit ten guilty persons. Yet scientific standards insist that a causal relationship between a chemical agent and human mortality requires that the odds be, at least, reversed. Arguably, with respect of the burden of proof, the current situation for the safety evaluation of additives should accord much more with the legal approach (e.g., see Cranor 2005).

Moreover, the traditionally acknowledged distinctions between risk assessment, management, and communication are open to severe criticism. While risk assessment is generally considered an objective process that necessarily entails the rigorous application of scientific methods and probability theory, the resulting recommendations are rarely indisputable. This is because risk assessment is far from being value free. Rather, the experts who produce the data for the risk analysis are constrained by the framing assumptions of their enquiries, which include the types of question addressed and those neglected, the evidence considered relevant and that discounted, and the way the evidence is interpreted. These assumptions might seriously affect (a) the reliability of extrapolating from results of short-term tests on laboratory animals to conditions in which people consume food in the real world, (b) the time and resource investments considered appropriate for adequate testing, and (c) the skills, experience, and presumptions of the experts chosen to make policy recommendations.

At issue here is the appropriate application of the precautionary principle, which states that lack of scientific certainty should not be used as a reason to ignore or postpone preventive or remedial action when there are other good reasons to do so, i.e., the principle aims to address the problems of uncertainty. The sheer complexity of the cocktail effect of a wide range of diverse individuals consuming inter alia numerous food additives exemplifies the latter factor.

In summary, the critical ethical issue relating to human health concerns the effectiveness of risk assessment and management procedures employed in evaluating the safety of food additives.

Trade-Related Issues

Having surveyed the ethical concerns raised by food additives, it is now appropriate to consider, albeit briefly, the ways these issues are addressed in relation to international trade. The body established to develop global harmonization of standards for international food trade, e.g., by using an International Numbering System for Food Additives (INS), is the Codex Alimentarius Commission (CAC), which is advised by the Joint Expert Committee on Food Additives (JECFA). The latter, a joint World Health Organization and Food and Agriculture Organization (WHO/FAO) body, established in 1956, aims to provide reliable and independent expert advice and thereby contribute to the setting of standards on a global scale for the health protection of food consumers and for ensuring fair practices in the trade in safe food.

The main objectives of CAC's General Standards for Food Additives (GSFA) are to stipulate conditions in which additives may be used in foods and to establish maximum levels for their inclusion to ensure that the intake of an additive from all its uses does not exceed its ADI.

In adjudicating on international trade disputes, the World Trade Organization (WTO) implements its Sanitary and Phytosanitary Agreement (SPS). Under the terms of the SPS, risk-based standards established by CAC are employed, which in practice rely on judgments documented in the GFSA. The standards are also used in contracts between private companies. However, questions of justice may arise when considering prospective food imports from a less developed country, which has not yet established a fully harmonized food regulatory system.

Traditionally, the CAC operates by consensus, a practice that is not conducive to achieving common global standards in some controversial areas (Paarlberg 2010). For example, the CAC has approved use of several additives (e.g., aspartame), the safety of which remains strongly contested by the governments of some states. Moreover, the number of an additive in the INS list does not necessarily correspond to its E number, while some countries, including the

USA, do not use the INS. Thus, despite the goal of a globally harmonized system, this aspiration is by no means yet realized.

Summary

The aim of this review has been to examine food additives from a perspective that prioritizes concern for key ethical principles. Thus, the central issues concern the alleged "technological need" for additive use, the degrees of consumer safety and sovereignty that can be guaranteed, and the reliability of the current mandatory toxicity tests.

Arguably, the analysis presented suggests there is a strong case for significant changes in food manufacturers' employment of certain food additives, in the levels of precaution adopted in their legal authorization, and in the reliance placed on, and conduct of, tests performed on animals. Implementation of changes based on these ethical considerations would seem certain to have important implications for the regulation of international trade in processed foods.

Cross-References

- ▶ Food Addiction
- ▶ Food Labeling
- ▶ Food Risks

References

Cranor, C. F. (2005). Scientific inferences in the laboratory and in the law. *American Journal of Public Health, 95*, S121–S128.

Eurobarometer. (2010). *354 food related risks: Summary*. http://www.efsa.europa.eu/en/factsheet/docs/sreporten.pdf

European Commission. (2011). *Food additives and flavourings*. http://ec.europa.eu/food/fs/sfp/flav_index_en.html

European Food Safety Authority. (2010). *EFSA opinion on six colours*. http://www.efsa.europa.eu/en/faqs/faqfoodcolours.htm

European Food Safety Authority. (2012). *Re-'E' valuation of Europe's food additives*. http://www.efsa.europa.eu/en/press/news/120130b.htm

Gearhardt, A. N., et al. (2011). Neural correlates of food addiction. *Archives of General Psychiatry, 68*, 808–816.

Harris, J. L., Schwartz, M. B., & Brownell, K. C. (2010). *Evaluating fast food nutrition and marketing to youth*. Yale Rudd Center for Food Policy and Obesity. http://grist.files.wordpress.com/2010/11/fastfood-facts_report.pdf

Jin, H., Xu, C.-X., Lim, H.-T., et al. (2009). High dietary inorganic phosphate increases tumorigenesis and alters Akt signalling. *American Journal of Respiratory and Critical Care Medicine, 179*, 59–78.

McCann, D., Barrett, A., Cooper, A., et al. (2007). Food additives and hyperactive behaviour in 3-year-old and 8/9-year-old children in the community: A randomised, double-blind, placebo-controlled trial. *The Lancet, 370*, 1560–1567.

Mepham, B. (2011a). Functional food and personalized nutrition. In R. F. Chadwick (Ed.), *Encyclopedia of applied ethics* (2nd ed., pp. 360–369). Dordrecht: Elsevier.

Mepham, B. (2011b). Food additives: An ethical evaluation. *British Medical Bulletin, 99*, 7–23.

Millstone, E., & Lang, T. (2008). Food additives. In *The atlas of food* (2nd ed., pp. 90–91). London: Earthscan.

Paarlberg, R. (2010). *Food politics* (p. 177). Oxford/New York: Oxford University Press.

Rock, C. L., Lampe, J. W., & Patterson, R. (2000). Nutrition, genetics and risk of cancer. *Annual Review of Public Health, 21*, 47–64.

Food Advertising to Children: Policy, Health, and Gender

Catherine L. Mah and Sylvia Hoang
Centre for Addiction and Mental Health, Toronto, Canada

Synonyms

Food and beverage marketing directed toward children

Introduction

This entry examines the policy debate on food and beverage advertising directed toward children. In particular, we address a number of normative issues for public health policy

intervention. We also consider gender dimensions of this policy debate, which have been underexamined.

Key Terms

We begin with a brief discussion of key terms: marketing versus advertising, food and beverages, and directed toward children.

The terms advertising and marketing are often used interchangeably in discussion of this policy issue. Marketing is generally understood as encompassing a broader range of issues, including the "four Ps" of traditional marketing practice: product, price, placement, and promotion. The term advertising usually refers to the promotional component of marketing. In this entry, we refer to the two somewhat interchangeably, with the understanding that broad marketing is likely the more appropriate way to consider a suite of policy interventions as well as related health and policy impacts.

Likewise, many actors would refer to food advertising as the colloquial way to refer to promotion of both food and beverages. The inclusion of beverages in what constitutes "food" has a public health significance and is also rooted in relevant jurisprudence. Beverages have received increasing attention as a significant contributor to the rise in prevalence of obesity, particularly sugar-sweetened beverages (SSBs) as an energy-dense, nutrient-poor food. This has led to public health policy interventions to limit SSB consumption among children, such as in school or recreation facility settings. Other policy proposals addressing SSBs include the widely publicized and failed proposal to reduce the largest beverage size permitted to be served in fast-food restaurants in New York City, which was sometimes referred to as a soda "ban" (the concept of public health "bans" is discussed further below). Finally, beverages are usually considered "food" in overarching legislation. For example, the US *Food, Drug, and Cosmetic Act* (c. 9, s. II, Sec. 321(2)(f)) notes that "The term "food" means (1) articles used for food or drink for man or other animals, (2) chewing gum, and (3) articles used for components of any such article." Similarly, Canada's *Food and Drugs Act* (R.S.C. 1985, c. F-27, Sec. 2) notes that "'food' includes any article manufactured, sold or represented for use as food or drink for human beings, chewing gum, and any ingredient that may be mixed with food for any purpose whatever."

A key phrase is "directed toward children." The dominance of food industry self-regulatory approaches to governing food advertising has meant a great deal of dispute over what constitutes advertising that is specifically directed toward children with the intent to influence their personal consumption, versus advertising that is directed to gatekeeper adults such as mothers, or part of the general social environment in which children happen to be (also discussed further below).

Overview of the Policy Issue in Health Terms

Policy debate on food advertising to children is not new, having been part of concerns about commercial influence in society for several decades. The current imperative for intervening through public policy is principally justified in terms of the need to address evidence about adverse health and dietary impacts of marketing, among a generation of children whose life expectancy is now less than their parents.

The major global systematic reviews on the health effects of food advertising directed toward children have been the Hastings et al. (2003) review, conducted by a group in the United Kingdom and subsequently updated for the World Health Organization (2007, 2009), and the US Institute of Medicine's (2006) report. These reveal that children are exposed to a greater intensity and frequency of advertising than ever before, including food and beverages that are predominantly energy dense and nutrient poor. The balance of evidence also indicates that advertising influences childhood food preferences, knowledge, dietary choices, and health status.

The most prominent effect appears to be on consumption (purchasing) behavior.

Policy actors worldwide have promoted three general types of strategies in terms of policy interventions to limit the negative influences of advertising on child health and well-being and/or ethical marketing (WHO 2010, 2012). The vast majority of jurisdictions have undertaken "voluntary" approaches, i.e., food industry self-regulation in the form of standards for ethical advertising practice. Several food industry and marketing industry associations worldwide have led initiatives to adopt "pledges" to alter their practices, although critics have often argued that such voluntary activity has not been sufficient to substantively alter the food advertising environment.

The "ban" or comprehensive public policy approach uses statutory regulation to limit childhood advertising exposure, although these vary from "total ad bans" (all commercial advertising) to "food ad bans" to "junk food ad bans" (also referred to as "nutrient-based" approaches) which require definition of what constitutes healthy and unhealthy food. Other jurisdictions have undertaken "stepwise" approaches that target exposures to specific types of products, in particular venues such as schools, or forms of marketing/media such as children's television programs.

Normative Issues Arising in the Policy Debate

The public health policy discussion on food advertising to children has raised a number of normative issues. We introduce a number of prominent points here, although this is by no means intended to be an exhaustive overview.

One core set of issues asks about the role and value of advertising in society. The purpose of advertising is to promote consumption, which ostensibly is a generic market instrument that could be applied to different types of goods and services, useful, beneficial, pleasurable, and/or harmful alike. The concepts of ethical consumption, marketing ethics, ethical advertising, and social marketing suggest that advertising is not inherently harmful, and can offer value in human life. The concept of corporate social responsibility (CSR), which has recently been updated to a notion of creating shared value (CSV), suggests that for-profit companies have social contributions to make and, also, that they are valid and important actors in societal decision-making, e.g., in the public policy domain.

A contrasting view would suggest that advertising is inherently manipulative, particularly in the presence of advancements in marketing practices based on psychological and neurological research, which include techniques aimed at shifting the subconscious. In this case, the capacity of individuals – even adults – to act freely on market incentives comes under question. The body of consumer behavior research on "mindless eating" (e.g., Wansink 2004, 2006, 2010) suggests that social and environmental cues such as large portion sizes and among advertising techniques, health claims, prompt people to eat more than they need, leading to caloric overconsumption, and more than they would if they were to choose freely without the influence of those cues. In this case, public policy intervention is deemed necessary to correct market failure in the form of information asymmetry, a lack of full and appropriate inputs for consumer decision-making.

A second set of issues speaks to the question of advertising specifically directed toward children. One dimension is about the group characteristics of children, who are generally seen as vulnerable in contrast to adults and requiring a broader range of societal protections. Another dimension, however, is to consider exactly how advertising relates to its potential audiences. Even if advertising is not inherently harmful, some would suggest that it is intended to appeal to abstract reasoning (e.g., desirability of a product) versus more concrete concerns such as material need or price. As noted above, one of the shifts in marketing practice over time has been to appeal to increasingly abstract dimensions of the relationship between people and products, such as the development of a lifelong emotional bond to a brand (sometimes referred to in child-directed

marketing as "cradle-to-grave" marketing). As such, the argument might proceed that those who lack sufficient cognitive capacity to fully comprehend the persuasive intent of marketing should not be targeted by it. One practical definition of relevant cognitive capacity in childhood that has been used in policy debate is Piaget's cognitive stages.

A third set of issues examines the specific harms associated with advertising directed toward children. Policy proposals have largely been put forward on the basis of a range of health effects of advertising directed toward children, introduced in the section above. The overarching rationale for policy intervention that policymakers have been most interested in, however, is the health outcome of childhood obesity. Restrictions on food and beverage marketing are seen as an effective policy instrument to stem the rising tide of obesity among children at the population level, with the reasoning that shifts in marketing over time have been a key etiologic factor. The focus on obesity has attracted particular attention amidst growing concern about future health-care costs associated with obesity and its sequelae, a utilitarian perspective. Yet some policy actors would argue that an obesity focus does not take into account the broader range of potential harms to children that would be important to air in public discourse about marketing in society. The section on gender dimensions below offers examples of some of these potential harms.

A fourth group of issues, discussed in some detail under other encyclopedia entries, is about the agency of children and whether children are (policy or market) actors in their own right. On the one hand, this line of argument comes from the concept of the rights of the child and the responsibility of states to uphold this right. The field of child-targeted marketing, however, also views children as important independent actors, either as shoppers directly making purchases or as indirect influencers of consumption, such as in the concept of the "nag factor" (where the purpose of marketing is to promote children's persuasion of adults who shop for them) or the "four-eyed, four-legged superconsumer" (where the child and mother make up a single super-unit that is the target of marketing practices).

The capacity of children as agents is often associated with proposals to incorporate the instrument of "media literacy" education in policy. Media literacy education is an information-based activity where health promotion tools are used to provide children (and their parents) with sufficient knowledge and skills to navigate and evaluate mass media of different kinds, which includes marketing messages. The media literacy view suggests that children will be exposed to marketing regardless of policy restrictions, so they are best suited to deal with that marketing as engaged and informed consumers.

It is worth mentioning that much of the health debate about childhood – and even adult – agency in relationship to marketing deals surprisingly little with civic participation. Whereas ordinary children and their parents can be empowered in terms of their informed participation in consumption in markets (such as through media literacy), the options for their involvement in deliberating upon or setting public policy appear to be more limited. This is consistent with the current dominant normative frameworks in the health sector dealing with relationships between state, market, and citizen.

Fifth, the policy principle of liberty raises a set of important issues to consider in public health policy debates. Liberty has been used in the policy debate in the negative and positive sense and is also discussed in parallel with concepts of bounded rationality and of personhood. One line of argument, for example, notes that marketing interferes with individual liberties, whether on the part of the child or parents, because it prevents people from acting freely in their own best interests. This can be consistent with bounded rationality because individuals cannot reasonably, even if they were to be exposed to all possible information, incorporate these considerations into every decision. Another line of argument suggests that marketing is a communication tool, and thus upholding liberty should mean free access to all possible information about products, including marketing.

This requires individuals to be more than boundedly rational.

Liberty is also discussed alongside the concept of personhood for corporations. In the US policy debate on this issue, an argument has been made for minimal policy intervention on the basis of the concept of corporate free speech.

Finally, a sixth set of issues is about marketing and advertising as part of the social and cultural environment. Some actors would argue that marketing has, for some time now, been part of normal childhood experience, and will always be. Other actors would counter that the intensity, frequency, and techniques of marketing have shifted substantially over the twentieth century, meaning that yesterday's advertising directed toward children cannot be reasonably compared to today's (and tomorrow's). Hence, a new policy approach is needed to address what has become an entirely different social and cultural enterprise.

Discussion of marketing in the environment is also related to the debate about commercial presence in different settings. For example, schools, where children not only spend time but are often required to spend time by law, are often seen as an archetypal "commons" that should be free from market incentives or commercial influence.

Gender Dimensions

Gendered advertising refers to images and concepts that are employed in advertising or marketing depicting stereotypical gender roles and or displays. Unlike the concept of sex, which refers specifically to the biologically based differences between females and males, gender is a socially constructed notion that interrogates the juxtaposition between femininity and masculinity.

The current policy debate on food and beverage advertising to children has tended to underexamine the implicit gendered notions in advertisements, marketing practices, and different policy intervention options. Considerations of gender are significant because they contribute directly to the normative frameworks (including commonly held beliefs, values, emotions, attitudes) underlying policy and that perpetuate dominant societal views (e.g., either compliance or aversion). In other words, advertising acts as an important tool of socialization in modern industrialized societies, maintaining particular social constructions such as gendered relations, displays, and roles in the public policy domain.

As the perceived primary providers of food and care to their families and children, marketing that has been specifically directed to parents has contributed to the normative expectations of what mothers' (as well as fathers' and lone parents') primary responsibilities and obligations ought to be. These expectations extend to socially defined perceptions of what individual children and "family units" ought to do, how they ought to look, and what they ought to eat. The mothering role also holds significance in the context of the childhood obesity rationale for intervention, mentioned above, which has been a subject of interest within the critical feminist perspective on fat studies, including concepts of fat oppression, (lone) motherhood, and constructions of beauty.

For instance, an advertisement depicting a socially acceptable, well-put-together mother, lovingly giving her well-behaved, adorable children a particular food item that they were specifically requesting, and subsequently thoroughly enjoy, creates the expectation that a "good" mother *should* provide certain food items at her children's request in order to achieve the desired outcome of having well-behaved, satisfied children within a happy family. Simultaneously, a child viewing the same advertisement may be conditioned to believe that they might be happier if they modeled the behavior of the children they saw in the advertisement and pressured their mother (or father) to purchase particular food items that were specifically featured. As noted above, a particular area of marketing specialization has been to target "superconsumer" units involving a compound form of consumption made up of behaviours of parent and child.

In addition to advertising that is infused with notions of gendered relations, displays, and roles, normative constructions have also materialized through food products that have been saturated with sterotypical feminine or masculine, or sexualized features/characteristics. Studies have

examined gendered packaging directed primarily at young girls or boys, creating a gender bias toward specific food products (e.g., see IOM 2006).

Apart from gender bias created by particular food products featuring specific packaging, other research has examined food advertisements directed at children that are perpetuating gender bias through the following vehicles: gender-specific voice-overs, dominant product user/main character, degree of activity/behavioral aggressiveness, and soundtrack volume – to name only a few (see Childs and Maher 2003). Once again, these factors foster gendered food preferences among specific target consumers such as parents and their children.

As technological advances in the twentieth and twenty-first century have made "screen time" more readily available and as most parents become progressively stretched for time, energy, and resources to manage activities in the private sphere, digital screens – and the advertising on them – have taken on a role of their own and have been equated to modern-day "babysitters."

Overall, the existing array of policy interventions to address food advertising to children have concentrated upon the private sphere, namely, marketing within homes on televisions. This portrays the management of exposures and behaviors related to advertising as a something essentially negotiated between parents and children. As the perceived or expected dominant figures of authority within the home, parents, and more specifically mothers, are thus expected in most policy debates to be the primary gatekeepers that filter advertising at all.

Cross-References

- ▶ Marketing, Food Policy, Diet, and Health
- ▶ Obesity and Responsibility

References

Childs, N. M., & Maher, J. K. (2003). Gender in food advertising to children: Boys eat first. *British Food Journal, 105*(7), 408–419.

Hastings, G., Stead, M., McDermot, L., Forsyth, A., MacKintosh, A. M., Rayner, M., Godfrey, C., Caraher, M., & Angus, K. (2003). *Review of research on the effects of food promotion to children*. Glasgow: Centre for Social Marketing. Retrieved from http://www.foodstandards.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf

IOM (Institute of Medicine, Committee on Food Marketing and the Diets of Children and Youth). (2006). *Food marketing to children and youth: Threat or opportunity?* Prepared by McGinnis, J.M., Gootman, J.A., & Kraak, V.I. (Eds.). Washington, DC: National Academies Press

Wansink, B. (2004). Environmental factors that increase the food intake and consumption volume of unknowing consumers. *Annual Review of Nutrition, 24*(1), 455–479.

Wansink, B. (2006). *Mindless eating: Why we eat more than we think*. New York: Bantam.

Wansink, B. (2010). From mindless eating to mindlessly eating better. *Physiology & Behavior, 100*(5), 454–463.

World Health Organization. (2007). *The extent, nature, and effects of food promotion to children: A review of the evidence*. Prepared by Hastings, G., McDermott, L., Angus, L., Stead, M., & Thomson, S. Geneva: World Health Organization.

World Health Organization (2009). *The extent, nature, and effects of food promotion to Children: A review of the evidence to December 2008*. Prepared by Cairns, G., Angus, K., & Hastings G. Geneva: World Health Organization.

World Health Organization. (2010). *Set of recommendations on the marketing of foods and non-alcoholic beverages to children*. Geneva: World Health Organization.

World Health Organization. (2012). *A framework for implementing the set of recommendations on the marketing of foods and non-alcoholic beverages to children*. Geneva: World Health Organization.

Food Allergies: Ethical Issues

Kristina M. Nies
Cambridge, MA, USA

Synonyms

Anaphylaxis; Diet-related disease; Food intolerance; Food sensitivity

Introduction

Food allergy is the term used to describe an immune response to a protein found in a food.

This adverse reaction is caused by a food that is normally tolerated by humans. (Food allergies occur in other species, but will not be discussed here.) There is no cure for food allergies. Treatment options include avoidance, desensitization, and/or treatment of symptoms. Persons with severe food allergies can experience anaphylaxis, a life-threatening impairment of the circulatory and respiratory systems that can lead to death. The allergic reaction occurs when IgE (immunoglobulin E) antibodies "tag" or attach and mark the protein as a foreign pathogen and trigger the allergic response in the body.

Food allergies most often occur during the first or second year of life. While it is possible to outgrow food allergies, allergies to tree nuts and peanuts are almost never lost. Food allergies are prevalent in 6–8 % of the population during the first year of life, and rates fall off and remain about 1–2 % of the population (Wood 2003, p. 1631).

The most common food allergens are often informally referred to as the "top 8" and account for ~90 % of food allergies experienced. They are peanuts, tree nuts (including almonds, pine nuts, coconuts, walnuts, pecans, pistachios), eggs, milk, soy, wheat, shellfish, and fish. Other less-common food allergens include fruits, vegetables, grains, spices, natural colors and even synthetic colors, and food additives. The 2004 Food Allergen Labeling and Consumer Protection Act (FALCPA) was passed by the US Congress in 2006 and requires the "top 8" allergens to be listed on packaged foods regulated by the Food and Drug Administration (FDA).

Food Allergen Exposure and Symptoms

Persons with food allergies can experience allergic reactions stemming from skin contact, ingestion, and/or inhalation of the allergen. There are varying degrees of sensitivity that food-allergic persons experience. The most severe sensitivities result in immediate hypersensitivity reaction referred to as *anaphylaxis*. This is classified by acute symptoms (appearing in the first 30 min after exposure, though symptoms will likely be present within seconds) and delayed symptoms (experienced up to 8 h after exposure). While immediate reactions including breathing difficulty or angioedema may be life-threatening, delayed reactions are usually not so.

Allergic symptoms include:

Flushing, urticaria/hives
Itching of mouth, lips, tongue, eyes, and skin
Tearing of the eyes
Angioedema, swelling of lips, palate, tongue, eyelids, or entire face
Congested or runny nose, rhinitis, sneezing, rhinorrhea
Stridor, wheezing, shortness of breath
Difficulty swallowing
Upper airway obstruction, dysphonia
Hypotension, arrhythmias, hypovolemic shock
Chest pain
Nausea and/or vomiting
Abdominal pain and cramping
Fecal urgency or incontinence
Uterine cramping
Urinary urgency or incontinence
Fainting
Cardiovascular collapse

Eighty percent of persons experiencing anaphylaxis have skin symptoms.

An allergic individual may experience different symptoms in response to the same allergen, over multiple exposures. These symptoms may change in type and severity as the person ages (Sampson et al. 2006, p. 374).

Diagnosis

There are three forms of allergy testing used to determine if a person has a food allergy: blood test, skin prick test, and oral food challenge.

Blood tests come primarily in the form of the IgE (immunoglobulin E) antibody tests. IgE tests are conducted by taking a sample of blood, introducing potential allergens to the sample, and measuring the IgE levels. A significant benefit of testing a drawn blood sample is that multiple allergens can be tested at once without exposing a person to the possibly toxic substances.

Skin prick test involves a portion of the allergen being placed on a needle or directly on the surface of the skin and the needle puncturing the skin. If a hive appears at the puncture site, the person is considered to have an allergy to the allergen. Skin prick tests are often performed on the forearm or back of the person being tested. Several tests can be done simultaneously using a paddle or plate holding several samples at once. Skin prick tests have an ~85 % sensitivity.

An oral food challenge is when a person is given an allergen in pill form to be ingested. This is often done in the office of a physician or allergist so the person can be carefully monitored in case of anaphylaxis. There has been a move to make the double-blind, placebo controlled food challenge the medical standard for food allergy diagnosis. This method is not feasible for those with a known medical history of allergic anaphylaxis. The diagnostics used can vary between different medical sites and clinics, which leads to a different standard of care. The lack of universal standards and unequal access to care are two important ethical issues.

Cross-Reactivity

Persons with a known allergy to one (or more) allergen can experience "cross-reactivity." This is an experiencing symptom of an allergic reaction in response to an exposure to an allergen that the person is *not* allergic to. Examples include latex-allergic persons having a histamine reaction to certain fruits. Persons who are allergic to bananas can also have a cross-reaction with latex.

Treatment

While there is no known cure to food allergies, there are two main treatments available for allergies: avoidance or controlled exposure and desensitization therapy.

Avoidance is the process of avoiding all exposure to allergens and control any unwanted exposure by managing exposure symptoms. There are three types of medications used to manage allergy symptoms: epinephrine, antihistamines, and steroids.

Epinephrine is a medication used to treat the acute symptoms of severe allergic reactions. It is often administered in the form of an epinephrine autoinjector (also known as EpiPen), a self-injectable form of adrenaline. It is administered when a person is having an immediate hypersensitivity reaction, which is often life-threatening. The goal is to prevent or preempt anaphylactic shock.

Antihistamines are another treatment option for managing the symptoms of an exposure to an allergen. Antihistamines block histamines and histamine reactions and can relieve some symptoms including itchiness. The most common antihistamine is diphenhydramine, commonly known as Benadryl. Antihistamines are not fast-acting and thus are ineffective if administered during an immediate hypersensitive reaction.

Steroids are a treatment option used to decrease inflammation that occurs during and after an allergic reaction has occurred. Similar to antihistamines, they are not effective in preventing or treating anaphylaxis.

Oral immunotherapy, or desensitization, is not a cure but a treatment where persons with food allergies are exposed to small amounts of the allergen. Over time, the quantity of the allergen is slowly increased, with the goal of desensitizing the person to the allergen. Allergy shots are another form of desensitization therapy typically used for environmental allergens. They are not considered effective for food allergies and not a treatment option.

Food Allergies Versus Food Intolerances

Food intolerance is a broad catchall term used to define an adverse experience to a food. Food allergies are classified differently than food intolerances. Food allergies involve an IgE-mediated response, while food intolerances do not. Food intolerances can involve the immune system and many involve an IgG- and/or an IgA-mediated response to a food protein, such as Celiac disease or Heiner syndrome. Food intolerances also

include nonimmune system responses to food, e.g., lactose intolerance which is an inability to digest lactose due to an insufficient amount of the enzyme lactase.

Food Allergies, Ethical Considerations

There are two categories of ethical concerns regarding food allergies: the personal and the implications to society. While persons with food allergies may endeavor to address their individual quality of life concerns, food allergies pose several public health concerns and bring issues of food and healthcare access into question. Lack of access to healthcare can be an obstacle to diagnosis and allergy treatment and potentially lead to increased emergency room use and/or mortality rates. On the individual level, food allergies also impact the quality of life of the food allergic but also caregivers. Quality of life measures include general health and emotional health including stress levels, limitations on family activities, and emotional impacts on parents (Sicherer et al. 2001).

Social Determinants of Health and Disparities

When looking at the ethics of food allergies, we must consider who has access to information about food allergies and who has access to testing and medications to manage symptoms. Social determinants of health and disparities dramatically impact access to healthcare. The World Health Organization defines social determinants of health as "the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels."

While it is easy to use the term "social determinants of health" to encompass all aspects of an individual's life and his/her surroundings, it is important to acknowledge the specific factors that impact health. These elements translate to variability in the quality of health services and support. This variability in access and quality is known as *healthcare disparities* and is defined as being those attributes specifically stemming from race and ethnicity. In addition to race- and ethnic-based disparities, access to care and quality care is impacted by socioeconomics, location, class, gender, sexual identity, religious affiliation, age, language spoken, and education.

Access to Food

There are significant obstacles to maintaining safe food. Ensuring food is allergen-free is difficult because the proteins that cause allergic reactions are not visible to the naked eye. Cross-contamination by crumbs, shared preparation facilities, and lack of proper sanitation, all can cause safe foods to become contaminated. Packaged foods that are labeled allergen-free are often significantly more expensive than their counterparts. This increase in cost can be financially burdensome or even prohibitive.

Education and Support Groups

There are many organizations and support groups who advocate on behalf of the food allergic. Some of these groups also function as emotional and educational support networks. Many have free membership but all require the social capital of time and often access to computers and the Internet. These requirements can exclude many who are in need of information and support.

Legal Rights

Laws that define and require food labeling are essential for those with food allergies to be able to have access to safe food. It was not until recently that some protections have been provided by US law. Passed in 2004 but not enacted until 2006, the Food Allergen Labeling and Consumer Protection Act of 2004 requires that source ingredients for the top 8 allergens be listed in plain English on packaged foods for sale in the United States. The second phase of the law was to develop a definition for the term "gluten-free." This was not completed until August 2, 2103, when the FDA released the federal definition that the food must contain less than 20 ppm of gluten in order to use the term "gluten-free."

This law pertains to packaged food items only. The regulations do not apply to alcoholic beverages and prescriptions or over-the-counter medications. Many pills are formed with starches that are used to bind medications. Some injectables, such as vaccines, have egg-based serums. Since there is no legal requirement to disclose the origin or source of ingredients, medications can be a source of potential unknown allergens.

In December 2012, the US Department of Justice announced that food allergies may constitute a disability under the Americans with Disabilities Act (ADA). The ruling was the result of a lawsuit brought against Lesley University. This ruling had direct implications for university meal plan participation and food services compliance. This ruling allows for some additional legal standing for those with celiac disease and/or food allergies.

In Massachusetts, the Act Relative to Food Allergy Awareness in Restaurants was signed into law in January 2009. It had two provisions that were rolled out separately. In October 2010, a food allergen poster and menu advisory were required by restaurants. In February 2011, "food establishments were subject to a certified food protection manager who viewed the training video and obtained a training certificate." Some have criticized the law as not doing enough in the way of educating restaurant staff and possibly giving food-allergic patrons a false sense of security in dining out.

An Act to Protect Anaphylactic Pupils: Sabrina's Law came into effect on January 1, 2006, in Canada. The law ensures all school boards have policies or procedures in place to address anaphylaxis in schools, which include providing instruction to staff and guidance on the administration of medication. (There is no such law in the United States.)

Social Stigma, Dating/Intimacy, Quality of Life

There is often a social stigma surrounding a person once their food allergy has become known. Persons can be excluded from certain events, or their participation is marginalized. Friendships, dating, and intimacy are complicated in the case of severe food allergies when skin-sensitive reactions can come from touching and kissing.

Food allergies can place additional stress on family members and caregivers. There is an increased financial burden due to the need to procure and store safe allergen-free foods; in families, this sometimes means having dedicated allergen-free space and/or different utensils in addition to special foods. Food-allergic people and their caregivers can have higher rates of school and work absences and limits placed on social interactions. These can lead to significant negative impacts on quality of life (Sicherer et al. 2001).

Literature

As Behrmann points out in his article "The Paucity of Ethical Analysis in Allergology," there has been little attention paid in the form of academic and medical literature on the ethics of food allergies. His review of texts written in French and/or English resulted in 35 pieces with substantial focus on allergies and ethics. He notes that research is primarily focused on the ethics surrounding psychological issues, and the majority is about asthma sufferers. He calls for the inclusion of social, legal, ethical, and morbidity, to be added to future research. Behrmann makes the comparison to the attention that obesity has received, since both diseases have higher occurrences in industrialized worlds, and both have seen dramatic increases since the 1960s. In his comparison, Behrmann calls for similar attention to be paid toward food allergies – focusing on ethics, public health and public health policy, disparities, and the need to pay specific attention to vulnerable populations. He outlines the need for collaborative research between allergologists and bioethicists to create interdisciplinary research to guide health policies and interventions.

There are significant ethical issues that arise in the diagnostics and treatment of food allergies. Roberts in "Challenging Times for Food Allergy Tests" highlights the ethical need to conduct oral

food challenge(s) as a means of ruling out false-positive blood work and unnecessarily restricting diets. Oral food challenges produce the risk of anaphylaxis, which can deter parents of small children and physicians from wanting to undergo the test. Roberts sides with the need to accurately diagnose patients and that the risk is outweighed by the need for knowing what food a person is or is not allergic to and what her/his reaction truly would be if exposed. At the same time, Hourihane and Beirne in "Evidence of Effectiveness of Anaphylaxis Management Plans: Are We Waiting for Godot?" look at whether drug trials for treatment of anaphylaxis are ethical at all.

In the article "Complementary and Alternative Medicine for the Allergist-Immunologist: Where Do I Start?," Engler et al. (2009) highlight that many food-allergic patients seek complementary or alternative therapies in addition to Western medical practitioners and medications. There is an issue of education, on parts of both physicians and patients as to the safety and efficacy of alternative/complementary therapies. They bring up the need for international information sharing, evaluations, reporting, and research.

Millins' work calls for an increase in research into the epidemiology of food allergies and notes the dramatic increase in hospitalization for anaphylaxis in Australia. He states that additional research into food allergies is necessary not only to determine their cause but also to effectively gather rates of occurrence and to effectively determine where and why food allergy rates are increasing. The public health implications include allocating additional resources for training and educating medical professionals on the signs of anaphylaxis and how to effectively administer medications.

One of the only pieces looking at the ethics of people with food allergies interacting with those without, and how both of these sets of bodies are being governed, is Ross and Hunt. In their "Governing Peanuts: The Regulation of the Social Bodies of Children and the Risks of Food Allergies," they look at the school board in Ottawa's set of guidelines surrounding peanut allergies. They specifically look at the moral implications of shifting the risk management from the food-allergic child to that of the parents of non-food-allergic children and classroom teachers. Ross and Hunt argue that the additional burden of regulating child behaviors and food consumption that is placed on teachers is an extension of the government and part of an increasing trend in teacher responsibility and oversight into more and more aspects of children's and their parent's lives.

Summary

The ethical considerations surrounding food allergies are complex and multifaceted. Persons with severe food allergies are impacted by the food choices and practices of others. When we consider what is just, ethical, moral, and right, we must consider the non-food allergic as well as those with food allergies. In both the public health and public school arenas, food allergies raise significant issues about individual's rights. This is further complicated by new laws and regulations, which have begun to shift some responsibility onto food producers, school districts, and restaurants, to help mitigate some risks for those with food allergies.

While there is more awareness and regulation, the rates of food allergies are increasing. This raises concerns about access to quality healthcare and brings up questions about what times of medical testing are too risky to engage. There is no known cause or cure for food allergies; and goal of gaining the knowledge of one or both may require continued discussion of the ethics of clinical trials and testing.

Cross-References

- ▶ Child Nutrition Guidelines and Gender
- ▶ Eating, Feeding, and Disability
- ▶ Feeding Children
- ▶ Food and Choice
- ▶ Food and Class
- ▶ Food and Life Chances
- ▶ Food Ethics and Policies
- ▶ Food Labeling

- ▶ Food Risk Communication
- ▶ Food Risks
- ▶ Food Security
- ▶ Food Standards
- ▶ Food-Body Relationship
- ▶ School Lunch and Gender

References

Behrmann, J. (2010). Ethical principles as a guide in implementing policies for the management of food allergies in schools. *Journal of School Nursing, 26*(3), 183–193. doi:10.1177/1059840510364844. Retrieved 24 Oct 2013.

Behrmann, J. (2012). *Ethics in health policy for allergy: A practical approach for decision-makers*. Doctoral thesis, Université de Montréal. Retrieved from 24 Oct 2013. http://www.academia.edu/1238130/Ethics_in_Health_Policy_for_Allergy_A_Practical_Approach_for_Decision-Makers

Behrmann, J. (2013). The paucity of ethical analysis in allergology. *Allergy, Asthma & Clinical Immunology, 9*, 5. doi:10.1186/1710-1492-9-5. Retrieved from 29 Jan 2014. http://www.aacijournal.com/content/9/1/5

Center for Food Safety and Applied Nutrition. (n.d.). Allergens – Food Allergen Labeling and Consumer Protection Act of 2004 (Public Law 108–282, Title II). WebContent. Retrieved from 23 Jan 2014. http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Allergens/ucm106187.htm

Department of Justice. (2012). *Justice department and Lesley University sign agreement to ensure meal plan is inclusive of students with celiac disease and food allergies* (Civil Rights Division No. 12–1538, p. 1). Department of Justice. Retrieved from 15 Jan 2014. http://www.justice.gov/opa/pr/2012/December/12-crt-1538.html

Engler, R. J. M., With, C. M., Gregory, P. J., & Jellin, J. M. (2009). Complementary and alternative medicine for the allergist-immunologist: Where do I start? *Journal of Allergy and Clinical Immunology, 123*, 309–316. e304.

Food Allergen Labeling and Consumer Protection Act. (2004). *Food allergen labeling and consumer protection act of 2004. 21 USC 301* note. Sec. 202. Findings. 21 USC 343 note. Retrieved from 24 Oct 2013. http://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/allergens/ucm106187.htm

Hourihane, J. O., & Beirne, P. (2007). Evidence of effectiveness of anaphylaxis management plans: Are we waiting for godot? *Clinical and Experimental Allergy, 37*, 967–969.

Kurowski, K., & Boxer, R. (2008) Food allergies: Detection and management. *American Family Physician, 77*(12), 1678–1686. Retrieved from 5 Oct 2013. http://www.aafp.org/afp/2008/0615/p1678.html

Mullins, R. J. (2007). Paediatric food allergy trends in a community-based specialist allergy practice, 1995–2006. *Medical Journal of Australia, 186*, 618–621.

Ontario Ministry of Education. (2006). *Anaphylaxis: Sabrina's Law*. 2006. Retrieved from 15 Jan 2014. http://www.edu.gov.on.ca/eng/healthyschools/anaphylaxis.html

Roberts, S. (2005). Challenging times for food allergy tests. *Archives of Disease in Childhood, 90*, 564–566.

Rous, T., & Hunt, A. (2004). Governing peanuts: The regulation of the social bodies of children and the risks of food allergies. *Social Science and Medicine, 58*, 825–836.

Sampson, H. A., Muñoz-Furlong, A., Campbell, R. L., Adkinson Jr., N. F., Allan Bock, S., Branum, A., … Decker, W. W. (2006). Second symposium on the definition and management of anaphylaxis: Summary report – second national institute of allergy and infectious disease/food allergy and anaphylaxis network symposium. *Annals of Emergency Medicine*, *47*(4), 373–380

Sicherer, S. H., Noone, S. A., & Muñoz-Furlong, A. (2001). The impact of childhood food allergy on quality of life. *Annals of Allergy, Asthma & Immunology, 87*(6), 461–464. Retrieved from 15 Jan 2014. http://www.ncbi.nlm.nih.gov/pubmed/11770692

Wood, R. A. (2003). The natural history of food allergy. *Pediatrics*, *111*(Suppl. 3), 1631–1637. Retrieved from 14 Oct 2014. http://pediatrics.aappublications.org/content/111/Supplement_3/1631

Food and Agricultural Trade and National Sovereignty

E. Wesley F. Peterson
Department of Agricultural Economics,
University of Nebraska-Lincoln, Lincoln, NE, USA

Synonyms

Nationalism; State sovereignty

Introduction

National sovereignty is a contested concept. Some see the evolution of the world order since the Peace of Westphalia in 1648 toward a system of sovereign nation states each with "supreme authority" over a particular territory as central

to the protection of national identities and the maintenance of peace between peoples naturally inclined toward conflict (Stanford Encyclopedia of Philosophy 2010). Singer, on the other hand, does not see national sovereignty as absolute and argues that it "has no intrinsic moral weight" (Singer 2004, p. 2). Respect for national sovereignty may be considered a grave error permitting governments to suppress opposition to their actions or to persecute people who subscribe to different religions or are members of different ethnic groups. In the aftermath of the atrocities of World War II, the international human rights movement has sought to circumscribe the ability of states to violate human rights as defined in the United Nations' Universal Declaration of Human Rights. While many regimes reject the universality of some or all of these rights and most governments resist any outside interference in internal affairs, global institutions related to human rights such as the UN Convention on Genocide or the International Criminal Court can support efforts to override the absolute authority of sovereign states in certain cases.

Globalization is another factor eroding state authority. Global problems such as climate change, the spread of infectious diseases, or terrorism cannot be addressed by individual states acting on their own. Rather, they can only be handled through international cooperation which may require subordinating certain national prerogatives to global initiatives. In addition, increasing economic interdependence through trade, investment flows, and migration means that government policies designed to manage the domestic economy are less effective and may be undermined entirely. The tension between globalization and national sovereignty is particularly acute in the area of food and agricultural trade. Food and agricultural systems are important components of national economies, but they are also invested with significant social and cultural meaning. The sensitivity of food and agriculture is apparent from the history of trade negotiations at the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO). Agricultural trade negotiations were the most difficult to bring to conclusion during the GATT Uruguay Round (1986–1994) and have been at the heart of the difficulties in completing the WTO Doha Round of trade talks launched in 2001.

National Sovereignty

A common definition of sovereignty is that it is the right to exercise "supreme authority" in a territory or political community (Stanford Encyclopedia of Philosophy 2010; de Benoist 1999). De Benoist (1999) argues that there is a second meaning that concerns the legitimacy of the holder of this supreme authority. In democratic states, the ultimate sovereign is supposed to be the people, but as a practical matter, sovereign authority is generally delegated to a government considered to be legitimate because it has been chosen freely by citizens. Even if the government of a country is considered to be unlawful by its own citizens or by the world community, international organizations such as the UN generally treat standing governments as if they are legitimate. The exercise of supreme authority requires noninterference with a government's actions both by those within the country and by foreign governments or individuals. Noninterference raises difficult ethical issues in cases where a government is committing genocide or crimes against humanity with respect to individuals or groups residing in its territory. If national sovereignty has no "moral weight," should it not be overridden by other moral imperatives such as a duty to protect vulnerable populations?

Of course, not all repressive actions by governments represent human rights violations. Most would agree that states have the right to use force to control criminal or terrorist activities. Problems arise, however, when the lines between criminality and the normal exercise of democratic rights become blurred. The government of Ukraine has jailed Yulia Tymoshenko, a former prime minister, on abuse-of-office charges that most consider to be politically motivated. Zanetti (2001) suggests that human rights violations should include not only suppression of free speech or physical violence but also extreme

deprivation, hunger, and poverty. Such a position is consistent with the Universal Declaration of Human Rights which includes rights to adequate food and shelter as well as civic and political rights. Pogge (2001) argues that all humans have a right not to be poor, claiming that the cause of world poverty is the global economic system created for the most part by individuals and governments in high-income countries. Full recognition of rights such as these would mean that there is a very extensive duty to assist regardless of the cause of a people's misery and whether or not the government of the country in question agrees.

Regardless of one's conclusions about the scope of human rights and the obligations they entail, it is clear that the world community is interfering in the affairs of sovereign states in the name of human rights more regularly than has been the case in the past as shown by recent conflicts in Bosnia, Kosovo, Sierra Leone, and Libya. These interventions suggest that respect for absolute national sovereignty may be on the wane. Human rights interventions are only part of the global forces working to constrain the exercise of state sovereignty. The ability of governments to control the evolution of their nation's culture, economic and social life, and legal system is also eroded by globalization as will become apparent in considering international food and agricultural trade.

Food and Agricultural Trade

The experience of the EU with economic integration can offer insights into the trade-offs between globalization and national sovereignty. In 1957, six European countries (Germany, France, Italy, the Netherlands, Belgium, and Luxembourg) created the European Economic Community (EEC). The EEC represented a fairly low level of economic integration, but over time as membership grew, the benefits of further economic integration were judged to outweigh the costs of reduced national sovereignty. From its inception, some European leaders hoped to see the EEC, and later, the European Community (EC) become more tightly integrated as a way to promote peace and avoid conflicts such as those that took place in the first half of the twentieth century. By the beginning of the twenty-first century, the EU had taken over many policy areas normally reserved for sovereign states such as trade policy, agricultural policy, customs and border controls, and some aspects of higher-education policies. The creation of the European Monetary Union and the introduction of the euro in 2002 represent the highest degree of economic integration attempted so far. For the 17 EU countries using the euro, monetary policy has been transferred from national governments to the EU removing a very significant policy instrument from the control of individual states.

This has played out quite dramatically in Greece, Spain, and other Mediterranean countries that experienced economic and financial crises in 2011–2012. In the past, these countries would have been able to devalue their currencies in order to improve their international competitiveness. As members of the monetary union, however, competitiveness can only be restored by lowering wages and profits, and the policies to bring this about caused great hardship and popular unrest. Some analysts have suggested that the monetary union can only function effectively if the member states give up even more of their sovereignty by unifying fiscal policies (government spending and taxation). The EU is a regional rather than a global agreement, but its history can be taken as a guide to the broad implications of globalization. With greater degrees of integration of the world's economies, resources are used more efficiently and there may be greater economic prosperity. National sovereignty, however, moves in the other direction becoming increasingly diluted as global interdependencies increase (see Weiner 1996; Bagwell and Staiger 2004). Whether the benefits of globalization outweigh the cost of diminished national sovereignty is hotly contested (see Singer 2004; Rosset 2003; Rodrik 2011).

While international trade is only one aspect of the broader process of globalization, it has long been the object of some of the more contentious policy debates. In recent years, two sets of issues

have become prominent in discussions of the relationship between international food and agricultural trade and national sovereignty. The first set relates to the idea of food sovereignty defined as the right of people to control their own food supplies in the face of an onslaught of unnatural foods promulgated by multinational firms in the globalizing world economy (Rosset 2003). The second set concerns the coordination of domestic food and agricultural policies through international institutions such as the WTO, the EU, or NAFTA. In both cases, ethical claims are often made to support contrasting positions taken by the proponents and opponents of international trade and globalization.

Food Sovereignty

The problem of economic development in low-income countries became more prominent after World War II with the dismantling of colonial empires and the beginning of the cold war competition for allies. Most intellectual and strategic approaches to development fall into one of two camps. The first, based on mainstream economic thinking, sees economic relations between rich and poor countries as mutually beneficial and emphasizes the importance of trade and domestic and foreign investment. Alternative conceptions draw on Marxist thought, particularly the writings on imperialism of Lenin and Rosa Luxemburg, casting economic relations between industrialized and developing countries as exploitative. This second tradition includes dependency theories and lives on today in the modern antiglobalization movement. From these perspectives, international trade and the international organizations such as the WTO, World Bank, and International Monetary Fund (IMF) that oversee world economic and financial systems are the primary cause of poverty in developing countries. Prior to the breakup of the Soviet Union, many governments in developing countries chose to implement socialist development strategies that included protectionist trade policies, nationalization of foreign-owned firms, and extensive government intervention in markets. In this setting, food self-sufficiency, defined as the production of most or all of the food consumed in a country within the territory of that country, was a common policy goal.

Food self-sufficiency has also been of concern in high-income food-importing countries such as Japan and Korea. In Japan, achieving self-sufficiency in the main staple food, rice, required the prevention of rice imports, and this led to domestic rice prices that were sometimes more than seven times the world price for rice of equivalent quality. From the perspective of international organizations such as the Food and Agriculture Organization (FAO), the World Bank, or the WTO, concern with food self-sufficiency has been seen as a costly mistake. The FAO favors an alternative goal, food security. National food security is defined as sufficient amounts of safe and nutritious food from domestic production and/or trade, distributed equitably and produced in a manner that is sustainable so food will be available over time (FAO 2006). For those committed to the idea that trade is just another word for exploitation, the fact that trade is treated as a means to achieving food security makes that concept unacceptable. An alternative is the idea of food sovereignty suggested in 1996 by a peasant organization known as Via Campesina (Windfuhr and Jonsén 2005):

> Food sovereignty is the right of peoples to define their own food and agriculture; to protect and regulate domestic agricultural production and trade in order to achieve sustainable development objectives; to determine the extent to which they want to be self-reliant; [and] to restrict the dumping of products in their markets. . . . (see Rosset 2003 or Windfuhr and Jonsén 2005)

Those who promote food sovereignty usually suggest that the movement is not opposed to international trade, but the emphasis on local production and consumption generally seems to support opposition to liberal trade policies. In addition, food sovereignty advocates favor the right of countries to erect protectionist trade barriers, particularly when aimed at countervailing the dumping of cheap food that undermines local producers. Most mainstream economists would agree with the argument that farm subsidies in high-income countries slow world economic growth and harm producers in developing

countries by depressing world prices but would point to the benefits of the WTO in its efforts to reach agreements that limit these subsidies (Peterson 2009). In contrast, some in the food sovereignty movement call for removing food and agriculture from trade agreements such as the WTO Agriculture Agreement or NAFTA (Rosset 2003). Advocates of food sovereignty argue that food should be seen as a basic human right and that the best way to realize this right is through local food systems based on small-scale agriculture using sustainable methods. Via Campesina (2012) has called for food self-sufficiency which, if taken literally, means that international food and agricultural trade would be eliminated. Schanbacher (2010) contrasts food security and food sovereignty, concluding that food sovereignty provides a superior framework for addressing broad global issues related to food, hunger, and poverty. To reach this conclusion, he first contrasts the two concepts from the point of view of human rights and then examines them from the perspective of the capabilities approach championed by Amartya Sen and Martha Nussbaum (see Nussbaum 2000 and Sen 2009). Schanbacher considers food to be a basic human right and argues that food security based on trade and the integration of local food systems into global markets violates this right by removing the option for individuals to decide what kinds of food they wish to produce and consume. This argument hinges on the notion that people in developing countries will always prefer traditional, locally produced food to imported food, and this may not always be the case, particularly when the local systems are incapable of producing enough calories to satisfy nutritional needs. It also requires that globalization remove the option of continuing to produce and consume in traditional ways and this outcome is not inescapable. In terms of the capabilities approach, Schanbacher (p. 106) claims that food sovereignty allows the "agrarian poor" to exercise greater control over their lives and this control is necessary for their capability to realize dignified lives (Nussbaum's seventh central human capability, part B). Schanbacher's discussion is based on value judgments that favor local over global; small-scale operations over larger, transnational systems; and "fair trade" over "neoliberal" economic models and profit maximization.

Food sovereignty as described by advocates such as Rossett (2003) and Schanbacher (2010) is closely related to other movements advancing alternatives to the global, industrial food system, including the slow-food movement, community-supported agriculture, organic agriculture, fair trade, and those promoting local consumption (locavores). These movements usually take it as self-evident that the current world food system has failed because of widespread hunger, malnutrition, obesity, and other food-related illnesses. While they have had limited success in changing the nature of the world food system, their membership is growing and they may eventually exercise greater influence on agricultural policies. The FAO has agreed to include food sovereignty in its discussions of global food policy (FAO 2012). In the EU, measures to insure animal welfare and resistance to genetically modified food have become widespread, and many individuals in high-income countries have opted for alternative sources of food such as farmers' markets and local food cooperatives because of beliefs that conventional foods are unhealthy or produced in ways that harm the environment. Aerni (2011) sees a positive role for the food sovereignty movement but points out that it "... still contains too much old left-wing ideology and too little creative thinking on how to make better use of today's global new knowledge economy to promote sustainable development" (p. 23).

Those less sympathetic to the anti-globalization and anticapitalism tenor of much of the food movement criticisms would point out that it may not be possible to feed a world of nine billion people with average incomes higher than today's without modern technologies, including genetically modified food, and that such alternatives as organic food will probably never be able to account for more than a small fraction of the world's food supply. Italy, the home of the slow-food movement, ranks tenth in the world in terms of the number (290) of McDonald's restaurants (http://www.nationmaster.com/graph/foo_mcd_res-food-mcdonalds-restaurants), and the output of the industrialized global

food system, including its fast-food industries, dominates world food production and consumption. Still the food sovereignty and other food movements have drawn attention to a range of ethical issues related to sustainability, poverty, and health as well as problems in the oversight of trade and globalization, and a rich literature has developed to address the ethical dimensions of these questions.

Agricultural Policies

The food sovereignty movement is concerned not only with the kinds of food people are able to consume and the impacts of producing this food on the natural environment but also with the well-being of the producers themselves. This concern has long been shared by governments although their interests are often less humanitarian than political. In Japan, the Liberal Democratic Party has particularly strong ties to rural voters who have often been critical in the party's electoral success (Peterson 2009). If a government decides to isolate its country from world markets, it can establish any kind of agricultural policy it wishes as long as domestic political support is forthcoming. Once a country begins to trade with other countries, its agricultural policies can no longer be set without considering the international repercussions. The EU again provides a telling example. Prior to the establishment of the EEC, the six member countries had independent agricultural policies supported by trade barriers that allowed differences in food and agricultural prices to persist. With the formation of the EEC, trade barriers were to be eliminated making these national agricultural policies impossible to sustain. The result was the Common Agricultural Policy (CAP) that replaced the preexisting national policies with a single set of agricultural regulations applied in all member states. The compromise that was struck when the CAP was created was to set internal prices at levels high enough to satisfy the least efficient producers in the member countries with extensive use of trade barriers applied to nonmembers to protect these high prices.

For countries that had traditionally sold large amounts of agricultural commodities to European food processors and producers, the high trade barriers set by the CAP were unwelcome. When the United Kingdom joined the EC in 1973, countries such as Australia and New Zealand that had traditionally supplied the UK market saw their export sales decline (Peterson 2009). Because of early opposition from the United States, the GATT had not included extensive provisions related to agriculture so there was no forum for resolving disputes over agricultural trade barriers. This became critical as the EC successfully rebuilt its agricultural sector after the destruction of World War II and began not only restricting imports but also subsidizing exports of its growing surplus food production. In the 1980s, the EC and the United States engaged in a kind of subsidy war with each side trying to spend the other into submission. The favored instruments for these policy wars were various types of nontariff trade barriers. The classic barrier to trade is a tax (tariff) levied on imported goods. Under the GATT, industrial tariffs had been reduced substantially but agricultural barriers had not been addressed. For technical reasons, the nontariff barriers deployed to protect domestic agricultural producers in the 1980s cause greater disruption of world markets than tariffs, and the widespread use of these instruments meant that world commodity markets were seriously distorted. Delegates to the Uruguay Round (1986–1994) trade negotiations elected to include agriculture for the first time in a multilateral trade agreement and with a great deal of difficulty managed to craft a set of rules on international agricultural trade that were included as part of the newly formed WTO.

Although the WTO Agriculture Agreement has not been entirely successful at reducing or eliminating farm subsidies, it has resulted in some significant changes, most notably in the EU which has eliminated its system of export subsidies and severely reduced the level of protection afforded to its farmers. Based on data from the Organization for Economic Cooperation and Development (OECD 2012), 87 % of producer support in 1986 in the EU was generated through trade barriers compared with only 12 % in 2011. Moreover, half of EU support in 2011 was in the form of direct payments that are not

tied to production and are judged by the WTO not to distort world markets. In contrast, only 29 % of 2011 US producer support was not tied to production and these non-distorting direct payments were eliminated in the 2014 US Farm Bill. Because there are still substantial distortions in world food and agricultural markets, further negotiations on the agricultural disciplines have been conducted in the context of the Doha Development Round (DDR) launched in 2001. The DDR negotiations were completed in 2013 but the final agreement made only modest changes to WTO trade provisions. While not the only bone of contention, conflicts over agriculture played an important role in slowing the negotiations.

One reason why agriculture has been so contentious not only during multilateral trade negotiations at the WTO but also in regional and bilateral trade agreements such as NAFTA is that farmers are often seen as honest, hardworking individuals who are vulnerable to the vagaries of world markets and who deserve protection from foreign competitors. Much has been written about the virtues of family farms and the values thought to be promoted by an agrarian way of life (Comstock 1987; Thompson 2010). International food and agricultural trade may drive traditional farmers out of business causing them hardship and disrupting vibrant rural communities. In addition, declining agricultural sectors may mean that a country becomes dependent on foreign suppliers making it vulnerable to international political events. In 1973, US President Richard Nixon placed an embargo on US soybean exports because of rising food prices. The embargo seriously disrupted Japanese livestock industries strengthening incentives for Japanese governments to push for food self-sufficiency (Peterson 2009). Finally, the influence of agricultural groups, particularly in high-income countries, has been translated into protectionist policies that are politically difficult to dismantle.

Policies to protect uncompetitive producers, however, have negative consequences for domestic consumers and farmers in other countries. Japanese rice policies mean that consumers in Japan face rice prices much higher than the world price and *japonica* rice farmers in California and Australia receive lower prices than would be the case if the Japanese market were opened to international trade. Low-income consumers in developing countries may benefit from low world prices while farmers find it difficult to compete. Whether greater weight should be attached to the interests of poor consumers or to those of poor farmers is a difficult ethical question. Most economic analyses show that the gains from agricultural trade liberalization are greater than the losses and that even unilateral reduction of trade barriers will increase overall economic welfare in the country electing to reduce or eliminate its trade barriers. The problem is that the gains are generally spread thinly across large numbers of people, while the pain is often concentrated in particular groups such as subsistence farmers in low-income countries or Japanese rice growers.

In recent years, the range of issues being addressed in trade agreements has expanded far beyond traditional barriers to trade such as tariffs or export subsidies. National policies related to animal welfare, organic foods, genetically modified foods, production methods involving the use of hormones or techniques thought to be cruel to animals, and many more can actually serve as trade barriers. The US and Canadian governments have always maintained that the EU ban on imported meat from animals treated with hormones is a disguised trade barrier designed to protect EU producers from competition from lower-cost producers in North America. EU authorities counter that the real purpose of the ban is to protect consumers from potentially harmful foods invoking the precautionary principle to justify policies restricting access to foods that have not been proven to be harmful. As in the case of the food sovereignty movement, it is often argued that trade and globalization disrupt traditional farming and food systems that have important ethical, cultural, and environmental values. But as with conventional trade barriers, protection of the traditions of one group may have negative repercussions for the well-being of other groups raising complex ethical questions.

Summary

Trade and globalization place constraints on the exercise of national sovereignty in all aspects of international relations including those related to food and agricultural trade. Some deplore this and argue for slowing globalization and protecting domestic agents from foreign interference. Others see declining national sovereignty as desirable because it reduces the ability of national governments to oppress their people and to interfere with voluntary economic exchanges. Ethical questions related to such issues as food sovereignty and domestic agricultural policies have been the subject of much reflection and discussion.

Cross-References

- ▶ Canada, US-EU Beef Hormone Dispute
- ▶ Food Security and International Trade
- ▶ International Food Quality Standards
- ▶ Trade Policies and Animal Welfare
- ▶ Trade Policies and Organic food

References

Aerni, P. (2011). Food sovereignty and its discontents. *ATDF Journal, 8*(1–2), 23–40.

Bagwell, K., & Staiger R. W. (2004). *National Sovereignty in an Interdependent World* (NBER Working Paper No. 10249). Washington, DC: National Bureau of Economic Research. Available at http://www.nber.org/papers/w10249. Accessed 8 Oct 2012.

Comstock, G. (1987). *Is there a moral obligation to save the family farm?* Ames: Iowa State University Press.

de Benoist, A. (1999). "Qu'est-ce que la souveraineté?" in Éléments, No. 96, pp. 24–35. English translation available at http://www.alaindebenoist.com/pdf/what_is_sovereignty.pdf

FAO. (2006). *Food Security* (Policy Brief, Issue 2). Rome: Food and Agriculture Organization.

FAO. (2012). *Thirty-second FAO regional conference for Latin America and the Caribbean*. Buenos Aires: Food and Agriculture Organization, LARC/12/REP, 26–30 Mar.

Nussbaum, M. C. (2000). *Women and human development: The capabilities approach*. Cambridge: Cambridge University Press.

OECD (2012). "*EU27 Agricultural Support Estimates, Table 1*," *producer and consumer support estimate database*. Paris: Organization for Economic Cooperation and Development. http://www.oecd.org/tad/agriculturalpoliciesandsupport/producerandconsumersupportestimatesdatabase.htm. Accessed 23 Oct 2012.

Peterson, E. Wesley F. (2009). *A billion dollars a day: The economics and politics of agricultural subsidies*. Malden: Wiley-Blackwell.

Pogge, T. W. (2001). Priorities in global justice. In T. W. Pogge (Ed.), *Global justice*. Malden: Blackwell.

Rodrik, D. (2011). *The globalization paradox: Democracy and the future of the world economy*. New York: W. W. Norton and Company.

Rosset, P. (2003). Food sovereignty: Global rallying cry of farmer movements. *Backgrounder, 9*(4). Available at http://www.foodfirst.org/fr/node/47. Accessed 8 Oct 2012.

Schanbacher, W. D. (2010). *The politics of food: The global conflict between food security and food sovereignty*. New York: Praeger.

Sen, A. (2009). *The idea of justice*. Cambridge, MA: Harvard University Press.

Singer, P. (2004). *One world: The ethics of globalization* (2nd ed.). New Haven: Yale University Press.

Stanford Encyclopedia of Philosophy. (2010). *Sovereignty*. Available at http://plato.stanford.edu/entries/sovereignty/. Accessed 4 Oct 2012.

Thompson, P. B. (2010). *The Agrarian vision: Sustainability and environmental ethics*. Lexington: University Press of Kentucky.

Via Campesina. (2012). *India, food sovereignty in Manipur*. Published 7 June 2012 at http://viacampesina.org/en/index.php/main-issues-mainmenu-27/food-sovereignty-and-trade-mainmenu-38/1250-india-food-sovereignty-in-manipur. Accessed 16 Oct 2012.

Weiner, M. (1996). Ethics, national sovereignty and the control of immigration. *International Migration Review, 30*(1), 171–197.

Windfuhr, M., & Jonsén, J. (2005). *Food sovereignty: Towards democracy in localized food systems*. ITDG Publishing. Available at http://www.ukabc.org/foodsovereignty_itdg_fianonline.pdf. Accessed 9 Oct 2012.

Zanetti, V. (2001). Global justice: Is intervention desirable? In T. W. Pogge (Ed.), *Global justice*. Malden: Blackwell.

Food and Agriculture in Bangladesh

Saleh Ahmed
Department of Sociology, Social Work and Anthropology, Utah State University, Logan, UT, USA

Synonyms

Agricultural ethics and policies; Food security; Population growth

Introduction

Bangladesh is one of the most densely populated countries in the world. With extremely low per capita land, feeding its growing population has always been a big challenge. Simultaneously agricultural land uses have changed continuously and that in a way demonstrates the dynamic and complex interplays of ethical dimensions of socioeconomic, political, and technological forces (Khan and Shah 2011).

However, the rapid agricultural land use changes occurred during the last three decades mostly due to unplanned and uncontrolled urbanization and industrialization. This changing pattern of land uses has serious implications for the agriculture and food security of the country. In 1980, there were 9.0 million hectares of available agricultural land, while in 2012 it decreased to 6.0 million (Rashid 2012). It is important to note that in 1980 the country's population was approximately 80 million and currently that is reported as 161 million (Wikipedia 2013; CIA 2013). The status of food and agriculture is exposed to huge risks and so from the food security perspective. Recently, the country's environmental minister mentions that "declining farmlands and rising population were the two major concerns for Bangladesh, not the impact of climate change" (Rashid 2012). This tells how food and agriculture are critically important to the country, rather than the popular belief of climate change damages.

The government prepared the "National Land Use Policy 2001" largely as a response to this dynamic socio-environmental challenge. The policy was aimed to ensure the competitive use of land resources for food production, housing, as well as protecting the country's environment. However, as governance and policy implementation have always been issues for Bangladesh, many people therefore were always very skeptic about the implementation of this plan. This type of uncertainty at the structural level is definitely detrimental to the country's capacity for food and agricultural production for its growing population.

Recent inventory highlights that land use changes in the recent years have adversely impacted the annual rice production by decreasing approximately 0.86–1.16 % of the country's total rice production (Rashid 2012). In a land-constrained country, it is a huge issue for Bangladesh, and therefore, the country has no way without imposing strictly any resource management regulations and zoning to secure agricultural lands. Apart from this, population control, rural farm and nonfarm employment creations, further efforts to increase land productivity through the adoption of modern green technologies, uninterrupted electricity supply to the irrigation equipment, agricultural credits, and subsidy all play important roles for the sustainable food and agricultural practice in Bangladesh. The government should take the lead role in ensuring a balanced interaction between human and nature. However, in this framework, citizens' awareness and involvements are critically important.

As a populous country in the developing regions, Bangladesh has a number of developmental challenges. Nevertheless, the country has made substantial progress on several global development indicators, such as reduction of poverty or gender equality. But still malnutrition or hunger in remote areas is at an alarming level. Productive capacity of agricultural lands is still comparatively low than many of the neighboring countries and still the country is dependent on food export for its own food security (ACDI/VOCA 2011). Therefore, the commodity price increase can impact the country badly. Like any other countries, the problems of food safety and security, animal welfare and production, technological change, agricultural production techniques, pollution and environmental sustainability, and corruption of regulators and policy makers are at the core of food and agricultural ethics (James 2003).

This entry on food and agriculture in Bangladesh is divided into three major parts: firstly, after having a brief theoretical discussion, it addresses the ethical challenges of food and agriculture in Bangladesh. Secondly, this entry focuses on how the discussions of food and agricultural ethics are

integrated into the local practices and contexts. Finally, it attempts to propose some policy solutions. Overall, it is expected that the discussions on this entry will generate further intellectual contributions and discussions on the ethics of food and agricultural production in a country-specific context, where the mentioned issues are unfortunately under-prioritized in the domain of policy making and implementation.

Agriculture, Environment, and Ethics

The publication of Rachel Carson's "Silent Spring" in 1962 was one of the major turning points when the scholars started to put further insights on the discussions of agriculture and environment at large. The arguments came into front that the conventional agricultural practice could be detrimental to the environment as well as public health and safety. Some also started to investigate that the adopted agricultural practice might not be sustainable in the long run. However, this is now clearly evident that conventional or even modernized agricultural practice involves heavily the replacement of natural ecosystems as well as reason for groundwater pollution, depletion, soil erosion and degradation, and pesticide pollution along with some other associated environmental stresses and risks (Chrispeels and Mandoli 2003). Therefore, a new paradigm of food production and agricultural practice was inevitable. At the same time, the world as a whole needs more feed, more clear water, better foods with more nutrients, and substantial ecological modernization for ensuring agriculture with less environmental footprints.

All these issues together gave importance for intellectual discourse and policy implications for food and agricultural ethics. Ethics is about choices, and food and agricultural ethics is about the choices and moral components for the people, who are engaged in agriculture either directly as the producer of it (e.g., farmers) or indirectly as the consumers of it (e.g., citizens) (Chrispeels and Mandoli 2003).

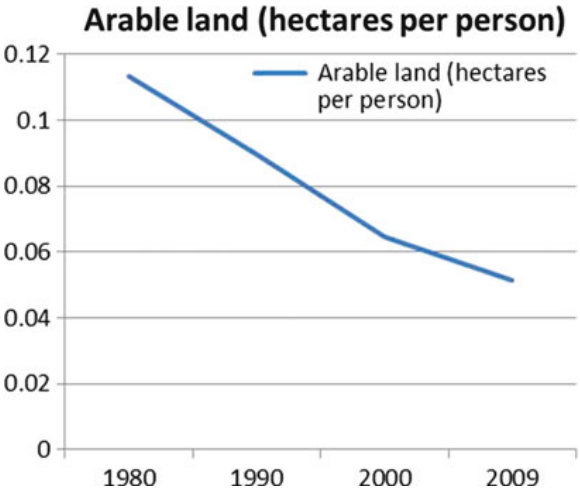
In this context, FAO (2001) stresses that the world needs more equitable ethically grounded food and agriculture involving three major global development agenda, such as improved well-being, protection of the environment, and improved public health. For many countries in the developing regions, poverty is the single most issue. However, it has been proved that ethical food and agricultural practice can ensure poverty reduction by enhancing economic and social efficiency along with the eradication of poverty, hunger, and malnutrition. Apart from that, FAO focuses on the protection of the environment and improved public health and safety, because these two are closely intertwined with the issues of food and agricultural ethics as well as involve the core components of global development.

Local Challenges

Bangladesh is relatively a small country with a total land area of 143,998 km^2, however with a population of 161,083,804 (CIA 2013). It is one of the densest nations in the world. Apart from other developmental challenges, the country faces challenges from limited lands for food and agricultural production for its vast population. It generates further concerns for the country's ethical positions and practices in food and agriculture. The World Bank Data (2013) reports that during the recent past, the amount of arable lands (in hectares per person) in Bangladesh has decreased in an alarming rate (Fig. 1).

In the present context of available arable lands, now in Bangladesh, there is almost no chance for horizontal expansion or growth for agricultural production; rather the country is following the trajectories with vertical growth. The current features of land and population (Table 1), mentioned by CIA World Factbook (2013), also support that argument.

For agriculture intensification or vertical growth, usually people use pesticides and different mechanisms which often contradict with the norms of food and agricultural ethics. However, apart from this, the numbers of natural disasters also cause huge challenges to local food and agricultural chains. Almost in every year floods



Food and Agriculture in Bangladesh, Fig. 1 Arable lands (hectares per person)

Food and Agriculture in Bangladesh, Table 1 Basic features of land and population

Land/population	Amount
Total area (in km^2)	143,998
Land (in km^2)	130,168
Water (in km^2)	13,830
Population (July 2012 est)	161,083,804
Agricultural lands (km^2)	91,490
Arable lands (in %)	55.39
Permanent crops (in %)	3.08
Other crops (in %)	41.53
Irrigated land (in km^2)	50,500

or the increasing impacts by the climate change, such as increased frequency of tropical cyclones, cause huge loss of crops and cropland devastations. Seasonal and sometimes unpredictable monsoon rains and floods always create further stress on local agriculture and food systems.

The consumption pattern sometimes might be a linear function of any particular group of population when technology and lifestyle are given. However, for various internal and external reasons, the environmental stress and burden are distinctively nonlinear and unpredictable in most of the cases. It has been already mentioned that in Bangladesh the population pressure has tremendous impacts on the sustainability and ethical dimensions of food and agricultural development. Further population will intensify the crisis along with irreversible damages of food and agriculture. Numbers of predictions say that in the foreseeable near future, climate change will be hard felt in this densely populated country where a substantial portion of land areas are barely above mean sea level (Mahtab and Karim 1992). It is now projected that 25–30 % of the land might be lost due to the sea-level rise and that says Bangladesh will lose its vast amount of prime agricultural lands. Already the country has started to experience salinization in land and water, particularly in southern Bangladesh. It is important to say that in the near future it will not be a surprise if climate events become the crucial determinant of the country's food and agricultural production. Bangladesh also experiences continuous erosion of its riverbanks and often that costs huge loss of agricultural lands. All these together illustrate that the country is heading towards critical ethical challenges regarding food and agriculture and subsequent human security issues, particularly when the populations are largely poor and have limited capacities to confront any types of challenges.

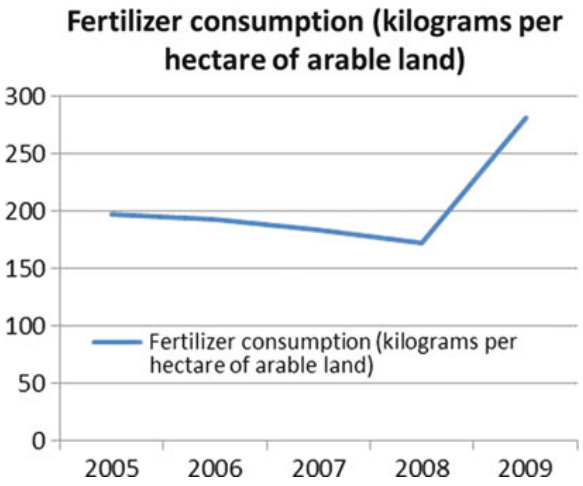
Theory and Practice: Food and Agricultural Ethics in Bangladesh

The country needs to feed its burgeoning population. A constant increase in demand will make increasing pressure on available lands, food, and agricultural practice. Contemporary division of human and nature in many developing countries demonstrates the mismatch between the food supplies and human nutritional needs. Unpredictable impacts of agribusiness on rural employments and consequences of modernization of agriculture on human and animal welfares along with the end effect of intensification of production systems on sustainability are some of the major reasons why agricultural and food production have become part of moral and/or ethical concerns at large (Grimm 2006).

It has been often argued that the intensification of production system has contributed to feed the country's massively growing population with

nominal imports. However, at the same time this form of agricultural development has usually large environmental footprints, such as in the form of land degradation, increasing salinization in soil and water, desertification, and the increase of agrochemicals into the larger food chains. Apart from that, intensification of production system has another human dimension of the issues. It can contribute to further marginalization of poor and landless farmers. In Bangladesh often intensification of the production system happens at the expense of a number of social costs such as increasing poverty, food insecurity, and rural unemployment.

Thompson identified some of the core premises of food and agriculture, such as (a) agriculture and agriculture communities are embedded in complex "eco-social hybrid systems"; (b) even though often agriculture and food are viewed as an economic function, but beyond producing food and fiber, they have important social functions; (c) agriculture and agricultural practices are inherently linked to environment and generate environmental footprints; and (d) finally, the ideological discourse of "pristine nature" and "ecological footprints" often generates a confrontational situation between human and nature, whereas agriculture makes a bridge between everyday life (nonspatial factors) and known places (spatial factors) (Epp 2012). To elaborate these premises in the Bangladesh context, clearly food and agriculture and the people who are closely engaged are embedded in complex eco-social hybrid systems; in other words, it is a coupled human and natural system. People are engaged in production, distribution, and consumption in the entire cycle of food and agriculture, and therefore, the entire cycle of food and agriculture has clear human dimensions. However, in doing that, both food production and agricultural practice inherently generate ecological footprints, which is again detrimental for human health or sustainable existence. Some might argue that intensification of production can reflect the core ethos of ecological modernization; however, no one can ignore the associated environmental costs.



Food and Agriculture in Bangladesh, Fig. 2 Fertilizer consumption (kilograms per hectare of arable land)

The core ethical issue of food and agriculture in Bangladesh mostly emerged due to the country's position on vertical production intensification. This type of production requires intensive use of chemical fertilizer. Recent estimations demonstrate that Bangladesh uses the highest amount of fertilizer per hectare in South Asia. Fertilizer consumption in the recent years, calculated from the World Bank Data (2013), demonstrates (Fig. 2) that from 2008 fertilizer consumption per hectare of arable lands has dramatically increased.

This alarming rate of the fertilizer use contributes to multiple challenges, such as issues with food quality, soil quality for agricultural production, diminishing soil productivity, and raising costs for agricultural production for particularly the marginal farmers. More precisely, the excessive and uncontrolled use of pesticides might cause (a) substantial health problems among the farmers or other associated workers, (b) natural ecosystems can be exposed to severe pollution risks, (c) loss of insect biodiversity in the entire agro-ecosystems, (d) creation of unnecessary secondary pests, and (e) insects can be resistant to pesticides. All these together can pose serious questions to the ethical dimensions of food and agriculture in Bangladesh.

"Water" can be another deciding factor in this entire discourse and policy implications. Almost half of the cropland in Bangladesh is under

irrigation. Currently, water is becoming a limiting factor for the sound agricultural practice in the country, most due to the increased intensification of agricultural productions and diversion of water to the nonagricultural uses (Khan and Shah 2011). In addition to that, groundwater level is decreasing for the excessive use, mostly for fulfilling the demands of large population, and at the same time for the excessive use of chemicals, the groundwater is experiencing issues like arsenic contamination.

Right now in Bangladesh prime agricultural lands are already used for agricultural production for feeding the vast population of the country. To meet further demands, expansion of croplands is now taking place at the cost of damaging forest and other marginal lands. Apart from that, forestlands and marginal lands are also being impacted by the uncontrolled industrialization as well as urbanization. This not only will pose questions for the ethical practices of agricultural and food production but also will make enormous environmental footprints, which can be detrimental for the country and its citizens in the short and long run. Illiteracy and inadequate knowledge of sustainable agriculture are also among the major issues in the discussions of food and agricultural ethics. This would not be a surprise if the prime agricultural lands are impacted by local agricultural practices. Criticisms already highlight that large areas of South Asian countries are losing the valuable topsoil or other forms of degradation due to the poor agricultural practices (Khan and Shah 2011).

It is important to note that intensification of agricultural production and production methods have both the negative and positive impacts. This is obviously true that intensification of agriculture helped to feed the country's bourgeoning population. It helped a large portion of population come out of poverty and hunger, contributed to rural economic growth, as well as contributed to save forestlands, wetlands, and other fragile ecosystems in the country from the conversion to cropland or other nonfarm uses. However, while making these mentionable important contributions, it was detrimental to genetic diversity as well as biodiversity. In addition to that, now agricultural practice is unaffordable for the marginalized farmers. In many places marginalized farmers are even poorer and shifting from farm to nonfarm practices is now quite evident. Farmers often report that they are experiencing diminishing return of agricultural productivity from their agricultural lands. The question might arise: what would be next after destroying the environment and agricultural base? And how will the country feed its vast population? All these questions and concerns therefore create an important base for the ethical practice of food and agriculture in the country. Therefore, the next challenges would be to identify how to manage this entire socio-ecological dynamics for a sustainable agricultural production in this resource-constrained country. As a reply to these critically important and intertwined issues, "ethics" or "ethical practice" might be at the center of scientific discourse and policy implications.

Summary

Because the issues with food and agriculture are linked with poverty, hunger, malnutrition, employment opportunities, etc., it is therefore critically important to understand the ethical dimensions of eco-social hybrid system. To feed the growing population, countries like Bangladesh have adopted intentionally and/or unintentionally a number of unethical food and agricultural practices. Now it is the time to turn around and set paths towards the ethical practice of food and agricultural production. Climate change impacts will pose further challenges to the existing food and agricultural practice in the country.

However, changing direction to the ethical practice is more than agricultural modernization. Social transitions are now apparent in every corner of the world. The use of social capital and social innovations for more desired food and agricultural practice is therefore inevitable. This should contribute to manage resources more efficiently and more precisely help to sustain with increasing food and agricultural productivity. There should be more investment in research and development for ensuring the ethical dimensions of food and agriculture. In this regard, some

of the following agenda can be addressed for building more equitable and ethical food and agriculture system in Bangladesh:

(a) there should be a holistic approach in formulating environmentally sensitive and ethical plans for national land use plans and policies;
(b) there should be adequate research and development investment to ensure continuous inventions for natural resource conservation and more particularly for ethical food and agricultural production;
(c) the research and development efforts should be coordinated and concerted as well as should be aligned with national development policies;
(d) as Bangladesh is a water-constrained country, there should be long-term integrated watershed management plans and strategies;
(e) farmers should get sufficient information and training for ethical production of food and agriculture; and
(f) building awareness and local-level capacity on the environment as well as ethical dimensions of food and agricultural production.

Above all, as in Bangladesh good governance is always a big issue; therefore, the government should to ensure peoples' awareness and involvement in national land use plans, and when necessary they should pursue for revision of the plans as well. Bangladesh should take care of the ethical dimensions of food and agricultural production, unless the country might need to pay a huge price with the expenses of enormous damage and loss, when the country is already challenged by climate change and huge population in a resource-constrained environment.

Cross-References

- ▶ Agricultural Ethics
- ▶ Food Security
- ▶ Population Growth

References

ACDI/VOCA. (2011). *Bangladesh – Program for Strengthening Household Access to Resources (PROSHAR)*. http://www.acdivoca.org/site/ID/bangladeshPROSHAR

Ali, A. M. S. (2006). Population pressure, agricultural intensification and changes in rural systems in Bangladesh. *Geoforum, 38*, 720–738.

Central Intelligence Agency. (2013). *The world factbook: Bangladesh*. https://www.cia.gov/library/publications/the-world-factbook/geos/bg.html

Chrispeels, M. J., & Mandoli, D. F. (2003). Agriculture ethics. *Plant Physiology* (Editor's Choice Series on Agricultural Ethics), *132*, 4–9.

Epp, R. (2012). Book review – Paul B. Thomson, The Agrarian vision: Sustainability and environmental ethics. *Journal of Agricultural and Environmental Ethics, 26*(3). doi:10.1007/s10806-012-9430-y.http://download.springer.com/static/pdf/934/art%253A10.1007%252Fs10806-012-9430-y.pdf?auth66=1363481241_75a8bb91145a4b37dafe6d451237f045&ext=.pdf

Food and Agriculture Organization of the United Nations. (2001). Ethical issues in food and agriculture. *FAO Ethics Series 1*. ftp://ftp.fao.org/docrep/fao/003/x9601e/x9601e00.pdf

Grimm, H. (2006). Ethical issues in agriculture. *Interdisciplinary and sustainability issues in food and agriculture* (Vol. 1). http://www.eolss.net/Sample-Chapters/C10/E5-22-06.pdf

James, H. S., Jr. (2003). On finding solutions to ethical problems in agriculture. *Journal of Agricultural and Environmental Ethics, 16*, 439–457.

Khan, M. A., & Shah, S. A. A. (2011). Agricultural development and associated environmental and ethical issues in South Asia. *Journal of Agricultural and Environmental Ethics, 24*, 629–644.

Mahtab, F. U., & Karim, Z. (1992). Population and agricultural land use: Towards a sustainable food production system in Bangladesh. *Ambio, 21*(1), 50–55.

Rashid, M. (2012, September 18). Future of farming and farmers in Bangladesh. *Financial Express*. http://www.thefinancialexpress-bd.com/more.php?news_id=143792&date=2012-09-18

Wikipedia. (2013). *Demographics of Bangladesh*. http://en.wikipedia.org/wiki/Demographics_of_Bangladesh

World Bank Data. (2013). *World development indicators*. http://databank.worldbank.org/ddp/editReport?REQUEST_SOURCE=search&CNO=2&country=BGD&series=&period=

Food and Choice

Erinn Gilson
University of North Florida, Jacksonville, FL, USA

Synonyms

Consumer choice; Control and autonomy; Diversity and variety; Freedom to choose; Options

Introduction

Food is understood to be a site of choice in myriad ways (Marshall 1995). Most obviously, individuals choose what food to eat. This seemingly simple choice gives rise to a variety of other opportunities for choice. One may choose to eat healthfully or not, to endorse a particular conception of what "healthful" means, to eat animal products or not, to seek the most affordable options, to select organic produce, to shop at farmers' markets or join a CSA, to grow one's own food, to dine out at numerous different kinds of restaurants, to eat only raw food, to buy in bulk, to avoid sugar or wheat or artificial sweeteners, and so on. Yet, choices about what to eat are never just choices about the content of what to put into one's body. Rather, these choices are ones that reflect priorities, values, self-conceptions, and bodily needs and wants, as well as the various socioeconomic, historical, cultural, and political conditions that shape these things. When one chooses what to eat, one may also regard oneself as choosing where and how this food is produced, who is producing it, what kinds of lifestyle one aims to lead, what kind of person one aims to be, what kind of body and physical appearance one seeks to have, what kinds of communities one wishes to join, and even what kind of world one aspires to inhabit.

Choice is often represented as something that individuals ought to value in itself when it comes to food and thus as something that ought to be desired, pursued, cultivated, and encouraged both via policy and individual action. Accordingly, the value of choice in relation to food is advocated in various ways by individuals, advertisers, activists, corporations, and the media, among others. Increased variety and choice is commonly presented as a merit of a global, industrialized food system, yet myriad choices are simultaneously obscured and restricted by that same system. Thus, choice is also the mantra of those seeking to challenge the industrial food system, who contend that *real* choices – that is, meaningful choices – lie outside of that system.

Since food choices are not simply choices about what to eat and the very idea of choice is ascribed value, it is instructive to examine the nature of the kinds of choices about food that are deemed significant and the context in which they are or become significant. Specifically, it is crucial to interrogate the assumption that the globalized, industrialized food system dramatically enhances choice, by asking the following: What kinds of choices does this system make possible? What kinds of choices does it preclude? How does it narrow or limit choices? For whom are these choices made possible and who is hampered in making them? What kinds of choices does it make visible and what kinds of choices does it obscure? Is the rhetorical claim that a globalized, industrialized food system is the only kind of system that maximizes choice, and so is best suited to Western sensibilities and preferences, valid? All of these questions cannot be addressed fully in this brief entry, so it proceeds by assessing various perspectives on the impact of the industrialized system on food choices and then considering how choice is understood in relation to this system, the dominant one that supplies food (i.e., what choice is *about* and why choice is thought to be significant).

The Contemporary Food System and Food Choice

It is readily acknowledged that the global industrial food system far expands the options available to consumers. A wide array of different types of food products is now available in supermarket chains, including types of produce and grains that previously remained regional crops (for instance, foods such as quinoa, goji berries, and acai are now fairly common in the USA, and US fast-food chains are now common throughout the rest of the world); a diversity of different kinds of retailers (ranging from supermarkets to club stores to natural food markets and so on) procure and distribute said products; fresh produce of all varieties is accessible to many year round and processed food products of all kinds have proliferated.

These developments in the amount, variety, and accessibility of food both within nations and internationally have dramatically increased

consumers' ability to make choices about how to feed themselves, including the choices of what to eat, how much time and energy to spend preparing food, and where to buy food and how much to spend on it. This increase in choice has obviously benefitted consumers, enabling them, for instance, to save money because of the advent of mega-retailers like Wal-Mart (Hausman and Leibtag 2007) and to save time because of the preponderance of convenience foods and restaurant options.

More significantly, however, the proliferation of options made possible by agricultural modernization and industrialization enables consumers to choose schemes of food purchasing, preparation, and consumption that fit best with their lifeplans. From a liberal individualist perspective, the ability to maximize choice in this way is a basic good because it allows each individual or each family unit not only to determine what foods they wish to consume but also what place food has in their conception of the good life in general (e.g., one can make food central to the good life by choosing to devote the time to preparing gourmet meals with exotic ingredients or one can regard food as sustenance or best prepared by others by choosing to eat takeout meals daily).

The consequence of the global market in food is that few foods remain purely local products but rather become available as a demand for their export arises. The globalization of food distribution enhances choice in terms of an increase in variety (especially for those in Western, "developed" parts of the world) but also has adverse consequences for those whose subsistence crops become in demand for export (e.g., quinoa) (Philpott 2013). Thus, the expansion of options and increase in variety that might be said to characterize the global food system is far from equitable and might even be described as distributing inequity. Imports into Western, "developed" parts of the world tend to be items desired for their health benefits whereas imports from the West into "developing" parts of the world tend to be far from healthy, highly processed food products, including items such as enriched bread and fast food; moreover, poverty and inequity of access *within* industrialized countries entails that increased variety benefits the middle and upper classes to a far greater extent than it does the lower classes. Problems of access such as food deserts limit the choices of the poor, but they are also simply priced out of the markets for healthy, organic foods (Winne 2008, p. 177). Thus, Mark Winne contends that "[w]e have in America today a tale of two food systems – one for the poor and one for everyone else" (2008, p. 175).

Whereas Winne's criticism of the burgeoning market for organic, humanely raised, fair trade, local, and "green" food highlights the way choice is a privilege afforded by wealth and the focus on sustaining farmers eclipses concerns about the poor, others focus on the way the decisions and forces that lead to increased consumer choice often constrain the choices available to farmers, consigning them to poverty, debt, and sometimes suicide. Consumer freedom and choice, especially as it pertains to price, are often invoked as a rationalization for low wages for farmers and workers and for centralization and market concentration. Raj Patel illustrates this point with the case of Ugandan coffee growers: When coffee prices drop in a globalized market, growers who have land suited to little else besides growing coffee find themselves compelled to grow more to earn enough to survive but doing so creates a surplus and drops the commodity's price further.

With the milling, roasting, exporting, and transporting in the hands of multinational corporations like Nestlé, coffee growers lack control over their crop and its price. While growers may be paid 14 cents per kilo of coffee, after processing the price rises to "US $26.40 per kilo, or nearly 200 times the cost of a kilo in Uganda" (Patel 2007, pp. 9–10). Centralization and market concentration disempower farmers even as it may enable corporations to present more options to consumers; thus "our choices at the checkout take away the choices of those who grow our food" (Patel 2007, p. 8). The creation of "food chain clusters" – both vertical and horizontal integration – allows major corporate players (such as Cargill, Monsanto, Archer Daniels

Midland, Smithfield, and ConAgra) to control the production of a food from seed to manufacturing and shift decision-making from farmers to corporate offices (Hendrickson and James 2005).

Moreover, as Hendrickson and James contend, this shift in power and control results in diminished and constrained choice for farmers, which leads to both a loss of farmers' knowledge and skills and "an erosion of farmer ethics" (Hendrickson and James 2005, pp. 278–279, 285). By altering the self-identity of farmers, agricultural industrialization and the ensuing constraints on choice can make agriculture "a place where ethically compromised positions could become natural for farmers" (Hendrickson and James 2005, p. 289). Overall, therefore, choices about what to eat may be increased for some, but these choices are both inequitably distributed along the lines of socioeconomic class and premised on impeding others' choices.

Another counterpoint to the view that the global industrial food system increases the options available to consumers is the fact that actual diversity in both crops and diet has decreased dramatically. Though some critics focus on the effect of agriculture on biodiversity (Cafaro et al. 2006), others focus on the way industrial production, exemplified by monocultures, has led to a loss of diversity in the plant and animal species in agriculture (agrobiodiversity) and thus in diet. The Food and Agriculture Organization of United Nations estimates that "75 % of plant genetic diversity has been lost" since the 1900s (Economic and Social Development Department of the Food and Agriculture Organization 2004) with the consequence that "[m]odern U.S. consumers now get to taste less than 1 % of the vegetable varieties that were grown here a century ago" (Kingsolver 2007, p. 49).

The exigencies of a global and industrial system demand that plant cultivar are selected for a select set of characteristics that are conducive to mass production, transport, storage, and supermarket presentation; thus, ease of harvesting, resistance to bruising and spoiling, uniformity in appearance, and so on are the criteria that determine both which cultivar consumers will find in supermarkets and how these cultivar will be bred and/or genetically engineered. So, consumers will not find apple varieties like the "Calville Blanc, Black Oxford, Zabergau Reinette, Kandil Sinap or the ancient and venerable Rambo on the shelves" (Patel, p. 2). Nor is it likely that the majority of consumers have heard of these varieties; thus it is unlikely that they realize that their choices have been restricted in advance. Corporate concerns about expediency, efficiency, and profit circumscribe the choices that consumers make in the store. Thus, the variables over which consumers may exercise control and make choices are de facto limited: "[w]e may choose between varieties, but not their presentation or the overall selection of goods on offer. When it comes to product quality, safety, and ethics we have to rely on liability and truth-telling" (Kjaernes 2012, p. 152).

A related concern is the decline in diversity in diet: Three crops – corn, wheat, and rice – comprise 60 % of the human diet (Economic and Social Development Department of the Food and Agriculture Organization 2004). In the USA, 75 % of the average person's diet is comprised of eight species (Kingsolver, p. 49) and two thirds of this diet is corn, soy, rice, and wheat (Pollan 2008, p. 117). Since agrobiodiversity is increasingly correlated positively with health and food security, especially for rural populations, this reduction in diversity is significant (Johns and Eyzaguirre 2006; Nicklas, et al. 2001; Thrupp 2000). Thus, the availability of innumerable food products does not translate into dietary diversity; the presence of options does not necessarily lead consumers to take them up. In this way, the kind of choice the system proffers is just the presence of options and the mere possibility of taking them up.

The narrow array of foods that comprise the average US diet is intertwined with yet another concern about the way choice is manifest in a global, industrialized food system. Critics of the impact that this system has had on the health of consumers point out that many of the products available are simply reconfigurations of the same basic components, especially including the aforementioned soy, corn, wheat, and rice as well as sugar, fat, and salt. The number of food products

available in US supermarkets has increased from approximately 4,000 in the 1950s to an average of 38,718 in 2010 (FMI: The Voice of Food Retail 2012). The number of new products introduced is even more dramatic: "18,722 new food and beverage products were introduced in 2005 alone. . . .[however,] many 'new' products turned out to be simply adaptations of existing products ('Oreos with a different color icing,' as one food product development researcher put it), . . . [with most] disappearing after a couple of years" (Gottlieb and Joshi 2010, p. 51).

The proliferation of new products aims to entice consumers to buy, and thus the main focus is on altering the packaging, branding, and messages coupled with the food product in order to attract consumers (Gottlieb and Joshi, p. 45). For such marketing to have its desired effect, though, it must portray the products as presenting genuine choices; such choices are often less about the content of product and more about the image associated with it. In the case of many cereals or soda, the diverse products are often simply different configurations of sugar or artificial sweeteners and so the choice is no longer one about food per se but about image and message. Advertising campaigns still play on the ideal of choice, however, as when the Coca-Cola beverage company markets its low- and zero-calorie beverages (including bottled water) as "healthy options" in order to establish the company as enabling meaningful (i.e., health-related) choice. Yet critics conclude that this depiction of choice is basically an illusion; given the minute differences in the products and the ultimate insignificance of the choice, "the choice between Coke and Pepsi is a pop freedom – it's choice lite" (Patel, p. 17).

Choice and Alternatives to the System

Various alternatives have arisen in response to the ethical and ecological problems inherent in industrial agriculture and the health effects of the kinds of food that are its major product. Alternatives include foods that are labeled, marketed, and/or certified as organic, sustainable, humanely raised, fair trade, nongenetically modified organisms (GMO), local, or "green" zero-emission products. In various ways and to varying extents, these alternatives constitute resistance to the ecologically devastating, inhumane, and unhealthy methods characteristic of global industrial agriculture and food production. Accordingly, the ideal of choice is crucial for such alternatives since they are often understood as, and/or marketed as, offering choices that either are not contained within or are precluded by the industrial system. In particular, these options appeal to the idea that our food choices signify more than a concern about the content of the food product.

Choices about food are choices about ethics, including how animals, human beings working in agriculture, and the environment are treated. In many cases, alternatives to the industrial system require eaters to see the kinds of choices presented within that system as illusory, as "choice lite," and so to understand the choices presented by the alternatives as more meaningful choices. The meaningfulness of these choices lies in the way in which they involve a more expansive sense of the implications of food production and consumption. In choosing what beverage to drink, one is doing more than choosing between a drink with calories and one without calories or between one in a blue can and one in a red can; one is choosing whether the farmers growing the coffee beans are paid a living wage or are barely subsisting, whether the coffee is grown in a sustainable manner or in a way that caused deforestation, and so on. In this context of a rise in ethical consumption, the concomitant desire of individuals to know more about their food in order to make informed choices, and the increasing sense that food choices reflect on who people are, Tavernier argues that consumers have a right to know about food production methods and the ecological impact of their food (Tavernier 2012; Beekman 2008). Along these lines, Coff suggests that the "ethical traceability" enables more informed food choice because it "can address the ethical, as well as the practical and physical, aspects of" the history of a food (Coff et al. 2008, p. 1).

Despite the increasing array of more ethical choices on offer, there is some concern and skepticism about their meaningfulness and about the value of the information provided through standard means such as labeling and certification. Labels like "organic" and "non-GMO" are often adopted by the very mega food corporations to which alternatives are sought (Kastel 2006). The same large corporations frequently buy out smaller organic or natural brands, which thwarts attempts to redirect consumer support (Howard 2009; Johnston, Biro and MacKendrick 2009). Substantive changes in agricultural and production practices do not necessarily follow, however (Guthman 2004). Consequently, the significant social differences – in working conditions and wages, in the scale of production and its associated effects on soil erosion, and in the connection consumers do or do not feel to their food and those who grow it – can be virtually nil.

Moreover, as Roff contends, the ethical consumption movement's emphasis on individual "freedom of choice" "vests responsibility in the individual and focuses attention on consumption as the new arena of citizenship[,]" obscuring the inequitable distribution of the ability to choose and the structural and political nature of responsibility (2007, p. 515; see also Bakker and Dagevos 2012 in support of the idea that citizenship can be effectively exercised through consumer choices). Aspiring to greater consumer "freedom of choice" does not require one to question the current high levels of consumption and their ecological impact and, further, can be achieved through similar kinds of reconfigurations of familiar foods, including highly processed products (Roff 2007, p. 517). Likewise, Kjaernes notes the limits of labeling schemes to address ethical concerns about industrial agriculture and food production; although labeling constitutes an attempt at transparency and the provision of more information, such schemes require competence in reading labels and trust that the labels mean what they say, and may simply comprise a means for corporations to increase profit (Kjaernes, p. 157). Moreover, labels may provide consumers with a degree of expanded choice but "if people's concerns and critique are directed towards the lack of personal interaction and direct control, then ethical labels and assurance programs cannot resolve that" (Kjaernes, p. 153).

Additionally, the question of whether mandatory labeling really maximizes consumer choice is itself a point of debate (Carter and Gruère 2003; Siipi and Uusitalo 2011). Busch summarizes the problem as "the private governance of food[,]" which while it "permits and even stimulates some forms of (more) equitable exchange, it also creates a bizarre bazaar where goods are differentiated by a growing and often bewildering array of standards, most of which are only made visible to consumers through claims embodied in certifications" (2011, p. 351). The labels, certifications, and other assorted claims about food products provide "greater choice to consumers even as it makes choice into a burden" (2011, p. 351). Thus, as Wilkins notes, the most genuine *alternative* to the industrial food system may be found "by shopping outside the mainstream food system – buying at least some food at a farmers market or roadside stand, or joining a CSA" (2005, p. 271). The most significant way to increase choice is likely to extricate oneself from the mainstream food system as much as possible.

Summary

If choice is valued both from within the conventional food system and by those who challenge it, then it is worth considering why choice is regarded as significant and where its value is thought to lie. On the one hand, choice is understood simply as having options from which to choose; that is, choice is valued because it is defined in terms of the presence of variety and the freedom to select what is most desirable or best suited to one's needs from that variety. The nature of these options may vary considerably, ranging from a selection of products that are essentially different configurations of the same basic ingredients (differing primarily in their packaging and marketing) to having options whose content is significantly different

(for instance, processed food products versus unprocessed, "natural" foods) to foods that are chosen not solely because of their content but also because of the implications of the practices involved in their production.

Although consumers choose from different types of food, they might choose a given option because of other variables: By choosing fair trade, consumers may seek to impact wages and working conditions; by choosing humanely raised animal products or not to eat animal products at all, consumers may seek to impact the welfare of animals; by choosing zero-emission products, consumer may seek to minimize the contribution their purchases make to climate change, and so on. Thus, on the other hand, the meaning of choice also extends beyond simply having options (being able to choose, for instance, from among ten different items rather than just three) to being able to make an impact on the processes and systems that are related to one's consumption. One's choice is not just whether to buy organic or not but is also a choice about the use of pesticides, contribution to soil erosion, and so on. The meaning of choice thus also lies in being able to exercise some control over the significant variables – methods of production, working conditions, environmental impact, quality and safety of the food product, etc. – that are involved in the choice rather than abdicating this control to other parties.

Both senses of choice are intrinsically connected to freedom, autonomy, and the ability to engage in self-determining action. To the extent that an ideal of choice is part of how food is marketed, food corporations focus on the first dimension of choice: the presence of variety and the freedom to select from these options, which easily becomes "choice lite." From the perspective of players in the global, industrial food system, the second dimension of choice – exercising some control over the significant variables related to one's food – is subsumed under the first: Control is to be found in selecting from the options the industry affords consumers. Since food corporations need to retain control over their methods of production, among other things, the degree of control available to consumers is just the control over which item they select. Thus, the choice between the available options must be construed as a significant and meaningful one, as a choice that says something about one's self-conception, for instance (Bordo 1999).

On some accounts, the proliferation of variety and the need to choose from an increasingly wide assortment of items can even create anxiety as consumers are encouraged to regard each choice as meaningful (Schwartz 2004; Salecl 2010). Thus, those who criticize and challenge the industrial system work to reveal these choices as basically chimerical, as far less important than they are depicted, and as tied to the disenfranchisement of others. In contrast, they emphasize the importance of control over the significant variables related to one's food, variables that impact the overall health and well-being of humans, animals, and the environment. They also emphasize the difference between a cognizant choice and an unwitting choice. In a landscape in which choices are commonly molded and manipulated to varying degrees, reacquiring control over how, where, and by whom food is produced, processed, transported, and sold requires an understanding of the way choices are shaped.

The difference between cognizant choice and unwitting choice is thus also a difference between understanding *that* choices are shaped (rather than being pure expressions of desire) and how they are so, and the absence of this critical awareness; such critical awareness also involves recognizing the way in which an idea or image of choice is a central part of how food products are marketed to consumers. These forms of awareness are considered central to regaining control over something as vital as food and reestablishing the full value of choice. Thus, alternative food systems seek to restore the meaning of choice by emphasizing both dimensions of choice equally and advocating for the idea that genuine variety and the freedom to choose only arise in the presence of decentralized, democratic control over the significant variables involved in food production and consumption.

Cross-References

- Community-Supported Agriculture
- Ethics and Food Taste
- Food Deserts
- Informed Food Choice
- Obesity and Consumer Choice
- Political Consumerism: Consumer Choice, Information, and Labeling
- Slow Food
- Vegetarianism
- Vertical Integration and Concentration in US Agriculture

References

Beekman, V. (2008). Consumer rights to informed choice on the food market. *Ethical Theory and Moral Practice, 11*, 61–72.

Bordo, S. (1999). *Twilight zones: The hidden life of cultural images from Plato to O.J.* Berkeley: University of California Press.

Busch, L. (2011). The private governance of food: Equitable exchange or bizarre bazaar? *Agriculture and Human Values, 28*, 345–352.

Cafaro, P., Primack, R., & Zimdahl, R. (2006). The fat of the land: Linking American food overconsumption, obesity, and biodiversity loss. *Journal of Agricultural and Environmental Ethics, 19*, 541–561.

Carter, C. A., & Gruère, G. P. (2003). Mandatory labeling of genetically modified foods: Does it really provide consumer choice? *AgBio Forum, 6*(1&2), 68–70.

Coff, C., Korthals, M., & Barling, D. (2008). *Ethical traceability and informed food choice: Vol. 15. The international library of environmental, agricultural and food, ethics* (pp. 1–15). Dordrecht: Springer.

de Bakker, E., & Dagevos, H. (2012). Reducing meat consumption in today's consumer society: Questioning the citizen-consumer gap. *Journal of Agricultural and Environmental Ethics, 25*, 877–894.

De Tavernier, J. (2012). Food citizenship: Is there a duty for responsible consumption? *Journal of Agricultural and Environmental Ethics, 25*, 895–907.

Economic and Social Development Department of the FAO (2004). What is happening to agrobiodiversity? *FAO Document Depository*.http://www.fao.org/docrep/007/y5609e/y5609e02.htm. Accessed 22 May 2013.

FMI: The Voice of Food Retail (2012). *Supermarket Facts.* http://www.fmi.org/research-resources/supermarket-facts. Accessed 15 May 2013.

Gottlieb, R., & Joshi, A. (2010). *Food justice*. Cambridge, MA: MIT Press.

Guthman, J. (2004). *Agrarian dreams*. Berkeley: University of California Press.

Hausman, J., & Leibtag, E. (2007). Consumer benefits from increased competition in shopping outlets. *Journal of Applied Econometrics, 22*, 1157–1177.

Hendrickson, M. K., & James, H. S. (2005). The ethics of constrained choice: How the industrialization of agriculture impacts farming and farmer behavior. *Journal of Agricultural and Environmental Ethics, 18*, 269–291.

Howard, P. H. (2009). Consolidation in the North American organic food processing sector, 1997 to 2007. *International Journal of Sociology of Agriculture and Food, 16*(1), 13–30.

Johns, T., & Eyzaguirre, P. (2006). Linking biodiversity, diet and health in policy and practice. *Proceedings of the Nutrition Society, 65*, 182–189.

Johnston, J., Biro, A., & MacKendrick, N. (2009). Lost in the supermarket: The corporate-organic foodscape and the struggle for food democracy. *Antipode, 41*(3), 509–532.

Kastel, M. A. (2006). *Wal-Mart: The nation's largest grocer rolls-out organic products: Market expansion or market delusion?* [White Paper]. Cornucopia: The Cornucopia Institute.

Kingsolver, B. (2007). *Animal, vegetable, miracle*. New York: Harper Collins.

Kjaernes, U. (2012). Ethics and action: A relational perspective on consumer choice in the European politics of food. *Journal of Agricultural and Environmental Ethics, 25*, 145–162.

Marshall, D. W. (Ed.). (1995). *Food choice and the consumer*. London: Blackie Academic and Professional.

Nicklas, T. A., Baranowski, T., Cullen, K. W., & Berenson, G. (2001). Eating patterns, dietary quality and obesity. *Journal of the American College of Nutrition, 20*(6), 599–608.

Patel, R. (2007). *Stuffed and starved*. New York: Melville House.

Philpott, T. (2013). *Quinoa: Good, evil, or just really complicated?* 25 Jan 2013. http://www.motherjones.com/tom-philpott/2013/01/quinoa-good-evil-or-just-really-complicated. Accessed 15 May 2013.

Pollan, M. (2008). *In defense of food*. New York: Penguin.

Roff, R. J. (2007). Shopping for change? Neoliberalizing activism and the limits to eating non-GMO. *Agriculture and Human Values, 24*, 511–522.

Salecl, R. (2010). *The tyranny of choice*. London: Profile Books.

Schwartz, B. (2004). *The paradox of choice*. New York: Harper Perennial.

Siipi, H., & Uusitalo, S. (2011). Consumer autonomy and availability of genetically modified food. *Journal of Agricultural and Environmental Ethics, 24*(2), 147–163.

Thrupp, L. A. (2000). Linking agricultural biodiversity and food security: The valuable role of agrobiodiversity for sustainable agriculture. *International Affairs, 76*(2), 265–281.

Wilkins, J. L. (2005). Eating right here: Moving from consumer to food citizen. *Agriculture and Human Values, 22*, 269–273.
Winne, M. (2008). *Closing the food gap*. Boston: Beacon Press.

Food and Class

Melissa Fuster
Department of Nutrition, Food Studies and Public Health, New York University, The Steinhardt School of Culture, Education, and Human Development, New York, NY, USA

Synonyms

Luxury foods; Poor-people's foods

Introduction

The act of eating, while simply defined as the consumption of food, has many social and cultural factors tied to it. These factors include how societies define what is edible or not and by whom, how and when to eat, and how the foods are acquired, among other things. Therefore, while eating is an everyday action necessary for survival, it requires a multidisciplinary approach for its understanding. This entry explores the relationship between food, eating, and class. Social class refers to the hierarchical organization of individuals in a particular society. It may refer to a caste system based on family social standing, but most commonly, nowadays, class is determined by the amount of wealth and income one possesses.

The topic at hand can be tied to different social dimensions depending on the context it is being addressed. Following the emphasis of this encyclopedia, the entry will focus on developed or resource-rich countries. In such context, the understanding of food and class is increasingly more essential to address health disparities in chronic, diet-related diseases which increasingly affect the poor disproportionately. In addressing this issue, the following entry will begin with an overview of key concepts associated with the study of food and class, followed by an overview of current issues associated with the topic.

The study of food and class can be addressed through disciplines such as nutrition, economics, history, sociology, and anthropology, to name a few. Through these disciples, various concepts emerge that are important in understanding the issue at hand. This entry will begin by addressing the key concepts of social class, eating, and taste. After the expansion of these key concepts, the entry will discuss the current issues associated and affected by the study of food and class.

Key Concepts in the Study of Food and Class

Social Class

Class is a key determinant of access to services and social goods. At the same time, it is also associated with education and asset ownership. Two key theorists addressing class were Karl Marx (1818–1883) and Max Weber (1864–1920). Marx addressed the issue of class from the perspective of who owns the means of production in society. In this context, there were two distinct classes: the proletariat, or working class, and the bourgeois, those who own the means of production. For Weber, on the other hand, class was determined by more than asset ownership. Weber addressed social class as the result of the interplay between economic standing, status or prestige (referring to how individuals are esteemed or evaluated in a given social context), and power (referring to that which allows individuals to get their way in society) (Wright 2005).

Nowadays, social class is typically seen in three categories: low, middle, and high. Low social class is associated with greater levels of social deprivation, lower levels of education, and less access to basic commodities. In extreme cases, low-class individuals may lack access to basic necessities, such as housing, health care, and food. Individuals in lower classes are usually in blue collar, unskilled occupations, such as the

service industry and high labor occupations. The low-class classification can be composed of those that are employed but earning very low salaries and those who are unemployed, destitute, and without a home to live or shelter. Middle-class individuals are associated with white collar, office occupations, and with higher levels of formal education and income, compared to those in the low social class. The middle class tends to be broad in high income societies and smaller in more developing contexts, with emerging economies. Finally, individuals classified as upper classes have even higher incomes, higher educational degrees, and more prestigious occupations. On concordance with Marx's views, the upper class or elites have control over means of production.

The separation between the lower and the high classes is dictated by the levels of social inequalities in the social context. Societies with big disparities between the low and the high social classes also show broad inequities in diets, health outcomes, educational attainment, and other factors associated with social well-being. Conversely, the gap between the low and the high class is affected by the level of social mobility in a given context. Social mobility refers to the facility individuals have to change their class status. It is related to equities in access to education, health care, social and cultural capital, and employment opportunities. Social mobility can also be facilitated by the provision of welfare programs, such as income and health safety nets Social Mobility (2013).

While income and wealth are important to class classification, education is often used as another indicator of class, given its close association with social standing. Higher education is correlated with higher income, as people get more economic opportunities from a higher education. Education is, then, key for social mobility and the amelioration of social inequities.

Food and Eating

Simply defined, food refers to a substance that nourishes and sustains life. At the same time, what is considered food, or what is an edible "substance," varies according to cultural and social contexts. In certain contexts and circumstances, definitions of what is acceptable to eat vary even within a given society. In contexts of extreme poverty or deprivation, individuals may be forced to consume commonly inedible substances, such as dirt, to quench their hunger (MacClancy et al. 2007). These instances are examples of how food, while an everyday concept, is interdependent to the sociocultural contexts in which people live.

Similarly, eating is also a commonplace concept, as an everyday act essential for survival. At the same time, the process of eating is also influenced by different factors. Eating involves several steps, starting with food selection, cooking or food preparation, and culminating with the actual ingestion of food. While these steps are commonplace, each process involved in the act of eating is influenced by a wide array of social, economical, biological, cultural, and environmental factors, including class. Social class dictates what is socially expected from individuals in terms of table manners, for example.

At a more basic level, socioeconomic circumstances affect the types and availability of cooking facilities and the availability of a space for eating in the home. This is demonstrated by research on the food choice process. Food selection is influenced by class and factors associated with it (Sobal and Bisogni 2009). The research has shown that food choices depend on the time available to procure and prepare food, eat, and clean after the eating episode. Individuals in low social classes, aside from being constricted by the money available to purchase the food, may also be limited by the time they have available to cook or the lack of cooking resources. Time might be an issue across classes, but class influences how time is managed around food. Individuals in higher classes may have better access to technology and hired labor that facilitates cooking under limited time availability. Another important resource is cooking and nutrition knowledge. There, intangible assets are affected by education and family support and attention during the development years, which are also affected by class. Education and nutrition knowledge also influence notions of food quality that influence food selection. This includes brand preferences

and access, notions of what is considered healthy or not, and whether people care about the health effect of foods. While all of these factors are important in the food choice process, the main influence in food choices is food preferences, discussed next.

Class, Taste, and Food Preferences

Food taste is influenced by a wide variety of factors, including biological and social influences. However, social class influences the formation of eating habits early in life. These habits and food preferences are built as part of a person's upbringing and the environment where they live – variables which are affected on income and social standing. This includes the foods and drinks individuals are exposed to as infants and children, which then influence or set a base to their subsequent taste (Drewnowski 1997).

Aside from differences in economic and socioeconomic asset ownership, classes distinguish themselves through different tastes reflected in different consumption patterns, which are influenced by their purchasing power. When discussing class and taste, an important contribution to the topic is the work of Pierre Bourdieu (1930–2002) in La Distinction. In this landmark work, Bourdieu studied taste and preferences across different classes in French society. Among his findings, the taste of the higher classes often dominates the taste of the whole society, defining what is tasteless, tacky, or undesirable. Members of different social classes distinguish one another based on different things they own and acquire. Since members of the high class dictate the preferred taste, those in lower classes will aspire to emulate the taste of those in the high class (Bourdieu 1986).

The differences in classes invariably express themselves in food choices and preferences, as well as eating and dietary patterns. Historically, classes and tastes have been shifting. Before, higher classes were better off when they could acquire higher quantities of food. Then, there were shifts in the qualities of the food consumed. This included an increased taste for foreign, ethnic foods, not readily afforded or accessible by lower classes. These historical shifts in food show how classes distinguish among themselves, with higher classes wanting to distinguish from lower classes, and lower classes wanting to imitate higher classes. Lower classes tend to emulate the taste of those in higher social classes, who at the same time change their consumption patterns to ensure a distinction from the lower social classes.

In the beginning those in higher classes could be distinguished from those in lower classes based on the quantity of foods consumed, with their status allowing them to eat more foods than those in lower classes. As lower classes started to improve their living conditions and were able to access greater quantities of foods and those in higher classes reached a limit on how much they could eat, class distinction then came in the types of foods consumed. Animal source product consumption, as less accessible, became more associated with higher classes. As nutrition patterns continued to evolve, and food becomes industrialized, higher social classes started favoring the new modern industrialized packaged products. For example, with the advent of the microwave, higher classes were able to consume pre-prepared foods, such as "TV dinners," as a sign that they could afford the new technology (microwaves) and these boxed items.

Higher classes distinguish themselves through the consumption of luxury items. A "luxury food" is defined as a food whose demand is associated to a perception of higher refinement or a qualitative improvement on a basic food. It serves as a tool for class distinction, as its consumption, while highly desired, is not widely attained (Berry 1994). Accordingly, luxury foods are not constant or specific, as they are dependent of specific time and place, where a given food is conceived as extravagant and not a basic necessity or food (van der Veen 2003). Following this, perceptions of luxury change through time. An example of such changes is found in the history of lobster consumption in the United States. Before the nineteenth century, lobsters were in great supply and considered a food for the poor. They were used as land fertilizers and mostly fed to prisoners and

servants. Over time, as the supply of lobster diminished, the demand increased and, therefore, its price (Henderson 2005). Nowadays, the lobster is associated with a high price and often considered an example of a luxury food.

The lobster is an example of how changes in supply of a given food affect the social perceptions of the food's status. Aside from changes in the given food supply, the status of a food can also change with new culinary trends. Two examples of "poor people's foods" increasingly appearing in high class, expensive restaurants are offal meat and polenta. The consumption of offal meat was associated with poverty, as individuals were consuming animal parts often considered inedible or the animal by-products. In the early modern period, offal meat starts to appear in cookbooks targeted to the elites, broadening their range of culinary taste (Lloyd 2012). Similarly, polenta, as a cornmeal porridge, was traditionally used as a satiating side dish found not only in Italy but in other countries where corn was a diet staple. For example, it is also known as "funche" in the Spanish Caribbean. Nowadays, polenta is served as a side dish in expensive Italian restaurants.

Aside from the changing status of individual foods, social perceptions on cuisines can also change, often, but not always, on par with the cultures associated with such cuisines. For example, in this ever increasingly globalized world, chefs in higher-end restaurants are experimenting with cuisines from developing or resource-poor countries and offering transformed versions of foods often regarded as street, cheap foods in their restaurants. Examples include traditional street foods, such as tacos, arepas, and various fritters, served as "fancy" appetizers in many new modern restaurants.

The notions of rich and poor people food are cultural dependent. In context as the United States, lower classes are associated with the consumption of highly processed snack food, fast foods, and an unhealthy diet in general. The rich distinguish themselves intended consumption of fresh, organic local foods, or more exotic food preparation, for example, the new gastronomy techniques such as the food foams and other new preparation techniques.

In poor countries, diets tend to be more monotonous, composed of basic staple foods. The ability of being able to afford processed, prepackaged foods is seen as a sign of status, as well as fast foods. Consuming wild, local greens is a sign of poverty. Contrasting this notion, wild, foraged foods are gaining popularity in developed countries, partly tied to the local food movement. In such contexts, higher-class individuals tend to distinguish themselves by selecting more modern foods, such as foreign, imported foods, while those in lower classes tend to adhere more to traditional foods. These foods, at the same time, have different nutritional values, as traditional foods, such as wild, local greens, tend to be healthier than new, modern foods, such as prepackaged processed foods.

Issues Associated to Food and Class Discussions

Food and Social Interactions

Aside from the need for nourishment, food fulfills and is tied to many human social needs. Food sharing is important in many cultures, and the act of eating is a primary way of interacting with others. In modern society, food sharing might take different forms, from sharing a meal at a restaurant, cooing for friends in the home, to having "pot luck" gatherings where those invited bring their foods. How individuals interact with one another through food is affected by their social standing. Those in the higher classes may consume more meals outside of the home, at more expensive establishments. The middle class may still enjoy eating out, but may also engage in more home cooking and having family or friends gathering in the homes. In terms of food, those in the low social classes are less able to use food as mean to socialize, as they may not have the resources to take part in different social interactions around food. Poverty, or belonging to lower social classes, carries with it an intrinsic component of deprivation, where those in lower classes cannot take advantage of different social gatherings.

Poverty, Food Deprivation, and Food Preferences

Individuals in low socioeconomic classes have a greater vulnerability to food insecurity and

food deprivation. Research has shown that past food deprivation is associated with preference for foods high in energy and fat, given their satiating and "comforting" effect. The importance of food as a source of happiness and comfort is important across all classes, but even more so in situations where the family's few resources do not allow for fulfilling other nonfoods rewards – for example, while a mother might not be able to afford the latest videogame for her son, when the son ask for a fast-food meal, she will give in, even if she knows other food options are better. Because of the link between food and physiological well-being, the experiences of poverty and food deprivation make the understanding and following of current nutrition advise harder.

Social Class and Diet Quality

There is an inverse relationship between income and the proportion of such income spent in food. Individuals in low classes spend a big percentage of their budget in food, along with other basic necessities (housing, utilities). Given the relatively higher cost of healthy food options, such lack of economic access to food is associated with decreased diet quality. High quality, or nutrient-rich, low energy density diets are associated with higher socioeconomic status, while low quality, more energy-dense and less varied diets are associated with low socioeconomic status. This is seen in the consumption of foods considered part of a healthy diet, including whole grains, lean meats, fish, fresh fruits and vegetables, and low-fat dairy products (Darmon and Drewnowski 2008).

Food Deserts

The relationship between food and class is mediated by differential access to healthy, fresh foods. Discussions around class and eating touch upon food access inequities and local food deserts found in many low income areas, where supermarkets and fresh food markets are not available, and the poor are dependent on small, "corner" stores selling mostly unhealthy foods along with alcohol and cigarettes. In the United States, for example, research has shown that in low income areas, families spend more time traveling to a grocery store, compared to the national average. While access is expectedly different in urban and rural areas, the issue is most concerning in urban areas with high levels of income inequality and racial segregation. Families in these low income neighborhoods have less access to supermarkets, greatly influencing the types of foods they have access to. This is reflected in purchasing patterns, where lower-class families who are not able to shop at supermarkets buy less fresh fruits and vegetables (Ven Ploeg et al. 2009). This lack of access to healthier, fresh food options partly explains the socioeconomic differences in diet quality, as presented above. Several community interventions are in place to address this issue, including the establishment of farmer's markets, local food production (urban agriculture), and education programs to promote family resource management for healthier eating patterns (Ven Ploeg et al. 2009).

Obesity Among the Poor and the Fat Prejudice

Disparities in food access and diet quality result in different physical and health outcomes. Obesity used to be a sign of affluence and being taken care of in earlier days, when food was scarce, as seen, for example, in historical women portraits, where fuller figures were represented. Being thin was a sign of illness and poverty. Nowadays, social prejudices along body shape have changed. There is a social preference for thinness and a negative stereotype concerning fatness. These stereotypes include negative perceptions of overweight individuals as "not having will power," among other negative adjectives (Crandall and Schiffhauer 1998). At the same time, fatness is associated with lower socioeconomic classes. Lower income and social standing, as mentioned above, are associated with less access to healthy food options. At the same time, low income areas present fewer opportunities for daily physical activity in so-called "obesogenic" environments, where the lack of healthy food choices combined with perceived lack of neighborhood safety, lack of outdoor space (playgrounds, parks), and poor infrastructure and transportation options increases the individuals' vulnerabilities to becoming overweight or obese. A second issue at play is the psychological consequences of poverty, which increase stress levels and, at the same

time, vulnerability for excessive weight gains and other health conditions, such as hypertension and heart disease. Conversely, obesity is also linked to social class, by influencing social opportunities through existing social prejudices (stigmatization and discrimination), limiting an individual's ability to improve his/her socioeconomic situation (Sobal 1991).

Summary

The topic of food and class is an important one across many disciplines. Food is much more than nourishment – it serves as a way to mark status in society, a vehicle for socialization, and a way to increase mental well-being, among other things. While food fulfills many different social and psychological needs, it is also closely linked to overall health. As social classes distinguish themselves through different tastes and food preferences, these differences are associated with health disparities and other issues, such as disparities in housing and neighborhood location and social stigma related to obesity, as a consequence of poverty and different eating patterns.

Cross-References

- ▶ Culinary Cosmopolitanism
- ▶ Eating and Nutrition
- ▶ Ethics and Food Taste
- ▶ Food and Choice
- ▶ Food Security
- ▶ Food Security in Systemic Context
- ▶ Obesity and Consumer Choice
- ▶ Taste, Distaste, and Food

References

Berry, C. J. (1994). *The idea of luxury: A conceptual and historical investigation*. Cambridge: Cambridge University Press.

Bourdieu, P. (1986). *Distinction: A social critique of the judgement of taste* (trans: Nice, R.). Cambridge: Harvard University Press.

Crandall, C. S., & Schiffhauer, K. L. (1998). Anti-fat prejudice: Beliefs, values, and American culture. *Obesity Research, 6*(6), 458–460.

Darmon, N., & Drewnowski, A. (2008). Does social class predict diet quality? *The American Journal of Clinical Nutrition, 87*(5), 1107–1117.

Drewnowski, A. (1997). Taste preferences and food intake. *Annual Review of Nutrition, 17*, 237–253.

Henderson, M. (2005). How lobster went up in the world. *The Times*. Retrieved from http://www.thetimes.co.uk/tto/news/world/americas/article1999676.ece

Lloyd, P. (2012). The changing status of offal. *Food, Culture and Society, 15*(1), 61–75.

MacClancy, J., Henry, J., & Macbeth, H. (Eds.). (2007). *Consuming the inedible: Neglected dimensions of food choice* (Vol. 6). Oxford: Berghahn Books.

Sobal, J. (1991). Obesity and socioeconomic status: A framework for examining relationships between physical and social variables. *Medical Anthropology, 13*(3), 231–247.

Sobal, J., & Bisogni, C. A. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine, 38*(Suppl 1), S37–S46.

Social Mobility. (2013). *Encyclopædia britannica*. Retrieved from http://www.britannica.com/EBchecked/topic/551322/social-mobility

van der Veen, M. (2003). When is food a luxury? *World Archaeology, 34*(3), 405–427.

Ven Ploeg, M., Breneman, V., Farrigan, T., Hamrick, K., Hopkins, D., Kaufman, P., et al. (2009). *Access to affordable and nutritious food – measuring and understanding food deserts and their consequences: Report to congress*. Washington, DC: USDA Economic Research Service.

Wright, E. O. (2005). *Approaches to class analysis*. Cambridge: Cambridge University Press.

Food and Health Policy

Martin Caraher
School Arts and Social Sciences, Centre for Food Policy, City University London, London, UK

Synonyms

Actions; Goals; Legislation related to food and health

Introduction to Food and Health Policy

What is food policy? Miller and Deutsch (2009) discuss what constitutes food studies; they say

that food studies are not really the study of food itself but the study of the relationship between food, the human experience, and food (Brillat-Savarin 1976; also see ▶ Brillat-Savarin and Food). Miller and Deutsch (2009) outline areas of study such as food science, agricultural science, culinary arts, public health nutrition, and agro-economics, to name but a few areas which they see as incorporating food studies. Food policy incorporates all of the areas but is more than even the study of the relationship between food and the human experience. Food policy is more than health and more than just agricultural policies or even nutrition policy as individual strands; it is the interconnectedness and sometimes even the disconnect between these various areas.

Food policy, as an academic subject, is the study of the relationship between all these areas of study and how policies are formed or not developed despite the weight of the evidence (Lang et al. 2009). For a long time, transport polices were not considered as having much to do with food policy; however, now they are seen as integral in terms of how food is transported from where it is grown to where it is consumed. Food policy can also be defined by the absence of a written policy or even benign neglect of an area. The failure to relate food production to oil and oil prices was for a long time a major commission in food policy; the food system relies on oil, oil to produce fertilizers for food, oil to power the machines to harvest it, oil to process it, and oil to distribute it. There is an argument that food policy should not become a distinct area of endeavor seeking instead to become part of and embedded in other policies. Like the concept of health in all policies, food should be in all policies. This in reality is difficult to achieve, and the fallback position is to develop a separate food policy. This usually takes the form of a nutrition-based policy (Milo and Hesling 1998; Caraher and Coveney 2004).

It becomes clear that healthy food-related policies can have an impact on other issues such as environment, considering the example of campaigns to increase fruit consumption in the global north. Fruit consumption has increased significantly since the mid-1970s; this has been largely accounted for by the very sharp rise in purchases of fruit juice which does not provide equivalent nutrition to its fresh counterpart. This fruit juice consumption, however, is often of juices from long-distant fruit, notably oranges from Brazil. A study by the Wuppertal Institute in Germany calculated that 80 % of Brazilian orange production is consumed in Europe. Annual German consumption occupied 370,000 acres of Brazilian productive land, three times the land devoted to fruit production in Germany. If this level of German orange juice consumption was replicated worldwide, 32 million acres would be needed just for orange production. The increasing expectation that fruit juices should be available throughout the year also contributes to this rise in consumption. If countries in the global north substituted orange juice for what they can grow and produce regionally, then this would contribute to a reduction in the environmental impacts. Of course what is occurring is a social phenomena in that orange juice is seen as something more luxurious and is imbued with concepts of sun and health. So health policy can have impacts on trade and environment, but equally areas not immediately related to food can have an impact on food and nutrition; this can be trade policies or even transport policy (Kranendonk and Bringezau 1994). This helps makes the case for food policy which is wider than just nutrition or even production but which incorporates elements of trade and global equity (see also "▶ Free Trade and Protectionism in Food and Agriculture"; "▶ Environmental Ethics"; "▶ Environmental Justice and Food").

Most of the existing food policies that exist are divided into two groups; the first are those that have nutritional health as their focus and the second group are agricultural/processing policies (Bronner 1997; Milo and Hesling 1998). The dangers inherent in both approaches are that there is no sense of joined-up policy. This is despite calls for the development of joint food and nutrition policies by the World Health Organization, following the 1992 International Conference on Nutrition. Egger and Swinburn (2010) make the link between the nutrition implications and the planetary ones in the subtitle of their book

How We're Eating Ourselves and the Planet to Death. There is of course a danger in assuming that nutrition equals food policy and occupies the moral high ground. Lang et al. (2009) set out a typology of "three nutritions."

Life Science Nutrition: food cannot be seen only as a totality of its micro and macro components that influence health, the biomedical approach (see also "▶ You are What You Eat"; "▶ Eating, Feeding and the Human Life Cycle").

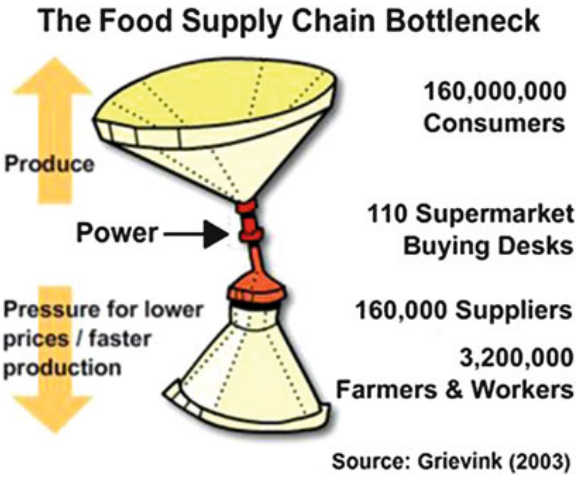
Social Nutrition: food can also be seen as a mean of socialization, linked to cultures and other social contexts.

Eco-Nutrition: food is now seen as an integral environmental component that affects and is being affected by the environment and hence needs to be produced and distributed in an ecological way. This is an attempt to relate nutrition to sustainable growing and processing.

These concepts are broadened below in the section on ways of conceiving food policy. In the sections that follow, the following are set out food and public health policy with the tensions between health and production policies set out, the new malnutrition and the shift from hunger to hunger and obesity in the nutrition transition, and issues about taxation and subvention in food and health policy including taxation as a means of changing behavior. These are dealt with under the four headings of globalization power and control in the food chains, ways of conceiving healthy food policy, food inequality and the nutrition transition, and finally interventions in public health and obesity prevention from tax to subsidy.

Globalization Power and Control in the Food Chains

Figure 1 highlights the concentration of power for the majority of foods grown and processed in Europe. The power and control are located at the bottleneck with the 110 buying desks who determine the type and price of goods that eventually appear on the supermarket shelves.



Food and Health Policy, Fig. 1 The supply chain funnel in Europe from farmers/producers to consumer

This has implications for growers and the consumer with what is called the funnel effect, with this process of concentrating power being repeated globally with respect to most commodities. It results in a concentration of buying power, with fewer buying desks and fewer outlets and less power in the hands of the grower (Monteiro and Cannon 2012). The buying desks of the large transnational corporations (TNCs), whether retail or fast food, do not want to be dealing with a large number of small producers. This leads to concentrations in the growing and production of food. There have been changes over time in who controlled the food system in the early 1900s farming was dominant with the manufacturing sector assuming dominance in the middle of the century; this changed in the 1960/1970s to manufacturers and wholesalers with retailers emerging as dominant in the last 20 years of the twentieth century and in this century. This dominance by the retailers is being challenged by the food service sector (fast food, takeaway, and restaurants). Globally power is concentrated in a small number of TNCs; it is estimated that 20 major companies control up to 80 % of global food trade (Lang et al. 2009). Key impacts of globalization of the food system include:

Development of large multinational companies who control what is grown, where it is grown, and prices

Loss of biodiversity

Homogenization of culture
Less emphasis on public health

(See also "► Community-Supported Agriculture"; "► Food Deserts"; "► Food Security"; "► Trade and Development in the Food and Agricultural Sectors.")

Public health concerns are subservient to those of business and trade. As was seen above, with orange juice, there are also problems when nutrition policy ignores or neglects to account for wider impacts such as those on the environment.

The concentration of power can be further represented by a north/south divide with the major international companies being based or originating in the rich north. The funnel or wine glass model represented in Fig. 1 is replicated across the globe within and between countries in terms of food power, trade, and control of the food chain. A small number of transnational corporations have power at the stem of the wine glass, controlling those who produce food and controlling the choices of those who consume (the industry calls this choice editing). This has implications for growers and the consumer with what is called the funnel effect, with this process of concentrating power being repeated globally with respect to most commodities. It results in a concentration of buying power, with fewer buying desks and fewer outlets. All this leads to concentrations in the growing and production of food.

An example of the global power of the food industry and the economic impact on nation states comes coffee growing. Globally, five major roasters are Procter and Gamble, Nestlé, Sara Lee, and Philip Morris with 40 % of world trade. The key driver is price for the major roasters. So they go where the coffee is cheapest; in recent years this has been the Far East (Vietnam) where World Bank policies have resulted in a glut of coffee resulting in lower prices for growers globally. So the basic grade coffee bean, for instant coffee (which accounts for about 80 % of the total coffee market), can travel across the globe for processing. In 1990 the world coffee trade was worth US $30billion, of which producing countries received US $12billion by 2004 global revenues were in the order of US $55billion but only US $7billion went or stayed in exporting nations. The cost for consumers stays the same or increases slightly; the main beneficiaries are the roasters and retailers.

So the point is that the old-fashioned notion of food policy as being simply related to health no longer holds true, if indeed it ever did. The danger is that food and health policy can be seen as merely a way to pick up the pieces after the event. So ill-health is the consequence of unbridled and unregulated food chains (Egger and Swinburn 2010). If food policy is to be successful, it needs to engage with the food chain in its entirety. This leads to the idea of conceptualizing the food chain and food policy's relationship to it.

Ways of Conceiving Healthy Food Policy

Lang and Heasman (2004) set out three paradigms of the food system (see Fig. 2 below which is based on these paradigms). These are:

1. A productionist approach
2. The life sciences approach to health
3. An ecologically integrated approach to health and environment

These are similar to the three "nutritions" mentioned earlier (Lang et al. 2009). The middle one is highly technical and based on technology and modern advances in nutritional knowledge. It offers hope for improvements in health and nutrition through technology and modern advances in nutritional knowledge (Gibney 2012). This will be delivered through novel foods, new technology, and changes in health-care screening. There remain two problems with such an approach: the first is concerned with the availability of such initiatives introducing a growing inequality between the countries of the north and the south; the second is the danger of it widening inequalities within countries. It remains questionable if such an approach can be seen as a population approach. There are two approaches in public health nutrition, the universalist and the selectivist. The former targets the whole population on the basis that small changes across the whole population are preferable to big ones in a small subsection of the population.

Food and Health Policy, Fig. 2 The models of the productionist paradigm of food production (*top*) and the ecological paradigm (*bottom*) (Lang and Heasman 2004)

The productionist paradigm sees human health best served by an efficient and productive food chain built on a model of more and greater efficiency. The second agricultural revolution following WWII in the shape of better and more efficient production, delivery, and retail is now being promoted through the development of genetically modified foods and other advances in technology. The drive is profit and the growth of corporations. The proponents of this model also claim it will address food security, although this is only in terms of the production of the total amount of

food produced, and these claims do not address issues of access or rights to that food (Sen 1981 and 1997).

The ecological paradigm works from a different set of values where the drivers are human and environmental health, and the system works to deliver on these values. Much as it would be nice to believe that this is the desired outcome for all players in the food system, there are many tensions inherent in this models and many vested interests at play; the neoliberal economic model of free trade and the removal of barrier including public health ones to trade are paramount (see examples of this in "▶ Fair Trade in Food and Agricultural Products"; "▶ Public Institutional Foodservice").

As noted above, the majority of food policies are developed from a health perspective; this is as much about historical antecedents as about the logic of the process (Ostry 2006; Caraher and Coveney 2004). Over time, health policy makers became aware that the development of health policy could not happen in the absence of working with agricultural, business, and economic interests. As the food chain became more global and power became concentrated in a number of global companies, nation states became less involved in policy making, leaving this to the private sector and global governance institutions such as the World Bank, the World Trade Organization (WTO), and regional trade bodies such the European Community/Union and North American Free Trade Agreement (NAFTA). The politics of food became more complex, and the influences shifted (Schanbacher 2010).

The 2009 report "A Future for Food" from the Public Health Association of Australia raises many of these issues and calls for a "national integrated food policy" for Australia, which would involve all the food sectors including the food industry. The report highlights a number of dilemmas for Australia which include questions about:

- The appropriateness of setting limits to the amount of food to be eaten and foods to avoid which are less sustainable, e.g., meat consumption
- The balance between land to grow feed for animals and land to feed humans directly
- The role Australia should play in addressing concerns re world food security, i.e., plans for Australia to produce sufficient food to feed the emerging economies of Southeast Asia

These are all challenges both to the current food system and the food choices individuals make every day. Irz et al. (2003) have estimated that to bring food production into line with WHO/FAO healthy eating guidelines (i.e., an integrated food policy), production of the following would need to be decreased:

- Pig meat by 5 %.
- Butter by 13 %.
- Cream by 18 %.
- Animal fat by 31 %.
- Soybean oil by 14 %.
- Rapeseed oil by 30–35 %.

And production of the following would need to be increased:

- Fruit production UP by 100 %
- Vegetables UP by 100 %
- Cereals production UP
- Nut production UP
- Fish catch and production UP (Irz et al. 2003)

Despite the calls for joined-up policy and even for the development of national food and nutrition policies, this has not resulted in many such joined-up policies. The reality is that agricultural, trade, and financial interests gain the upper hand. Another way of addressing the problem is to ensure that all policies are food "proofed." So a set of criteria are developed against which all policies are measured against. Key among these criteria should be the issue of preventing further inequalities and pulling back existing ones – the topic which is addressed next.

Food Inequality and the Nutrition Transition

At a global level, inequalities are stark with the rich-developed nations enjoying choice and food safety at a time when the Millennium Goal to reduce hunger is not being met. In fact, the numbers at risk have increased (George 2010).

These divides are sometimes stark and obvious as a section of the population engages in conspicuous food practices and consumption, while others suffer "want." While these global divides are often apparent and somewhat visible, food insecurity within developing and developed economies is seen as something of a myth and often viewed as being self-inflicted and due to inadequate food knowledge and skills on behalf of the individuals or families concerned. In the light of the recent global economic crises, countries in the global north are seeing an increase in poverty and a consequent rise in food poverty. This is evidenced by the number seeking food aid from charitable and state institutions (Poppendieck 1999, 2010).

As the background to the changing nature of food poverty and insecurity, the world is experiencing a "nutrition transition" (Caballero and Popkin 2002) with diseases, such as obesity and type II or late-onset diabetes, previously associated with affluence, middle age, and lifestyle factors, now skipping a generation and occurring among younger members of society and in low-income and marginalized groups. This has in the past been preceded by changes in the makeup of population demographics and generally better health status due to infectious diseases being controlled and improvements in nutrition, housing, maternal health, and health care. The "nutrition transition" model helps explain some of these effects with overabundance and want existing in the same societies. The nutrition transition is also occurring in the developing world with diseases of undernutrition existing side by side with non-communicable diet-related diseases. While hunger is still evident in developed economies, 47 million Americans will go hungry today. This is counterposed with the obesity epidemic. The paradox is that the want and abundance in terms of overconsumption exist in the same cohorts (Pena and Bacallao 2000). So this group goes hungry at times and overconsumes at others – often with the intake of inappropriate foods. This paradox can be seen in the work of Popkin, and his work is worth reading to untangle these complexities. There is always the danger that in seeking explanations and solutions, the focus is on individual behavior.

The choices that people are making in the name of what might be called the new concerns with ecological health mirror the facts of life of those who live with "want" – that is, restricted choice and diets. The distinction is, of course, that of choice – if I chose to eat less meat and consume less or eat a locally based diet, then that is different than if this consumption is a matter of necessity and lack of choice (see Kingsolver 2007; Pollan 2009 for examples of this new austerity as lifestyle choice). At the same time as these changes in food security/poverty, we are also witnessing a growth in new ways of dealing with food and which has been labeled the "new austerity" movement (Caraher 2011).

A short example may help illustrate some of the above contentions. With the demise of the Soviet Union, the Russian population experienced shortages of foodstuffs. Rooftop gardening emerged as one way of addressing urban food shortages and adding to the diet. In one district in St. Petersburg, 2000+ tons of vegetables are grown. This arose out of the need to meet food shortages and food insecurity (World Health Organization 1999). On a similar climatic level in Michigan but a few degrees south in latitude, there is a group of food consumer "activists" – those committed to "eating locally" in Michigan. The group have adopted the name *Edible WOW* (WOW takes its name from three densely populated counties in southeast Michigan: Washtenaw, Oakland, and Wayne). These are part of Edible Communities' network of local food publications (see www.ediblecommunities.com). The reasons for the actions in Michigan are very different from those in St Petersburg; the WOW group is focused on eating locally, methods of production, and the origins of food, all admirable aims. But here, are two groups doing similar things but for different reasons, one because they had to, the other because they chose to. Developments such as WOW have also been critiqued for being "middle class" and niche in their operations. They can be critiqued for the level of social skills and social capitals needed to adopt an alternative lifestyle. The irony is that some of the rich chose to live in ways that the poor or peasant societies lived; they can do this as they have the resource and capabilities. The poor,

now, have less choice and power to do this as their foodscapes are controlled by TNCs and the power of availability and advertising. Contemporary calls in the United States to address "food deserts" focus on deprived areas having a supermarket or large grocery store which sells a range of fruit and vegetables (United States Department of Agriculture 2009). This is a reflection of the dominant market system. Michelle Obama, the US first lady, announced a US $400 million effort to eradicate food deserts within seven years; this entailed working with key retailers to ensure all communities have a supermarket to shop from; key partners include Wal-Mart. All this at a time when the alternative movement is growing, but for the poor and disenfranchised, there it appears no "alternative" but the mainstream. So it may be that future development of alternative food systems and networks contributes to a further sense of alienation and creates a further gap in the social divide (see examples of this in ▶ Public Institutional Foodservice; ▶ Slow Food).

At a time when well-off consumers are moving away from the dominant system, the dominant system is being brought closer to the poor. This development of a modern day "Walden" (Thoreau 1854/2004) or return to an ideal of bucolic living, which is more easily accessible and available to those with capital assets and resources. So some, with self denial and lifestyle choice as part of the "new austerity" such as 100 mile or 100 km diets or locavore-based diets, are expressing a form of social capital which has its roots in the protestant ethic of denial and the greater good (Belasco. 2007; Poole 2012). As Gopnik (2012, 93) asks "*who is likelier to eat the today the diet of the American farmer or the Russian peasant of the Old Country- brown bread and freshly grown local vegetables, free-range chicken and raw milk cheese- the farmers' great-grandchildren, or the professor of comparative literature at the nearby liberal arts college?*" But, ironically, this may not be an option for those on low incomes or disenfranchised in other ways (see as an example of this new genre Kingsolver 2007).

At the same time as the nutrition transition, the face of food poverty is changing with undernutrition and micronutrient deficiencies now exiting alongside the problems of overnutrition. This is important to note as the changing nature of food supply and consumption is leading to a need to revisit and reconceptualize our ideas of food poverty; see Table 1 for how the new or modern food (in)security can be conceived. Food inequality needs to be key to any food policy development;

Food and Health Policy, Table 1 The "old" and "new" forms of food poverty and (in)security

	"Old" food poverty	"New" food poverty
Availability	Lack of food	Overabundance of processed foods
Nutrition problem	Undernutrition	High calorie intake and overall lack of balance and possible micronutrient deficiency
Specific groups	The urban poor, the "indigent," and those who are unemployed	The same but with the addition of the working poor
Nutrient profile	Nutrient light	Energy/calorie dense
Nutrition problem	Undernutrition	Lack of balance
Meal occasions	Few	Continual "grazing"
Food expenditure	High % of household spending	Low % of household spending
Price implications	Absolute cost of food	Relative cost of food
Social implication	Removal from the norm	Social and cultural isolation
Work	Manual	Sedentary
Easiest mode of access	Walk or bike	Car
Fuel	Food	Fossil fuel
Drink	Water	Carbonated drinks
Price pressures	Cost of food	Cost of food relative to other demands, e.g., transport and housing
Appearance	Thinness	Obesity
Fantasy role model	Plump/fat royalty	Thin celebrities
Disease patterns	Diseases of "want" characterized by undernutrition	Diseases of "want" and affluence occur side by side

Adapted from Lang et al. (2009) (see also ▶ Food and Class)

in fact, it can be argued that the key function of any food policy or food in other policies should measure the impact of any increase in food inequality or access. The key point is not that all forms of alternative food create inequality but that some do and should be monitored to ensure they do not increase inequalities of access and provision to food. Eating seasonally was once the preserve of the poor now with the development of what Gopnik (2012) calls the modern "*moral taste*"; seasonality and eating locally are fast becoming the terrain of those with resources. The price of food poverty or insecurity in the past was seasonal eating; now the rich pay money to eat seasonal and local food.

The changes in any society are complex and subject to local food culture and customs. However, they tend to follow a pattern whereby in the first stages of development, the rich adopt the food habits of the rich first-world countries. This can take the form of consumption of takeaway and processed foods, all of which can contribute to chronic diseases such as heart disease and cancers (Popkin 1998). The reasons for this are twofold – these lifestyle choices are culturally aspirational but also expensive and too often only the well-off can afford them.

The second stage of the changes are rooted in the food system becoming more industrial and concentrated so that processed foods and fast food become more affordable to all. Fast food is "fast," thanks to modern technology and suits modern lifestyles and in many instances a viable option for those on low incomes (the Big Mac index is an indicator of how much time you have to work to afford a Big Mac, see http://www.bigmacindex.org/). In fact, the use of takeaway and fast food (or street food) often becomes an important money and labor-saving mechanism for many who are engaged in piecemeal work.

At the latter stage of the transition, the rich classes return to eating more basic foods due to the health implications (see ▶ Population Growth; ▶ Slow Food). The dietary impacts of such moves, for the poor, are an increase in the fat, salt, and sugar content of these foods with possible long-term consequences for health burdens. Food or nutrition policy that focuses on one aspect is bound to be only partial in its scope and effectiveness. Obesity and coronary heart disease (CHD) have, until relatively recently, been viewed as a diseases of affluence/food choice and less of a problem in developing countries than in rich, industrialized ones. This is no longer true (see Caballero and Popkin 2002; Egger and Swinburn 2010). CHD and some food-related cancers (e.g., bowel) are on the increase in developing countries, where the more affluent social groups are tending towards a more "western" lifestyle – eating different foods, taking less exercise, and not just aspiring to, but achieving, western patterns of consumption. In developing countries, obesity now exists alongside more traditional problems of undernutrition.

The modern globalization process means that many of these changes are now occurring in the space of single years as opposed to decades (see ▶ Population Growth). The consequence is that the chronic and acute diseases and problems associated with food occur side by side as opposed to occurring temporally or sequentially. So the behaviors associated with poverty are played out by a section of the population, while another section indulges.

Allied to this is the concept of relative poverty, where the shifts reflect both changing lifestyle practices and cultural norms and not simply the amount of food. Food poverty is relative, in that it is dependant on the standards in a society, and people define their cultural needs relative to the population standard; in many developed countries not being able to afford meat or being able to eat out are now considered part of the measures of food insecurity/poverty. The term "socially acceptable ways" is often included in definitions of food poverty/security; this could, for example, be taken to mean that even if an individual would get their nutrient requirement from a source such as a food charity that it is unacceptable if the majority of their contemporaries are able to afford a healthy diet and shop at supermarkets. A definition of food security is "Access to enough food for an active, healthy life; at minimum, includes the ready availability of nutritionally adequate and safe foods and an ensured ability to acquire acceptable foods in socially acceptable ways" (included in Troy et al. 2011). The recent US Institute of Medicine report provides definitions of food security, high

food security, low food security, food insufficiency, and hunger. Troy et al. (2011, pp. 2–3) define very low food security as:

> A range of food insecurity in which households report multiple indications of food access problems, but typically report few, if any, indications of reduced food intake on the USDA survey. Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.

This illustrates the changing nature of food insecurity/poverty. The Feeding America campaign (see http://feedingamerica.org/, accessed 22nd Apr 2014) reports that 37 million Americans regularly go hungry. This is alongside the problems associated with overconsumption such as obesity and related chronic diseases such as diabetes. Indeed, many of the same groups who overconsume may at different stages go hungry.

Hunger still exists in many communities, and the changing global economic crises are exacerbating this, often in new ways and groups such as migrants and the working poor. For example, migrants, in many nation states, have ambiguous status and entitlement to welfare and security benefits. The working poor are in danger as they may not be entitled to welfare and food benefits but are forced to squeeze their available income, and what is known is that spending on food is the elastic item in the budget that you can cut back on. Riches (2002) has reported similar trends in Canada.

This is equally true of the life sciences approach mentioned earlier, where the benefits will be available to those who can afford them, and they may even widen existing inequality gaps. Advances in treatment, novel foods, biotechnology, the human genome project, and epigenetics are less likely to be available to those with the most need but the least resources; this is true at both country and individual levels.

Interventions in Public Health and Obesity Prevention from Tax to Subsidy

There are clearly benefits from a globalize world. In this respect, it is important to make one crucial distinction; the association of free-market liberalization and economies based on this principle with liberal societies is at one level misleading as it is not with a straightforward relationship (Hertz 2001). Many development reports identify the Scandinavian countries among the best places to live, and many of these have barriers to food trade based on public health principles (e.g., sales tax on unhealthy foods, Sweden and its banning of advertising to children, Denmark with its ban on trans fat. Other countries such as the United Kingdom, the United States, and Australia advocate protection systems based on voluntary agreements with the food industry (Panjwani and Caraher 2014).

A report from bankers USB Warburg (2002) pointed out that health issues such as obesity are better controlled in well-regulated societies. The old public health was concerned with infrastructure and the provision of health food to people. The neoliberal economic agenda has shifted this from an emphasis on state provision to one of consumer choice. Essentially reflecting a move from the rights of citizens to one where the consumer has to exercise caution as in "caveat emptor" or buyer beware.

Caraher and Cowburn (2005) point out that interventions need to focus not just on taxation or removal of certain foods but to look to a comprehensive approach so that taxation of food high in fat, salt, and sugar is matched with subsidies on healthy options. However, given the antagonism that and the general public and the food industry express over taxation may require a selectivist approach to its introduction. For example, focusing on children or vulnerable groups in the first instance helps win over public and political opinion. The debate should not be about whether food taxes disadvantage the poor or restrict choice but what is the part that food taxes play in any overall program of intervention. As opposed to being seen as barriers to health and growth, such interventions can be seen as contributions to long-term health and even the GDP of a country (Caraher and Carr-Hill 2007).

Food programs such as the World Food Program organized by the Food and Agricultural

Organization (FAO) are moving from models of delivering food that rely on global trade to models that encourage local food production and sustainable development (Food and Agricultural Organization 1999). The new policy of enabling development fits well with Keynes' maxim in *National Self-Sufficiency* that ideas, art, and culture should circulate freely across borders but that capital and goods should remain national. For example, in many sub-Saharan areas, the staple diet is based on the production of maize. The problem is that maize is a cash poor crop, and currently the focus is on raising the incomes of farmers by encouraging them to grow high-value crops. The tension here for food security is that such a policy leads to food becoming rivalrous in both the domains of consumption and production. Cash crops for farmers result in more money for the producer but are more expensive and possibly less nutritious and less energy dense foods (e.g., it requires 440 g of potatoes to provide the same kcal as 100 g of maize). The recirculation of money may also only occur within a select elite group and have a trickle down or diverse impact. The idea is that such goods could command a cash price locally or internationally, resulting in the flow of money to buy maize on the international market. While farmers would benefit, the community in general may suffer if the international commodities market results in the price of potatoes dropping or the price of maize rising. Such a policy based on changing local food habits also runs the danger of having to overcome cultural barriers towards food.

Such policies, outlined above, as well as being based on crops for cash (and export) are often accompanied by the removal of subsidies and support for farmers and crops. The use of subsidies and its influence on global trade can be gauged from the fact that in 1999 (Lang and Heasman 2004):

- In the UK, £76 billion was provided in support to farmers in Europe – this accounted for 49 % of income per full-time farmer, which was estimated to be £11,221 per farmer.
- In New Zealand, which operates a similar scheme to Australia, the extent of support to farmers was £60 million, and this accounted for 2 % of income or £660 per full-time farmer.
- In contrast, the situation in Poland was that the total subsidy was £2 billion, and this accounted for 25 % of total farm income but only £660 per full-time farmer (see Lang and Heasman 2004 for a discussion of this).

Farmers sometimes change their mix of crops in response to the removal of subsidies or because of low prices for one crop, but frequently they do not or cannot. The behavior of Ethiopian farmers, decreasing the cropland they plant following a year of prices disastrously below their costs of production, is different from farmers in the United States, Canada, or Australia who are able to withstand a season or two of low prices. In return, the subsidies given to farmers in the developed world in areas such as the European Union and America result in the subsidization of cheap exports to the developed world and the undermining of local food systems.

The relationship between the level of subsidies in the European Union Common Agricultural Subsidy Program and rises in exports is clear – the subsidization of high-cost agricultural systems such as that in the European Union allows foodstuffs to be dumped on the world market and particularly the developing world (Lang and Heasman 2004). Subsidized agriculture in the developed world is often criticized as a form of protectionism. And has influences on food security both in the country of origin and the global market where it can be argued it allows unfair trade by competing with local produce. It both externalizes the cost of "cheap" food and even exports the negative health consequences. Here can be seen the negative impacts of subsidies – increasing food prices for the consumer and more especially for the poor. In addition, subsidies may lead to increases in intensive agriculture with a subsequent impact on natural capital in terms of increased pollution.

The same argument can be made with respect to the reduction or removal of subsidies – this forces farmers to resort to more intensive farming methods with subsequent impacts on the natural environment and the health of local farming

communities as well as the physical and financial infrastructures. On the other hand, there can be benefits, depending on how subsidy policies are set out and conceived. Currently, there are few food policies which focus on using subsidies as means of producing more healthy food in line with nutrition guidelines.

The current restructuring of the Common Agricultural Programme (CAP) in Europe heralds a return to the social roots of the European Common Market (Garzon 2006). Its origins lie in equalizing the income differential between rural and urban areas with the additional purpose of keeping farmers and communities on the land and encourage environmental stewardship and livelihoods. In addition within current developments, there is an attempt to divert subsidies from large landowners and companies to smaller units. Such an approach recognizes the importance of agriculture to society and in helping create urban/rural links, harking back to the original intentions of the Treaty of Rome in 1957 (Garzon 2006).

In the United Kingdom/Europe and the United States, the subsidy program leads to support for the growing and production of unhealthy foodstuffs, the surplus of which often finds its way onto the global market and contributes to the nutrition transition. This often results in an increase in fat and processed food in the developing world.

The consequences of these moves are that those who produce cheap local food are themselves trapped in a cycle of food insecurity. This policy of encouraging development through growth appears to offer the benefits of creating less dependency and of encouraging both money and goods to circulate locally. This is in contrast to traditional models of food aid which were vertically based, relying on food being bought on the world market and then brought across national borders and distributed to local distribution points. Yet both come with their problems.

Unbridled choice as noted in the previous section is not good for health as individuals tend to revert to choosing what they like a lot and if left to their devices feast every day. This is especially true for young people where habits are set early and become the templates for food behavior in later life.

Discussion

Why is all this important? It is important because the lessons of the past are not being addressed, and this new generation of food problems are presented as if they were something new, whereas in fact they are part of a longer tradition originating in the first nation states and trade as was seen in the Columbian Exchange following the discovery of the Americas by Columbus. The west gained the potato/tomatoes/maize, new colonies for food production, and in turn the Americas got communicable diseases which in some instances decimated populations. Now chronic diseases such as heart disease and cancer are crossing boundaries in following the food trade. Albritton (2009) argues that capitalism creates hunger and obesity and that these dialectics of the new poverty are the result of control of the food system by a small number of global companies right through the food chain. This is among the reasons why many embrace alternative food networks and supply systems as an attempt to escape such control by outside factors; a lack of trust in the conventional food system drives people towards a sense of localism (Morgan et al. 2006). This move away from direct action can also be seen as a failure of food policy, a failure to engage and to understand the dynamics of modern food policy and capitalism. While the new generation of nongovernment organizations (such as Greenpeace and Friends of the Earth) are developing sophisticated ways of dealing with the new global order, other activists are becoming disenchanted and seeking ways of direct action or, more increasingly, indirect action by opting out of the system. Those protestors, who through their violence gain media attention, may be less concerned with the issues of reform of the system than with its overthrow. They may, in fact, be diverting attention from the problems of poverty and access. The individual protest is devoid of meaning beyond the community in which it happens (Caraher 2003).

Belasco (2007) noted that the instigators of the "new austerity" movement the alternative food networks often had their roots in "oppositional" politics and this can be harnessed to develop what Thompson (1993) termed the moral economy of

the mob – that is, a concern with higher level elements beyond the individual. However, there is the concomitant danger of extending this model of self-help. Encouraging people to act and then 'blaming' them when their material and financial circumstances work against them making such changes. Or blaming them when their individual changes do not add up to a mass change (Caraher 2003).

This new protest movement may involve others in simply getting on with growing and supplying food to themselves, their families, and neighborhoods. Some of this can happen at a structural level, whether at state or regional points. Toronto stands out as an example of a citywide food policy, which in recent times has sought to influence its own food supply hinterland and foodshed (Straessle 2007; Lister 2007). The difference between the Toronto experience and that of other alternative food movements is that food policy is embedded in the systems of the state. This of course brings with it its own disadvantages but does include the possibility of more structural and lasting changes in terms of what it can influence. Also the Toronto experience is one of linking the ecological aspects of food production with reductions in food poverty.

The current focus on food as a green issue hides the poverty of many who are not able to access or afford food and may also misunderstand the cultural aspects of food and its social significance (Caraher and Reynolds 2009). The challenge for these new networks is to broaden their scope by adopting a broader approach to include lobbying, campaigning beyond members' individual interests and include a specific approach to addressing inequality and inclusiveness.

With the popularity of the new austerity movement (see ▶ Slow Food), there is a danger in taking the words of the American philosopher Aldo Leopold (1996) at face value when he said there are spiritual dangers in not owning a farm; the first is to suppose that "breakfast comes from the grocery store" and the second that "heat comes from the furnace." The thrust of this argument is alluring but worrying as it runs the risk of victim blaming and of allowing the behaviors to be closely associated with values that assume self-help is the answer. All of the above point to a need for food policy which integrates the issues of food growing, production, processing, and consumption of food. While we may want to define and measure the problem this should not blind us to the necessity for action to tackle the problem, justice needs to be seen to be done. As Amartya Sen (2009) argues in his book 'The Idea of Justice' we need to make the world less unjust by actions and not simply seek to articulate a grand theory of justice. Therefore we need research which shows us the way forward in tackling problems and not just describe them.

Summary

The thrust of the Aldo Leopold argument is alluring but worrying as it runs the risk of victim blaming and of allowing the behaviors to be closely associated with moral values and of locating food policy as simply about facilitating individual decisions to behave morally. These, while useful, do not fundamentally change the conditions or circumstances in which people live, and for those who are food insecure or living in food poverty, they will in most cases introduce an extra burden. The Via Campesina movement from the developing world provides one model where the welfare of food is linked to the green issues of sustainability and concern for the environment (see http://viacampesina.org/en/), but the roots of this movement are in oppositional politics and of providing a voice for the poor and disenfranchised. Any food policy needs to incorporate all these elements and of creating supportive environments to health and the environment through regulation and education.

The tension for food policies is to find a space between the issue of protecting the environment and contributing to health while providing a just and fair food system for citizens. Often this means finding solutions to the current dominant vertical global food supply system by looking at domestic production with more than an economic lens. More and more, this perspective is finding a voice in the growing food sovereignty

movement (see Wittman et al. 2011 for a perspective on this and also ▶ Food and Agricultural Trade and National Sovereignty).

Cross-References

- ▶ Brillat-Savarin and Food
- ▶ Community-Supported Agriculture
- ▶ Eating, Feeding and the Human Life Cycle
- ▶ Environmental Ethics
- ▶ Environmental Justice and Food
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Food and Agricultural Trade and National Sovereignty
- ▶ Food and Class
- ▶ Food Deserts
- ▶ Food Security
- ▶ Free Trade and Protectionism in Food and Agriculture
- ▶ Population Growth
- ▶ Public Institutional Foodservice
- ▶ Slow Food
- ▶ Trade and Development in the Food and Agricultural Sectors
- ▶ You are What You Eat

References

Albritton, R. (2009). *Let then eat junk: How capitalism creates hunger and obesity*. London: Pluto Press.

Belasco, W. (2007). *Appetite for change: How the counterculture took on the food industry and won* (2nd ed.). New York: Cornell University Press.

Brillat Savarin, J. A. (1976). *Physiologie du goût: Méditations de gastronomie transcendante*. Harmondsworth: Penguin.

Bronner, F. (Ed.). (1997). *Nutrition policy in public health*. New York: Springer.

Caballero, B., & Popkin, B. (2002). *The nutrition transition: Diet and disease in the developing world*. London: Academic.

Caraher, M. (2003). Food protest and the new activism. In S. John & S. Thomson (Eds.), *New activism and the corporate response* (pp. 185–205). Basingstoke: Palmgrave.

Caraher, M. (2011). Food austerity: A lifestyle choice for whom! *Journal of the Home Economics Institute of Australia, 18*(2), 17–25.

Caraher, M., & Carr-Hill, R. (2007). Taxation and public health: 'Sin taxes' or structured approaches. In S. Galea (Ed.), *Macrosocial determinants of population health by S Galea* (pp. 211–231). New York: Springer Science and Business Media Publishers.

Caraher, M., & Coveney, J. (2004). Public health nutrition and food policy. *Public Health Nutrition, 7*(5), 591–598.

Caraher, M., & Cowburn, G. (2005). Taxing food: Implications for public health nutrition. *Public Health Nutrition, 8*(8), 1242–1249.

Caraher, M., & Reynolds, J. (2009). Food and fairness through ecological public health? A critical analysis. *Journal of the Home Economics Institute of Australia, 16*(2), 2–6.

Egger, G., & Swinburn, B. (2010). *Planet Obesity: How we're eating ourselves and the planet to death*. Crows Nest, New South Wales: Allen and Unwin.

Food and Agricultural Organization. (1999). *Enabling development. Policy issues*. Rome: Food and Agricultural Organization.

Garzon, I. (2006). *Reforming the common agricultural policy: History of a paradigm change*. Palgrave: Basingstoke.

George, S. (2010). *Whose crises, whose future? Towards a greener, fairer, richer world*. Cambridge: Polity Press.

Gibney, M. (2012). *Something to chew on: Challenges, controversies in food and health*. Dublin: University College Dublin Press.

Gopnik, A. (2012). *The table comes first: Family, France and the meaning of food*. London: Quercus.

Grievink, J. W. (2003). The changing face of the global food industry. *OECD conference presentation at: Changing dimensions of the food economy: Exploring the policy issues*. The Hague, 6 Feb 2003.

Hertz, N. (2001). *The silent takeover: Global capitalism and the death of democracy*. London: William Heinemann.

Irz, X., Shankar, B., & Srinivasan, C. (2003). *Potential impact on consumption, production and trade of selected food products: Report for the International Federation of Agricultural Producers & Institute for European Food Studies*. Reading: University of Reading Dept Agricultural and Food Economics.

Kingsolver, B. (2007). *Animal, vegetable, miracle: Our year of seasonal living*. London: Harper Collins.

Kranendonk, S., & Bringezau, B. (1994). *Major material flows associated with orange juice consumption in Germany*. Wuppertal: Wuppertal Institute.

Lang, T., & Heasman, M. (2004). *Food wars: The global battle for mouths, minds and markets*. London: Earthscan.

Lang, T., Barling, D., & Caraher, M. (2009). *Food policy: Integrating health, environment and society*. Oxford: Oxford University Press.

Leopold, A. (1996). *A sand country almanac*. New York: Ballantine.

Lister, N. M. (2007). Placing food: Toronto's edible landscape. In J. Knechtel (Ed.), *FOOD, alphabet city series* (pp. 150–185). Toronto: MIT Press.

Miller, J., & Deutsch, J. (2009). *Food studies: An introduction to research methods*. Oxford: Berg.

Milo, N., & Hesling, E. (Eds.). (1998). *European food and nutrition policies*. Copenhagen: World Health Organization Europe.
Monteiro, C. A., & Cannon, G. (2012). The impact of transnational "Big Food" companies on the South: A view from Brazil. *PLoS Medicine, 9*(7), e1001252. doi:10.1371/journal.pmed.1001252.
Morgan, K., Marsden, T., & Murdoch, J. (2006). *Worlds of food: Place, power, and provenance in the food chain*. Oxford: Oxford University Press.
Ostry, A.S. (2006). *Nutrition policy in Canada*. 18701939 (NUMBER??) Vancouver: UBC Press.
Pena, M., & Bacallao, J. (2000). *Obesity and poverty: A new public health challenge*. Washington, DC: Pan American Health Organization.
Pollan, M. (2009). *Food rules: An eater's manual*. London: Penguin.
Poole, S. (2012). *You aren't what you eat: Fed up with gastroculture*. London: Union Books.
Popkin, B. (1998). The nutrition transition and its health implications in lower-income countries. *Public Health Nutrition, 1*(1), 5–21.
Poppendieck, J. (1999). *Sweet charity?: Emergency food and the end of entitlement*. New York: Viking.
Poppendieck, J. (2010). *Free for all: Fixing school food in America*. Berkeley: University of California Press.
Riches, G. (2002). Food banks and food security: Welfare reform, human rights and social policy. *Social Policy and Administration, 36*(6), 648–663.
Schanbacher, W. D. (2010). *The politics of food: The global conflict between Food Security and Food Sovereignty*. Santa Barbara: Prager.
Sen, A. (1981). *Poverty and Famines*. Oxford: Oxford University Press.
Sen, A. (1997). *Inequality re-examined*. Oxford: Oxford University Press.
Sen, A. (2009). *The idea of justice*. London: Allen Lane.
Straessle, C. (2007). *Feeding the regional imagination: The Urban Century Spring 2007*. Toronto: Canadian Urban Institute.
Thompson, E.P. (1993). *Customs in common: Studies in traditional popular culture*. New York: The New Press. See chapters IV and V (pp. 185–351).
Thoreau, H.D. (1854 and 2004). *Walden*. London: Collector's Library.
Troy, L. M., Miller, E. A., & Oslor, S. (2011). *Hunger and Obesity: Understanding a food insecurity paradigm; workshop summary*. Washington, DC: National Academies Press.
UBS Warburg. (2002). *Global equity research: Absolute risk of obesity*. London: UBS Warburg.
United States Department of Agriculture (USDA). (2009). *Access to affordable and nutritious food: Measuring and understanding food deserts and their consequences*. Washington, DC: United States Department of Agriculture.
Wittman, H., Desmarais, A. A., & Wiebe, N. (Eds.). (2011). *Food Sovereignty in Canada: Creating just and sustainable food systems*. Nova Scotia: Fern Wood Publishing.
World Health Organization. (1999). *Urban food and nutrition action plan elements for local community action to promote Local production for local consumption*. Copenhagen: World Health Organization.

Food and Life Chances

Rachel Outhred
Australian Council for Educational Research, Policy Analysis and Program Evaluation, Melbourne, Australia

Synonyms

Capabilities; Citizen; Consumer; Food security; Life chances; Social justice; Space and place; Vulnerability

Introduction

Life chances refer to the opportunities each individual has to improve upon his or her quality of life and are generally correlated to the individual's social situation. Traditionally, life chances has been related to lifestyle choices and the distribution of rewards, however has more recently been used within a social justice perspective informing the question of capabilities and inequalities between social categories (Manuel 2006).

The world is now a place where opulence and destitution are the lived realities of certain groups. Sen argues that this opulence is unprecedented, to the extent that it would have been challenging to imagine a century or two ago. Simultaneously, there is "deprivation, destitution and oppression" (Sen 2001, p. xi). Brown and von Braun state that roughly 80 % of the world's 1.2 billion poor are dependent on agriculture for their survival (Brown and von Braun 2003, p. 1040). The chance of belonging to this group of 1.2 billion people is pervasively determined by "the

chance event of being born in one nation rather than another" (Nussbaum 2006, p. 224). Resolving this inequality is not a simple task. Hobbs argues that "global inequity is the essential challenge facing the planet today" (Hobbs 2006, p. 165).

Historical and contemporary ethical perspectives on food production, distribution, and consumption do not always adequately address the issue of vulnerability and limited life chances. This entry uses recent historical approaches to the ethics of food systems as a lens to explore the complexities of addressing the limited life chances of certain groups of men, women, and children in a globalized world. The entry will use a case study to highlight the intersections and divergences between dialogue concerning the ethics of food production, distribution, and consumption and the ethics of addressing limited life chances for vulnerable groups.

Food production systems have been defined as the combined elements of land, labor, capital, technology, the market, and the institutions that govern their allocation (Brown and von Braun 2003, p. 1040). The application of the definition of "consumption" to food can be undertaken narrowly, i.e., "to eat or drink," or can be applied more broadly to include definitions such as "wasteful," "squander," "absorb," or "to use up" or "expend" (Collins English Dictionary 2003).

This entry will use the case of the cocoa bean to discuss ethical perspectives and the adequate consideration of the limited life chances of vulnerable groups. The entry will provide a brief background on the history of food ethics in order to situate the ethical concerns raised regarding the food supply chain of chocolate. This example will then be used as a case study to discuss the complexities of a number of ethical perspectives and to argue for systemic ethical perspectives in order to address vulnerability and limited life chances.

Illbery's Place, Process, and Product

The distancing of people from sites of food production began prior to and throughout the Industrial Revolution (1750–1900) when, in most of Europe, the countryside was depopulated through the urbanization of the new working classes (see Goodman 2009, p. 10; Campbell 2006, p. 119). This irreversibly altered human relations with food (Campbell 2006, p. 119) and since that time, food production systems have become increasingly globalized, creating complex "farm to table" linkages (Brown and von Braun 2003, p. 1040).

In the late 1980s to the mid-2000s, a wide range of microbiological, contaminants, and animal disease-related food scares were reported throughout the European Union (Knowles et al. 2007), inciting a "crisis of trust" among consumers concerning large-scale agriculture and nameless and faceless food (Goodman 2009, p. 3). The food scares corresponded with reports regarding the use of child slave labor in West Africa's cocoa farms and the distance between the "farm and table" in mainstream food provisioning became a source of concern for the "moral" consumer.

Vulnerability and the Chocolate Supply Chain

In the late 1990s and early 2000s, numerous reports and newspaper articles tracing the use of child slave labor to chocolate products in the international market confronted consumers in the West. In 1999 the United States Department of State report cited an Ivorian newspaper reporting the widespread practice of importing migrant child laborers from Mali to work on plantations (USDOS 1999). This was followed by a 2001 International Labor Organization report that the trafficking of children is widespread in West Africa. By 2002 these findings were quantified in a joint report by the ILO and the International Institute of Tropical Agriculture stating that an estimated 284,000 children in cocoa farms in West Africa were "either involved in hazardous work, unprotected or unfree, or have been trafficked" (IITA 2002).

During this time, the news spread quickly through the international media, and

commentators did not miss the paradoxical nature of the West's sweet pleasure, being produced on the backs of children in slave-like conditions.

An English newspaper *The Express* reported on a documentary produced by award-winning Brian Woods and Kate Blewett, stating that "Chocolate, it seems, carries modern-day slavery into our homes" (Wolfe and Holdstock 2005). Woods was quoted in UK's The Guardian on September 28, 2000 as saying "We wanted a way of bringing it home to people in the West and not letting it be something people could watch and go 'Isn't it terrible what people in far-off lands do to other people in far-off lands'" (Wolfe and Holdstock 2005). In the United States Knight Ridder Newspapers profiled children who were cocoa farm slaves and reported on a farmer who had been prosecuted in Cote d'Ivoire for mistreating 19 migrant child workers (Knight Ridder/Tribune Business News 2001).

Shifts in Ethical Considerations Concerning Food Systems

A fundamental shift in the approach to ethics in food systems followed. Korthals argues (25) that for a long time, the ethics of food was predominantly concerned with food security, focusing on the ethics of distribution and misdistribution and on what might be considered as fair distribution. Though the problematic use of child labor in food production had been established for almost a century, with the 1917 US National Child Labor Committee producing the "Children in Food Production" report, the fundamental shift in ethical perspectives relating to food did not take place for about 60 years. The fundamental shift in the approach to ethics in food systems was representative of ". . .momentous shifts across the global and national landscapes" (Sassen 2000).

During the late 1980s and 1990s, with the collapse of Soviet-style communism in Eastern Europe, the concentration of power elites in the global North and with the rapid expansion of global flows of trade, "globalization" as both a process and a political ideology rapidly became "decontested in public discourse" (Steger 2005, p. 14). By the mid-1990s the whole proportions of the global population, within both the global North and the global South, had accepted and internalized ideologies supporting the deregulation of markets, the liberalization of trade, and the privatization of the state (Steger 2005, p. 14).

Simultaneously, momentous legislative shifts were taking place. The 1917 US National Child Labor Committee Report established the link between the ethics of food production and child labor, formulating suggestions for the control and supervision of children in work, in order to safeguard American children from loss of education, overwork, or neglect (National Child Labor Committee 1917, p. 3). This was followed by international legal treaties, similarly attempting to protect children from the worst forms of child labor, including the 1919 Minimum Age (Industry) Convention No 5, which established 14 years as the minimum age for children to be employed in industry and was ratified by 72 countries. In 1966 the International Covenant on Economic, Social, and Cultural Rights enjoined state parties to protect young people from economic exploitation and from employment in work harmful to morals, health, or life. The 1973 International Labor Organization's Minimum Age Convention No. 138 obliged member states to pursue a national policy to ensure the effective abolition of child labor and establish that no child can be employed in any economic sector below the age designated for the completion of compulsory schooling. However, it was only the 1989 Convention on the Rights of the Child that recognized the *right* of children to be protected from work that threatens their health, education, or development (Article 32). Prior to the Convention on the Rights of the Child, child laborers were objects of charity or humanitarian concern; they were not considered to have legal rights (United Nation's Children's Fund 1997, p. 17). Consumers and civil society in the United States and Europe responded to this new knowledge with demands for action (World Vision 2011, p. 5).

The Rise of the "Worried Well"

The 1970s and 1980s saw the introduction of ethical considerations regarding consumption. At inception, consumption ethics primarily focused on environmental campaigns to promote considerations of personal responsibilities within everyday lives (Martens and Spaargaren 2005). However, born out of this new politic of consumption, a shift from production politics to consumption politics leads to the emergence of new social movements, informed by reflexive modernization (Campbell 2006, p. 126). Launched by three leading European sociologists, Giddens, Beck, and Lash published "Reflexive Modernization, Politics, Tradition and Aesthetics in the Modern Social Order" in 1994 (Beck et al. 1994), directing attention to the process of modernity itself. Reflexive Modernization called for a reevaluation of the resource base that is already in existence, rather than the use of science and technology to expand the resource base.

This leads to a renewed emphasis on social justice in food production and consumption and a focus on "short food supply chains." Localized organic quality food networks were integral in the strategy to restructure the productivist model of the post WWII agricultural settlement (Goodman 2009). Critical social analysis on alternative food pathways renewed the emphasis on social justice in food production and consumption practices. Drawing on the work of Foucault, Beck, Giddens, and Harvey, the alternative model suggested that Western societies had moved from a state of government to governance (Campbell 2006, p. 118), marking the move of individuals from citizens to consumers. This shift is observable in one of the first reports on the genetic modification of food products, the 1994 Polkinghorne report. Within the report food is framed as "politically and ideologically neutral" (Korthals).

The only ethical issue widely considered concerning food previously was the misdistribution of food, not issues of production and consumption. Raising conflicting perspectives regarding the sovereignty of the consumer, alternative, short, and slow food pathways were demanded by the "ethical consumer."

The Ethical Consumer and the Chocolate Supply Chain

Within West Africa, multinational cocoa-processing and chocolate-producing companies blamed West African governments for the use of child slave labor in the chocolate supply chain, stating that the primary responsibility for enforcing human rights was with governments, charging them to "investigate and eradicate any criminal child labor activity" (see Schrage and Ewing (2005), p. 105). Blame was returned to the multinationals by the West African governments (particularly the Ivory Coast and Ghana as the largest cocoa producers), accusing the industry of earning billions off the labor of children (World Vision 2011, p. 5).

Industry giants initially denied knowledge of child labor in their supply chains and then argued that the task of guaranteeing working practices on every farm was too complex (Schrage and Ewing 2005, p. 104). Cocoa brands were only spurred to action in response to media attention detrimental to their branding (Schrage and Ewing 2005, p. 104) and the serious consideration given to regulating "child-labor-free" cocoa labeling by US politicians (World Vision 2011, p. 8). In order to avoid regulation yet respond to calls for action by consumers, an agreement for cocoa processors and the chocolate industry to collaborate voluntarily became appealing to industry giants. The Cocoa Industry Protocol (often cited as the Harkin-Engel Protocol) laid out a series of date-specific action to work towards eliminating the worst forms of child labor (WFCL) from supply chains and was agreed to by major cocoa and chocolate companies, the US government, and West African governments in late 2001 (World Vision 2011, p. 8).

Notably, the Cocoa Industry Protocol referenced major international legislative frameworks including the International Labor Convention No. 182 and the International Labor Organization Convention No. 29, collectively prohibiting the Worst forms of child labor and forced or compulsory labor (Schrage and Ewing 2005, p. 106).

Confidence in the Harkin-Engel Protocol began to diminish in 2008 as the process failed to deliver on the Protocol's core objective of creating and implementing a public standard and certification process to provide consumers with a "guarantee" on "cocoa free of the worst forms of child labor" (World Vision 2011, pp. 5–6). Agreement on a public standard was never reached, and rather than providing absolute certification, a continuous improvement system was produced.

In February 2008 Fortune reported that many aid groups share the opinion that the provisions of the Cocoa Protocol have still not been met, with the situation worsening in the Ivory Coast between 2002 and 2004 when civil war gripped the country and "blood chocolate" was said to be resourcing armed groups (Parenti 2008). Even the Executive Director of the International Cocoa Initiative admitted "We've not yet had a significant effect, but it's a journey" (Parenti 2008).

During this period, "fair trade" expanded from an organized social movement to a market-based approach, aiming to assist producers in developing countries to establish better trading conditions and aiming to promote sustainability. The initiative/s advocated higher export prices and higher social and environmental standards. In 1988 the first Fairtrade label was launched under a Dutch development agency initiative and in the late 1980s and early 1990s the initiative was replicated in other markets in Europe and North America. The first Fairtrade certified product was Green and Black's Maya Gold Chocolate and was made with cocoa from Belize, in 1994, just a few years prior to the news of child labor, slavery, and human trafficking in West Africa's cocoa plantations. In 1997 the Fairtrade Labeling Organizations International was established in order to incorporate all labeling initiatives into one worldwide standard and certification. By 1999, the Fairtrade labeling system was positioned perfectly to respond to the reports regarding the chocolate industry's supply chain. By 2001 the retail value of annual Fairtrade sales reached 30 million pounds and 290 million pounds by 2006 and 500 million pounds by 2007 (Fairtrade UK). In the 2007 annual report, Fairtrade Labeling Organizations International estimated that over 7.5 million producers and their families benefited from fair trade funded infrastructure, technical assistance, and community development projects (Fairtrade Labeling Organizations International 2007).

The Worried Well

From the early 1980s, food has become increasingly political, whereby the "worried well" pursue alternative food pathways and have revitalized regional gastronomic interest in order to fulfill the moral obligation of personal responsibilities within everyday lives. Along with the politicization of food became the morality of food, leading to the performance of food (Goodman et al. 2010).

Simplistic dichotomies of food categories were constructed, including "...fast and slow, reflexive and compulsive, fat and thin, and, hence, good and bad" (Guthman 2002). Fast food was bad, reflexive food good, and fat food best avoided in order to fulfill the role of the ethical consumer. However, predominantly the categorization of the "ethical consumer" has been typically filled by the white middle classed, "worried well," rich in both economic and cultural capital (Goodman 2009, p. 2). Higher-income consumers with the means have been afforded the luxury to opt out from mainstream food networks, in a move away from "placeless and faceless" foods (Goodman 2009, p. 3). The class and gender dimensions of slow and local food production highlight an ethical perspective reliant on the gendered division of labor, simplistic portrayals of the "good" and the "bad," and a return to cooperating with the "old enemies" of supermarkets and multinationals.

The risk being that when food is categorized into binary forms of "good" and "bad," power asymmetries between actors in the food production and consumption network becomes obscured from view. Guthman outlines the complicated ethical considerations not only in conventional food but also in ethical alternatives.

The tremendous amount of unpaid feminized labor involved in slow food and the service the fast food industry provides to women who work outside the home remain problematic and unresolved ethical considerations (Guthman 2002, pp. 55–56). Within the alternative model, consumers emerge as private and passive rather than being "eminently social, relational and active" (Goodman 2009, p. 17).

The crisis of confidence in mass-produced "placeless and faceless" foods provided a site of resistance against the mainstream food system; however, Goodman argues that alternative food networks have become commodified. These sites of resistance became mainstreamed, and in 2009 the UK multinationals held a 75 % share of sales of organic products (Goodman 2009, p. 22).

Advocating for further analysis into power asymmetries between actors in the value chain, Goodman argues that though short food pathways might expose the processes of production, they fail to expose the *social relations* underpinning processes of production (Goodman 2009, p. 22).

Summary

The distancing of people from sites of food production began prior to and throughout the Industrial Revolution and has irreversibly altered human relations with food. Ethical perspectives that have resulted in alternative food pathways fail to address the "unprecedented opulence" and the "remarkable deprivation, destitution, and oppression" in the modern world brought about through globalization. Alternative food pathways rely on voluntary personal moral performances that address consumption only in the narrow terms, rather than the broad sense of "wastefulness," "squandering," "absorbing," or "using up or "expending." Shorter "farm to table" food supply chains brought about through the performance of morality by the ethical consumer do not sufficiently address the economic vulnerabilities of the working class and the gendered division of labor assumed through slow food preparation or ease the burden of the double day for the world's working women.

Essentially, current approaches to food ethics raise serious concerns about the extent to which voluntary ethical consumption approaches can confront the extreme socioeconomic and development inequalities that are "...the essential challenge facing the planet today" (Hobbs 2006, p. 165). Organized social movements, such as "fair trade" labeling, have moved to market-based approaches that, while promoting sustainability, do not interrogate the power asymmetries that have taken hold in the globalized era. These power asymmetries function within networks of global flows, rather than as linear chains of sequenced events (following Appadurai 1996).

Goodman et al. argue that the idea of an "ethical foodscape" can be added to the "ethnoscapes, mediascapes, technoscpaes, financescapes, and ideoscapes" that Appadurai argues make up global cultural flows. Conceptualizing food ethics within this network of flows provides a more systemic way of engaging critically with the "...processes, politics, spaces, and places of the praxis of ethical relationship embedded and produced in and through the provisioning of food" (Goodman et al. 2010).

Food ethics must address the economic, political, environmental, and physical vulnerabilities that result in limited life chances.

Cross-References

- Corporate Social Responsibility and Food
- Food and Class
- Food Security and Rural Education
- Local and Regional Food Systems
- Systemic Ethics to Support Wellbeing

References

Appadurai, A. (1996). *Modernity at large*. Minneapolis: University of Minnesota Press.

Beck, U., Giddens, A., & Lash, S. (1994). *Reflexive modernization, politcs, traditions and aesthetics in the modern social order*. Stanford: Stanford University Press.

Brown, M. A., & von Braun, J. (2003). Ethical questions of equitable worldwide food production systems. *Plant Physiology, 133*, 1040–1045.

Campbell, H. (2006). Consultation, commerce and contemporary agri-food systems: Ethical engagement of new systems of governance under reflexive modernity. *The Integrated Assessment Journal, 6*(2), 117–136.
Collins English Dictionary. (2003). London: Harper Collins.
Fairtrade Labelling Organizations International. (2007). *FLO international: Annual report 2007*. Bonn: FLO International.
Goodman, D. (2009). Place and space in alternative food networks: Connecting production and consultation. *Environment. politcs and development working paper series, Department of Geography, King's College, London* (Paper #21), pp. 1–36.
Goodman, M. K., Maye, D., & Holloway, L. (2010). Ethical foodscapes? Premises, promises, and possibilities. *Environment and Planning, 42*, 1782–1796.
Guthman, J. (2002). Commodified meanings, meaningful commodities: Re-thinking production-consumption links through the organic system of provision. *Sociologia Ruralis, 42*, 295–311.
Hobbs, J. (2006). *Equity and development*. Washington, D.C./Berlin: Internationale Weiterbildung und Entwicklung gGm.
International Institute of Tropical Agriculture. (2002). *Child labor in the cocoa sector of West Africa: A synthesis of findings in Cameroon, Cote d'Ivoire, Ghana and Nigeria*. Croydon: International Institute of Tropical Agriculture.
Knight Ridder/Tribune Business News. (2001, June 25). Much of America's sweets made possible through Slave Labor on Ivory Coast.
Knowles, T., Moody, R., & McEachem, M. (2007). European food scares and their impact on EU food policy. *British Food Journal, 109*(1), 43–67.
Martens, S., & Spaargaren, G. (2005). The politics of sustainable consumption: The case of the Netherlands. *Sustainability, Science, Practice and Policy, 1*(1), 29–42.
National Child Labor Committee. (1917). *Children in food production*. New York: National Child Labor Committee.
Nussbaum, M. C. (2006). *Frontiers for justice: Disability, nationality, species membership*. Cambridge: Harvard University Press.
Parenti, C. (2008, February 15). *Chocolate's bittersweet economy*. Retrieved 15 April 2012, from CNN Money. http://money.cnn.com/2008/01/24/news/international/chocolate_bittersweet.fortune/
Sassen, S. (2000). Spatialities and temporalities of the global: Elements for a theorization. *Public Culture, 12*(1), 215–232.
Schrage, E. J., & Ewing, A. P. (2005). The cocoa industry and child labour. *Journal of Corporate Citizenship, 18*, 99–112.
Steger, M. (2005). Ideologies of globalization. *Journal of Political Ideologies, 10*(1), 11–30.
United Nation's Children's Fund. (1997). *The state of the world's children*. Oxford/New York: Oxford University Press.
United States Department of State (USDOS). (1999). *Country reports on human rights practices for 1998: Cote d'Ivoire*. US State Department, Washington, D.C.
Wolfe, D., & Holdstock, S. (2005). *Naked chocolate: The astonishing truth about the world's greatest food*. Berkeley: North Atlantic Books.
World Vision. (2011). *Our guilty pleasure: Exploitative child labour in the chocolate industry – 10 Years on from the Harkin-Engel cocoa protocol*. Melbourne: World Vision Australia.

Food and Place

Nicolas Sternsdorff Cisterna
Anthropology Department, Harvard University, Cambridge, MA, USA

Synonyms

Foodscapes; Landscape; Scape; Space

Introduction

Food and place are linked at a basic level, for food must be produced somewhere, and consumed in the same place, or circulated for consumption elsewhere. However, this basic process becomes entangled in judgments about whether it was produced in the appropriate location and manner, if it is being consumed in a culturally sanctioned way, and whether the "right" inhabitants of a place are consuming it. Furthermore, the contemporary world is organized around nation-states, which has given rise to national eating cultures. These national practices coexist with more global eating phenomena, be they long standing such as the widespread consumption of sugar or more recent fast food phenomena like McDonaldization.

The concept of space spans many disciplines and goes beyond a reference to a physical location. Space can be physical, subjective, or affective; it can refer to a geographical location or be a way to speak of mental and emotional landscapes. Economic systems change the way spaces

look and are used by humans. Abstract anonymous space can become a place, imbued with meaning for the user. Henri Lefebvre, one of the leading theorists of space, argues that every society or culture is generative of spatial practices, but that the practices themselves are generative of space. Space is both a launching pad for action and a framework in which to act. Scholars of space have argued that if reality consists of time and space, too much attention has gone to thinking about time. The main framing device to understand the world has been processual – what happened when, how it was affected by earlier events, and how it might impact the future. On the other hand, how human experience is spatialized and the ways in which spatial arrangements both enable and constrain people's lives have received comparatively less attention.

Space is an analytical category to think about the ways in which people organize, produce, and make sense of the foods around them. Space is an entry point to think about how flavors and regions come together, how people evaluate those connections, who benefits and who loses from the spatial arrangements under which foods are produced, and how capitalist practices generate spatial arrangements and their resulting inequities. Space is a lens with which to analyze a wide range of phenomena involving food and to think of the ways in which power operates through food networks. In particular, the spatialization of power and its effects opens up ways of thinking about ethics, justice, and food.

This entry touches on four aspects of space and its relationship to food. First is a discussion of national cuisines, which is followed by a consideration of political economy and how capitalism intersects with food and space. Third is the concept of terroir, which is used as an expression of how taste and place come together in a product. Finally, the entry ends with an analysis of food smells and how they encode places.

National Cuisines

The idea of a national cuisine is one way in which place and taste become entwined and projected onto a geographical location. Scholars have debated whether national cuisines exist, if they are useful categories of analysis and how they come about. One of the key considerations in thinking about national cuisines is not only what they consist of but also what they leave out. The modern system of nation-states is predicated upon what Benedict Anderson called "Imagined Communities." These are groups of people that, through various means, feel part of a larger whole that is deemed a country. A similar act of imagination is required to frame food practices as a national cuisine, and this process runs the risk of obscuring or neglecting the multiple foodways that already exist in a country. This privileging can be part of a process where one group, be it ethnic, class based, or otherwise, asserts control of the nation. Scholars need to carefully analyze the power differentials at play in the growth of national cuisines and how these are mapped onto the geographical space of the nation.

There are several works that trace how national cuisines come into being. Katarzyna Cwiertka (2006) looked at the case of Japan and shows that two big moments in the country's political history affected the growth of a national repertoire of food. Japan broke in the nineteenth century several centuries of relative seclusion from the rest of the world and embraced western foods. In particular, the state encouraged the consumption of beef and dairy in greater quantities because it was believed that Western bodies grew strong because of them. Military catering and World War II also had an impact on the national diet; prior to militarization, people mostly ate regional specialties, but the army brought people from all parts of the country together and supplied them with the same food. The distribution networks, as well as the tastes for certain foods that ensued, helped to solidify national eating practices that continued after the war ended. The case of Japan shows that what are considered national eating practices can go hand in hand with major historical developments such as militarism.

The nation-state can be involved in more subtle attempts at creating dispositions toward certain foods among its citizenry. The French

government, for example, has sponsored tastings designed to teach adults and children to appreciate the work of French food artisans, such as wines or chocolates, in contrast to the mass-produced goods that circulate in the global economy (Terrio 2000).

Scholars of globalization call attention to how national cuisines emerge in the space between global and local. Richard Wilk's (2006) work on Belize argues that pitting globalization against local eating practices is a misguided approach. Rather, eating practices are both local and global at the same time; it is in the space between an abstract globalized food culture and local practices that national eating cultures emerge. Watson's (2006) edited volume on how McDonald's is viewed across East Asia makes a similar point and argues that globalized foodways do not automatically displace local eating cultures. Rather, they are folded into local understandings about food, albeit this does not mean that there are no power differentials in how the encounter occurs.

One way in which national cuisines are codified is through cookbooks, and Arjun Appadurai's (1988) work on cookbooks in India illustrates some of the dynamics at play. Appadurai argues that the spread of cookbooks presupposes the existence of print media and a common language within the nation. In India, English acted as a lingua franca whereby cookbooks acted figuratively to present women of one group to another across ethnic lines and facilitated the exchange of flavor combinations and eating practices that contributed to an emerging sense of Indian cuisine.

Sidney Mintz (1997), on the other hand, has argued that a national cuisine is an artifice. It is constructed out of the foodways of people who live inside a country, but that these are regional and not national practices. Regional cuisines are the flavors not of a country, but of a place. The borders are not politically drawn, but are rather social borders of inclusion and exclusion. Mintz distinguishes between cuisines that are eaten regularly by the members of a group, and "haute cuisine," which he argues, is tied to the elites and can more easily be called upon to signify a national practice. Nonetheless, a cuisine for him is something that people eat on a regular basis and are familiar with, and these practices are best understood as regional and not national.

Research in this area points to the many ways in which national eating cultures emerge and change over time. They are affected by globalizing forces dating back sometimes hundreds of years and involve a negotiation of class and ethnic lines. A central question is how the image of the nation can be mobilized so that people eat and come to like certain products and how foods can be used as markers of inside and outside status. Space, eating, and national cuisines can be sources of identity formation but conversely can place people outside the boundaries of the group. National spaces are a defining feature of the contemporary world, but that does not mean that national cuisines fit neatly into each political entity. Scholars who research these processes pay special attention to the power-laden processes that lead to food practices to be labeled as national, but keep in mind that these are contingent processes that need to be treated as such and not as natural categories of analysis.

Political Economy

In order to study how politico-economic arrangements are spatialized, scholars often look at commodity chains. The study of commodity chains highlights the ethical questions that emerge from processes of capitalist expansion and the food products carried with them. Sidney Mintz's (1985) work on the globalization of sugar is a classic study of how power and capitalism act through commodity chains. Mintz argues that humans have a biological craving for sweetness, but this alone does not explain why sugar became the sweetener of choice in the British colonial empire. If people simply like sweet, then any number of sweeteners could have emerged, but to explain the ascendancy of sugar, one needs to pay attention to the historical and power-laden processes that led to its prominence. He traces how sugar went from being a luxurious and rare spice enjoyed by the British upper classes to an

everyday item in the British diet, a proletarian hunger killer that powered the workers of the industrial revolution. However, the ascendancy of sugar in the British diet cannot be separated from how the Caribbean agricultural sector was remade into an export platform for Britain and the use of slave labor to power it. Widespread sugar consumption resulted in spatial arrangements that moved slave labor to the Caribbean and then sugar to Europe. It is in these movements that the workings of power become spatialized and ethical questions emerge of whether the spatial networks through which food is produced and moved are just and how they can be made more fair.

While there is much debate about what constitutes a national cuisine and its projection onto a territory, the modern state exerts a powerful influence in regulating the flow of food products in and out of its borders. The ways in which trade and food safety rules are set have powerful implications for the livelihoods of food producers around the world. The 1994 Uruguay round of trade talks that are now covered under the World Trade Organization put agricultural liberalization on the table. Nonetheless, subsidies and protection of domestic markets continue, especially among rich countries. These market distortions have had difficult implications for Southern farmers, who compete with subsidized production in the North and sometimes face restrictions for their own exports. For example, the trade in coffee beans from South to North favors the export of raw beans, which face few tariffs, but discourages the value-added step of roasting in the producing country by charging considerably higher tariffs. There is considerable debate among scholars and policy-makers whether further liberalization is a means to greater prosperity or if the flow of agricultural trade is best handled in other ways. Critics of liberalization charge that powerful multinational companies are the biggest beneficiaries of freer markets and that freer markets can result in the loss of local farmers. One alternative is the concept of food sovereignty, which argues that peoples have a right to define their own food systems in ways that are culturally and ecologically appropriate. They assert that people, and not corporations, must come first in designing food policy, even if that means curtailing freer trade.

The growth of capitalism and the trade networks associated with it are powerful ways in which politico-economic relations are spatialized. This raises ethical questions about the fairness of these networks and how they can be made more just. Scholars of space argue that capitalism creates particular kinds of places that are amenable to capitalist accumulation. For example, large-scale monocultures are places where agricultural land is turned into a space where the first objective is accumulation. The point of producing and moving food is to accumulate capital. Meeting the needs of people to eat is a corollary to accumulation. Proponents of this system argue that this provides the incentive to grow food in more efficient ways. Critics, however, would like to see food production change so that people and their needs, not capital accumulation, are at the core of the system. This would entail a shift in how commodity chains are spatialized and who would stand to benefit and loose from those arrangements. The intersection of capitalist forces and food commodity chains provides fertile ground to examine how capitalist relations result in spatial practices and how just they are.

Terroir

One of the key concepts scholars have examined to understand the connection between food and place is terroir. The concept comes from the French, and it roughly translates as the taste of place. Terroir encapsulates the idea that products such as wine, cheese, meats, vegetables, and others are inextricably linked to the places where they were produced. For example, a wine tastes the way it does because it was grown on a specific location that has unique environmental qualities, and it was exposed to weather patterns and agricultural practices that only occurred during that season. The wine is reflective of the unique set of circumstances that came together in its production and therefore reflects the taste of place.

There are many terroirs that are considered unique and provide a distinct experience or that are historically associated with a product. The Napa Valley in the United States is recognized as one of the premier wine-growing regions of North America, and some products like Roquefort cheese can only be produced in geographically delimited regions. The connection between taste and place can provide a financial premium, and many terroirs are administered by law under Protected Designations of Origin (PDOs). These laws regulate naming rights and the provenance of the source ingredients. For instance, the technique to make sparkling wine has traveled far and wide, but for a wine to be called champagne, it must be made with champagne-grown grapes and produced in that region of France. Likewise, to call a cheese Parmigiano-Reggiano, the milk must be sourced from specific pastures, and the cheese must be produced according to strictly defined procedures.

Scholars such as Amy Trubek (2008) have contrasted the French model of terroir-based foods with an American emphasis on industrialization. She argues that food in the United States is produced primarily to be consistent and cheap, but not to be sensual and reminiscent of the place where it came from. She concludes that food localism and the "taste of place" must be further developed in the United States to counteract industrial food practices and shows an emerging sense of terroir in the Wisconsin cheese industry and Vermont maple syrup production.

Scholars argue about the political potential of connecting taste and place together. People supportive of these endeavors, like Elizabeth Barham (2002), argue that bringing taste and place together for the consumer may result in more enlightened eating practices. They criticize contemporary industrialized eating practices because they erase the connection between taste and place for the product. As commodity chains grow larger and more complicated, consumers only see the end product and have no access to the location and labor that went into making it. The commodity ends up being assessed and valued on its own terms, detached from its provenance. This state of affairs, they argue, is detrimental for it often fosters industrialization, homogenization, and a moral distancing between consumers and producers. The corrective to this state of affairs is to allow place to shine through in the commodity, which allows consumers and producers to come closer together. If this connection is reestablished, the hope is that consumers will choose commodities that allow for moral economies to emerge that place greater emphasis on the livelihoods of producers and that celebrate diversity in taste. The taste of place is not a question of taste alone; taste and place become enmeshed in questions of social justice and morality.

The turn toward a moral food economy has sparked wide interest in agro-food studies, and Karl Polanyi has become a central interlocutor. Karl Polanyi argued that before the "great transformation," economic activity was but one of many spheres that regulated the flow of social life; the economy, its rules and logics, was embedded in social relations, and economic activity was under a larger umbrella of moral codes that held society in place. For Polanyi, the great transformation signifies a shift where the economy seeks to detach from the other spheres of life and takes a life of its own – the economy disembeds from society. The logic of the economy is no longer to satisfy society's needs, but rather to accumulate capital. Fulfilling human needs becomes a medium through which capitalist accumulation takes place, but it is not the *raison d'etre* of economic activity. The changes brought about by this great transformation were both disconcerting and worrying to Polanyi, who argued that as the economy moves farther and farther away from the other spheres of social life, society will resist this tendency and attempt to re-embed it in social relations. Polanyi called this dynamic tension the "double movement."

Scholars in agro-food studies have used the work of Polanyi to analyze the ways in which moral economies may emerge. One argument is that labels such as protected designations of origin (the legal framing of *terroir*) are examples of a double movement. The labels are examples of political activity that counteract market forces. Elizabeth Barham (2002) calls these labels

"values-based labels" and argues that they return a sense of process to food commodities, connect producers and consumers, and re-embed the economy in social relations. Other scholars have looked at fair trade networks and argued that they are a new kind of commodity chain where moral economies can emerge. The fair trade label brings consumer and producer together in an alternative economy that opposes the logics of capitalist food production with its emphasis on profits and lowering costs. The taste of a fair-traded product, be it coffee, bananas, etc., becomes inextricably linked to the moral economy in which it circulates. The hope is that consumers and producers will come together around a non-alienated food commodity that is also a force of change and sustainable development. In order to achieve that, they propose to keep the connection between food and its provenance, be that its unique terroir or the labor conditions under which it was produced, alive throughout the commodity's cycle up to the consumer.

Critics of this approach, like Julie Guthman (2007), question whether it is wise to resolve these moral issues in the marketplace. To hope that consumers purchase the right kinds of products shifts responsibility away from government to those with money to spend. Instead of casting voluntary food standards as the seeds of political transformation, they argue that these labels and movements are best understood as market mechanisms. The labels are simply one more form of market differentiation and hardly pose a challenge to the overall structure of the neoliberal economy. The hope that these movements are an expression of a re-embedding of economic forces in social relations is misguided and could be politically debilitating in social policy is transferred to individual consumers in the hopes that they will make moral choices with their wallets. Instead, scholars working in this tradition would like to see a stronger role for states in implementing laws that allow these moral and fairer exchanges to take place. This is not to say that food and place should not be connected, but that this connection in and out if itself is not enough to resolve moral questions about the way food is produced, distributed, and framed for the consumer.

Questions of Smell

Food is appreciated in a multisensory way. Human taste buds are capable of detecting essential flavors like sweet, salty, or bitter, but a lot of the more nuanced sensations come from the interaction between the senses. Food is a tactile, visual, olfactory, auditory, and gustatory experience. Smell in particular plays a big role in the experience. Food aromas tie communities together and also evoke memories. Theorists of smell, such as David Howes, argue that there is a strong relationship between smell and memory, for smells are often linked to the moments when they were first perceived and can act as triggers for those memories later on. There are several studies of immigrant communities and how familiar food smells serve as a source of nostalgia. These studies examine how people experience the evocative power of food smells and how they use them strategically to create slices of home in their new surroundings. Lisa Law (2001) looked at Filipino domestic workers in Hong Kong. On Sundays they often congregated in open plazas and appropriated them with familiar cooking smells. These aromas encoded the space around them in ways that were explicitly different from the sensory expectations they faced throughout the week when working in the homes of local Hong Kongese.

Other work in this area has looked at how food smells can be a marker for class and race. Sometimes immigrant communities have found themselves on the receiving end of discrimination based on what are perceived as "offensive" smells by the host country. One study found that realtors in New York City advised Asian immigrants to scrub their houses before potential buyers arrived, by which they meant the erasure of smells such as shrimp paste or kimchi. In contrast, the realtors suggested that they bake apple pie or bread before showing the house to encode it with smells more typically associated with home in the United States. Associations between food smells and home are not just sentimental, but are also enmeshed in racial and class politics. The smell

of foods, and its associations to place, can be an entry point with which study questions of power, discrimination, and justice. Space as an analytical category looks at emotional or mental landscapes, and food smells are one way to study how these affective relations to food are spatialized. The evocative powers of smell allow it to encode places as familiar or foreign, to trigger nostalgia, and for people to deploy food smells strategically to mark the places around them.

Future Directions

Space is an emerging field in food studies. One of the key questions is how moral economies can emerge, and one suggestion has been to link food to its provenance in a tighter way. Thus, localized food practices, resurgence of farmers' markets, connecting consumers, and producers across boundaries through labels have been examined to see if they can contribute to a moral economy. Future directions on space research need to tackle the extent to which place can be an answer to the emergence of more just eating practices.

Summary

Place is a lens with which to think about how food production and consumption is spatialized, how those spatial arrangements come to be, and who benefits and loses from them. This entry looks at national cuisines, commodity chains, terroir, and sensorial markers as ways in which food and place become intertwined and the ethical questions that arise out of it.

Cross-References

- ▶ Culinary Tourism
- ▶ Ethnicity, Ethnic Identity, and Food
- ▶ Geographical Indications, Food, and Culture

References

Appadurai, A. (1988). How to make a national cuisine: Cookbooks in contemporary India. *Comparative Studies in Society and History, 30*(1), 3–24.

Barham, E. (2002). Towards a theory of values-based labeling. *Agriculture and Human Values, 19*, 349–360.

Cwiertka, K. J. (2006). *Modern Japanese cuisine: Food, power and national identity*. London: Reaktion Books.

Guthman, J. (2007). The polanyian way? Voluntary food labels as neoliberal governance. *Antipode, 39*(3), 456–478.

Law, L. (2001). Home cooking: Filipino women and geographies of the senses in Hong Kong. *Cultural Geographies, 8*(3), 264–283.

Mintz, S. W. (1985). *Sweetness and power: The place of sugar in modern history*. New York: Penguin.

Mintz, S. W. (1997). *Tasting food, tasting freedom: Excursions into eating, culture, and the past*. Boston: Beacon.

Terrio, S. J. (2000). *Crafting the culture and history of French chocolate*. Berkeley/Los Angeles/London: University of California Press.

Trubek, A. B. (2008). *The taste of place: A cultural journey into terroir*. Berkeley/Los Angeles/London: University of California Press.

Watson, J. L. (2006). *Golden arches east: McDonald's in east Asia*. Stanford: Stanford University Press.

Wilk, R. (2006). *Home cooking in the global village: Caribbean food from buccaneers to ecotourists*. Oxford/New York: Berg Publishers.

Food and Poverty in High Income Countries

Elaine M. Power
School of Kinesiology & Health Studies, Queen's University, Kingston, ON, Canada

Synonyms

Food poverty; Taste of necessity; Food insecurity

Introduction

Household income is the most important factor influencing the food that individuals and families eat. Income has both *direct* and *indirect* effects on the food people eat. Income affects eating

practices directly either by putting economic limits on what a household can afford to eat or by allowing the ease and freedom to eat whatever is desired. It affects eating practices indirectly because of its influence on our tastes, preferences, and desires, which appear to be individual but are shaped by class positions shared with others. This entry considers the impact of income, and especially inadequate income, on food practices in rich, developed countries and the particular case of food insecurity, where financial resources are inadequate for a safe, healthy diet that meets personal, cultural, and religious preferences. The entry also introduces key theoretical concepts from Pierre Bourdieu to help explain the "logic" of everyday food practices and to assist in reflexive practice in scholarship, health promotion, and public policy making.

The Impact of Household Income on Food Practices

For households that live in poverty, with not enough money for food, food is a constant source of stress and anxiety. Not having enough money for food, or worrying about not having enough, can alter the quality and quantity of food that household members are able to consume. In many English-speaking wealthy countries, such as the United States, Canada, Australia, and New Zealand, this condition is known as individual and household food insecurity. In the United Kingdom, it is also called food poverty. In the most severe cases of food insecurity, individuals may skip meals entirely, resulting in outright hunger. Food insecurity is a significant public health concern, associated with a higher risk of nutrient deficiencies and a range of health problems, including depression, diabetes, and heart disease. It is also in direct contravention of the basic human right to food for all, which is protected in several international agreements, including the *International Declaration of Human Rights (1948);* the *International Covenant on Economic, Social and Cultural Rights (1966)*; and the *International Convention on the Rights of the Child (1989)*. In wealthy countries, the right to food is predicated on having sufficient income to purchase food in the marketplace, the usual way of obtaining food in these countries. Consequently, the right to food means that state governments have a responsibility to ensure income security policies, including adequate wages and a social safety net, that allow households to purchase adequate, safe, culturally appropriate, and nutritious food to meet daily needs.

Along with important direct effects on what people eat, income also has indirect effects, mediated through social class (Beagan et al. 2014). Indirect effects of income on food practices operate through preferences shaped by class position, that is, through income, education, and the movement between class positions. For example, a desire to experiment and try new cuisines, foods, and recipes is associated with those who have higher levels of education and sufficient income to be able to do so. Those living on low incomes cannot afford to experiment with new foods or recipes; there is no room in the budget for any food to go to waste. Moreover, there may be little desire to try novel foods or cuisines, on the basis that such experimentation is "not for the likes of us," or not something that "people like us" do. This can be a process of "making a virtue of necessity," where conditions of material scarcity create a personal disposition that values what is necessary, such as frugality or the loyalty of sticking with the tried-and-true. For example, low-income households may buy only branded products, favoring more expensive products over similar "no-name" ones. This may be derived from a condition of necessity, because the branded product has a known and consistent taste that family members will be sure to eat, rather than the uncertain and unpredictable taste of a comparable "no-name" product. Consumption of highly marketed branded food products may also be a source of pride, a means of displaying loyalty, and offering a small, symbolic way to belong in our consumer society and be "normal," doing what others do. It may also be a treat, offering an opportunity to dissociate oneself momentarily from ever-present poverty and deprivation.

In other words, the food practices of those living in poverty do not conform to a purely economic logic, at the same time that financial constraints are central by limiting the scope of purchases within economic possibility and by shaping taste and preferences through class dispositions. This entry introduces some key concepts from sociologist Pierre Bourdieu, whose book, *Distinction*, is one of the most important sociological texts of the twentieth century and is especially useful in understanding the relationship between income, class, and food practices. Sociological theory can be especially helpful in understanding the interaction of social or collective factors and individual factors influencing what people eat. In other words, it helps develop an understanding of why people located within particular social positions (defined, e.g., by class, class trajectory, gender, and racialization) eat the way they do.

Bourdieu's key theoretical concepts include *habitus*, *practice*, *forms of capital*, *the logic of practice*, and *distance from necessity*. Understanding that all practice, including food and eating practices, has a logic that is based in the habitus and derived from a particular social position, has ethical implications for those who study, wish to understand, and perhaps change the eating practices of those in (especially lower) class positions that are different than their own. The implications of this will be drawn out in the conclusion.

Theorizing Food Practices with Bourdieu

In his study of taste in France, *Distinction: A Social Critique of the Judgement of Taste*, Bourdieu (1984) found distinct patterns of lifestyle, manifested in tastes in art, music, food, clothing, furniture, and so on. While the particulars of Bourdieu's analysis of 1960s France are not generalizable, many researchers have found his conceptual tools can be usefully applied to their particular empirical contexts to help us understand food practices and why people eat what they do, especially in relation to class (Beagan et al. 2014). In Bourdieu's conceptualization, class has two main dimensions: economic capital (i.e., income and wealth) and cultural capital (such as level of education as well as other forms of knowledge). So, for example, the self-made successful business person, with large amounts of economic capital but less cultural capital, occupies a different social space and tends to have different tastes and lifestyle than, for example, a humanities professor, who has comparatively less economic capital but considerably more cultural capital. A schoolteacher may have similar economic capital as a tradesperson, but they will tend to have different tastes and lifestyles because of dissimilar amounts of cultural capital.

A third dimension of class, which also affects taste, is the trajectory through social space (i.e., upward or downward social mobility or a stable social position). Thus, someone moving (or with ambitions to move) from a lower to higher social space may leave behind the tastes of the lower class and take on those of the higher class. Those moving downward in social space tend to be conservative and traditional in their tastes. Bourdieu found these associations between social trajectory and taste in whole groups, such as small business owners and farmers, who were slowly losing their historical status in French society.

Habitus

Why do people who occupy similar positions in social space tend to have similar tastes and thus similar lifestyles and practices? Bourdieu developed a theoretical concept, the *habitus*, to explain why. Bourdieu used the concept of the habitus to overcome dichotomies that haunt social theory, such as structure/agency and freedom/necessity. The habitus is the "sedimentation" or embodiment of social structures such as class, gender, and ethnicity within the individual. It is a set of *dispositions*, internal to the individual, which reflects external social structures and shapes how the individual perceives the world and acts in it. Although the social structures embodied in the habitus do not *determine* behavior, individuals are *predisposed* to act in accordance with the social structures that have shaped them, because,

in effect, they carry those social structures within them. The habitus also shapes one's expectations of the future. Once learned, the dispositions of the habitus become "second nature," difficult to bring to consciousness and not easily changed. This is especially true of aspects of the habitus learned in childhood, such as gender identity.

Forms of Capital, Practice, and Class

Habitus has an important influence on practice, or our everyday activities, but it is not the only one. Practice is also influenced by the interaction between the habitus and different forms of capital. Bourdieu identifies four primary forms of capital: economic (money and wealth), cultural (formal and informal education), social (relationships), and symbolic (honor, prestige, or recognition). He understands economic capital as the most important form but shows how these different forms of capital can be exchanged. Social class, in Bourdieu's terms, reflects the total volume of capital as well as the composition of the capital (particularly economic and cultural), and social class trajectory (i.e., upward or downward movement between different classes).

Logic of Practice and Distance from Necessity

As Bourdieu (1984) explains, all practice has a logic, even practice that appears to others to be "illogical." The logic of practice comes from social location, including class, habitus, class trajectory, and the different types and amounts of capital available. In his study of taste in France, Bourdieu found fine distinctions in the tastes of those in different social spaces; however, he also found two main opposing dispositions toward consumption, distinguished by "distance from necessity." The consumption patterns of the working class and the poor are characterized by the "tastes of necessity," while the consumption patterns of the middle and upper classes are characterized by the "tastes of luxury (or freedom)." The taste of necessity is a "forced choice" of being resigned to what is inevitable, produced by material conditions of low income that rule out other options. In contrast, the taste of luxury is so bound up in freedom of choice that it is difficult to imagine that others are much more constrained in their choices. The taste of luxury is derived not just from income, but also the cultural dispositions that come from being in the social space that higher levels of income allow. Thus, for example, those who have lived in poverty who move into significantly better economic circumstances may carry with them the cultural dispositions that incline them toward the taste of necessity and continue their frugal lifestyle despite their improved finances.

In Bourdieu's study in France, the taste of necessity in food (for those with little economic or cultural capital) generally led to the consumption of salty, fatty, heavy, strong, simmered, cheap, and nourishing food. Those with significant economic and cultural capital had food tastes in opposition to the taste of necessity, tending toward the light, refined, and delicate. Bourdieu also found differences between those who had relatively different amounts of cultural and economic capital and those who had relatively more cultural capital (i.e., education) tending toward healthier and more exotic food, especially low-cost exotic food such as that found at "hole in the wall" family-owned restaurants serving "ethnic" food. Cooking practices also differed among those with different amounts of capital and different relative amounts of economic and cultural capital.

Taste in food also depended on how different classes value the body and the effects of food on the body. While the working classes were more interested in bodily strength and thus tend to eat food that was cheap and filling, the professions were more interested in the aesthetic aspects of the body and thus tend to eat food that was healthy, light, and not fattening. Bourdieu found that the working class meal was characterized by abundance, particularly of "elastic" and inexpensive dishes and foods, such as soups, pasta, or potatoes. The "impression of abundance" was especially true for special occasions. The rituals of the meal (preparation, serving, eating, cleaning up) were marked by strong differences of social status, based on age and gender. Strict sequencing

of the meal was ignored, and a freedom, which from a bourgeois perspective would be seen as disorder or slovenliness, prevailed. This freedom arose from a sense that eating is a form of compensation for the rest of life, where controls, constraints, restrictions, and necessity prevail, and that these should not be imposed on food and eating, the heart of domestic life. In contrast, the meals of the bourgeoisie, or middle class, were conducted as a social ceremony, concerned with form and a strict observance of sequence. Rigorous rules surround the meal, as with all other aspects of everyday life, an expression of a habitus of order and propriety.

Bourdieu maintains that this basic opposition between substance (food as material reality, sustaining the body and giving strength) and form (food as self-discipline to an aesthetic ideal) represents two antagonistic worldviews, divided by distance from necessity, which, as a function of the habitus, affect all aspects of taste. Bourdieu argues that the distance from necessity divides us all, with no neutral point of view. What appears to be messy, undisciplined, and careless to some is straightforward, down-to-earth, and unpretentious to others. And what is refined and orderly to some is frivolous and pretentious, "not for the likes of us" to others.

Bourdieu's work demonstrates that there is a "logic" to everyday practices, such as eating, which goes far beyond the practice or behavior itself but is instead embedded in a habitus which systematically reflects a set of social structures, not least of which is class. Everyday practices are generated from a system of perception and appreciation and form a particular lifestyle that is meaningful in relation to the social and material conditions in which the habitus was formed. Everyday practices follow a logic which is largely outside our consciousness and therefore difficult to describe in words. What people do in their everyday lives has more significance than they know or can say.

Food Practices in the Context of Food Insecurity

As household income declines, financial considerations become more and more important in the decisions regarding which foods are purchased and consumed, with the emphasis moving toward low-cost, filling foods that will stave off hunger. These decisions and choices are always weighed with other considerations, including personal preferences and tastes, health and nutrition, food quality and freshness, cultural and religious imperatives, convenience, cooking skills, transportation, and available storage and cooking equipment. However, as food insecurity grows, the cost of the food becomes the driving force in decision-making (Dachner et al. 2010; Power 2005). The person most responsible for food work makes most of these decisions and choices. Despite some overall progress in engaging men in housework, women are still primarily responsible for food work, especially the invisible aspects, such as menu planning and shopping lists, which involve the weighing of the sorts of considerations described above (Beagan et al. 2014; DeVault 1991).

For food-insecure households, the stress of living in poverty and not having enough money for food can be overwhelming, especially if there are children involved. There is little-to-no relief in managing inadequate food and financial resources. The relentless nature of trying to "make do" and "make ends meet" requires significant amounts of time, work, and energy. It is not surprising that food insecurity is associated with much higher rates of depression than for the food secure population. With the exception of households on food stamps in the United States, who have some money (in the form of food stamps) that can only be spent on food, most low-income households can use money allocated for the food budget for other priorities, such as when emergencies arise or for months when there are unusually high expenses, such as when heating or cooling costs are higher than normal. In terms of budgeting, the first priority is keeping a roof over one's head, by paying the mortgage or the rent. This is usually a fixed expense and a bill that must be paid on a regular basis. In food-insecure households, after housing costs are paid, there is usually little-to-no money left over. Money for other services and items, such as food, utilities, phone, childcare, clothing, and

transportation, is juggled in a complex strategy to maximize benefit and avoid losing access to necessary services. Part of the elasticity of the food budget derives from the multiplicity of strategies that can be used to attain food and stretch food resources, or the last-ditch strategy of going hungry (Power 2005).

Food insecurity is a managed process, experienced on a continuum, from mild or marginal to moderate to severe. In households where there is marginal food insecurity, the person responsible for food provisioning (usually a woman in heterosexual households or in households with children) worries about being able to buy adequate amounts of food. In moderately food-insecure households, there are changes in the quality and quantities of food eaten, for example, substituting cheap and filling food for the food that would be normally eaten. Finally, in severely food-insecure households, household members literally go hungry, skipping meals or going for a day or more without food (Tarasuk et al. 2013).

In households with children, the most severe form of food insecurity is characterized by children going hungry. Mothers will do almost anything to keep their children from being hungry, including going hungry themselves, sending their kids to relatives, shoplifting, prostitution, or "doing favors" for the landlord in exchange for rent reductions or groceries. In other words, not all household members experience food insecurity in the same way; the woman in the household normally bears the brunt of the strategic management of food insecurity. In households where there is intimate partner violence against women, food may act as a trigger. The woman will then prioritize the food wishes of her partner or husband, in the hope of avoiding violence. This may adversely affect her own food security and possibly her children's. Intimate partner violence may also include financial abuse, with the man controlling all household finances and leaving the woman unable to protect herself or her children from food insecurity and hunger. Abusive partners may also use food to bribe their way back into relationships.

As food insecurity deepens, households change the type and the number of strategies used to feed themselves. Some strategies involve freeing up money for food or increasing the supply of money. These include working, perhaps in "under-the-table" jobs; giving up services, such as cable TV; selling possessions; delaying bill payments; or borrowing money from family or friends. Some strategies can only be used infrequently (e.g., a possession can only be sold once) or have a limited lifespan (e.g., one quickly runs out of friends unless loans are repaid). Strategies to acquire food include purchasing food on credit; borrowing food from friends or relatives; eating at relatives' homes or sending the kids there to eat; sending kids to school meal programs; and obtaining food from nonconventional sources, such as food banks, dumpsters, soup kitchens, and other community food programs.

Another set of strategies revolves around the food itself, during the planning, shopping, and cooking stages. These strategies include careful planning, looking at flyers, clipping coupons, making lists, budgeting, making food from scratch, planning to buy only what is essential or most filling, buying grocery store gift cards to save the money to buy groceries at a later date, and shopping only at discount grocery stores or greengrocers. During shopping trips, women also use multiple strategies to conserve money. These may include transportation considerations, such as coordinating a trip with someone with a car, walking one or both ways, or only buying foods that can be transported easily. Other strategies include not taking the kids on the shopping trip, sticking to a shopping list, adding up the cost as one shops, only buying foods and brands that are known and liked by the family, buying foods that provide the most value for money, buying foods on sale, buying cheaper cuts of meat, and buying in bulk when appropriate or buying small quantities to avoid waste. And finally when cooking, women will alter food preparation to "stretch" a meal (e.g., adding extra rice or potatoes to soup or stew); cook low-cost and filling meals of minimal ingredients; use canned foods; serve the higher-quality foods for the man or the children and eat less expensive foods herself; and cut portion sizes or skip a meal while others in the household eat. Most of this extra work to avoid

hunger in the household is borne by women. Much of it is invisible, requiring creativity, energy, and skill. For low-income households with no access to a vehicle, there is additional physical labor to acquire food, adding to the physical, mental, and emotional stress and exhaustion.

In the context of food insecurity, one strategy that some households use is to turn to food charity, particularly food banks or food pantries. These charitable organizations offer limited amounts of food to those who qualify for their services, usually for a limited number of times a year. While food banks and food pantries allow some families to be somewhat less hungry, they have significant limitations. These include an insufficient supply of food to meet the demand; inability to meet the food preferences, religious restrictions, or health needs of clients; the nutritional inadequacy of food packets; the instability and irregularity of volunteer labor and donations of food and money; inaccessibility of food banks and their services; the inefficiencies associated with connecting hungry people with donated food and volunteer labor; and lastly, but perhaps most importantly, the indignity of charity (Poppendieck 1998). Despite the best intentions of staff and volunteers, most people find that receiving charity is demeaning and dehumanizing, provoking feelings of shame and humiliation. Food charity is a blunt reminder to those who use the service that they are not part of mainstream society, contributing to a pervasive sense of marginalization. For these reasons, and perhaps others, most food-insecure households do not use food banks (Power 2014).

Ethical Considerations

Food insecurity raises two different ethical issues. The first is related to social justice and the ethical implications of hunger, poverty, and food insecurity in rich, industrialized countries. The second is a reflexive one and the ethical issues of researchers, academics, and students studying and trying to understand the "logic of practice" of groups of people who may occupy quite different social positions. Related to this are the ethical issues of health practitioners who want to change the eating habits of low-income people and public policy makers who are responsible for creating public policy to promote the health of all citizens.

Food insecurity has become a significant public health concern in many rich, industrialized countries. In the United States in 2011, almost 15 % of households experienced some level of food insecurity, while over 12 % of Canadian households were affected (Tarasuk et al. 2013). Both countries use the same questionnaire to assess household food security status, but the US approach is more restrictive in categorizing households as food insecure. This means that many more US households would be food insecure using the Canadian approach and amounts to millions and millions of people in two of the richest countries in the world who suffer food insecurity as a result of poverty and the subsequent health consequences.

This situation is incongruent with principles of social justice and with the obligations and commitments set out under international agreements, including the *Universal Declaration of Human Rights (UDHR) (1948)*; the *International Covenant on Economic, Social and Cultural Rights (ICESCR) (1966)*; and the *International Convention on the Rights of the Child (ICRC) (1989)*. Notably, the United States has refused to sign the ICESCR and the ICRC. But it has signed the UDHR, which specifies:

> Everyone has the right to a standard of living adequate for the health and well, being of himself [sic] and his [sic] family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his [sic] control. (United Nations 1948)

While not legally binding, the UDHR sets out a set of principles to which nations, at their best, aspire. Recently, the United Nations Special Rapporteur on the Right to Food has highlighted the growing number of national governments around the world that have implemented frameworks to progressively realize the right to food as a legal entitlement, not a charitable handout

(De Schutter 2013). In wealthy countries, this means the assurance of an adequate income, derived from either employment or social supports, so that everyone can participate in normal channels of food acquisition (De Schutter 2013). Given the unprecedented wealth of the world's richest countries, growing income inequality, and the structural conditions that create the poverty that leads to food insecurity, it is time to reconsider our obligations to each other and to ensure the conditions in which all can thrive and contribute their best.

The other key ethical implication of understanding the impact of income on food practices is a reflexive one. In other words, those interested in the food and eating practices of those living on low incomes – whether student, researcher, health promoter, or policy maker – must understand that if they are occupying a different class position, the "logic" of their food practices will be different than the logic of low-income food practices. This is not simply a matter of available economic resources. For example, while postsecondary students may be "poor" based on their income, the logic of their food practices will also be impacted by the habitus made possible by higher education, the sense of possibility that enabled them to get to a higher education institution and that unfolds with the achievement of a postsecondary diploma, and the sense of inclusion and doing something "normal" and valuable by being a student. For health promoters, the ethical responsibility is to understand that the food practices of low-income households are unlikely to change significantly without additional financial resources and to advocate on behalf of low-income clients for additional resources (see, e.g., Ontario College of Family Physicians 2013). The ethical responsibility of researchers is to research enough about participants to understand the logic of their practices and then to represent the research results in ways that are true to that understanding, allowing the reader to come to a similar conclusion.

Summary

Household income affects the logic of food practices in both direct and indirect ways, through the habitus and the resources available for purchasing food. In conditions of food insecurity, when income is inadequate to meet dietary needs and preferences, the cost of food becomes increasingly important in decision-making, overshadowing other important considerations, particularly health. Those in food-insecure households who are primarily responsible for food work try to manage food insecurity with numerous strategies that take considerable time, energy, skills, and creativity. Their creativeness and skill cannot dispel the anxiety and stress that accompanies food insecurity. The challenges they face demand understanding and respect. The existence of millions of food-insecure households in the richest countries of the world is incongruent with international standards and principles of social justice.

Cross-References

- ▶ Child Nutrition Guidelines and Gender
- ▶ Eating and Nutrition
- ▶ Eating, Feeding and the Human Life Cycle
- ▶ Emergency Food System: Soup Kitchens and Food Pantries
- ▶ Ethics of Dietitians
- ▶ Feeding Children
- ▶ Food and Choice
- ▶ Food and Class
- ▶ Food, Class Identity, and Gender
- ▶ Human Rights and Food
- ▶ Poverty and Basic Needs
- ▶ Right to Food in International Law

References

Beagan, B. L., Chapman, G. E., Johnson, J., McPhail, D., Power, E., & Vallianatos, H. (2014). *Acquired Tastes: Why Families Eat the Way They Do*. Vancouver: UBC Press.

Bourdieu, P. (1984 (1979)). *Distinction: A social critique of the judgement of taste* (trans: Nice, R.). Cambridge, MA: Harvard University Press.

Dachner, N., Ricciuto, L., Kirkpatrick, S., & Tarasuk, V. (2010). Food purchasing and food insecurity among low-income families in Toronto. *Canadian Journal of Dietetic Practice and Research, 71*(3), e50–e56.

De Schutter, O. (2013). *Interim report of the special rapporteur on the right to food*. New York: United Nations General Assembly. http://www.srfood.org/images/stories/pdf/officialreports/20131025_rtf_en.pdf.
DeVault, M. (1991). *Feeding the family: The social organization of caring as gendered work*. Chicago: University of Chicago Press.
Ontario College of Family Physicians. (2013). Primary care interventions into poverty. http://ocfp.on.ca/cme/povertytool. Retrieved 4 Dec 2013.
Poppendieck, J. (1998). *Sweet charity? Emergency food and the end of entitlement*. New York: Viking.
Power, E. (2005). Background paper. Individual and household food insecurity in Canada: Position of dietitians of Canada. http://www.dietitians.ca/Dietitians-Views/Individual-and-Household-Food-Insecurity.aspx.
Power, E. (2014). Food banks. In K. Albala (Ed.), *Food issues*. Thousand Oaks: Sage.
Tarasuk, V., Gundersen, C., Emery, H., McIntyre, L., Mah, C., & Rehm, J. (2013). PROOF: Research to identify policy options to reduce food insecurity. http://nutritionalsciences.lamp.utoronto.ca/food-insecurity/. Retrieved 30 May 2013.
United Nations. (1948). The universal declaration of human rights. http://www.un.org/en/documents/udhr/index.shtml-a25. Retrieved 28 Nov 2013.

Food and the Avant-Garde

Yael Raviv
Department of Nutrition, Food Studies and Public Health, New York University, New York, NY, USA

Synonyms

Food and art; Food and performance art; Futurism and food; Historical avant-garde and ideology; Modernist art; Modernist cuisine

Introduction

Defining the avant-garde is an ongoing process in art and literary criticism and changes depending on the particular historical period and cultural sphere discussed. For the sake of this entry, the term refers to a collection of modernist artists and artistic movements who explore new frontiers, react against previous conventions and traditions, and engage in experimental work. The work of avant-garde artists and writers often responds to existing social, political, or aesthetic practices, making it particularly relevant to a study of ethics. In the Theory of the Avant-Garde, Peter Burger argued that the term was originally used to describe a combination of artistic goals and a sociopolitical agenda (Bürger 1984). More specifically, some of the ideas associated with the avant-garde that apply to a study of food include a wish to reintegrate art into the practice of everyday life, an interest and a prioritizing of the senses beyond sight and sound, a valuing process over product and nonrepresentational art over a fixed subject, and a fascination with language, the body, and consumption.

The historical avant-garde's power for social reform derived largely from its anti-institutional stance and its ability to reexamine and call into question products and forms that were taken for granted and have become routine. But as these artists were accepted into the art institution themselves (shown in museums and studied in academia), their work was stripped of that power. This particular critic of the historical avant-garde is significant in the context of food work, since the ephemeral nature of most of this artwork serves to protect it to a certain extent against institutionalization.

This entry refers to two types of interaction between food and the avant-garde: artists who use food as a medium and employ it as way of interrogating traditional art practices and institutions as well as other social and cultural questions and chefs who create culinary work that can qualify as art, stretching our understanding of what is art and expanding the culinary field into new realms of interaction between chef and audience (essentially creating avant-garde work in the culinary field).

The entry begins with several examples of artists who can be directly linked to avant-garde related movements in some way. These artists share some of the central tenets of the historical avant-garde: the wish to step outside the art establishment, call into question traditional practices and institutions, promote art that is integrated into

everyday life and materials, and promote an ideological agenda, questioning social or cultural tropes. The examples progress in a rough chronological order and focus on artists who engage food and food practices directly, as a medium, not only as a subject for visual art or poetry. The final section of the entry expands on this focus and presents the work of several modernist chefs. Exploring their work in the context of avant-garde art and as an extension of the artwork described below offers new insights into some of the problems associated with the historical avant-garde.

The Futurists

Futurism, an art movement of the historical avant-garde, produced perhaps the most well-known, influential, and food-centered work. In the second wave of the movement (from 1930), the Futurists devoted serious attention to culinary events, opened the Holy Palate restaurant in Turin (1931), and published The Futurist Cookbook (1932). Filippo Tommaso Marinetti published the first Futurist Manifesto in 1909 and strove, with his fellow Italian Futurists, to "liberate language, art and life from tradition and convention" (Chamberlain 1989, p. 8). The Futurists saw art and everyday life as inseparable, and so everyday materials, like food and recipes, were a natural progression for their work. Using culinary devices and materials allowed the Futurists to engage and comment on traditional Western art practices and values, such as questioning the traditional hierarchy of the senses that prioritizes sight and sound, the concept of an art object as everlasting, and the injunction that art must never be utilitarian and must be confined to the museum and gallery space.

The Futurist Cookbook encourages Italians to abandon traditional culinary practices (pasta in particular) in favor of a new and "modern" culinary practice. It includes descriptions of several futurist banquets, theoretical thoughts on futurist perception of cooking and eating, and numerous recipes (called "formulas") contributed by different Futurist artists. It provides a documentation of several performative and experimental dinners, but it is also an art object in itself. By taking a familiar everyday object such as a cookbook and appropriating it to deliver the futurist artistic message, Marinetti is combining several of the futurist ideals: not only the interest in everyday life as material for art but also the hybridization of different genres, the importance of the chemical senses (taste and smell), the body as a present and participant in the artwork, and the interest in technology, scientific discovery, and innovation – all of which play a part in the recipes and banquets the Futurists staged.

The Futurists had a very strong, unabashed, and political and ideological message, and The Futurist Cookbook expresses some fascist ideals, mostly exemplifying strong nationalist tendencies and a chauvinistic approach, advocating Italian patriotism and condemning bourgeois habits and lifestyle. The book is a poetic text that expresses both an artistic agenda and an ethical one: the Futurists wished to change the Italian persona, influencing and reshaping both Italians' minds and their bodies. However, the cookbook remains first and foremost an artistic creation, its irony mostly apparent in the selection of clearly inedible dishes scattered through the text, like The Excited Pig: "A whole salami, skinned, is served upright on a dish containing some very hot black coffee mixed with a good deal of eau de Cologne" (Fillia, in Marinetti 1989, p. 144). This and other inedible recipes serve as reminders that this "cookbook" is in fact an art object and not a kitchen manual. They force the reader to pause and consider each recipe, not take them for granted. They call into question the very nature of recipes and instructions and emphasize the need for vigilance and independent thinking (for more on the Futurist banquets see Delville, 2008).

Fluxus

This multidisciplinary, international movement originated in the 1950s in Europe and the United States and continues to some degree to this day. One of the most influential forces at its inception in the United States was experimental musician

John Cage, whose class on musical composition in New York in the late 1950s inspired some of the central techniques later used by Fluxus artists, like George Brecht's Event Score, chance-generated poems by Jackson Mac Low, and Allen Kaprow's Happenings, describing his multimedia theatrical events (Higgins 2002, pp. 46–48). Two central elements in Fluxus artists' work were the performance event and the Flux kit. Both were based on simple, everyday actions and objects and highlight the notion of experience. Rejecting representational art and focusing on primary experience, Fluxus's work defies fixed definitions; its central ideology is the rejection of any assigned, permanent meaning (Higgins 2002, pp. 58–59). Thus food, as a temporal medium that offers a wide range of opportunities for social interaction and immediate experience, appears often in Fluxus artists' work. These artists include Alison Knowles (Make a Salad, 1962; Make a Soup, 1962; and Identical Lunch, 1967–1973), George Maciunas (Flux banquets, 1967–1978; One Year, 1973), Ben Vautier (Flux Mystery Food, 1963 and 1966–1967), and Daniel Spoerri (Twenty-nine Variations on a Meal, 1964), among others.

Daniel Spoerri's early Trap Paintings literally captured remains of meals, gluing to the table's surface, empty dishes, cutlery, and leftovers and then flipping the surface to hang vertically. These projects, created from 1960 and on, were based on an individual meal, a collaboration with other artists, or the result of banquets and dinners Spoerri staged at his Spoerri Restaurant (1968), the Eat Art Gallery (1970), and other venues around the world (Novero 2010). The Trap Paintings were essentially collages created by chance actions during a meal. Preserving and displaying these remains reflect Spoerri's interest in everyday materials and in their perishable nature, reflecting similar interests of earlier avant-garde artists. Spoerri's themed banquets and the idea of creating a working restaurant that, in addition to serving traditional German fare, also hosted guest artists as chefs were very much in the spirit of the Futurists, bringing his edible work into a real-world context. Some of Spoerri's themed meals revolved around regional/national dishes no longer common and recognized as such in different countries, problematizing the clear definitions of a national, centralized cuisine. In this, he diverges from the Futurists and their strong nationalist agenda, questioning rather than trying to influence a national diet.

This approach to political ideology is characteristic of many more recent avant-garde artists, who prefer to call into question or problematize existing sociopolitical ideologies, rather than a prescribe one.

Some Fluxus artists' work involved a reframing of everyday acts of the artists themselves as art events, like **Ben Vautier's** Flux Mystery Food, which entailed purchasing unlabeled cans of identical size and eating whatever was inside them (1963). A later variation included replacing the labels with ones that read Flux Mystery Food (1967). Another example is **Alison Knowles's** Identical Lunch (1967–1973), in which the artist consumed the exact same lunch every day, over a period of several years, at the same time and at the same place: tuna sandwich on whole-wheat bread with soup or buttermilk at Riss restaurant in Chelsea (Higgins 2002; Novero 2010).

Even though Fluxus artists are obviously interested in taste and smell, many of these works focus on a shared, communal experience, on language and representation, and on classification and organization rather than on gastronomy (Novero 2010). Unlike the Futurists' interest in creating innovative work on the plate, most Fluxus artists explore eating rituals and mine food for its ability to call into question the Western hierarchy of the senses and present art as a total experience, free of fixed definitions. It highlights these artists' interest in creating multisensory experiences that frame "pieces" of everyday life and draw our attention to them, allowing that everything is material for art. This inversion of accepted Western cultural hierarchies and questioning of common perceptions extends beyond the art world into other social and cultural realms of experience. Subverting the art institution implies the suspect nature of other institutions. By calling into question

common perceptions regarding the value system and hierarchies within the art system, these artists encourage the audience to question the status of Western culture, the division of gender roles, or other sociopolitical classifications.

Carolee Schneemann was connected with several Fluxus artists and events, and her work in live performance was very influential on a variety of artists (most notably feminist work). Schneemann created Meat Joy in 1964 as "a celebration of flesh as material" (http://www.caroleeschneemann.com/meatjoy.html, viewed December 27, 2012). The performance included raw fish, chicken, and sausages, among other materials, and centered on the movement of the performers' naked bodies in space and the improvised interactions among them and with the materials surrounding them. Schneemann's work explores ideas regarding sexual expression, the body, feminism, and traditional art practices and history. Her work is significant in relation to historical avant-garde work that was a distinctly white, male provenance, using women's bodies as a vehicle, but excluding them (as well as non-Western artists) from art making. Following Schneemann, several female artists employed food and cooking as a way to introduce women's voices into avant-garde art practice.

Martha Rosler's early work with video (like Semiotics of the Kitchen, 1974) and mail art (A Budding Gourmet and Tijuana Maid – both "novels" – were originally sent out in installments on postcards and included recipes in addition to text) continues the avant-garde's interest in new and undervalued forms, art in everyday life and materials, and strong ideological context. Rosler's early work had a strong feminist message and explored labor rights and socioeconomic hierarchies.

Karen Finley is another well-known artist who explores topics at the intersection of language, the body and female sexuality, and everyday life. She used food and food imagery in her work on numerous occasions, perhaps most notoriously by smearing her upper body with chocolate (standing in for excrement) in her piece We Keep Our Victims Ready (1988). Finley, who was influenced by artists like Schneemann, uses similar techniques of taking food out of its traditional context ("wearing" it rather than eating it), as one of the devices to deliver a strong political and ideological message. Like other artists mentioned here, Finley chose to perform her art in nontraditional and undervalues venues (nightclubs instead of art galleries) and used everyday materials in her work to emphasize her anti-art establishment attitude and to call into question traditional hierarchies in both the art world and the real world.

Food as material for art allows artists to follow in the footsteps of the avant-garde commenting both on earlier art movements and art institutions and on social-cultural practices. **Jana Sterbak's** Vanitas: Flesh Dress for an Albino Anorectic (1987), in which a model wears the 50 lbs dress made out of raw steak (which later was preserved and dried), comments on earlier feminist work (like Schneemann's) while also rethinking current social and cultural norms and practices, reflecting on both the meat industry and the fashion industry. **Janine Antoni** created her sculptures Chocolate Gnaw (1992) and Lard Gnaw (1992) by using her mouth as a carving tool. She displayed both the enormous, gnawed blocks and the leftover, chewed pieces she removed from them and shaped into lipsticks and chocolate hearts (Trippi 1998, pp. 142–144). In these pieces, Antoni explores the idea of a traditional carved sculpture, replacing both the material and the tools, and comments on minimalist artwork, while also investigating the idea of consumption in modern society.

An example of an artist-driven restaurant, very different in feel from the Futurist Holy Palate, is **Gordon Matta-Clark's** FOOD, which opened in SoHo, New York in 1971. The restaurant was a group enterprise, designed to offer artists living in the area at the time an affordable place to eat, a place to work, and a space to display their art. It was in-line with Matta-Clark's other food-related work at the time, mostly concerned with experimenting with cooking tools and techniques like his Fried Photographs and Incendiary Wafers (1970–1971). The restaurant was created by Matta-Clark with Caroline Goodden, Tina Girouard, Suzanne Harris, and Rachel Lew with

an original investment by Goodden. FOOD can be seen as a "political, economic and artistic project" evolving as a critic of the art world in the early 1970s (Morris 1999, p. 21). In addition to the regular, eclectic menu, the restaurant hosted special artist-cooked, themed dinners, like Matta-Clark's Bone Meal, which included "a variety of bone-based dishes" like aspic and oxtail soup. At the end of the meal, the bones were washed, drilled through, and strung as necklaces for the diners to wear (Morris 1999, p. 29). Several other projects were created at the restaurant or were inspired by it, like artist **Robert Kushner's** fashion show performance "Robert Kushner and Friends Eat Their Clothes" (1973). Kushner, who worked at Food at the time, acquired much of the raw materials for the "cloths" the performers wore through the restaurant. Goodden reflected that the restaurant, and much of the food work created there, was inspired by an atmosphere of new and experimental changes in the art world at the time and the search for new modes of expression, different types of spaces, and new materials (Morris 1999).

Rirkrit Tiravanija surprised visitors to a show's opening by serving a Thai curry instead of displaying artwork. He was concerned with institutional critique and his Untitled (Free) in 1992 was a way to use a new medium to take this critique further and combine it with his unique set of interests. Tiravanija did not only subvert the gallery experience by serving a strong smelling, yellow curry instead of displaying art, he also did so in the entryway to the gallery, a kind of "nonspace." Tiravanija explores the social interaction around the consumption of food. He says "...it's really not so much about coming to see things, but to be in it. [...] you're in it and the meaning is made through you. I think it's a different way of experiencing art in that sense. It's not art as life, it's different" (Trippi 1998, p. 156). Tiravanija locates himself as both continuing the work of earlier avant-garde artists, exploring the relationship between art and life, and questioning it. The experience, the interaction between the diners in the space using food as a frame, is the focal point of his work.

Mimi Oka and **Doug Fitch** chose the term Orphic to describe their artistic work. They refer to themselves as "sustenance artists, making works of art in edible media" (http://orph.us viewed 2012). Orphism was an avant-garde art movement that focused on abstract painting, highlighting the notion of painting for its own sake, not as a representation of anything else, and on the artist's ability to create a sensuous experience. Fitch and Oka perceived their work with food in the same terms, exploring food as a medium for its own sake and creating edible objects and later culinary events inspired to a degree by the Futurist Cookbook, like A Night of Seating and Eating Color (Tokyo, 1996), Edible Still Life in Clay (Tokyo, 1998 and NY, 1999), or Ile Flottante (France, 2000). In *Good Taste in Art* (1999 and 2000), the artists created handmade, colorful pasta that was then composed into framed pictures. The painting were displayed in a gallery where the audience could purchase them and then choose whether they would rather take their new acquisition home or take it next door, where chef Daniel Boulud would cook and sauce it for them to consume on the spot. In this project, Oka and Fitch involved their audience in the work directly, forcing them to make decisions that highlight their culpability in the process of consumption.

Composer **Fast Forward's** musical pieces using kitchen sounds are directly inspired by John Cage's work with found sound. Forward created musical compositions from a variety of found sound, incorporating chance elements into his work. In recent years, he has devoted more attention to work centered on sounds derived from cooking and the kitchen environment, like Feeding Frenzy (1999 and on) and Musique a-la-Mode (2008, 2009), where the sound can be directly linked to the perceived action of the performers (Kirshenblatt-Gimblett 2007, p. 83).

Finally, to mention just one of a younger generation of artists, Meat Poem #6 (Man Becoming Machine Chew to the Future) by Bradley Chriss (2010) can be seen as a direct descendent of the Futurists in both its interest in machines and technology and in its shock value: in this live performance and video work, Chriss stuffed raw, ground meat into his mouth, chewed it several times, and

spit it into a sausage skin. The sound of his breathing and chewing was amplified to provide the score. Chriss's work highlights both the ongoing relevance of the Futurists work and the constant evolution and reexamination of the interaction between artists, audience, and food and consumption.

Avant-Garde Culinary Practice

Historically, culinary creations could not qualify as artistic creations since in order to qualify as Art required the creation have no utilitarian value and that it would have a lasting presence allowing its study and appreciation for years to come. Culinary creations would obviously be excluded from such a definition. However, modern art forced a change in what we perceive to be a work of art. From Dada's ready-mades to performance work, a new definition of art was required to encompass these new modes of expression.

John Dewey's theory of aesthetic experience asserts that an aesthetic experience is based on interaction and that ordinary experiences in everyday life could be appreciated as aesthetic experiences, insisting that traditional classifications of "art" hinder our appreciation and understanding of new forms (Dewey in Kuehn 2005). This is particularly relevant as we think of the experience-centered work of Fluxus and much of the other work described above. It is also helpful as we think through the understanding of certain culinary creations as art.

Chef Ferran Adria's work has been publicly marked as art by his inclusion in the 2006 Documenta art fair in Germany. After considering several options of how to present his "art," Adria and his team decided that a true experience of elBulli art is dinner at elBulli. During the 100 days of Documenta, two visitors a day came and dined at elBulli. Rather than justify Adria's work as art (that has already been established by the fact of the invitation to participate), he would show "that cooking is cooking," that he is not a sculptor or a performer. Adria's Documenta team asserts that cooking is a unique medium governed by its own strict set of rules (Hamilton and Todoli 2009). Central among these rules is that the food needs to be delicious (a restriction that does not apply to artists working in this medium as many of the Futurist "formulas" demonstrate). Furthermore, cooking is multisensory and dishes must engage all five senses. It is also tied to a particular location and the dining experience is a total one, including all aspects of the restaurant. Finally, it is important to note that a restaurant is a business; unlike other artists, chefs need to run a sustainable business. Following these rules, this branch of the arts has its own avant-garde movement, one that tests the boundaries of traditional culinary practice and breaks new ground with experimental, innovative work.

Adria and his team examine the concept of avant-garde cuisine, defining it as a cuisine that is "most modern" at the time, "one which opens up new horizons," but find other concepts more useful to describe their work, like "technique-concept cuisine" in 2004: "a type of creative cuisine in which the chef aims not only to make a new recipe, but also to create a new concept or invent a new technique that will open up new horizons for his own style and for cooking in general" (Adria et al 2005, pp. 176–177). In 2008, Adria preferred the label "techno-emotional cuisine" (Myhrvold 2011). Significantly, Adria and his team think through these terms and engage in an ongoing process to classify and frame their work, relying on tools from both the sciences and the arts. Nathan Myhrvold makes a case for defining Adria's cooking as the first true Modernist Cuisine, claiming the key to the Modernist project in the arts is in the dialog between artist and audience, a dialog that Adria creates with the diner at elBulli. Myhrvold demonstrates that among Adria's goals are the impact of questions like "did the food make people think?" Did it engage them emotionally? (Myhrvold 2011, pp. 17–18).

Carolyn Korsmeyer argues that the most significant element in appreciating food as an aesthetic category lays in its "meaning-bearing qualities that give food its cognitive significance," positioning the subjective pleasure we derive from food as secondary (Korsmeyer 2008). A significant element in the work of Adria, as well as several other new or Modernist chefs, is that they are conscious of these "meaning-bearing" properties and employ them

deliberately in their creations to give the diner pause and make her think.

Heston Blumenthal writes in The Fat Duck Cookbook "...a multi-sensory approach to food [,i]f it's done sensitively, it's not about turning the restaurant into a lab and the diners into guinea pigs. It's about creating a framework and canvas upon which each person paints their own images, memories and emotions" (Blumenthal 2008, p. 212). Adria in particular has systematically examined, documented, and analyzed his work over the years at elBulli. In a reflection on deconstruction he says: "This deconstructed dish will keep its essence and will still be linked to a culinary tradition, but its appearance will be radically different from the original. For this game to be successful, it is essential that the diner has a gastronomic memory, since the absence of references turns the concept of deconstruction into new 'construction' based on nothing" (Adria et al in Myhrvold 2011). In this, Adria is like the artists described above; his work has meaning in the context of previous work in the field. He reacts against it or pays homage to it, but in order to fully understand his creation, the diner must have a prior knowledge and "read" the work as part of a historical development.

Chefs like Heston Blumenthal and Grant Achatz, among others, share with Adria not only the sophisticated methods of preparation and necessary technology – these are but the tools they employ in creating their dishes – but also a way of thinking about their dishes conceptually. They are not only looking for new and pleasing flavor combinations and textures but also for ways to provoke an emotional and/or intellectual response in the diner, as seen in a poster on the kitchen wall at Achatz's Alinea: "capture spring. What is it? New, Fresh, Ice. Sprouts, delicate, gradual" (Max 2008). Other examples include Adria's *Thaw* (2004) reflecting on a natural phenomenon, Blumenthal's *Sound of the Sea* (2007), presented with a small listening device inside a shell with a specially recorded soundtrack, and Achat'z *Tomato* (2008), which makes the diner pause and rethink that particular product.

Most significantly, these chefs are constantly trying to innovate and surprise their diners. Much like the artists discussed above, Modernist chefs control and shape the total dining experience, engage all the senses, and create work that surprises and even shocks. They react against previous traditions and strive to make the diner pause and think and to reexamine things they may have taken for granted or disregarded.

Summary

The changes in the food world in recent years have made an impact on the way artists employ food in their work today. As the chef becomes more like an artist and the restaurant becomes a site for unexpected surprises and multisensory experiences, artists turn to food with new insights and interests. Since one of the hallmarks of the avant-garde is the strong presence of an ideological agenda, it seems a relevant question to end within the context of this entry. Like many avant-garde artists, it seems the strongest ideology common to these chefs is the search for innovation, the suspicion and reexamination of all previous rules and traditions, and the openness to inspiration from a variety of cultural and disciplinary sources. This ideology has powerful implications beyond the restaurant or the gallery. The growing importance of non-Western cultures and traditions and the questioning of habitual hierarchies and institutions, particularly when experienced experientially – literally ingested, can be a very effective tool for change. It remains to be seen if the kitchen will follow in the steps of the art world to include more diverse voices beyond those of white men, as part of its deconstruction of tradition.

Cross-References

- ▶ Aesthetic Value, Art, and Food
- ▶ Food-Body Relationship
- ▶ Molecular Gastronomy

References

Adria, F., Soler, J., & Adria, A. (2005). *ElBulli 2004*. Cala Montjoi: ellbulli Books.

Blumenthal, H. (2008). *The fat duck cookbook*. London: Bloomsbury.
Bürger, P. (1984). *Theory of the Avant-Garde* (trans: Shaw, M.). Minneapolis: University of Minnesota Press.
Chemberlain, L. (1989). Introduction. In F. T. Marinetti (Ed.), *The futurist cookbook* (trans: Brill, S.). San Francisco: Bedford Arts.
Delville, M. (2008). *Food, poetry and the aesthetics of consumption*. New York/London: Routledge.
Hamilton, R., & Todoli, V. (2009). *Food for thought, thought for food*. Barcelona/New York: Actar.
Higgins, H. (2002). *Fluxus experience*. Berkeley/London: University of California Press.
Kirshenblatt-Gimblett, B. (2007). Making sense of food in performance. In S. Banes, A. Lepecki, S. Banes, & A. Lepecki (Eds.), *The senses in performance*. New York/London: Routledge.
Korsmeyer, C. (2008). Taste, food, and the limits of pleasure. In R. Schsterman & A. Tomlin (Eds.), *Aesthetic experience*. London/New York: Routledge.
Kuehn, G. (2005). How can food be art? In A. Light & J. M. Smith (Eds.), *The aesthetics of everyday life*. New York: Columbia University Press.
Marinetti, F. T. (1989). *The futurist cookbook* (trans: Brill, S.). San Francisco: Bedford Arts.
Max, D. T. (2008). A man of taste. *The New Yorker*.
Morris, C. (1999). *Food: An exhibition by White Columns, New York*. Münster: Westfälisches Landesmuseum für Kunst und Kulturgeschichte.
Myhrvold, N. (2011). The art in gastronomy: A modernist perspective. *Gastronomica, 1*(1), 13–23.
Novero, C. (2010). *Antidiets of the avant-garde: From futurist cooking to eat art*. Minneapolis/London: University of Minnesota Press.
Trippi, L. (1998). Untitled artists' projects by Janine Antoni, Ben Kinmont, Rirkrit Tiravanija. In *Eating culture* (pp. 132–160). New York: State University of New York Press.

Food Animal Production, Ethics, and Quality Assurance

Candace Croney[1] and Raymond Anthony[2]
[1]Center for Animal Welfare Science, Purdue University, West Lafayette, USA
[2]Department of Philosophy, University of Alaska Anchorage, Anchorage, AK, USA

Synonyms

Agriculture; Animal welfare; Quality; Safety; Social responsibility; Values

Introduction

As the need increases for sustainable methods of feeding the growing world population, questions have emerged about the quality and safety of foods currently being produced in affluent, developed nations. Various studies indicate that with increasing affluence, consumers tend to shift their focus from food accessibility to food safety, quality, and ethical and social dimensions that are of importance to them (FAO 2009; Viaene and Gellynck 1997; Botonaki et al. 2006). Consumers with continuous access to food expect the products they purchase to be safe, nutritious, inexpensive, and high in quality and consistency (Beekman 2008), and substantial portions can afford to scrutinize the methods by which food is produced.

A number of reasons beyond relative affluence underlie such changes in consumer interest. Aside from the increasingly global nature of food production and trade and decreases in consumers' sense of connection to their food and their understanding of how it is produced, food safety scares, while relatively infrequent, are still a major source of concern. For example, high numbers of people still become ill from foodborne pathogens such as *Salmonella*, *Campylobacter*, and *E. coli* O 157 (Rocourt et al. 2003), and food recalls due to safety and quality issues are regularly reported. In addition to occasional food safety scares, recent UK discoveries of beef products tainted with horsemeat and animal abuse scandals occurring in the USA and abroad have raised concerns about the quality of care and treatment of agricultural animals used for food production routinely received. Further, conflicting information on the human health implications of the use of antibiotics and other technologies used in food animal production (Rollin 1995; Thompson 2008) as well as various reports of resource depletion and other negative environmental impacts of food animal production have helped to undermine consumer trust in the safety and quality of foods of animal origin (Ilea 2009; Wright and Middendorf 2008; Scruton 2004). The basis, therefore, for demands for food quality assurance is multifactorial and

reflects both ethical and scientific concerns about modern food animal production and its societal impacts.

Ethical Dimensions of Food Quality

Food "quality" can be somewhat difficult to characterize as it refers to subjective as well objective characteristics upon which consumers have varying ideas and priorities. Positive perceptions of food quality generally pertain to those features consumers find desirable. As such, food safety is inextricably linked to quality, since presumably consumers find safety in foods to be a desirable attribute. However, beliefs about food quality are increasingly tied to "credence attributes" or qualities of a product that are invisible to the consumer both before and after the purchase (Grunert 2005) such as the standard of care provided to animals used for food or the sustainability of the production method used. Because qualities such as these cannot be verified at the point of purchase (and it is often difficult to do so afterward), the capacity to meet and verify public expectations in these dimensions becomes a challenge.

Nonetheless, the ethical dimensions of food quality assurance (e.g., distributive justice concern such as the ways in which animals and people are treated, fair trade, or the broader environmental impacts of food production) appear to be of particular interest currently to consumers in western developed nations and elsewhere. Over the past decade, shifts in public interest toward "ethically responsible" food and "food activism" have become evident. Such interests are reflected in the growth of locavores, animal protectionists, environmentalists, and members of the human health community opposed to conventional, industrialized animal agriculture, which has become the predominant model of animal production in developed western nations. Singer and Mason (2006) describe this movement as "ethical consumerism," wherein people actively seek out food production systems that align with their values. This type of consumer behavior is focused on procuring foods that do minimal harm to society and to the environment. Consumers with such interests tend to favor extensive production systems and are more inclined to seek labels with implied credence attributes such as "traditional," "organic," and "natural," (Harper and Makatouni 2002) because they believe them to be of higher quality and safety and perhaps perceive them to be more socially responsible (Croney et al. 2012). Studies indicate, for instance, that some consumers may associate organic production with positive attributes such as "chemical-free," "healthier and more nutritious," "earth-friendly," and "fresh" (Raab and Grobe 2005). Consumers may also use animal welfare as an indicator of food quality and safety and in fact have been reported to buy organic food for these reasons (Harper and Makatouni 2002).

Clearly, the desire to seek out products with credence attribute labels is indicative of interest in discerning conventionally produced foods from alternatives that are perceived to be superior both in terms of quality and social responsibility. In regard to the latter point, large-scale, intensive food animal production has become highly contentious in recent years. Recurrent issues of concern relative to intensive animal production range from the safety to healthfulness of foods produced using technologies such as genetically modified organisms (GMOs) and antibiotics, to implications for human health, animal well-being, and environmental integrity (Verdurme and Viaene 2003). Claims that foods, especially animal products derived from industrialized, intensive production may be unhealthful and of poorer quality than those produced by other means are ubiquitous. Much of the concern about the quality and safety of foods of animal origin relates to the industrialization and intensification of animal agriculture. In particular, large-scale confinement production is often viewed as problematic. Such systems facilitate optimization of certain production efficiencies and have resulted in an abundance of food made available at reasonably low costs, which permits most consumers to spend only a small percentage of their disposable incomes on food (Thompson 2013). However, intensification, which amounts to getting as much economic value possible, heightens

concerns that animal care and well-being may be sacrificed for economic expediency. The "high technology" typical of industrialization has facilitated mechanization and cost cutting in labor, housing, feeding, and processing advancements in farm animal production and has allowed the respective industries to confine large numbers of animals in highly capitalized facilities known as CAFOs or concentrated animal feed operations. These production systems are emblematic of large-scale swine and poultry facilities in many parts of the world, such as the USA.

CAFOs have been met with mixed reviews despite their success in meeting consumer demands for safe, consistent, and relatively inexpensive foods and although they offer some welfare benefits to animals, such as advancements in feed composition and delivery, and benefits derived from indoor housing, such as protection from predators, parasites, and inclement weather. A major concern raised by critics is that technological innovations have paved the way for animal producers to alter the environments in which agricultural animals are raised and housed and that this may result in impaired animal well-being (see also Fraser et al. 1997). For example, billions of commercially produced chickens and pigs are kept in vast numbers in environments which are more congenial to increased productivity rather than to their ethological or evolutionary histories (e.g., battery cages for laying hens and gestational crates for pregnant sows). Farmed animals maintained in husbandry situations described by Rollin (1995) as akin to putting "round pegs in to square holes" may lack the requisite adaptations to cope with their circumstances, thus jeopardizing their well-being. Given this, technologies such as antibiotics and vaccines are often employed to mitigate production diseases in contemporary large-scale production operations. However, such interventions do not address the behavioral impingements on the animals, necessitating further technological investment in housing and management strategies that more broadly support animal well-being in industrialized production.

Consequently, there appears to be growing concern not just about the types of technologies being utilized in food animal production but about the rearing conditions that necessitate their use in the first place. Numerous studies have shown that consumers have a positive willingness to pay for various animal welfare attributes, including opportunities for the animals to exhibit normal behavior or exercise and to have comfortable bedding and access to the outdoors (Norwood and Lusk 2011).

In addition to concern about the humaneness of on-farm practices, other environmental justice issues associated with industrial food animal production have also been highlighted as needing serious attention. These include the plight of farm workers vis-a-vis their health and safety, just wages, and various forms of discrimination (Wright and Middendorf 2008; Thompson 2007). For example, undocumented immigrants who have little to no protections themselves are at risk of being exploited by being poorly paid, offered little or nothing in the way of worker training or health care, and having limited protection under the law due to their status. Given these circumstances, it is not inconceivable that they might have little incentive to be proactive about performing rigorous animal care duties since they themselves may not be well cared for.

Environmental justice concerns also include how animal agriculture impacts water, air, biodiversity, species interaction and integrity, and land use. The whereabouts of CAFOs near rural communities, for example, raise distributive justice issues when the potential harms to community members (e.g., in terms of assaults to their health and quality of life) can put them at a gross disadvantage (Donham et al. 2007) relative to others who may derive benefits from CAFOs (e.g., access to affordable animal products) without being so immediately and adversely impacted.

Not surprisingly, given these concerns, assurance of the socio-ethical quality attributes of foods of animal origin has become a high priority for many consumers. For a number, it is a matter of ethical urgency related to substantive ethical issues such as consumer autonomy and procedural ethics issues like governance and trust in the global "foodscape." Consequently many companies, organizations, and nations have

developed quality assurance schemes as much to assuage public concerns as to ensure food safety and quality and lend potential marketing advantages to those utilizing them (Grunert 2002).

Quality Assurance in Regard to Animal Welfare

Various schemes have been designed to assure consumers of the safety and, thus indirectly, the quality of foods. As noted previously, although quality and safety often go hand in hand, quality is not an absolute characteristic and neither attributes (safety or quality) can be directly observed (Holleran et al. 1999). Given this, food quality assurance programs are generally aimed at guaranteeing that certain specifications or requirements have been met during production. One commonly accepted way of ensuring food safety is by the application of Hazard Analysis and Critical Control Points (HACCP) principles which have been designed and implemented to facilitate food safety. Noting HACCP application implies that the food will not cause harm as the principles help identify hazards, set control points and limits, establish monitoring procedures, and outline corrective measures (Wood et al. 1998). In theory, similar principles should be able to be applied to ensure other aspects of food quality of importance to consumers. Attributes that do not necessarily affect the safety or intrinsic qualities of the product, but which consumers might find of interest, include animal welfare or environmental preservation.

Why the Impetus to Incorporate the Well-Being of Agricultural Animals into Food Quality Assurance?

Protecting the well-being of agricultural animals is clearly becoming a global priority (Fraser 2008). The World Organization for Animal Health (OIE) guidelines are indicative of the increasing global level of concern for the welfare of farmed animals (http://www.oie.int/animal-welfare/animal-welfare-key-themes/) (OIE 2005). Treaties in Amsterdam and Lisbon (Article 13) (http://ec.europa.eu/food/animal/welfare/policy/index_en.htm) have clearly expressed protection and welfare provisions for "sentient" animals, and EU directives that have implications for national and trade policies mark more clearly guidelines for international land and sea transport as well as for euthanasia and humane slaughter. Recent developments also include national strategies like Australian's Animal Welfare Strategy, which outlines obligations to animals in our mixed communities. Countries like Canada and the USA have put forward documents that reinforce best practices (note AG Guide and NFACC Code of Practice http://www.agr.gc.ca/cb/index_e.php?s1=n&s2=2010&page=n100430c). A new animal welfare legislation in Scotland in 2012 that replaces the Welfare of Animals (Slaughter or Killing) Regulations of 1995 also reflects a growing desire for national standards and uniformity (http://www.food.gov.uk/scotland/news-updates/news/2012/dec/animal-welfare-scot#.UTvgdqUQgUU).

Animal welfare has an "evaluative-normative component" that is linked to the quality of life of the animals and from a production standpoint has correlates with other normative components such as food safety and quality, worker safety, and environmental quality (Fraser 1999). The conception of farm animal welfare is rooted in public concern for how animals are treated and raised in CAFOs (Harrison 1964) and today integrates the interests and concerns of different stakeholders, including producers, governments, NGOs, and animals.

Trade policies, national regulations, voluntary industry programs, citizen and consumer initiatives, advocacy group initiatives, and media coverage are different ways in which protection for (farm) animals' welfare is gaining attention globally. Some recent prominent drivers for change behind concern for animal welfare include consumer awareness of on-farm practices and social acceptability of standard practices; animal abuse scandals; changing relationships and image of food animals (they no longer are "creatures outside of society"); the prominence of animal welfare science and cognitive ethology and revelations regarding the capacities, behavior, and needs of animals; citizen pushback due to

relatively little legislative protection for farm animals in many countries and the lack of a national animal welfare code or standard in some; ballot initiatives and legislative activities like California's Proposition Two; influence from the European Farm Animal Protection policies on global trade partners; and pressure by special interest groups for industries to develop welfare guidelines and standards (Mench 2003; Croney and Millman 2007).

To that end, food quality assurance systems that at least partly address animal welfare and other latent ethical attributes of food production can take various forms. Regardless as to the nature of the quality assurance program, there must be documentation of the practices and procedures used, and verification and certification of these must occur (Holleran et al. 1999). For these reasons, most quality assurance schemes typically include the following components: traceability, certification, and auditing.

Traceability refers to the ability to track a food product all the way back through the supply chain (e.g., from a supermarket back to the producer). Traceability not only facilitates increased transparency in the supply chain but also provides an essential tool in the ability to identify and recall products that pose food safety or other consumer risks. Traceability can also be used to enhance certification programs. Certification programs, which are typically voluntary, involve meeting the requirements of an established standard for the production of food so that this can be conveyed to potential customers and other interested parties. In cases where certification is required for a producer or other entity to have their animals or products purchased by a customer or specially labeled and marketed, participating in a certification program may be only somewhat voluntary as the producer has little choice in complying if they hope to retain market access. For certification to be meaningful and credible, however, it is necessary to verify that the production standards have been met. Verification may be achieved through auditing or assessment. Third party auditing, wherein an entity with no vested interest in the outcome does the assessment, is considered the "gold standard" in verification and thus, facilitating consumer trust.

Assurance programs vary in regard to their scope and source of origin. For example, voluntary programs can include international quality assurance standards, such as ISO 9000, national farm-level programs, such as the USDA's National Organic Program, the UK's Farm Assured British Pigs, and private standards or certification programs developed and employed by major retail organizations, such as the National Council of Chain Restaurants (NCCR), the Food Marketing Institute (FMI), McDonald's, Burger King, Marks and Spencer, European Retail Good Agricultural Practices (EUREPGAP), and British Retail Consortium (Mench 2003; Mench et al. 2008; Trienekens and Zuurbier 2008). Recently, voluntary assurance standards that emphasize agricultural animal well-being have become a major source of contention as well as change for food animal production standards and thus will be the focus of the discussion. For a more comprehensive review of different types of quality assurance schemes in the UK and USA, refer to Bredahl et al. (2001) and Trienekens and Zuurbier (2008).

In the USA and other western developed nations, the impetus to address the animal welfare component of food animal product quality assurance has been market driven, involving niche marketing of "humanely raised" products (Mench 2003; Croney and Millman 2007). Thus, the last decade of food animal production has been marked by food processors and retailers establishing quality assurance via development of science-based guidelines/standards with an emphasis on animal care and welfare. Such standards usually include common areas related to meeting the animals' physical needs, and thus, basic for needs provision of food, water, shelter (including ventilation, lighting, and the thermal environment), and veterinary care will be outlined. Depending on the goals of the assurance scheme, for instance, for those attempting to better address animals' behavioral and psychological needs, attention may also be given to the type of housing that is permitted (e.g., the use of gestation stalls or battery cages), the amount of space allocated to animals whether they are kept singly or in groups, and whether or not enrichment is

required. In addition, the quality of animal handling and some aspects of management may be specified, including practices that are forbidden (e.g., tail docking, nontherapeutic use of antibiotics) or required (e.g., analgesia for painful practices, such as dehorning of cattle). Further, some programs will specify the types of euthanasia that are considered acceptable and who may perform them and how often animals must be monitored.

Such assurance programs serve dual purposes. First, they provide a means by which to document that a specific farm animal product indeed possesses the attributes of interest (e.g., higher animal care and welfare or environmental impact standards), which is particularly important when it is difficult or impossible for consumers themselves to verify that the respective conditions have been met. Second, when the on-farm management of animals is tied to other aspects of production, such as their transport and processing, a "Total Quality Assurance" program can potentially create greater assurance and coordination of the standards under which the animals have been reared. By doing so, consumers potentially have some reassurance that animals have been properly cared for from "farm to fork." Likewise, when production is integrated as is the case for US pork production, linking existing quality assurance programs such as those related to on-farm management of pigs (Pork Quality Assurance) to the transport of the animals (Transport Quality Assurance) can create multiple integrated points of reassurance and verification for consumers. In other words, they may facilitate coordination of the supply chain in industries which involve different sectors that are not necessarily controlled by one entity (e.g., a retailer), but still potentially impact the credibility of the claims associated with a particular quality assurance scheme.

Ethical Considerations Relative to Ensuring Animal Well-Being in Food Quality Assurance Programs

Those involved in animal production may view quality assurance via any of the available strategies – certification, traceability, or specialty labeling as a means not just of garnering consumer trust in an era of skepticism and concern about modern production but as a way of gaining some type of market advantage. Of course, gaining an advantage is contingent on consumer knowledge about and receptivity toward such programs (Botonaki et al. 2006). Further, creating challenges is the apparent incongruence between what consumers state they want and what they appear to support via their purchasing behavior (Olynk et al. 2010). These differences have been suggested to occur via a phenomenon wherein people act as citizens in articulating their preferences, but act differently as consumers at the point of purchase. It is still unclear though to what extent consumers, especially those in the USA, are motivated to purchase based on their awareness of product attributes such as better animal welfare practices on the farm. The economics literature, for example, suggests that the emphasis on the USA *consuming* public is misplaced. Concerns regarding animals really seem to be an outcome of voting rather than consumer choices as such. This data suggests that in the USA, the debate about food animal welfare seems to be occurring less at grocery stores and more in media forums and at ballot boxes (see Tonsor et al 2010). Some studies have shown that animal welfare is a key consideration for the European Union consumers in the broader context of environmental responsibility in food production. As discussed previously, these consumers look for labels associated with animal products perceived to convey higher ethical standards and rely on locally produced foods or those marketed as organic or "free-range" (Nilsson et al. 2004). However, consumer willingness to pay for welfare improvements is uncertain due to limited research and is not uniform (Norwood and Lusk 2011), especially in the USA. Moreover, the actual link between ethical values such as protecting animal welfare and organic food production methods may be weak and require verification.

Further, voluntary proprietary quality assurance in such a manner can be challenging. For example, these programs rely on shared economic interests between suppliers and retailers and can be patchy. Also, although scientists are

often instrumental in developing many of the retail schemes and standards (Mench et al 2008), it is sometimes unclear if the scientific information was critically balanced with insights from other stakeholders, including producers who are directly impacted. In some cases, it is unclear whether the standards are based on scientific justification. In others, political and economic factors may overwhelm scientific ones and conventional practices may prevail despite scientific consensus that might dictate otherwise. Arguably, in the case of animal welfare, an inherently philosophical area of public concern, science alone is not enough to inform our view on our ethical obligations toward animals. Science alone cannot show that certain technologies are in fact "bad" for animals' welfare, since what is "bad" or "good" will be influenced by one's value commitment about what makes a life go better or worse (Heleski and Anthony 2012). In the absence of universal standards, latent value systems will likely influence how standards are formed, interpreted, and employed (Mench et al. 2011).

Additionally, this sort of "market approach" has limited outreach since the initiative targets only a small percentage of the consuming public as a way to drive change in animal welfare. It may not be the approach for all countries, especially if local consumers are not well informed about animal welfare issues or do not have the means to pay more for "added-value" products. Moreover, companies based in developing nations may be at a disadvantage as they may not be able to meet all of the safety and quality assurance demands imposed by consumers in developed nations pushed by Western markets. They may lack the means to fully control and trace all aspects of production and distribution that are critical to meeting quality assurance goals while remaining globally competitive (Trienekens and Zuurbier 2008). Consequently, an issue that is likely to emerge as ethically problematic is the establishment by globally operated corporations of disparate standards (for animal care, workers, environmental impacts) for different parts of the world. While it is essential that such companies consider the cultural norms and logistical constraints of establishing universal standards for attributes such as animal welfare, having different standards operating simultaneously under one brand creates many challenges, including the potential to reflect inconsistent levels of corporate social responsibility within the brand. Increasingly, corporate responsibility is viewed as more broadly encompassing than just business ethics; thus, there is a growing trend to hold corporations morally and socially accountable for their various impacts on communities, the environment, and even on human rights by diverse stakeholders (Maloni and Brown 2006). It is therefore likely that in the future, quality assurance programs may be scrutinized and potentially used as indicators of global corporate social responsibility.

Summary

Quality assurance in food animal production has become a necessity, and the factors that influence perceptions of "quality" are rapidly expanding. Ensuring animal welfare is an increasingly essential component of sustainable, socially responsible production for those operating in developed nations and will presumably become so for those that are still developing.

In regard to animal welfare, quality assurance programs involving standards aimed at addressing animal care and well-being will need to address questions related to what is a good quality of life or baseline standard for morally acceptable animal welfare. Even voluntary standards programs should have teeth and be nonambiguous and scientifically informed by advisory groups that are represented by independent experts (scientific and nonscientific, e.g., ethicists and economists), animal advocacy groups, members of the industry, and the public. They should be validated, balanced (i.e., consider the impacts on animals, environment, and people), consistent, effective for addressing animal welfare concerns, practical for producers and animal caretakers to adopt and execute, and sustainable (Croney et al. 2012). Public trust in and social acceptability of these standards is important, and thus, the

viability of these programs should not be a function of the viability of the sponsoring body nor merely tied to their philosophy or funding at the time.

Perceptions of agricultural animal food quality involve consideration about which animal production systems are supported in our local and global communities and have inherent social, ethical, and environmental justice implications. A central ethical challenge will be to promote equitable distribution of benefits and burdens for all those impacted by the animal agricultural policies and production systems that are adopted. Consequently, future development and refinement of food quality assurance programs may facilitate deliberation about (1) the nature and impact of vertical integration of different production systems, like swine and poultry; (2) the scale and effects of different farm sized on the behavior (including social) of animals, on local communities, workers' health and safety, public health, efficient use of land and water, energy policy, and food security; and (3) the relationship between science, ethics, and values in promoting and ensuring humane standards for animal agriculture.

Cross-References

- ▶ Agricultural Ethics
- ▶ Animal Welfare: A Critical Examination of the Concept
- ▶ Bioethics at Purdue University
- ▶ Centre for Animal Welfare and Ethics
- ▶ Corporate Farms
- ▶ Corporate Social Responsibility and Food
- ▶ Environmental Ethics
- ▶ Environmental Justice and Food

References

Beekman, V. (2008). Consumer rights to informed choice on the food market. *Ethical Theory and Moral Practice, 11*, 61–72.

Botonaki, A., Polymeros, K., Tsakiridou, E., & Mattas, K. (2006). The role of food quality certification on consumers' food choices. *British Food Journal, 108*, 77–90.

Bredahl, M. E., Northen, J. R., Boecker, A., & Normile, M. A. (2001). Consumer demand sparks the growth of quality assurance schemes in the European food sector. In A. Regmi (Ed.), *Changing structures of global food consumption and trade* (pp. 90S102). Agricultural and trade report no. WRS-01–1, Washington, DC: USDA/ Economic Research Service.

Croney, C., & Millman, S. (2007). The ethical and behavioral bases for farm animal welfare legislation. *Journal of Animal Science, 85*, 556–565.

Croney, C. C., Apley, M., Capper, J. L., Mench, J. A., & Priest, S. (2012). Invited paper. The ethical food movement: What does it mean for the role of science and scientists in current debates about animal agriculture? *Journal of Animal Science, 90*(5), 1570–1582.

Donham, K. J., Wing, S., Osterberg, D., Flora, J. L., Hodne, C., Thu, K. M., & Thorne, P. S. (2007). Community health and socioeconomic issues surrounding concentrated animal feeding operations. *Environmental Health Perspectives, 115*(2), 317–320.

Food and Agriculture Organization of the United Nations (FAO). (2009). *The state of food and agriculture 2009: Towards a responsible livestock future*. Rome: Food and Agriculture Organization of the United Nations (FAO).

Fraser, D. (1999). Animal ethics and animal welfare science: Bridging the two cultures. *Applied Animal Behaviour Science, 65*, 171–189.

Fraser, D. (2008). *Understanding animal welfare: The science in its cultural context*. Oxford: Wiley.

Fraser, D., Weary, D. M., Pajor, E. A., & Milligan, B. N. (1997). A scientific conception of animal welfare that reflects ethical concerns. *Animal Welfare, 6*, 187–205.

Grunert, K. G. (2002). Current issues in the understanding of consumer food choice. *Trends in Food Science & Technology*, *13*, 275–85.

Grunert, K. G. (2005). Food quality and safety: Consumer perception and demand. *European Review of Agricultural Economics, 32*, 369–391.

Harper, G. C., & Makatouni, A. (2002). Consumer perception of organic food production and farm animal welfare. *British Food Journal, 104*, 287–299.

Harrison, R. (1964). *Animal machines: The new factory farming industry*. London: Stuart.

Heleski, C., & Anthony, R. (2012). Science alone is not always enough: The importance of ethical assessment for a more comprehensive view of equine welfare. *Journal of Veterinary Behavior: Clinical Applications and Research, 7*, 169–178.

Holleran, E., Bredahlb, M., & Zaibetc, L. (1999). Private incentives for adopting. Food safety and quality assurance. *Food Policy, 24*, 669–683.

Ilea, R. C. (2009). Intensive livestock farming: Global trends, increased environmental concerns, and ethical solutions. *Journal of Agricultural and Environmental Ethics, 22*, 153–167.

Maloni, M. E., & Brown, M. E. (2006). Corporate social responsibility in the supply chain: An application in the food industry. *Journal of Business Ethics, 68*, 35–52.
Mench, J. A. (2003). Assessing animal welfare at the farm and group level: A United States perspective. *Animal Welfare, 12*, 493–503.
Mench, J. A., Sumner, D. A., & Rosen-Molina, J. T. (2011). Sustainability of egg production in the United States – The policy and market context. *Poultry Science, 90*, 229–240.
Mench, J. A., James, H., Pajor, E. A., & Thompson, P. B. (2008). The welfare of animals in concentrated feeding operations. In *Report to the Pew Commission on industrial farm animal production*.
Nilsson, H., Tunçer, B., & Thidell, A. (2004). The use of eco-labeling like initiatives on food products to promote quality assurance – Is there enough credibility? *Journal of Cleaner Production, 12*, 517–526.
Norwood, F. B., & Lusk, J. L. (2011). *Compassion by the pound: The economics of farm animal welfare*. New York: Oxford University Press.
OIE. (2005). *Terrestrial animal health code*. Paris: World Organization for Animal Health (OIE).
Olynk, N. J., Tonsor, G. T., & Wolf, C. A. (2010). Consumer willingness to pay for livestock credence attribute claim verification. *Journal of Agricultural and Resource Economics, 35*, 261–280.
Raab, C., & Grobe, D. (2005). Consumer knowledge and perceptions about organic food. *The Journal of Extension, 43*(4), 4RIB3.
Rocourt, J., Moy, G., Vierk, K., & Schlundt, J. (2003). *The present state of foodborne disease in OECD countries food safety department*. Geneva: WHO.
Rollin, B. E. (1995). *Farm animal welfare: Social, bioethical and research issues*. Ames: Iowa University Press.
Scruton, R. (2004). The conscientious carnivore. In S. F. Sapontzis (Ed.), *Food for thought: The debate over eating meat* (pp. 81–107). Amherst: Prometheus Books.
Singer, P., & Mason, J. (2006). *The ethics of what we eat: Why our food choices matter*. Emmaus: Rodale.
Thompson, P. B. (2007). Agriculture and the working-class political culture: A lesson from the grapes of Wrath. *Agriculture and Human Values, 24*, 165–177.
Thompson, P. B. (2008). *The ethics of intensification: Agricultural development and cultural change* (The international library of environmental, agricultural and food ethics). Dordrecht: Springer.
Thompson, D. (2013). Cheap eats: How America spends money on food. http://www.theatlantic.com/business/archive/2013/03/cheap-eats-how-america-spends-money-onfood/273811/. Accessed 22 Mar 2013.
Tonsor, G. T., Mintert, J. R., & Schroeder, T. C. (2010). US Meat demand: Household dynamics and media information impacts. *Journal of Agricultural and Resource Economics, 35*, 1–17.
Trienekens, J., & Zuurbier, P. (2008). Quality and safety standards in the food industry, developments and challenges. *International Journal of Production Economics, 113*, 107–122.
Verdurme, A., & Viaene, J. (2003). Exploring and modeling consumer attitudes towards genetically modified food. *Qualitative Market Research: An International Journal, 6*, 95–110.
Viaene, J., & Gellynck, X. (1997). Consumer behaviour towards light products in Belgium. *British Food Journal, 99*, 105–113.
Wood, J. D., Holder, J. S., & Main, D. C. J. (1998). Quality assurance schemes. *Meat Science, 49*(Suppl 1), S191–S203.
Wright, W., & Middendorf, G. (Eds.). (2008). *The fight over food: Producers, consumers, and activists challenge the global food system*. University Park: Pennsylvania State University Press.

Food Assistance and International Trade

Ryan Cardwell
Department of Agribusiness and Agricultural Economics, University of Manitoba, Winnipeg, MB, Canada

Synonyms

Food aid

Introduction

The donation and delivery of food assistance is widely viewed as a purely humanitarian endeavor; however, the historical motivations for donor-countries' food assistance policies are often self-serving. Also, food assistance can generate negative commercial and humanitarian effects in recipient-country markets. Such complications have led to the entanglement of international commercial trade policies and governing architectures with the humanitarian domain of food assistance. Several decades of debate and analysis of these issues have been productive, however, and food assistance policies have evolved to better serve those most in need.

It is worth making a clarification on terminology before proceeding. "Food aid" has traditionally been used to describe "the international sourcing of concessional resources in the form of or for the provision of food" (Barrett and Maxwell 2005). Recent innovations in the way that these resources are provided have led to the use of "food assistance" as a more general descriptor that includes cash-based donations and food vouchers, in addition to traditional in-kind food shipments. This entry uses food assistance as a general descriptor and specifies otherwise when referring to in-kind commodity shipments or other forms (cash, vouchers) of assistance.

Donors

The overlap of food assistance and international trade dates back to the first national programs of the 1950s. Canadian and US domestic farm support programs generated surplus production, and national governments sought markets into which these commodities could be disposed without triggering negative price effects in home markets. US food assistance programs, in particular, were entangled with US exports because most assistance shipments were made under the authority of the United States Department of Agriculture (USDA) instead of the Unites States Agency for International Development. Farm support programs that were paid for by the USDA generated large public stocks of cereal grains that had to be either stored at public expense or disposed of in external markets where US exports would not normally compete. Public Law 480 was established to govern US food assistance policies, and Title I of this program was the largest outlet for US commodities for several years. Food assistance through Title I served two policy objectives: to dispose of public stocks and to develop prospective markets for future US commercial exports. Policymakers believed that providing free, or discounted, cereal grains to consumers in developing countries could condition local tastes for US-produced cereal commodities and create future export markets for US producers. The ethics of attempting to change traditional tastes through such means are unclear, but there is no convincing evidence that this strategy was successful (Barrett et al. 1999). The market development objective of US food assistance has subsided in recent years, and most US assistance is now channeled through Title II (commodities that are provided to meet humanitarian needs). A large share of US food assistance was historically sold on concessional terms instead of provided in grant form. Such concessions often took the form of export credit guarantees that offered favorable financing terms to buyers. This practice has been abandoned, and all US shipments have been in grant form in recent years (World Food Programme 2012).

Other major donor countries also used their food assistance programs to unload domestic agricultural surpluses. The European Union's (EU) Common Agricultural Policy (CAP) provided generous support to producers and generated large domestic surpluses. A large share of European Commission (EC) food assistance was drawn from these government-held stocks in the early years of EC programs.

Japanese food assistance programs are closely linked to international trade policies because of the country's obligations under the World Trade Organization (WTO) Agreements. Japan agreed to allow a minimum volume of rice imports after the implementation of the Uruguay Round Agreement on Agriculture (URAA) in 1995. This commitment was quickly followed by a jump in in-kind donations of rice from zero to an average of 185,000 mt per year (World Food Programme, n.d.) thereafter. Japan appears to be using its in-kind food assistance shipments as an outlet for some of the rice that it has agreed to import under its WTO agreement obligations, instead of allowing the imported rice to enter the Japanese market.

Canadian food assistance was traditionally not linked to international trade policy objectives, but procurement policies were captured by domestic agricultural interests. The Canadian Treasury Board (responsible for funding official Canadian food assistance programs) tied procurement of

donated commodities to the Canadian Wheat Board. The Canadian International Development Agency (responsible for allocating Canada's official food assistance budget) estimates that they paid substantially more to the Canadian Wheat Board than would have been the case if commodities were purchased on international markets (Canadian International Development Agency 1998). The fallout of this tying program was fewer, and smaller, donations from Canada.

Food assistance policies that tie commodity procurement to donor-country agricultural interests amount to implicit subsidies to domestic producers and processors. The result of such policies is that a portion of governments' international development budgets are used to support domestic agricultural interests. The ethics of such practices are questionable, and the debate over these policies has led to important changes in food assistance policies in most donor countries. Most donors have weakened the links between international food assistance policies and domestic agricultural interests. Canada completely untied its food assistance procurement, and almost all food that is purchased with Canadian funds is now purchased in local or regional markets. The EC also provides almost all of its food assistance in cash to be spent in local and regional markets.

The USA is the important exception to this trend. Changes in domestic farm support programs have stemmed the acquisition of public stocks, but procurement remains closely tied to domestic sources. The value of US food assistance programs – approximately US$1.7 billion in 2010 (Ho and Hanrahan 2010) – is not large enough to provide significant subsidies to US primary agricultural producers, but there remains an "iron triangle" (Barrett and Maxwell 2005) of interest groups that are motivated to preserve the current system. The first point on this triangle is a corps of US processing companies that submit proposals in response to government tenders for commodities. These requests are mostly limited to US-based firms and are generally uncompetitive. The Guardian (Provost and Lawrence 2012) reports that three firms provided 70 % of US food assistance commodities in 2010–2011. The second point consists of US-based shipping companies who benefit from uncompetitive granting of transport contracts that are restricted to US-flagged vessels. Shipping costs on such contracts are high and are implicit subsidies to US shipping firms (Williams 2006). The third point on the triangle consists of NGOs that receive in-kind food assistance as a form of budgetary support from the US government. These NGOs sell the food ("monetize") in developing-country markets and use the proceeds to support their activities. There is concern among these NGOs that reductions to in-kind donations would not be offset by higher cash donations; congressional leaders and lobby groups have stated that they would not support the continuation of current budgetary support levels for food assistance programs if the restrictive tying policies were relaxed. Smaller shipments from the USA would significantly affect global food assistance flows because the USA provides more than one-half of all commodities (by volume) in most years.

The transition from in-kind to cash-based food assistance has led to a remarkable shift in procurement patterns. The share of food assistance purchased either locally (in recipient countries) or regionally (in neither donor nor recipient countries) has jumped from approximately 10% to 70% over the past 20 years – this share is above 80 % if US shipments are excluded. Locally and regionally procured food assistance (LRP) provides flexibility to food assistance organizations and is often preferred to donor-country procurement for several reasons. First, locally procured food can typically be transported to recipient regions much faster than donor-sourced food. Second, it can be easier for donor organizations to meet their commitments to provide "culturally appropriate" food if commodities are purchased near recipients. This commitment is viewed by many implementation organizations as an ethical response to the historical use of food assistance as a tool to change local tastes in hopes of developing export markets. Finally, LRP commodities can be cheaper than food that is purchased through uncompetitive bids in donor countries.

Local and regional procurement has the potential to generate temporary demand surges in small markets. Such demand, though beneficial for traders and local producers, can increase local prices and reduce consumers' access to food. Most food assistance organizations are cognizant of this risk and make efforts to mitigate negative effects. Concerns about contract defaults and quality/safety standards have prevented food assistance agencies from buying from smallholders and local markets (Tschirley and del Castillo 2007); most LRP contracts are struck with commercial traders.

The movement to LRP has been paralleled by a shift in the categories of food assistance being delivered. Program food assistance is traditionally bilateral aid; this is donated to recipient-country governments and then sold in local markets; proceeds provide budget support to the recipient government. Project assistance is also sold in recipient markets (monetized), and proceeds are used to pay for development projects. The share of food assistance volume that is made up by program and project aid has fallen from approximately 85–25 % over the past 20 years (World Food Programme, n.d.). Emergency food assistance, which is delivered in periods of humanitarian crises, has become the primary type of food assistance and now accounts for almost three-quarters of shipments by volume (World Food Programme, n.d.). This transition is the result of evolving priorities in donors' food assistance policies. Program food assistance was historically the largest category and was used primarily as budget support for recipient-country governments. Such donations often reflected strategic political and diplomatic, instead of humanitarian, concerns. The most prominent example of this was the US donation of over three million metric tons (mt) of grain to Russia in 1993 and 1999 to encourage stability and strengthen ties with the new leadership. The increased use of emergency food assistance reveals the stronger emphasis that donors now place on the humanitarian objectives (i.e., reducing the incidence of acute hunger) of food assistance. Donor interests (such as export market development, strategic political concerns, and domestic agricultural interests) in allocating food assistance are becoming relics of the past, with the notable exception of US procurement policies.

Recipients

The inflow of noncommercially imported food, as donated assistance, has the potential to disrupt local markets in recipient countries. Such disruption can take the form of lower domestic prices and reduced imports. Nobel Laureate Theodore Schultz (Schultz 1960) questioned the ethics of disposing of US agricultural surpluses without regard for potential negative developmental effects in recipient markets. He formalized the potential negative effects on domestic prices through the description of disincentive effects on local producers; local producers may respond to lower prices by scaling back domestic food production. Surges of food assistance commodities can also displace commercial imports, thereby affecting trade flows. The potential for displaced commercial trade has framed much of the discussion about food assistance disciplines in WTO negotiations. The concerns about such effects are theoretically sound: an inflow of food will necessarily affect local market prices if it is not wholly additional consumption (i.e., the increase in food supply is not matched by an equivalent increase in food consumption). Observed income elasticities of food demand are less than one, so food assistance commodities cannot be wholly additional (Barrett and Maxwell 2005), and there will necessarily be price effects.

The magnitude of price effects depends on several factors, some of which have been investigated in empirical studies. Barrett et al. (1999) find that aid shipments do not significantly affect recipient-country production, but have a J-curve effect (initial decline, followed by longer-term increase) on commercial imports across a panel of 18 recipient countries. Other studies find mixed results, including negative production (Gelan 2007) and negative price effects (Tadesse and Shively 2009) in Ethiopia, and no significant production effects in Swaziland

(Mabuza et al. 2009). Such results cannot be generalized, however, because the effects of assistance shipments depend on the peculiarities of each case. A few broad lessons can be deduced, though. First, there is the potential for unintended negative consequences of food assistance shipments. Second, this problem is more likely to occur when commodities are monetized. Third, better targeting to those most in need reduces negative market price effects because such consumption is likely to be more additional than if the food is distributed to relatively better-off consumers. Recent developments in most donors' policies have reduced the probability of significant negative side effects. Implementation organizations are better targeting those most in need, and most donors (the USA notwithstanding) no longer allow the monetization of their donations.

International Agreements

The first formal international mechanism linking food assistance and international trade was the Food and Agriculture Organization's Consultative Subcommittee on Surplus Disposal (CSSD). The CSSD was convened in 1954 to oversee donor-country practices in an effort to mitigate the displacement of commercial imports. Donors agreed to report donations to the CSSD and were encouraged to maintain "usual market requirements" in donor countries. Usual marketing requirements were operationalized by comparing current year commercial imports to a five-year historical average. If imports fell below this average, then UMRs were not met. The CSSD had a commercial trade agenda, not a humanitarian agenda, and it did not affect the links between domestic agricultural interests and food aid policies in donor countries. Also, its guidelines were not enforceable and reporting requirements suffered from low rates of compliance.

The Food Aid Convention (FAC) was negotiated alongside the Kennedy Round international trade negotiations in 1967. Donor countries (current members are Argentina, Australia, Canada, EC, Japan, Norway, Switzerland, and the USA) committed to provide 4.5 million metric tons of grain each year to developing countries. The FAC contained lists of acceptable commodities and formulae for calculating the commitments in different commodities (e.g., maize, rice, and wheat). The FAC, like the obligations of the CSSD, had no enforcement mechanism, and some members did not meet their donation obligations in some years. But, unlike the CSSD, the FAC was motivated by humanitarian concerns. The FAC is fundamentally apolitical in that it does not set any guidelines for how recipients are to be determined; allocation decisions are left to donor countries. The FAC was renewed several times between 1967 and 2011.

A new FAC (now called the Food Assistance Convention) has been negotiated and is scheduled to take effect in 2013. Some commentators had advocated for a change in the measurement of commitments that would increase the incentives for donors to provide micronutrients. Also, the increased popularity of cash and voucher-based assistance programs led some to advocate for a new method of calculating donor obligations based on value instead of volume (e.g., commit donors to inflation-indexed value contributions instead of volume contributions). This suggested change was not incorporated, and the new FAC bears close resemblance to past versions.

Food assistance first entered the WTO set of agreements in the 1996 URAA. The URAA contains disciplines on a range of trade-related policies that are enforceable through the WTO's dispute settlement understanding (DSU), but references to food aid appear only as guidelines and are not enforceable through the DSU. These guidelines call for shipments to be untied from domestic procurement and defer to the CSSD reporting procedures. These guidelines did not affect food assistance policies in donor countries; in fact, the reduction in domestic support payments that followed the implementation of the URAA probably had more significant effects on food assistance. Large public stocks are no longer prominent features of domestic support programs, so the pressure for unloading surplus commodities has lessened. The URAA remains the

governing agreement between trading partners related to food and agricultural products.

The ongoing Doha Development Agenda (DDA) round of WTO negotiations has been framed by the increased assertiveness of developing countries, many of whom felt that they did not receive the developed-country market access promised to them in the URAA. Developing countries have pushed hard for special and differential treatment in the implementation of new disciplines and for increased flexibility to increase tariff barriers (Special Safeguard Mechanisms) in the face of import surges. Despite the title of "Development Agenda," the WTO agreements that are being negotiated fundamentally remain trade agreements, and there remain lingering concerns among competing food exporters that food assistance can displace commercial trade.

The DDA negotiations over food assistance can be understood through the lens of the ongoing dispute between the EU and the USA over export competition policies. US negotiators are seeking binding and effective disciplines on the EU's use of export subsidies in agricultural industries. WTO negotiations are reciprocal, and EU negotiators are, in turn, pushing for disciplines on export credit guarantees that the USDA provides to consumer nations. The USA has, until recently, provided some food assistance to recipients under favorable credit terms instead of in grant form. The DDA negotiations have settled on the construction of a "safe box" for food aid that would be exempt from export competition disciplines. The most recent draft modalities to emerge from the DDA negotiations (World Trade Organization 2008) define this safe box as containing food shipments that are provided in response to an emergency declaration by the recipient-country government, the United Nations, or a relevant humanitarian organization. Shipments that do not meet the safe box criteria, with a few exceptions, would be prohibited and subject to disciplines on export subsidies or export credit guarantees.

Observers have raised concerns about the ethics of constraining food assistance shipments with an international commercial trading agreement. Negotiators at WTO meetings are cognizant of these concerns, and draft modalities defer to humanitarian organizations with expertise in food security to determine when food assistance is needed. Such concerns may be immaterial, however, because it is unlikely that food assistance shipments will be affected by international trade agreements in the near term. Doha Development Agenda negotiations are stalled and are unlikely to be completed anytime soon. This means that the URAA will remain the document of record. Also, it is difficult to envision a situation in which a formal WTO case would be pursued against a donor country (Cardwell 2008). Negotiating countries are aware of the scorn that would be directed towards them if they were to pursue trade retaliation against a donor country. Negotiators also recognize that a WTO panel could consider the opinions of other interested parties when ruling on whether a shipment satisfied safe box criteria – it would not be difficult to find an interested party that could provide justification for a shipment ex post.

Other Issues

The food crisis of 2008 led to anti-trade policies in net food-exporting developing countries that generated a new type of problem for food assistance agencies. Governments in several countries imposed export restrictions on food in attempts to constrain domestic food price inflation – these restrictions included border taxes and export bans. Aid organizations, including the World Food Programme (WFP), reported that such policies threatened their ability to source commodities from LRP markets. The risk of encountering such barriers has been more relevant in recent years because of most donors' increased reliance on LRP commodities. World Trade Organization disciplines on export restrictions did not apply to the types of policies that were implemented over the past few years (Headey 2010), and DDA negotiations have not addressed this issue. Several developed countries have proposed an agreement between exporting countries (outside the

auspices of the WTO) that would exempt noncommercial, humanitarian food from future export restrictions. Most net food-exporting developing countries oppose such an agreement on the grounds that they have ethical responsibilities to prioritize the food security of their own residents. The reality is that food assistance purchases would typically be too small to affect domestic prices in source countries, but such decisions are inherently political and it is likely that anti-trade policies of this type will remain unchecked.

The allocation of food assistance across recipients has been controversial since the first national programs in the 1950s. The seemingly ethical method of allocating limited food assistance resources across recipients would be to deliver food to those recipients whose marginal benefit is largest; that is, target those most in need. Identifying "need" in this context is a complicated task, but there is evidence that recipient need has not been the only, or even the most important, determinant of food aid flows. Studies have identified non-humanitarian factors as being important drivers of donor allocation decisions; these include colonial ties between donor and recipient (Nunn and Qian 2010) and geographic proximity (Neumayer 2005). There have also been reports of the provision of food assistance being used as a bargaining chip in negotiations between the USA and North Korea about nuclear technology. Conditioning the delivery of food assistance on anything other than recipient needs presents serious ethical questions about the role of international assistance – should vulnerable populations be captive to international political considerations? Such questions are, however, becoming less relevant in food assistance allocation decisions. Multilateral assistance (i.e., delivered through the WFP) is more responsive to need than bilateral deliveries, and emergency assistance is more responsive to need than program and project assistance. The shares of food assistance that are multilateral and are emergency have been increasing for several years.

The emergence of genetically engineered (GE) crops has forced international trade concerns into the humanitarian arena of food assistance. There have been instances in which shipments of GE commodities were turned away in recipient countries, for example, Zambia's refusal of GE maize from the USA in 2002. There are several ethical considerations in such cases. The ethical standard set by the Codex Alimentarius (a joint effort between the World Health Organization and the Food and Agriculture Organization to provide and guide international food safety assessments) is that international food assistance shipments should meet the national safety regulations of the donor country (CODEX Alimentarius 2010). This requirement is satisfied in the case of GE maize, which is widely produced and consumed in the USA. Genetically engineered maize was rejected in Zambia, however, based on claims of health concerns for Zambian recipients. Certainly, it is the prerogative of recipients to decide on the suitability of food for their own consumption, but such concerns should be weighed against the ethics of turning away food (which has been deemed safe by international organizations and several countries) during periods of humanitarian crises.

There is also a strategic international trade concern that underlies the decision to accept or reject GE commodities as food assistance. The EU maintains a de facto ban on the importation of most GE food products, and developing countries have expressed concerns that GE food assistance may comingle with their domestic production. Such comingling could contaminate otherwise non-GE exports that are bound for EU countries and jeopardize future contracts. The potential loss of export markets in the EU could be damaging for local producers, and the implementation of segregated supply chains is not feasible in many developing countries. The concern about contamination can be addressed by milling grains prior to delivery (thereby ensuring that GE whole grains are not planted in recipient countries), but this adds costs and reduces shipment volumes, ceteris paribus.

The debate over GE commodities in food assistance shipments has generated a spate of

ethical accusations between donor countries and NGOs. Countries in the EU and some NGOs have accused the USA of pursuing markets for its GE products by donating food grown from GE seeds. The reality, however, is that the donation of GE products from the USA is a function of USA tying policies, not market development objectives. Approximately 90 % of US soybean and maize crops are grown from GE seeds (United States Department of Agriculture 2012), so countries that receive food assistance from the USA are likely to receive GE products. Segregation of GE from non-GE food in the USA before donating these commodities is not feasible, particularly in light of such products being approved for human consumption in the USA. Other commentators have accused EU member countries of unethically forcing their tastes for non-GE products on poor people in developing countries. Such criticism may be justified, but the real issue is the fear of lost commercial export markets. Widespread consumer rejection of GE products in EU countries is unlikely to change in the near term, and developing countries' decisions about accepting GE food may hinge on their assessments of the risk of lost export markets.

The importance of this issue in the future will depend on the adoption of GE technology in developing countries. Most donors, with the notable exception of the USA, have moved towards LRP for donated commodities, and GE adoption rates in many countries are below those in the USA (partly because existing GE technologies have been designed for use in temperate climates on crops that are commonly grown in the USA).

Summary

The provision of food assistance to those in need is viewed by many as an ethical responsibility for developed countries. Several developed countries have, to some degree, accepted this responsibility and agreed to provide commodities as part of their FAC obligations. The finer points of each country's food assistance policies begin to cloud the ethics of food assistance deliveries, however. National food assistance programs began as reactions to donor-country agricultural industry interests, not as humanitarian endeavors. Other commercial interests (market development, displaced commercial trade) and political concerns (geopolitical considerations, colonial ties) became entangled with food assistance policies in the years that followed. This entanglement led to the presence of food assistance guidelines and disciplines in WTO commercial trade agreements.

There is good news, however. Most donors have significantly reformed their food assistance policies by untying procurement from domestic sources and by channeling more assistance through multilateral channels (i.e., the WFP). Food assistance serves the needs of the most vulnerable much better today than in decades past. The USA remains the main exception to this, which presents a dilemma for those advocating for change. The tying of US procurement to domestic sources reduces the effectiveness of the US food assistance budget, but financial support for these programs would fall if procurement were to be untied. The USA provides approximately one-half of global food assistance commodities, so such a loss would leave a large gap in the volume of resources available for humanitarian projects.

Cross-References

- ▶ Biotechnology and Food Policy, Governance
- ▶ Food and Agricultural Trade and National Sovereignty
- ▶ Food Security
- ▶ Food Security and International Trade
- ▶ Food Security and Rural Education
- ▶ Local and Regional Food Systems
- ▶ Multilateral Trade Organizations, Food, and Agriculture
- ▶ Trade and Development in the Food and Agricultural Sectors
- ▶ WTO Dispute Settlement and Food and Agricultural Trade

References

Barrett, C. B., & Maxwell, D. G. (2005). *Food aid after fifty years: Recasting its role*. New York: Routledge.

Barrett, C., Mohapatra, S., & Snyder, D. (1999). The dynamic effects of U.S. food aid. *Economic Inquiry, 37*(4), 647–656.

Canadian International Development Agency. (1998). *Food aid – synthesis report*. Ottawa.

Cardwell, R. (2008). Food aid and the WTO: Can new rules be effective? *Estey Centre Journal of International Law and Trade Policy, 9*(1), 74–93.

CODEX Alimentarius. (2010). *Code of ethics for international trade in food including concessional and food aid transactions*. Rome.

Gelan, A. U. (2007). Does food aid have disincentive effects on local production? A general equilibrium perspective on food aid in Ethiopia. *Food Policy, 32*, 436–458.

Headey, D. (2010). *Rethinking the global food crisis the role of trade shocks*. IFPRI Discussion Paper, Washington, DC. International Food Policy Research Institute.

Ho, M. D., & Hanrahan, C. E. (2010). *International food aid programs: Background and issues*. Washington, DC. Congressional Research Service.

Mabuza, M. L., Hendriks, S. L., Ortmann, G. F., & Sithole, M. M. (2009). The impact of food aid on maize prices and production in Swaziland. *Agrekon, 48*(1), 85–105.

Neumayer, E. (2005). Is the allocation of food aid free from donor interest bias? *The Journal of Development Studies, 41*(3), 394–411.

Nunn, N., & Qian, N. (2010). *The determinants of food aid provisions to Africa and the developing world*. NBER Working Paper. Boston.

Provost, C., & Lawrence, F. (2012). US food aid programme criticised as 'corporate welfare' for grain giants. *The Guardian*.

Schultz, T. W. (1960). Value of US farm surpluses to underdeveloped countries. *Journal of Farm Economics, 42*(5), 1019–1030.

Tadesse, G., & Shively, G. (2009). Food aid, food prices, and producer disincentives in Ethiopia. *American Journal of Agricultural Economics, 91*(4), 942–955.

Tschirley, D., & del Castillo, A. M. (2007). *Local and regional food aid procurement: An assessment of experience in Africa and elements of good donor practice*. MSU International Development Working Paper, Michigan State University, Department of Agricultural Economics. East Lansing.

United States Department of Agriculture. (2012). *Adoption of genetically engineered crops in the U.S*. Washington, DC.

Williams, D. G. (2006). Impact of proposed federal limits on US bagged food aid shipments: Reduction in MSF carrier profits – a risk assessment. *Maritime Policy and Management, 33*(3), 257–280.

World Food Programme. (2012). *2011 food aid flows*. Rome.

World Food Programme (n.d.). INTERFAIS database.

World Trade Organization. (2008). *Revised draft modalities for agriculture*. Geneva.

Food Boycotts

Laura Hahn
Department of Communication, Humboldt State University, Arcata, CA, USA

Synonyms

Ethical consumerism; Political consumerism

Introduction

What do tuna, grapes, salt, and Starbucks coffee have in common? All of these foods have been subject to consumer boycotts. A boycott can be understood as a refusal to purchase goods or services with the intent of changing some aspect of the good or service. For example, when Rosa Parks refused to give up her seat to a white person on the bus and was subsequently arrested and jailed, the citizens of Montgomery boycotted the Montgomery bus system to challenge the laws and practice of the system. Boycotts are "an attempt by one or more parties to achieve certain objectives by urging individual consumers to refrain from making selected purchases in the marketplace" (Friedman 1985, p. 97).

This entry begins with the origin of the term *boycott* and the role of boycotts as a political strategy in contemporary society. Drawing from *Consumer Boycotts: Effecting Change Through the Marketplace and the Media* by Monroe Friedman (1999), one of the primary scholars of consumer boycotts, a taxonomy of boycotts is presented. Here various food boycotts are discussed in context of stages of boycott actions, functions of boycotts, the focus of boycotts, and boycott characterizations.

Role of Boycotts in Contemporary Life

The word "boycott" has its origins in food production. In 1880 in County Mayo, Ireland, a retired British army captain, Charles

Cunningham Boycott, sent his tenant farmers to work for a fraction of their pay. When the farmers refused, Boycott and his family attempted the work themselves but grew tired in a short time. Eventually, the farmers went back to work yet on rent day were served eviction papers from Boycott. The tenant farmers organized a "mass meeting at which they persuaded Boycott's employees (his servants, drivers, and animal herders) to desert him and his family. Three days after this declaration of social and economic ostracism the term "boycott" was coined by [Father John] O'Malley" (Friedman 1999, p. 6).

As the Montgomery bus boycott was designed to target the practices and policies of the Montgomery Bus Line, many food boycotts are designed to influence one of the organizations or corporations that are involved in the production and/or distribution of food. In some cases, such as the Delano Grape Strike and the resulting boycott of table grapes, food boycotts are less about the food itself; instead, food becomes the symbol of the contested practice, policy, or ideology. As Friedman (1999) demonstrates, boycotts play an "important social justice role in American history" (p. 3). Recognizing the power of boycotts, Cesar Chavez explained, "boycotts are better than elections because the polls never close and you can vote more than once" (UFW Press Release).

The boycott and other consumption-oriented strategies are not without their criticisms. Bauman (2007) explained the rise in political disengagement as a "collateral causality" of rampant consumerism. (For more discussion, see Robert Putnam's *Bowling Alone*.) Summarizing this research, Simon (2011) explained, "As forces of buying and selling spilled into every corner of American life, they narrowed . . . conceptions of citizenships. Politics, like consumption, became about me, about how something or some policy created immediate and material benefits, not about the larger community" (147). Brown (2003) argues, "The body politic ceases to be a body but is, rather, a group of individual entrepreneurs and consumers."

Focusing on the potential power of a popular consumer pastime, Zukin (2004) suggests that engaging in political and electoral debate in the public sphere has been replaced by shopping. Through both purchasing and refusing to purchase, consumers communicate their presence in the marketplace. Moreover, their participation in the marketplace, and the particular flavor of that participation (e.g., which brand of coffee they buy), conveys ideals and values. As values such as justice and equality in society are often linked to particular brands through marketing and advertising campaigns, the consumption of such brands acts as a "vote" for the company's image and a definition of such values (Klein et al. 2004). This perspective suggests that consumers hold power to enact particular conceptions of justice and equality through the power of their dollar. Echoing Cesar Chavez's belief in the power of boycotts, Simon (2011) asserts, "boycotts are about leverage and about being heard; they are about the practice of political power. [As] boycotters urge fellow shoppers to think about the implications of their purchases . . . they attempt to leverage—and thus acknowledge—consumer power" (p.152).

Taxonomy of Consumer Boycotts

This taxonomy is based on the work of Friedman (1999) and will discuss the following elements of consumer boycotts: stages of boycott actions, functions of boycotts, the focus of boycotts, and boycott characterizations.

Stages of Boycott Actions

When people begin considering a boycott solution, they embark on a potential four-step process to take them from idea to action. The decision to initiate a boycott, crafting a persuasive and compelling press release, planning the details, gathering public support, and the implementation of a boycott are steps of a progressive process designed to put pressure on the target organization to comply with the demands of the boycott organizers. While not all boycotts move through the following four steps, they typically escalate in

Food Boycotts, Table 1 Stages of boycott actions

Stage of actions	Description	Case in point
Action-considered	Press release that a boycott action is under consideration	UFW President Rodriguez delivers a petition with 25,000 signatures (Press Releases: New Gallo Boycott Kickoff Media Packet 2005)
Action-requested	Boycott is called	"No Gallo" boycott is announced
Action-organized	The details of the steps and procedures are given	Media Packet is released and supporters are directed to www.gallounfair.com for details about how to support the boycott
Action-taken	The boycott occurs	United Farm Workers (UFW) Boycotts of Gallo Wines (1973–1978 and June–September 2005) and Charles Krug Mondavi Wines (2006–2008).
		Delano Grape Strike/Grape Boycott organized by UFW and Cesar Chavez (1965–1970)

the following fashion with the first being the most mild action and to the latter being the most militant. Although this model may not have been conceptualized to explain the actions of individuals, it can, with some adjustments, be applied to both large-scale group boycotts and the actions of an individual. The following case in point describes the progression of the United Farm Workers (UFW) 2005 boycott of Gallo Wines (Table 1).

The Organizational Boycott: UFW and Gallo Wines

The UFW exemplifies a type of organization whose past success with action-taken boycotts has come to represent considerable force, organizational skill, and political power. When the UFW announces that they are considering a boycott, the target group often responds. In the case of the 2005 boycott of Gallo Wines, the boycott was short-lived, lasting only three months. When the UFW was considering a boycott of Gallo Wines due to labor issues, they began making the intention to boycott the public with a press release and show of support. Nearly a year before the start of the boycott, UFW President Arturo Rodriguez showed up at the City Hall in Los Angeles to display petitions with 25,000 signatures pledging to boycott Gallo Wines unless a "fair and just" contract is negotiated (Press Releases: New Gallo Boycott Kickoff Media Packet 2005).

Moving to the next stage, action-considered, in June 2005, President Rodriguez officially called the "No Gallo" boycott via rally and march through San Francisco. Calling for a boycott is typically communicated via a press release and corresponding media coverage. In the action-organized step, specific plans for carrying out the boycott are given. The UFW made fliers which summarized the issues at stake, what they wanted consumers to do (i.e., exactly what wines to boycott as Gallo owns and produces under multiple labels), and a phone number to call with questions. The final step of course is to carry out the boycott which the UFW did, until September 2005 when they and Gallo ratified a 3-year contract giving workers pay increases and other benefits.

The Individual Boycott: Boycotting the Meat Industry

When an individual considers the personal decision to participate in a larger boycott, they too may progress though the four stages, albeit not so publicly. The popular slogan from PETA, "Go Veg," represents the ideology and corresponding dietary practices which boycott the entire meat industry. While the refusal of vegetarians to purchase or consume meat products may be based on a number of individual motivational factors such as concern for the treatment of nonhuman animals, health reasons, ethical considerations, or

religious beliefs, the effect is the same: a boycott of the meat industry. Or in the case of vegans (people who refuse to consume all products containing nonhuman ingredients), their actions create boycotts of the dairy, leather, and wool industries as well.

Individuals considering the decision to be a vegetarian and participating in a larger boycott of the meat industry, for example, will probably think about this alternative diet before making the decision to "Go Veg." He or she might consider choices by reading about the health benefits, reflect on how this new diet may or may not affect their daily life, or consider the ethical implications of their choice. If the decision is based on a response to a particular situation, he or she may write the offending organization and tell it that unless it rectifies the situation, one's consumer support will be withdrawn. Next, they may tell friends and family to gauge the level of social support they will have for their decision. The third step in the process involves formulating a plan to carry out a successful boycott. For the individual this may mean finding answers to the questions, "What will I eat if I give up meat"? "Where will I do my grocery shopping"? "Will I hurt my grandmother's feelings when I won't eat her traditional turkey at the family Thanksgiving meal"? "Is it alright that my choice will affect what others eat"? By finding solutions to these practical and ethical problems, the person arrives at a practical plan for carrying out their meat boycott. The final step, of course, is the action of giving up meat.

Primary Functions of Boycotts

While boycotts may fulfill more than one function, they usually contain a primary function. Those that are instrumental are designed to achieve practical ends, such as the change or implementation of a particular policy or behavior. Instrumental boycotts are often obstructionist. Expressive boycotts are often short-lived and are a means for venting frustration. Surrogate boycotts fall under this category (Table 2).

Food Boycotts, Table 2 Primary functions of boycotts

Boycott functions	Description	Case in point
Instrumental	Boycott organizers attempt to achieve practical and material ends. Obstructionist boycotts are often instrumental	Cracker Barrel Boycott (1991–2002)
		Southern Lunch Counter Sit-ins (1950–1960s)
Expressive	Boycott organizers communicate frustration through symbolic acts	Starbucks Boycott (2001)
	Surrogate boycotts are often expressive	

An Instrumental Strategy: The Obstructionist Boycott

Obstructionist boycotts operate by placing an obstruction between the consumer wishing to purchase a particular product or service and the product and service itself. When carried out effectively a physical barrier is created to make obtaining the good or service difficult or impossible. Common obstructionist tactics include sit-ins, stand-ins, call-ins, mail-ins, and die-ins. However, what if the corporate target of the boycott is innocent of the charges brought by the boycott organizers? Or what if that corporate target is unable to defend themselves against such accusations or make adequate changes to the policy, product, or service under attack? These are some of the ethical questions surrounding obstructionist boycotts.

While not a boycott of the food itself, the lunch counter sit-ins in segregated Southern restaurants in the 1950s and 1960s are examples of this type. As the black protesters took up space at the lunch counter, they effectively used themselves as barriers between other potential customers and the lunch counter. Similarly in 1991, the Tennessee Gay and Lesbian Alliance and the

Queer Nation called for a boycott of the Cracker Barrel restaurant chain for its anti-gay and lesbian policies and the firing of some gay and lesbian employees. Participants in the boycott would engage in "slow-down sit-ins" where large groups of protestors "customers" would go into the restaurant at peak times such as Sunday brunch or dinner, take up as many separate tables as possible, place a minimum order (e.g., a cup of coffee), and occupy the table for 2–3 hours (Friedman 1999, p. 150). In 1992 Cracker Barrel claimed that it was an equal-opportunity employer yet refused to rehire the fired employees or add sexual orientation to its nondiscrimination policy; thus, the boycott continued. It was not until 2002 when the shareholders of Cracker Barrel's parent company voted to add sexual orientation to the nondiscrimination policy was the boycott terminated.

An Expressive Strategy: The Surrogate Boycott

One of the most extreme examples of a food product and company as a symbol of protest as opposed to being the literal focus of the boycott is the 2001 boycott of Starbucks coffee. After a traffic violation, Aaron Roberts, a 27-year-old African-American man, was pulled over by two white police officers. Roberts ended up dead at the scene, shot by one of the officers. Reverend Robert Jeffery believed Roberts' shooting to be the result of the Seattle Police Department's unofficial policy of "shoot first, cover up later" when dealing with young black men. Frustrated by the actions of the police in relation to the African-American community, Jeffery called for a boycott of Starbucks coffee. What's the connection between Starbucks and the death of Roberts by the Seattle Police Department? The power of surrogate boycotts.

In a surrogate boycott or indirect action, "a protest group finds itself dissatisfied with the public policies of a city state or foreign nation and acts upon its feelings by boycotting surrogates (the business firms operating in the geographic area" (Friedman 2001, p. 237). As with the case of Reverend Jefferey and Starbucks, the decision to launch a surrogate boycott often speaks to the disenfranchisement and frustrations of citizens to make effective change in the democratic process: "consumer actions increase when politics lose traction" (Simon 2011, p. 146). Boycotts, according to historian Dana Frank (2003), "fill a void where there aren't social democratic regimes." The Starbucks Boycott suggests there is a shift of power from formal politics to consumer politics, "as if citizens have out-sourced their politics from the voting booth to the supermarket" (Simon 2011, p.147).

But surrogate boycotts are not without their particular ethical costs. Is it morally just to link Starbucks with the killing of Aaron Roberts? What about the costs of the boycott to not only Starbucks but the secondary targets, such as the suppliers of coffee or cups? According to Garrett (2001), "corporate executives who have experienced the force of this tactic have several strong reservations about the morality of boycotts" (p. 19). These include potential excessive power of the boycott and a restriction of consumer choice (Garrett 2001, p. 19).

Primary Boycott Focus

Depending on the primary function – instrumental or expressive – of the organizing group and how far they progress along the stages of boycott actions, boycotts typically fall into one of two categories: media- or marketplace-oriented. As all boycotts depend on media outlets to grow and survive, the distinction here is on the *primary* focus of the boycott: where most of the action occurs, what strategies for change are utilized, and physical locations of actions. When a boycott stays at the action-considered or action-requested stage, the boycott occurs primarily in the media as boycott organizers attempt to place public pressure generated by media attention on the target of the boycott. Press releases and highly visible protests are utilized to create public awareness and support. Because of the need for public attention, media-oriented boycotts tend to occur in visible and easily

Food Boycotts, Table 3 Primary boycott focus

Orientation	Description	Case in point
Media-oriented	The primary focus for action-considered and action-requested boycotts. Use of press releases and protests in a visible and recognizable local	PETA's McCruelty and Kentucky Fried Cruelty campaigns
Marketplace-oriented	The primary focus for action-organized and action-taken boycotts. Use of protests in places of large consumer traffic	The March to Dandi (Salt Satyagraha) 1930
		Vegetarian boycott of meat industry
		Vegan boycott of meat and dairy industries as well as all products made from nonhuman animals

recognizable locations such as in front of the target organization's headquarters, corporate sign, or logo. When a boycott progresses to the stages of action-organized and action-taken, the primary focus for action is the marketplace as boycotters are attempting to influence the bottom line of the target organization. Typical here would be for the boycotters to protest in front of a local restaurant that is part of a larger national chain to persuade potential customers not to dine there (Table 3).

Media-Oriented: Kentucky Fried Cruelty

In response to the cruel conditions facing the one billion chickens killed each year by Kentucky Fried Chicken, PETA launched the "Kentucky Fried Cruelty" Campaign and Boycott in 2003. Since then PETA has held over 12,000 protests where activists have "crawled into cages, tied on bikinis in the freezing cold, walked around on stilts, and "slaughtered" and "burned" an effigy of Col. Sanders" (PETA 2012). Adding the weight of celebrity endorsements to this campaign, PETA has garnered public support of the boycott from His Holiness the Dalai Lama, the Reverend Al Sharpton, Dr. Cornel West, Alice Walker, Smashing Pumpkins, and the Black Eyed Peas. While the goal is certainly to effect change in Kentucky Fried Chicken's treatment of chickens while they are alive, the primary focus of PETA's media-savvy activities is to keep the issue in the public sphere and focus negative attentive and pressure on KFC.

Marketplace-Oriented: Salt War

Using the act of boycotting as part of the larger political and moral philosophy of nonviolence, Mahatma Gandhi led the salt war as part of his lifetime quest to foster Indian Independence. The choice of salt was as much strategic as it was symbolic for Gandhi. As the need for salt cut across all regional, class, and ethnic boundaries in India, the focus on the salt tax did not have a polarizing effect on a diverse Indian population. And as the salt tax hit hardest on the lower class, this struggle symbolized the inequity that resulted from British colonial rule.

The salt march or Salt Satyagraha (truth force) began because of a salt tax that was imposed by the British government on the sale of salt. Moreover, the British government had a monopoly on salt, legally forbidding anyone else to produce or sell salt. On March 2, 1930, Gandhi wrote to Viceroy Lord Irwin asking that he amend the salt tax. When the request was not met, Gandhi and 78 male Satyagrahis from his Ashram in Sabarmati began the 230-mile, 23-day walk to the seaside village of Dandi. Along the way villagers stopped to watch the procession and many more joined in. On March 6, 1930, Gandhi picked up some mud, boiled it in saltwater, and produced illegal salt (Graham 2012).

Following his example, Gandhi invited others to make and sell their own salt and continue the war on the British salt tax. (A pinch of Gandhi-made salt sold for 1,600 rupees or approximately $750.) All across India, people produced and sold the illegal mineral with roughly 80,000 people being jailed for their actions. Although Gandhi asked only men to participate in the March, many

Food Boycotts, Table 4 Boycott characterization

Quality	Description	Case in point
Positive	The refusal to purchase or consume a specific good or service	Tuna boycott (1988–1990)
Negative	The choice to purchase or consume a particular good or service. Also called a "boycott," "girlcott," or a "procott"	Buy Fresh, Buy Local (2002–present)

women participated. This was significant as it marked the first time that women participated in the struggle for Indian Independence (Chatterjee 2001).

Just days prior to his next planned action, a raid of the Dharasana Salt Works, Gandhi was arrested and jailed. The Salt Satyagraha continued until Gandhi's release nearly a year later. Upon his release from jail, he participated in negotiations with Viceroy Lord Irwin resulting in the Gandhi-Irwin pact.

Boycott Characterization

Depending on whether or not they support or discourage consumer spending, a boycott can be positive or negative. Positive boycotts are a sort of "blacklist" and encourage consumers form purchasing the targeted good or service. Negative boycotts function as a "whitelist" and support the consumption of a particular good or service (Table 4).

The Positive Boycott: Creating "Dolphin-Safe Tuna"

In response to a practice borne in the 1950s which has killed over seven million dolphins in the last four decades, the International Marine Mammal Project (sponsored by Earth Island Institute) organized a consumer boycott of tuna in 1986. The practice in question involved the intentional chasing down of dolphins and using purse seine nets in the hunting for commercial tuna. When biologist Sam La Budde got a job on a Panamanian shipping boat and secretly shot a film showing dolphins dying in tuna catching nets in 1988, he helped bring significant public awareness and support to the boycott. The boycott was further supported when the film was shown to a Senate subcommittee. Two years later StarKist tuna (then owned by Heinz) announced that they would no longer buy tuna caught my methods that would cause harm to dolphins. Bumble Bee tuna and Chicken of the Sea quickly followed the lead set by StarKist. As further evidence of the boycott's success, the "Dolphin-Safe Tuna" label was created and placed on all cans of tuna which followed dolphin-safe practices. Yet, despite the fact that this was a successful boycott as it significantly reduced the number of dolphins killed in the harvesting of tuna, in September 2011, the label was found to violate the World Trade Organization (WTO) (Tucker 2012).

Led by Casson Trenor of Greenpeace, a tuna boycott is under way to reform the tuna industry yet again. Currently much canned tuna is skipjack and is caught using fish aggregating devices (FAD). To fish with an FAD, a buoy is cast into the water off of a boat. For small fish the FAD acts as a barrier from larger fish. Eventually, the area around the FAD becomes a small but dense ecosystem as larger fish have discovered the fertile hunting grounds. Many of the FADs are equipped with radios and signal the boats when the fish population is high. Boats return with large purse seine nets and take in the targeted skipjack along with everything else in the vicinity – sharks, sword or marlin, and young yellowfin and bigeye tuna. In September 2011 the Congressional representative from American Samoa Eni Faleomavaega showed support for Greenpeace and called for a full ban on FADs. He further asked Americans to refrain from buying any products from Chicken of the Sea or Bumble Bee (Bittman 2011).

The Negative Boycott: "Buy Fresh, Buy Local"

The ongoing "Buy Fresh, Buy Local" campaign is an example of a negative boycott. Negative boycotts are not boycotts at all but their consumption-oriented counterparts, also referred to as a *buy*cott. A buycott encourages the purchase and/or consumption of particular goods or services, for example, "Buy American." While the original focus was on produce and local farmers markets, the "Buy Fresh, Buy Local" campaign encourages community members to purchase all locally made products and to patronize locally owned establishments. For some, buycotts are preferred over boycotts because of their positive rather than punitive tone.

Summary

The decision to boycott a particular food is often a symbolic choice, such as Gandhi's choice to use salt to represent the cruelty of British colonial rule or Cesar Chavez's focus on table grapes to stand for the plight of farm workers. These symbolic functions can be understood by looking at the stages and primary focus of boycott actions, the expressive and instrumental functions, and the positive and negative qualities of consumer boycotts. For the target of a boycott, there may be significant costs stemming from a loss of revenue or damage to their public image, logo, or reputation. For the consumer, the decision to boycott may signify a form of consumer-based political power once found in the public sphere and electoral politics.

Cross-References

- ▶ Fair trade in Food and Agricultural Products
- ▶ Political Consumerism: Consumer Choice, Information, and Labeling

References

Bauman, Z. (2007). Collateral casualties of consumerism. *Journal of Consumer Culture, 7*, 25–56.

Bittman, M. (2011, September 20). *Opinionator*. Retrieved from The New York Times: http://opinionator.blogs.nytimes.com/2011/09/20/time-to-boycott-tuna-again/

Brown, W. (2003). Neo-liberalism and the end of liberal democracy. *Theory and Event*. Accessed at http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/theory_and_event/v007/7.1brown.html

Chatterjee, M. (2001). 1930: Turning point in the participation of women in the freedom struggle. *Social Scientist, 29*, 39–47.

Frank, D. (2003). Where are the workers in consumer alliances? Class dynamics and the history of the consumer-labor campaigns. *Politics and Society, 31*, 363–379.

Friedman, M. (1985). Consumer boycotts in the United States, 1970–1980: Contemporary events in historical perspective. *Journal of Consumer Affairs, 19*, 96–117.

Friedman, M. (1999). *Consumer boycotts: Effecting change through the marketplace and the media*. New York: Routledge.

Garrett, D. E. (2001). Consumer boycotts: Are targets always the bad guys? *Business and Society Review, 58*, 17–21.

Graham, S. (2012). *The Salt March to Dandi*. Retrieved from Emory University: http://www.english.emory.edu/Bahri/Dandi.html

Klein, J. G., Smith, N. C., & John, A. (2004). Why we boycott: Consumer motivations for boycott participation. *Journal of Marketing, 68*, 92–109.

PETA's Campaign Against KFC: Kentucky Fried Cruelty. (2012). http://www.kentuckyfriedcruelty.com/index.asp

Press Releases: New Gallo Boycott Kickoff Media Packet. (2005, June 14). Retrieved from United Farm Workers: http://www.ufw.org/_board.php?mode=view&b_code=news_press&b_no=263&page=19&field=&key=&n=381

Simon, B. (2011). Not going to Starbucks: Boycotts and the out-sourcing of politics in the branded world. *Journal of Consumer Culture, 11*, 145–167.

Tucker, T. (2012, June 25). *Eyes on trade*. Retrieved from Public Citizen: http://citizen.typepad.com/eyesontrade/2011/09/flipper-again-on-the-wto-chopping-block.html

Zukin, S. (2004). *Point of purchase: How shopping changed American culture*. New York/London: Routledge.

Food Culture and Chefs

Nancy Lee
The University of Sydney, Sydney, NSW, Australia

Synonyms

Celebrity chefs; Cultural criticism; Destination dining

Introduction

The public's fascination with chefs can be tracked through the rising celebrity of chefs like Jamie Oliver, Gordon Ramsay, and Heston Blumenthal. No longer confined to the kitchen, chefs with prominent media presence have created a changed role for professional chefs which can require skills other than cooking in order to be successful. Appearing on cooking programs, writing cookbooks, and promoting household products are just some of the additional jobs required of chefs in order to maintain a profile and run a successful business. Chefs themselves have become brands, changing perceptions of the hospitality industry significantly. This entry gives an overview of celebrity chef culture and some of its effects. In order to understand the celebrity chef phenomenon, this section examines celebrity culture, food criticism, and the increasing influence of social media.

Celebrity Culture

The perception of chefing is changing. One of the key factors of this change is the incorporation of celebrity culture into the restaurant industry. To reach a level of success that transcends working in the kitchen, chefs have become media savvy and authoritative and appear approachable. The plethora of media channels through which chefs can reach their audience includes television cooking programs and online social networking sites like Twitter and the photo-sharing platform, Instagram. The combination of these media sites, in addition to the authority and taste standards constructed by food critics for chefs and diners, can build the chef as a figure of celebrity.

Celebrity culture is a field that is conceded to be ambiguous, and the definition of "celebrity" is constantly evolving (Marshall 1997; Turner 2004). P.D. Marshall describes celebrities as "overtly public individuals" (1997, p. ix). These individuals, he argues, are "given greater presence and a wider scope of activity and agency" (1997, p. ix). Graeme Turner adds, "What constitutes celebrity in one domain may be quite different in another" (2004, p. 17); certainly the celebrity chef is only a 'celebrity' in certain contexts. Both Turner and Marshall agree that contemporary celebrity is the result of "a significant shift in popular culture" (Turner 2004, p. 6) and that it "constitutes a change in the way cultural meanings are generated as the celebrity becomes a key site of media attention and personal aspiration, as well as one of the key places where cultural meanings are negotiated and organised" (Marshall 1997, pp. 72–73). There are many chefs who fit these definitions. Jamie Oliver and Gordon Ramsay, for instance, are perhaps the most recognizable contemporary celebrity chefs globally. Both communicate certain values of food, particularly in the case of Jamie Oliver, who promotes healthy cooking and eating through his Ministry of Food project.

With celebrity chefs acting as "ambassadors" of the restaurant industry and sharing their knowledge of food, the public can benefit from the social function of celebrity. As Turner, Marshall, and Bonner argue, "the individual celebrity persona provides a powerful condensation of meaning which can be attached to commodities and issues; similarly, celebrities can act as prisms through which social complexity is brought back to the human level" (2000, p. 66). Contributions of knowledge and opinion from chefs (as judges on cooking shows) position them within the realm of celebrity culture.

Celebrity chefs can be understood through the sociological understanding of celebrity. Marshall considers celebrity as a site of power (1997, p. ix) and as a position that "celebrates the potential of the individual" (1997, p. 43). Marshall defines the "celebrity function" as having the capacity to "organize the legitimate and illegitimate domains of the personal and individual within the social" (1997, p. 57). This organization of domains occurs especially on cooking programs in which audiences are shown a specific way to cook or eat. Television is the primary domain for celebrity chefs; the particular celebrity constructed on television is of a more intimate nature, relying on "an aura more of familiarity than one modalized around distance" (Marshall 1997, p. 122). Celebrity chefs on cooking programs present their

skills as specialized and professional. Tania Lewis considers the importance of "celebrity intellectuals" in light of the "shifting nature of the relationship between contemporary intellectuals and the mediatized public sphere" (2001, p. 234). With social media giving users more power (Rosen 2006, 2010; Lewis 2010), the figure of the public intellectual has evolved to include what Lewis describes as the "more pragmatic figure of the celebrity intellectual" (2001, p. 235).

Lewis argues that celebrity intellectuals may be "more useful for thinking through the changing status of the intellectual in a postmodern public sphere" (2001, p. 235). Increasingly, the knowledges and authority of chefs see them moving toward being placed under the category of "intellectual." Chefs' popularity also contributes to what Lewis describes as "a model of intellectual practice that foregrounds rather than disavows the dialectic of *elitism* versus democratisation that inevitably underpins the status of the intellectual" (2001, p. 236, original emphasis). Chefs position themselves as sharing knowledge with everyday audiences; they emphasize the importance of good food for families and people with busy lifestyles, serving what Gramsci calls the "social function" of an intellectual (Gramsci 1983, cited in Lewis 2001, p. 237). Another way to consider celebrity chefs is as "lifestyle experts" (Lewis 2010). Celebrity is increasingly attached to personalities who share ideas and suggestions for different lifestyle subjects such as home decorating as well as cooking (e.g., Martha Stewart). As such, celebrity chefs fall under this category of "lifestyle expert." As a result, chefs have the choice to be associated with particular ideas or products, enabling them to promote their own celebrity profile at the same time. While media exposure can contribute in large part to a chef's celebrity status, celebrity "power" "becomes activated only through cultural "investment" in the construction of the celebrity sign" (Marshall 1997, p. 57). This cultural investment comes from food criticism, which lends cultural authority and legitimacy to the work of celebrity chefs.

Food critics are vital to the production of celebrity chefs, creating a discourse through which the industry – and chefs – can be understood. Turner comments, "The more important development, in my view, is the scale upon which the media have begun to produce celebrity *on their own*" (Turner 2010, p. 15, original emphasis). This production of celebrity can be seen in media texts such as *MasterChef*, *Jamie's 30-Minute Meals*, or *Heston's Feasts* and the influential San Pellegrino 2012 World's 50 Best Restaurants (San Pellegrino 2012; covered in more detail in the next section). Popular media gives chefs a mainstream platform to share their work, while the World's 50 Best legitimises chefs work through critical appraisal. The more critical acclaim a chef receives, the more opportunities and access to media he or she will have.

Marshall argues that celebrities can be used to "make sense" of the world around us (1997, p. 51). Celebrities are produced by the cultural industry and are figures of cultural legitimation. To consider chefs in the context of celebrity culture is to consider celebrity chefs as legitimising figures of dining out and cooking as a cultural pursuit.

Food Criticism

Print media have shaped the culture of dining and continue to interact with new media discourses on fine dining. Internationally, star ratings in the *Michelin Restaurant Guides* are highly regarded. Along with *Michelin*, critical acclaim in the San Pellegrino World's 50 Best Restaurants list (published in *Restaurant* magazine) is highly coveted by chefs. Food critics provide potential diners with ideas of what to expect and in doing so shape the ways in which the industry evolves.

A text like the *Michelin Guide* or World's 50 Best can be read in the context of cultural criticism as an example of Bourdieu's concept of cultural capital (1984, p. xvi). Bourdieu's idea of cultural capital is a useful resource with which to analyze the effects of food criticism both on chefs' working lives and on media and patrons' consumption of chefs. Bourdieu states, "A work of art has meaning and interest only for someone who possesses the cultural competence,

that is, the code, into which it is encoded" (Bourdieu 1984, p. xxv). The media produce chefs as authority figures on the assumption that its audience has the "cultural competence" to appreciate and accept their authority. "Cultural competence" is constructed with the information provided by the publications – such as the *Guide* – about which food trends are the most popular and which chefs are the most talented. In turn, chefs' skills and knowledges translate to cultural capital in the eyes of their audiences and the media.

As Arjun Appadurai notes in his *Modernity at Large: Cultural Dimensions of Globalization*, "the modern world... is now an interactive system" (1996, p. 27). Appadurai's ideas of "neighbourhoods" (1996, p. 178; drawing on Benedict Anderson's 1991 *Imagined Communities*) and "global cultural flow" (1996, p. 178) form a framework for the idea of chefs' global community. Appadurai's notion of the globalized, delocalized world allows for a global chef community, and it is therefore necessary to consider international practices. An examination of key international food criticism texts highlights the existence of a global template of food criticism and the evaluation of the global chef community to produce a chef economy that trades on symbolic cultural capital.

Bourdieu suggests, "The pure gaze is a historical invention linked to the emergence of an autonomous field of artistic production; that is, a field capable of imposing its own norms on both the production and the consumption of [chefs'] products" (1984, p. xxvi). The food critics' gaze is a form of governance. As cultural gatekeepers, food critics impose norms – that is, standards – on chefs' work, and they assert these standards in their reviews. As Bourdieu argues, this gaze of critics and diners alike is not unbiased and pure, but loaded in terms of cultural capital in the form of potential critical approval. Bourdieu argues there is no real autonomy in artistic production but that the field is shaped by a governing gaze (p. xxvi). By giving chefs attention and accolades, food critics are simultaneously guiding audiences into having certain expectations of their dining experiences. These experiences and the food consumed become objectified cultural capital (Bourdieu 1997, p. 47).

Bourdieu argues that capital takes time to "accumulate" (1997, p. 46) and food critics build up experiences and knowledges over time that enable them to offer informed critique. "The production of social capital presupposes an unceasing effort of sociability, a continuous series of exchanges in which recognition is endlessly affirmed and reaffirmed" (Bourdieu 1997, p. 52). Bourdieu argues, "The science of taste and of cultural consumption begins with a transgression that is in no way aesthetic: it has to abolish the sacred frontier which makes legitimate culture a separate universe, in order to discover the intelligible reasons which unite apparently incommensurable 'choices', such as preferences in music and food, painting and sport, literature and hairstyle" (1984, p. xxix). The creation of celebrity chefs has abolished the boundary that makes dining and food culture "a separate universe" – celebrity chefs appear on television frequently and write cookbooks that can be used by everyday home cooks. Print food media in Sydney contributes to maintaining the presence of chefs in popular discourse. Food criticism is fundamental in maintaining this presence.

Social Media

The culture of participation is a key characteristic of the chef economy; in particular, Instagram and Twitter have significantly influenced practices of consumption. Social media facilitates various participatory practices sharing photos of restaurant experiences online and tweeting about it. These practices have the capacity to reach wide audiences on social media, allowing users to connect to other users sharing mutual interests. Henry Jenkins argues contemporary media culture is less "spectatorship" and more a "participatory culture" (2006, p. 3). He explains, "This circulation of media content – across different media systems, competing media economies, and national borders – depends heavily on consumers' active participation. I will

argue here against the idea that convergence should be understood primarily as a technological process bringing together multiple media functions within the same devices. Instead, convergence represents a cultural shift as consumers are encouraged to seek out new information and make connections among dispersed media content" (2006, p. 3). Jenkins' analysis particularly comes from observations of fan cultures and their appropriation of primary materials (2006). The participatory culture that occurs in the chef economy is similar to what Jenkins describes in his fan cultures; however, primary materials (food cooked by chefs) are less "appropriated" than directly reproduced – as in photographs or using chefs' cookbooks, for example. While Jenkins speaks of media consumption in general – news, entertainment, popular culture, etc. – his ideas can be extended to consider consumers of the chef economy in order to understand its particular economy of consumption. "Participatory culture" occurs when photos of food are taken at restaurants and shared on Instagram or when diners are tweeting about their meal at a restaurant. This culture is present among chefs and their diners. Participatory culture is characteristic of the chef economy; participatory culture informs consumption in the chef economy and is significant in the construction of the global chef community.

Cynara Geissler writes of the contemporary mobile phone (particularly the ubiquitous iPhone) user's "impulse to digitally diarize is powerfully present in many (if not the majority) of our social interactions" (Geissler 2010). Geissler cites Anna Reading calling mobile phones "a wearable shareable multimedia data record of events and communication" (Reading 2009, cited in Geissler 2010). While the focus of recent research on mobile social media has been about diarizing and personal biography (Arthur 2009; Hoskins 2009; Reading 2009, as cited in Geissler 2010), sites such as Instagram and Twitter are significant in building communities in order to share common interests. Followers of chefs on Twitter and Instagram are likely to follow other chefs. Instagram also allows users to "tag" their location, providing information on the location of the photographer. Diners take photos of their restaurant food and upload these to Instagram for their friends and followers to see. The photos are a symbol of cultural capital: by posting the photo, the diner is displaying his or her involvement in the chef economy. Social media not only facilitates and encourages interaction with food culture but also provides a platform on which to signal conspicuous consumption.

With the advent of the smartphone, Geissler suggests "It is easy and intuitive – maybe even irresistible – to digitally narrate the story of our lives as they occur" (2010, online). Instagram has an intuitive interface; it is easy to fill in time waiting in a queue or waiting for friends by simply scrolling through. The app is designed to document what might otherwise be mundane moments in everyday lives. Geissler notes that with such media, there is "the feeling that every moment is performed (for digital distribution and consumption) as much as it is lived" (2010, online). The performance of consumption is evident on Instagram. But Jenkins argues, "Each of us constructs our own personal mythology from bits and fragments of information extracted from the media flow and transformed into resources through which we make sense of our everyday lives" (2006, pp. 3–4). While Instagram allows users to document and share their everyday lives, it is also a platform on which taste is cultivated. "Taste becomes one of the important means by which social distinctions are maintained and class identities are forged" (Jenkins 1992, p. 16). Instagram contributes to the changing practices of consumption affected by the chef economy.

Chefs may have personal uses for Instagram and Twitter, but both are powerful platforms on which they can extend their profiles by documenting their everyday lives to audiences. By forming a sense of community among people who enjoy their food, chefs are able to demonstrate their authority and knowledge on a wider scale, outside of their restaurants (and away from television). This added layer of participation by the audience and chef contributes to further reinforcement of the chef as a figure of authority legitimizing food culture. As well as promoting

their own work, chefs' photos of food on Instagram can also be seen as a general promotion of good food and eating well. The social media presence of chefs adds to their authority and effectiveness with a wider audience, which makes the idea of eating well – either in restaurants or through your own cooking – a worthy idea to promote.

Chefs encourage people to think more about what they eat and have brought food quality to the forefront of dining out. But increasingly, the cultural capital possessed by chefs contributes to changing consumption practices. A key characteristic in the chef economy is its participatory nature – in consumption, in production of information, and in the process of seeking information. Participants of the chef economy are actively seeking to identify with food culture, consequently producing a community *through* convergence culture. Thus, the chef economy controls what and how its participants consume and for what reason. The use of "new" media – that is, social media – mediates consumption of the chef economy that is in part constructed by "old" media – specifically, food criticism in print media.

Summary

Celebrity culture affects the work of contemporary chefs. It requires chefs to be active on social media and to engage with certain aspects of mainstream media. This has fundamentally changed the labor of chefs and the way their labor is understood. The cultural investment by media into chefs has produced an authoritative figure who embodies a specific kind of celebrity status: that of specialized knowledges and culinary cultural capital.

Bourdieu considers taste and distinction through the various activities people undertake in their day-to-day lives. This entry has examined significant practices of consumption and the mediated creation of a chef economy through key aspects of his work. Bourdieu's ideas of distinction, taste, and cultural capital can be clearly seen and are clearly consumed in the chef economy through social media outlets such as Twitter and Instagram. Food critics in the print media construct cultural capital to inspire these practices of consumption in social media. The chef economy trades on cultural capital and in turn changes practices of consumption, creating a culture of spectatorship and consumption of chefs. The media creates ideas of cultural capital, and chefs scramble to embody them – in turn creating a chef economy that requires constant production and reinforcement of cultural capital to sustain itself. Engagement and consumption of cultural capital are not limited to dining at restaurants; interactions with chefs and food discourses on social media are another way of consuming and participating in the chef economy, creating and maintaining a space in which food and chef cultures continue to flourish.

Cross-References

- ▶ Culinary Tourism
- ▶ Epicureanism and Food
- ▶ Food and Class
- ▶ Food, Class Identity, and Gender
- ▶ Food "Porn" in Media

References

Appadurai, A. (1996). *Modernity at large: Cultural dimensions of globalization*. Minneapolis: University of Minneapolis Press.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Oxon: Routledge.

Bourdieu, P. (1997). The forms of capital. In A. H. Halsey, H. Lauder, P. Brown, & A. S. Wells (Eds.), *Education: Culture, economy and society*. Oxford: Oxford University Press.

Geissler, C. (2010). Pix or it didn't happen: Social networking, digital memory, and the future of biography. In V. Chan, C. Ferguson, K. Fraser, C. Geissler, A.-M. Metten, & S. Smith (Eds.), *The MPub reader* (pp. 135–141). Vancouver: CCSP Press. http://tkbr.ccsp.sfu.ca/bookofmpub/pix-or-it-didnt-happen-social-networking-digital-memory-and-the-future-of-biography-by-cynara-geissler

Jenkins, H. (1992). *Textual poachers: Television fans & participatory culture*. New York: Routledge.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.
Lewis, T. (2001). Embodied experts: Robert Hughes, cultural studies and the celebrity intellectual. *Continuum: Journal of Media and Cultural Studies, 15*(2), 233–247.
Lewis, T. (2010). Branding, celebritization and the lifestyle expert. *Cultural Studies, 24*(4), 580–598.
Marshall, P. D. (1997). *Celebrity and power: Fame and contemporary culture*. Minnesota: University of Minnesota Press.
Rosen, J. (2006, June 27). The people formerly known as the audience, *PressThink*. http://archive.pressthink.org/2006/06/27/ppl_frmr.html. Accessed 1 Mar 2013.
Rosen, J. (2010, 19 September). The Journalists formerly known as the media: My advice for the next generation, *PressThink*. http://pressthink.org/2010/09/the-journalists-formerly-known-as-the-media-my-advice-to-the-next-generation/. Accessed 1 March 2013.
San Pellegrino. (2012). World's 50 best: 'About.' http://www.theworlds50best.com/about-us/people. Accessed 12 Apr 2012.
Turner, G. (2004). *Understanding celebrity*. London: Sage.
Turner, G. (2010). *Ordinary people and the media: The demotic turn*. London: Sage.
Turner, G., Bonner, F., & Marshall, P. D. (2000). *Fame games: The production of celebrity in Australia*. Cambridge: Cambridge University Press.

Food Deserts

Daniel R. Block
Chicago State University, Chicago, IL, USA

Synonyms

Food swamp; Low-food-access zone; Obesogenic environments

Introduction

Interest in areas with poor access to healthy foods, or what have often been dubbed "food deserts," has greatly increased over the past 15 years in the USA and the world. Since the 1990s, when the concept of "food deserts" and their possible connections to health was first suggested by researchers and activists in the UK, the idea that low access to supermarkets carrying a wide variety of healthy food items may lead to negative health effects has been investigated by a number of academic and nonacademic authors. In addition, working to eliminate food deserts has become a key focus area of many organizations working on urban food issues, particularly in the USA.

The term "food desert" originated in British antipoverty activism and policy. It is generally sourced to a resident of a Scottish public housing project who used it to express the experience of living in a deprived community (Cummins and Macintyre 2002). Quickly, the term became focused on the relationships between community development and health, as a number of mid- to late 1990 UK government reports focused on the relationship between food access, community development, and health. In 2003, a study in Leeds found a small improvement in vegetable intake in a low-food-access community after a supermarket opened (Wrigley et al. 2002).

Advocacy and Policy in the USA

In the USA, interest among advocacy organizations and politicians has been particularly strong. In Los Angeles, *Seeds of Change*, a food access report completed by students at the UCLA School of Urban Planning in the wake of the 1992 race-related hostilities in which many supermarkets and corner stores were looted and/or set fire to, influenced the city to promote the opening of new markets in underserved areas and inspired the founding of the national community food security movement (Ashman et al. 1993). In Chicago, a study on food deserts by Mari Gallagher, a local independent researcher, received great publicity, including a front-page story in the *Chicago Tribune*, bringing to light the lack of supermarkets and plethora of fast-food outlets in many areas of the city and showing correlations between areas of low food access, predominantly African-American regions of the city, and negative health indicators (Gallagher 2006). Gallagher later completed similar studies in Washington, DC; Birmingham, Alabama; Savannah, Georgia; Cincinnati; Louisville; and Detroit.

Through The National Center for Public Research, Gallagher also organizes "National Food Desert Awareness Month." *The Need for Supermarkets in Philadelphia*, a 2001 study by the Food Trust, a local emergency food organization that has since become a national leader in advocacy around food deserts, brought to light vast areas of the city with little access to supermarkets and spatial correlations with patterns of income and race as well as areas of high levels of diet-related disease (The Food Trust 2001). This study led to the Pennsylvania Fresh Food Financing Program, which provides low-interest loans to supermarkets opening new stores or improving existing stores in low-food-access areas. The success of this study in influencing policy influenced the Robert Wood Johnson Foundation to fund similar studies and lobbying efforts in Illinois, Louisiana, and New York.

As interest among funders and advocacy groups in food deserts has risen, policies addressing food deserts have moved forward in the USA at local, state, and national levels. Combating food deserts has been a key domestic agenda for the Obama administration. The Fresh Food Financing Initiative, based on the similar Pennsylvania program, announced in 2010, made available more than $400 million to promote the development and improvement of groceries in food desert communities through New Market Tax Credits and other incentives. At the city level, many cities have pursued anti-food desert programs. Postindustrial cities such as Detroit and Cleveland have promoted urban farming and community gardens as part of the redevelopment of vacant land. In 2011, new Chicago mayor Rahm Emanuel made ending food deserts 1 of 28 focus areas of his administration. Emanuel hosted a food desert summit starring Michelle Obama and bringing together corporate leaders and community organizers. Emanuel has pushed new policies to assist urban agriculture as well as open stores in areas designated to be food deserts.

Researching Food Deserts

Despite, or perhaps because of, increasing research and policy attention to food deserts, questions about the issue have recently become more prominent, both inside and outside academia. Questions focus on the existence of food deserts, whether they actually correlate with income and race, the relationship between food deserts and health outcomes, and the morality of the term itself.

Interest in food deserts by independent researchers and policy makers in the USA and elsewhere has been spurred in particular by proposed connections between food deserts and the American "obesity epidemic," and the further association between both food access and obesity and communities of color. An example of this is "The Grocery Gap," a review of US studies on food access by researchers at nonprofits PolicyLink and The Food Trust. Based on these studies, the authors conclude that accessing healthy food can be a challenge for those in low-income, rural, and minority communities; "better access corresponds with healthier eating"; and "access to healthy food is associated with a lower risk for obesity" (Treuhaft and Karpyn 2010). In general, food deserts have been claimed to be "obesogenic environments." A correlation between food deserts, predominately minority communities, and negative health outcomes including obesity is seen in many US studies. However, the question of whether the relationship between food deserts, minority and low-income communities, and negative health outcomes is causal remains a topic of debate. As Caspi et al. (2012) point out, even the methods of studying this relationship are quite nascent. In general, academic studies and the commissions and legislation that often followed have often focused on mapped correlations between food access and racial and income-based inequality. While these maps and the stories they tell are extremely powerful, questions of how to deeply investigate food access abound. Methodological questions include what kinds of stores should be included, how stores should be classified, at what scale to measure access itself, and the possible role of qualitative data.

In terms of the existence of food access as well as correlations between food access and social variables such as race and income, US and

non-US studies have shown very different patterns. The majority of US studies have found negative correlations between poverty and minority status and poor food access (higher poverty rates and percentages of minorities, in particular African-Americans, correlating with lower food accessibility), in both urban and rural areas (Black and Macinko 2008). Much of the difference seen was in the type, rather than the number, of groceries serving the area. For instance, in a national survey, Powell et al. (2007) found that low-income, predominantly African-American, and predominately Hispanic US neighborhoods were much less likely to have a chain supermarket than white and higher-income neighborhoods, which were more likely to have non-chain supermarkets and smaller grocery stores. In a three-state study of selected census tracts in North Carolina, Maryland, and New York, Moore and Diez Roux (2006) found that minority and racially mixed neighborhoods had more than twice as many grocery stores, but half as many supermarkets, than predominantly white neighborhoods. On the other hand, evidence from studies completed outside the USA is mixed, with some finding little or even an inverse relationship between measures of socioeconomic status and supermarket access, with lower SES areas having better access to supermarkets (Apparicio et al. 2007), while others have shown a relatively weak positive correlation (Burns and Inglis 2007). As in the USA, patterns by store type can be quite complicated. In Glasgow, Cummins and Macintyre (2002) found that higher concentrations of retail food outlets were located in deprived districts, including both smaller, independent stores and chain supermarkets. However, the types of chain stores differed, with discount stores being more likely to be in low-income areas and high-quality stores in high-income areas.

Looking at the body of research on food deserts as a whole, cities and countries differ greatly in the relationship between minority status and socioeconomic factors and food access, with much of the difference being the type rather than the number of stores in compared communities. This is important because store type consistently predicts both food price and availability. Cummins and Macintyre (2002) found in Glasgow that cheaper prices were generally found in chain and discount supermarkets, followed by chains, and then independents. In a rural Australian setting, Burns et al. (2004) found that a larger percentage of the "Healthy Food Access Basket" studied was available in chain stores in larger towns than in the independents that dominated smaller towns. In the Chicago area, Block and Kouba (2006) found a complex picture. Fresh meats and produce were cheaper in independent supermarkets and groceries, while packaged items were cheaper at chain supermarkets. Discount stores were by far the cheapest, but often had low availability, while chains carried almost all items surveyed. Small corner stores, of which there were many in the lower-income, African-American community surveyed, had low availability, and if fresh produce was available, it was often of unacceptable quality.

Controversy over food desert studies was highlighted in the nonacademic media by the publishing of an article by Gina Kolata in the *New York Times* in spring 2012, based on two US studies which questioned both the existence and importance of food deserts. Lee (2012) found children in a national US cohort study living in minority neighborhoods lived more closely to convenience stores and fast-food outlets, but also to supermarkets, than those in higher-income, majority communities. In addition, differences in food access were not tied to weight gain in the children. A California study (An and Sturm 2012) similarly found no connection between food access level and eating patterns. The prominence of the *Times* article, as well as an opinion piece that followed questioning policies focused on ending food deserts, led to a level of public debate that had not been previously seen. While greatly varied, public comments focused particularly on debates over individual responsibility versus ecological explanations for obesity.

For researchers, the article highlighted how differences in scale, as well as differences between study communities can result in very different conclusions. Studies specifically focused on urban areas may differ from national

studies that include both rural and urban zones, in which poverty, as well as distance to the nearest store, varies greatly. The data used for stores can also vary greatly. Many studies, including the ones quoted in the *New York Times* article, use private data vendors that are often highly inaccurate at a local level. Another example of this is a national study completed by the USDA that only mapped chain supermarkets. Contrary to many studies of particular US urban areas that also incorporate independent and local chains, in the USDA study, predominantly African-American communities were not found to have low access to supermarkets, while predominately Latino communities did (Ver Ploeg et al. 2009). In addition, the An and Sturm article further highlighted specific connections between food access levels and eating patterns are difficult to make. While some studies have found connections, qualitative studies on the subject have suggested that food desert residents who wish to procure healthy foods travel outside their neighborhoods to stores where they are available and that the choices consumers make have much to do with the kinds of stores they shop (Zenk et al. 2005). A new supermarket opening in their neighborhood may make their lives easier, but it will not necessarily change their diet. Finally, academic questioning of food deserts was furthered by the publishing of *Weighing In* by prominent geographer Julie Guthman, which questions the idea of obesogenic environments in general and food deserts in particular, focusing on the fact that most studies of the relationship between food deserts and obesity have concentrated on correlations. Guthman also questions the focus on food deserts as an excuse for alternative food projects serving low-income minority communities that she feels are often overly parental at worst, racist (Guthman 2011).

Definitional Issues

A major issue in the study and identification of food deserts is that there is no standard definition for them or even an agreement on whether there should be a standard definition. As many of the comments on the *New York Times* stated, being two miles away from a supermarket is very different in Manhattan than in rural Iowa. The USDA's original "Food Desert Locator" took this into account by mapping as food deserts low-income areas, defined in a number of ways, but particularly areas that had a median household income of 80 % or less of the state or metropolitan area MHI, where at least 33 % of the population was more than 10 miles to the nearest supermarket in rural areas or more than 1 mile to the nearest supermarket in urban areas. Its new "Food Access Research Atlas" keeps the income cutoffs but creates three different classes of low-food-access zones, including low-income areas where at least 33 % of the population is more than ½ mile (urban) or 10 miles (rural) to the nearest supermarket; more than 1 mile (urban) or 20 miles (rural) to the nearest supermarket; and a third measure that takes into account the percentage of the population that has access to a car. PolicyLink and the Philadelphia-based Reinvestment Fund created a much more nuanced method that divides US census block groups by population density and then into groups within this by car availability. From this Mari Gallagher's consulting company, which has done food access studies nationwide, uses a measure based around a ratio between mean distance to the nearest supermarket and mean distance to the nearest fast-food restaurant. Academics have developed various methodologies for measuring food access, most coming out of more general access measurement techniques that have been used for measuring access to such things as physicians and parks. At the simplest, the number of stores in a region is counted and compared to the population. A somewhat more complex method measures distance to the nearest store and factors in population density. More complex measures utilize advanced geographic analysis techniques to create "food access" surfaces that interpolate access over space. Finally, a body of research primarily within public health looks at the "health environment" inside of the store, including such things as the mix and placement of healthy and not healthy items (Glanz 2009).

A further measurement issue is that there is little agreement on what constitutes a supermarket. How large, in particular, does a store have to be classified as a supermarket? Furthermore, how should one measure size? By square footage? By annual sales? Many researchers and policy makers studying local areas utilize the number of registers, since this is something that a quick store survey can easily gather, but it, as well as the other measures, is a rough indicator of the breadth of food offered by the store. A small store can, in some cases, be devoted to the provision of low-cost fruits and vegetables. Another issue, as mentioned above, is the dataset used for the study. In some countries such as Canada, the national database of businesses is quite accurate. In the USA, however, many researchers rely on nongovernment data sources. Many, particularly national, studies in the USA have utilized purchased business databases. As mentioned above, these have varying levels of accuracy and are probably in general better at general measures of food access than specific local measures. They are also quite expensive. For ease of research, some researchers have looked only at chains. Local organizations have utilized in-person surveys, Web site reviews, Yelp pages, and other methods to improve purchased datasets or to build datasets of their own. Finally, other researchers and activists have tried to study "food swamps," areas with high access to foods of negative value, rather than low access to healthy foods.

Another difference between food desert investigations is their goals. For most academics, the goal of studying food access is to discover overall relationships between it and socioeconomic variables such as race and class, as well as health outcomes such as diabetes, coronary disease, and obesity. The focus is generally not on specifically identifying particular low-access "food desert" areas. For these researchers a simple index with a cutoff point between food deserts and not food deserts generally makes little sense since they are more interested in the overall pattern than the identification of particular food desert areas. For policy makers, the business community, and advocates, however, the identification of specific food desert areas is often the focus. They wish to know how many people live in food deserts, where the food desert areas are, where low-interest loans and other subsidies should be focused, and what impact policies addressing food deserts have had. It should be noted, however, that the USDA has changed its indicator from being called the "Food Desert Locator" to "Food Access Research Atlas" and added two additional measures. In other words, focus has been changed from locating particular food deserts to being able to research food access in a more general way.

"Food Desert" as a Controversial and Influential Term

As mentioned above, the term food desert was, at its origin, designed to communicate the experience of living in a high-poverty area. In practice, however, areas have been defined as food deserts with little discussion of what the designation means to those living in the communities themselves. The main issue may be that geographic study of food deserts is truly only a portion of a complete study of the constraints people in various types of communities encounter when provisioning themselves and their families, both for food and many other products and services. In many food access studies, particularly ones covering a large geographic area, stores are "dots on a map." There is little information known or studied about what is actually inside the stores or how the people in the neighborhood shop. This has been addressed through market basket and food environment studies, as well as qualitative studies, including focus groups and interviews, of those living in food deserts, but the policy focus has been on food deserts as designated zones, without these more in-depth considerations.

Organizations and activists have both utilized and shunned the food desert term for their communities. On the one hand, funding from such organizations as the Robert Wood Johnson Foundation and publicly funded programs such as the Fresh Food Financing Initiative are premised on addressing food deserts and therefore make new

funds available to food desert communities. In order to access these funds, proposals usually have to show that an area is part of a food desert according to an established map, which leads to situations in which groups compare various food desert maps to find ones that include their communities, as well as declaring in public meetings that the areas they serve are food deserts. On the other hand, activists, in particular African-American activists, have objected to the term "food desert" on a number of grounds. Longtime food justice activist LaDonna Redmond, for instance, in a 2013 interview with Tanya Fields in *Ebony*, states that the use of the term food desert places focus on economic development, in specific opening a supermarket, rather than on developing the community as a whole. There is much more needed in many "food desert" communities than a supermarket. Redmond calls food desert "a marketing term" that suppresses community-led entrepreneurship. Wal-Mart made addressing Chicago's South Side food desert a core of its marketing in overcoming widespread resistance in the city to new Wal-Mart stores. Redmond also feels that the term masks deeper issues in the food system that lead to hunger and poverty. The food desert issue is at its root about the spatial inequality of economic, specifically retail, development. The stories tied to the maps tend to go beyond this, because food desert maps in the USA often mirror maps of negative health outcomes as well as poverty and percent minority. The primary issue for Redmond and other activists is that by focusing on mapping supermarkets, the solution becomes focused on opening supermarkets rather than addressing the reasons behind such issues as concentrated poverty, obesity, and economic disinvestment.

Redmond's issues with the term in a sense match the reasons for anti-food deserts focus on it. The full name of the Grocery Gap study done by advocates The Food Trust and PolicyLink is "The Grocery Gap: Who Has Access to Healthy Food and Why It Matters." The study is, thus, not just about where food deserts are but also who lives there. In the USA, this is generally found to be poor, minority, and rural communities. The main focus of PolicyLink's activism and research is on disparities in health between races and ethnicities in the USA. For the Food Trust and groups such as the Robert Wood Johnson Foundation, the focus of the work has been on addressing the obesity epidemic and health inequalities. Since low food access tends to geographically mirror obesity levels, such patterns lead to environmental explanations for and responses to obesity in these regions.

Summary

The term "food desert" has become an accepted part of the urban vocabulary and a popular area of research. The power of the term is significant. The idea that many inner city areas have low access to supermarkets now appears in venues from Wal-Mart advertisements to rap music. The term also brings attention on the lack of economic investment in inner city and rural communities as well as provides a possible explanation for higher obesity levels among the poor and minorities. What is still under debate is whether the power of the term is matched by reality. In general, US research tends to support the existence of food deserts in both urban and rural communities and the correlation of these food deserts with areas of poverty and high-minority areas, especially predominately African-American urban communities. However, research outside the USA generally does not find this relationship. Evidence on the specific relationship to health outcomes tilts toward finding a connection, but is more mixed and may also vary by place. The study and mapping of food deserts are also affected by the lack of a standard definition. Finally, the value and implications of the term itself are under debate among food justice and food security activists. The outcomes of these debates will be interesting to watch over the coming years.

Cross-References

► Access to Land and the Right to Food
► Environmental Justice and Food

▶ Food and Class
▶ Food Security
▶ Grocery Store Design
▶ Obesity and Responsibility
▶ Urban Agriculture

References

An, R., & Sturm, R. (2012). School and residential neighborhood food environment and dietary intake among California children and adolescents. *American Journal of Preventive Medicine, 42*, 129–135.

Apparicio, P., Cloutier, M., & Shearmur, R. (2007). The case of Montréal's missing food deserts: Evaluation of accessibility to food supermarkets. *International Journal of Health Geographics, 6*, 4.

Ashman, L., Vega, J., Dohan, M., Fisher, A., Hippler, R., & Romain, B. (1993). Seeds of change: Strategies for food security for the inner city. Unpublished masters thesis, University of California-Los Angeles, Los Angeles.

Black, J. L., & Macinko, J. (2008). Neighborhoods and obesity. *Nutrition Reviews, 66*, 2–20.

Block, D., & Kouba, J. (2006). A comparison of the availability and affordability of a market basket in two communities in the Chicago area. *Public Health Nutrition, 9*, 837–845.

Burns, C. M., & Inglis, A. D. (2007). Measuring food access in Melbourne: Access to health and fast foods by car, bus and food in an urban municipality in Melbourne. *Health and Place, 13*, 877–885.

Burns, C. M., Gibbon, P., Boak, R., Baudinette, S., & Dunbar, J. A. (2004). Food cost and availability in a rural setting in Australia. *Rural and Remote Health, 4*, 311.

Caspi, C. E., Sorensen, G., Subramanian, S. V., & Kawachi, I. (2012). The local food environment and diet: A systematic review. *Health and Place*. http://dx.doi.org/10.1016/j.healthplace.2012.05.006

Cummins, S., & Macintyre, S. (2002). A systematic study of an urban foodscape: The price and availability of food in greater Glasgow. *Urban Studies, 39*, 2115–2130.

Gallagher, M. (2006). Examining the impact of food deserts on public health in Chicago. Mari Gallagher Research & Consulting Group. Chicago.

Glanz, K. (2009). Measuring food environments: A historical perspective. *American Journal of Preventive Medicine, 36*, S93–S98.

Guthman, J. (2011). Weighing. In *Obesity, food justice and the limits of capitalism*. Berkeley: University of California Press.

Lee, H. (2012). The role of local food availability in explaining obesity risk among young school-aged children. *Social Science & Medicine*. doi:10.1016/j.socscimed.2011.12.036.

Moore, L., & Diez Roux, A. V. (2006). Associations of neighborhood characteristics with the location and type of food stores. *American Journal of Public Health, 96*, 325–331.

Powell, L. M., Slater, S., Mirtcheva, D., Bao, Y., & Chaloupka, F. J. (2007). Food store availability and neighborhood characteristics in the United States. *Preventive Medicine, 44*, 189–195.

The Food Trust. (2001). The need for more supermarkets in Philadelphia. Philadelphia: The Food Trust. http://www.thefoodtrust.org/pdf/supermar.pdf

Treuhaft, S., & Karpyn, A. (2010). The grocery gap: Who has access to fresh food and why it matters. www.policylink.org/grocerygap

Ver Ploeg, M., Breneman, V., Farrigan, T., Hamrick, K., Hopkins, D., Kaufamn P., Lin, B., Nord, M., Smith, T. A., Williams, R., Kinnison, K., Olander, C., Singh, A., & E. Tuckermanty. (2009). Access to affordable and nutritious food – Measuring and understanding food deserts and their consequences: Report to Congress. USDA-ERS Administrative Publication No. (AP-036).

Wrigley, N., Warm, D., Margetts, B., & Whelan, A. (2002). Assessing the impact of improved retail access on diet in a 'food desert': A preliminary report. *Urban Studies, 39*, 2061–2082.

Zenk, S. N., Schulz, A. J., Israel, B. A., James, S. A., Bao, S., & Wilson, M. L. (2005). Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. *American Journal of Public Health, 95*, 660–667.

Food Ethics and Policies

Christian Coff[1] and Peter Kemp[2]
[1]Centre for Ethics and Law, Copenhagen, NV, Denmark
[2]Department of Education, University of Aarhus, Copenhagen, NV, Denmark

Introduction

Food policy attracts considerable attention in public administration, among consumers, in the media, in food and agricultural research, and even in private organizations. In general, it is recognized that food production, food handling, and food consumption all have considerable impact on a number of issues such as health, economy, culture, and environmental sustainability. The recognition of the central role of food for

society, the environment, and human beings has fostered multiple reflections on the role and extent of food policy. In this entry, focus is on:

- What is food policy?
- How is food policy interlinked with other policies?
- Which aims and ethical principles relate to food policy?

Policy and Principles

Considering the nature of food policy, it is reasonable to look into understandings of the last part of the concept, namely, *policy*. It is worthwhile to note that in English, unlike many other languages, a distinction is made between policy, politics, and polity. In short, polity refers to the political organization or form of a group. Politics refers to activities associated with governance of political questions. Politics as a -decision-making process is concerned with the process of policy-making and therefore part of, for instance, power struggles about which policies to be conducted and implemented and of ethical and juridical evaluations of such processes.

When it comes to the concept of policy, most authors agree that the raison d'être of policies is to achieve certain desired outcomes. Policies state aims and goals to be pursued. As most organizations ranging from states to companies to civil society organizations have goals, they also have policies. Policies are hence applied from the macrolevel till the microlevel.

An example from food policy can illustrate this. A common desired outcome of food policy that can be found on all institutional levels from international organizations like the United Nations (UN), European Union (EU), and Codex Alimentarius (1979) to local levels like local canteens is that of food safety. The aims of food safety policies are manifold. Most evident is the aim to protect citizens' and consumers' health by avoiding diseases caused by food intake. This goal is also a part of UNs *Universal Declaration of Human Rights* (1948). Food safety is therefore linked to health, public health, and health policies. However, food safety is also important for consumers' trust in food and the food market and therefore interlinked with industrial and trade policies.

The example makes it clear that a desired outcome of a policy, in this case food safety, may serve different purposes. The case also underlines the interrelatedness of food policy with other policies. In the light of this, it can be debated if food safety should be seen as value in itself, as a value connected to other values, or simply as a tool to reach certain outcomes and aims. The values behind food safety in this case stretch from economic considerations of the functioning of the market to the protection of individuals based on universal human rights which again are based on the ethical idea of the inherent dignity of all human beings.

The example suggests that policies and policy goals ultimately are based on values or principles even though they may not be expressed explicitly. In his famous definition of a political system, David Easton writes that "[A] political system can be designated as those interactions through which values are authoritatively allocated for a society" (Easton 1965, p. 21). Maurice Kogan (1975, p. 55) states that policies are the operational statements of values and statements of prescriptive intent. *Oxford Dictionary* describes policy as "a course or principle of action adopted or proposed by an organization or individual." To summarize, it can be said that policies:

- State matters of principle (values, moral norms, ethical principles)
- Are prescriptive/guiding and focus on action
- Are authoritative statements

The last point refers to the fact that in order for a policy to be efficiently converted into action, it must be stated authoritatively. If a policy has no authority or is poorly legitimized, it cannot be expected to be implemented effectively. One way of legitimizing policies is to consider inclusive procedures during the process of policy-making (Röcklinsberg 2006), which belongs to the area of procedural ethics.

Development and Extent of Food Policy

With this understanding of the concept of policy, attention can be turned to *food policy*. Like any other policy, food policies state matters of principle and focus on prescription and action. This entry addresses the link between food policy and ethics and the question is therefore what are these matters of principle in food policy?

Food policy is not a recent term but a term with a history and therefore also a term with different meanings in different periods and different areas. Subscribing to a very broad understanding of the term policy, it can be assumed that most cultures in the history must have had some sort of food policy. Most societies, present or historical, do have principles about food and do take action to ensure that these principles are followed. Principles about food may, for instance, be based on religious, ethical, or economic principles.

In this sense, the idea of food policy has always been there even though it might not have been called food policy. However, both during World War I and World War II, the term food policy was much debated in public in the light of the restricted food supplies. Focus was on how to increase food supply. Food policy at that time was thus mainly an agricultural policy whose main principle was to ensure an efficient food supply to the population. Action was thus directed towards improving farming practices.

This understanding of food policy as an agricultural policy remains more or less unchallenged until the 1970s. The subsequent development of food policy has been subject to different interpretations. Maxwell and Slater (2003) goes as far as pointing to a shift of paradigmatic character in food policies, although this does not happen overnight but gradually over many years. They refer to an "old food policy" and the need for a "new food policy." Whereas the old food policy focused on agriculture and rural areas, the new food policies place more emphasis on food consumption, health, and environmental issues. The shift in food policy is thus a focal switch from food supply to food demand (Maxwell and Slater 2003, pp. 532–534).

Their distinction between old and new food policies has been criticized by Lang et al. (2009, p. 8) for not doing justice to the extent of the policy challenge and thus being too simplistic. They argue for a more nuanced division of food policy into four periods starting from the 1950s that reflects how food policy is at first concerned with first food supply and what they call productionism; then, food policies focus on markets and third world development in the 1970s; from 1980 to 2000, environmental issues and food safety increasingly enter the food policy scene; and finally from 2000 and onwards, focus turns towards ecological public health. This development of food policies reflects different ethical concerns present in different periods. Today, it is fair to say that all concerns are present within food policy discussions.

Debate on food policy takes place in different arenas and focus varies accordingly. Compared to the historical outline above in a development and third world perspective, focus has been and still is mainly on food security and nutrition security. Food policy in the development context is marked by the founding in 1975 of the *International Food Policy Research Institute* (IFPRI) devoted to end hunger and malnutrition, and later, the Indian economist Amartya Sen (1981) gained international recognition for arguing for poor citizens' entitlement to food due to their vulnerable position in society. It is also in the early 1970s that food policy emerges as scientific field evident, for example, by the launching in 1975 of the academic journal *Food Policy*.

Thus, in the 1970s and 1980s, food security mainly became an issue discussed in relation to the third world, starvation, and poverty reduction (Timmer 2001). In the developed world as shown above, the shift in food policy is indeed a turnaway from food security and self-sufficiency that dominated the war periods and continued into the 1970s. Indeed, the issue of food security is taken for granted and considered as one of the successes of a market-oriented and (over)-efficient agricultural and food processing sector which has led to an overabundance of foodstuffs. This in turn results in new threats to health (like obesity and the associated diseases),

and most recently also, the threats of food production and consumption to climate change are being recognized.

The shift in food policies is also mirrored in the renaming of ministries of agriculture to ministries of food and thereby underlining the move from the agricultural perspective to the consumer or demand perspective. Part of this change also reflects other social changes, for instance, there has been a massive migration from rural areas to urban areas. On a more operational level, public food policies are in some countries mainly gathered in one governmental department (e.g., Germany and Denmark), whereas food policy relating to food safety and food production in, for example, the UK has been separated with reference to conflicting interests. Food policies are communicated by institutions in a number of ways like food policy documents, food regulations and laws, food certification schemes, advertisements, food procurements, etc.

In the light of the enormity and complexity of food policy, it can be debated if food policy should be divided into core areas that directly apply to food and those concerned with derivative or interrelated issues like health and environmental issues. Core areas that apply directly to food would typically be food production/supply or novel food. However, on closer inspection, the interrelatedness of these two issues with the demand side shows that, for instance, consumer health cannot be neglected in reflecting on how food supply and novel food should be developed and regulated.

It can likewise be debated whether food policy is to embrace other policy domains or if the other way around other policy domains should incorporate food issues into their policies. This may lead to controversies on the organizational structure and fights over policy domains in policy-making institutions.

Today, still broader and more integrative approaches to food policy are being proposed; an increasing number of areas are considered to be part of or incorporated into food policies. For the reasons outlined above, that food policy is an ambiguous concept. Recently, the education sector has been included in food policy, the aim being to promote basic food literacy and skills (see, for instance, *Public Health Association of Australia* [2009]) as part of a strategy to promote health. Also, climate changes have in recent years been introduced as a major element in food policy. Lang et al. (2009, p. 21) emphasize the embracive character of food policy, which makes it difficult to make a simple and concise definition of it. To simplify matters, at least 10 major traditional policy areas related to food policy can be identified:

- Research policy
- Agricultural policy
- Security policy
- Consumer policy
- Health policy
- Educational policy
- Environmental policy
- Trade and industrial policy
- Development and aid policy
- Transport policy

Efforts to Define Food Policy

The rapid changes in what is to be understood by the term food policy and the interrelatedness of the term have caused ambiguity as to the content and aim of food policy. Conceptual opacity is especially of concern for those involved in food policy-making. Clearly, one must know what food policy is about to make one. For this very practical reason, the challenge of defining food policy is most frequently undertaken by institutions involved in policy-making and less by researchers in academia. Chambolle (1988) refers to a *French Interministerial Group for Food Policy* set up in 1978 by which food policy was defined as the crossroads of problems linked with:

- Quantitative and qualitative adoption of agricultural production and food processes to meet the needs of well-balanced diets
- Food regulations intended to provide safe foods at value for money prices
- Distribution of food supplies, at both national and international levels

- Planning of research in agriculture and food processing, as well as in nutrition and food toxicology

This somewhat prescient understanding of food policy presents an embracive approach in which food policy includes agricultural research and production, food processing, healthy diet, food security, food safety, and affordability. Strictly speaking, in the sense that policy is used here, it is not a policy (principles and actions) but a list of areas that food policy applies to. Chambolle (1988, p. 456) also refers to the definition by the *Organisation for Economic Co-operation and Development* (1981) who in their report *Food Policy* states that "the term food policy . . . regards the food economy, which takes account of the interrelationships within the food sector and between it and the rest of the national and international economy." From these two efforts to define food policy, it can be concluded that very early on in the transition of food policy, there was an awareness that food policy touched upon numerous issues and was interrelated with other policy domains that contributed to the complexity of food policy.

Apart from the increasing awareness of the interrelatedness of food policy with other policies, some authors also point to societal changes as drivers in the shift in focus of food policies. Timmer (2001, p. 787) mentions three social changes with an influence on food policy:

1. Globalization and the associated commercialization. For instance, the upcoming of supermarkets and the changes it leads to on the food market.
2. Urbanization leads, for instance, to a more profound split between food production and consumption and increased food miles.
3. The technological development. New technologies like the biotechnologies pose new bioethical questions with importance for food policy.

However, some efforts to define food policy do not directly embrace the inclusive approach but point to a more narrow focus on food. Neil D. Hamilton (2002) describes food policy as "any decision made by a government institution which shapes the type of foods used or available – as well as their cost, or which influences the opportunities for farmers and employees, or effects the food choices available to consumers." In the same line, the *State and Local Food Policy Project* (2005) suggests that food policy is "any decision made by a government agency, business, or organization which affects how food is produced, processed, distributed, purchased and protected." In these two definitions of food policy, emphasis is put on decisions by a government that exercises an influence on production, handling, and consumption of food whereas less importance is attached to the interrelatedness with other policy areas.

A final understanding of food policy to be mentioned here is that of Lang et al. (2009) which states that "we can define the study of food policy as of how policy-making shapes who eats what, when and how; and of whether people (and animals) eat and with what consequences." They continue to describe the remit of food policy, which "ranges from how food is produced and grown, to how it is processed, distributed and consumed; from the structures that shape food supply, to those that determine health and environment; from the sciences and processes that unlock food's potential, to the formal governance and lobbies that seek to control it; from the impact the food system's dynamics have on society, to the way its demands are factored into policy-making itself." In this understanding, emphasis is on the consequences of food policy for everyday life of food producers, handlers, and consumers as well as on the more systemic interrelatedness of food policy to other policy areas.

Major Matters of Principle in Food Policy

Given the long list of topics and goals that food policy embraces, it is not surprising that the list of ethical ideas and principles in food policy is quite extensive. It is not surprising that is not a common custom explicitly to supplement food policy goals with descriptions of basic ethical ideas and principles that these goals are based on. However, this is what this last part intends:

to mention major ethical ideas and principles essential to food policy issues and goals.

Food security: *The Universal Declaration of Human Rights* states in article 25: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food . . . ." Food security concerns the demand side (consumers) and is based on vulnerability and integrity as the basic ethical principles. Rendtorff and Kemp (2000) argue that bioethics and biolaw in a modern welfare state are based on four ethical principles that are linked to each other in a social framework of solidarity and responsibility. These four principles are the ideas of autonomy, dignity, integrity, and vulnerability. Within food security, the most important principles must be those of integrity and vulnerability. Concern about integrity is not only care for a person's virtuous character but for the coherence of the life of that human being (Rendtorff and Kemp 2000, p. 39). Therefore, it includes both a psychological and a corporal dimension and the corporal dimension concerns "my own body." This dimension is vulnerable: the human being is vulnerable in the sense that it can be hurt and submitted to risks that threats its integrity. Thus, the principle of vulnerability imposes an appeal for the protection of the human person's integrity in a life span and a life space.

Therefore, the concepts of integrity and vulnerability are fundamental to legal systems protecting the rights of citizens. *Codex Alimentarius* (1979) states that "food purchases utilize a significant portion of the income of consumers, particularly low-income consumers, who often also represent the most vulnerable group and from whom the ensurance of safe, sound and wholesome food and protection from unfair trade practices is critical."

Diet-related diseases: Food safety and nutritional behavior both focus on the risks of eating (see, for instance, Nestle [2002]). Food safety is based on the idea of the vulnerable consumer/citizen (Sen 1981). A more recent concept is that of nutrition security. Nutrition security exists when a person has a nutritionally adequate diet for an active and healthy life. The problem can be both lack of nutrients and access intake of nutrients. Also here, the principle of vulnerability is essential when protecting citizens and consumers from malnutrition. In the case of overnutrition like obesity, debates are among others on whether to blame the food industry or the individual. Proponents of the latter position argue with reference to the individual's autonomy that the individual's capacity for self-determination makes him- or herself responsible for the diet, whereas proponents of the first position argue that choice of diet is not an autonomous act but it is coerced by, for instance, the food industry, supermarkets, culture, etc.

Also here, the idea of vulnerability invokes responsibility as a virtue and obligation. The EU food law (2002) places the primary responsibility for ensuring compliance with food law, and in particular the safety of the food, with the food business.

Food and consumer choice: The idea of a free market and more recently the notion political consumerism both point to the influence of consumers on the food market and food production practices. A central ethical principle at stake here is that of autonomy.

Individual autonomy is a complex concept that refers to the capacity to moral insight and to self-legislation. It also refers to decision-making without coercion as well as it invokes the idea of certain responsibilities. The right of consumers to make free choices is based on the ideas of autonomy and freedom (Coff 2006, p. 181, Mepham 1996), which calls for increased transparency and traceability in the food sector (Coff et al. 2008). Respect for autonomy is partly reflected in *Codex Alimentarius* (1979), which states that "no food should be in international trade which, is labelled, or presented in a manner that is false, misleading or is deceptive." Respecting citizens and consumers autonomy in practice is dependent on the existence of a procedural ethics or discourse ethics that ensures citizens' access to information and to participate at some level in policy-making.

Food research and production: Respect for living beings: Food and agricultural research must like all research comply with standard ethical research principles like informed consent

(based on disclosure, understanding, voluntariness, competence, and consent), data protection, and nonmaleficence (avoiding causing harm).

Informed consent presupposes both cares for autonomy and integrity, and therefore, integrity is mentioned in the second medical Helsinki Declaration that claims that "integrity must always be respected." Moreover, integrity is also a basic ethical principle in both food research and production as well as in the argument for the protection of animals and nature.

Food and environmental sustainability: Food policy has a strong link to environmental sustainability as food production is a heavy polluter and makes use of energy for production and transport (food miles). Beder (2006) presents the six major ethical principles within environmental protection that also apply to food policy: environmental sustainability, the polluter pays principle, the precautionary principle, the equity principle, the human rights principles, and the participation principle (procedural ethics).

Food and social justice: *Codex alimentarius* (1979) states that consumers should be protected from unfair trade practices. Fair trade is a concept that places social justice in a key position. Justice can be understood as a concept of moral rightness that focuses on fair distribution of benefits, risks, and costs without discrimination.

Summary

This entry gives an overview of food policy and major ethical principles that in the last decades have been proposed and advocated for in debates on food policy. Food policies touch upon a vast area of interrelated policies (like health, transport, environment, poverty, animal welfare, etc.) which makes of food policy a highly complex and diverse area. The entry opens with a description of the concept of policy and food policy and how it relates to ethical principles and values. The fourth section discusses some influential definitions of food policy. The final section contains a description of ethical principles and ideas of relevance to food policy.

Cross-References

- ▶ Animal Welfare: A Critical Examination of the Concept
- ▶ Environmental Ethics
- ▶ Food and Health Policy
- ▶ Food Safety
- ▶ Food Security
- ▶ Human Rights and Food
- ▶ Political Consumerism: Consumer Choice, Information, and Labeling

References

Beder, S. (2006). *Environmental principles and polices*. London: Earthscan.

Codex Alimentarius. (1979). Code of ethics for international trade in food. CAC/RCP 20–1979 (Rev. 1–1985).

Coff, C. (2006). *The taste for ethics. En ethic for food consumption*. Dordrecht: Springer.

Coff, C., Barling, D., Korthals, M., & Nielsen, T. (Eds.). (2008). *Ethical traceability and communicating food*. New York: Springer.

Easton, D. (1965). *A framework for political analysis*. Englewood Cliffs: Prentice-Hall.

EU (2002). European food law. Regulation (EC)178/2002

Hamilton, N. D. (2002). Putting a face on our food. *Drake Journal of Agricultural Law, 7*(2), 408–454.

Kogan, M. (1975). *Educational policy making: A study of interest groups and parliament*. London: Allen & Unwin.

Lang, T., Barling, D., & Caraher, M. (2009). *Food policy: Integrating health, environment & society*. Oxford: Oxford University Press.

Maxwell, S., & Slater, R. (2003). Food policy old and new. *Development Policy Review, 21*(5–6), 531–553. Basil Blackwell, Oxford.

Mepham, B. (1996). Ethical analysis of food biotechnologies: An evaluative framework. In B. Mepham (Ed.), *Food ethics*. London: Routledge.

Nestle, M. (2002). *Food politics*. Berkeley: University of California Press.

OECD. (1981). *Food policy*. Paris: Organisation for Economic Cooperation and Development.

Public Health Association of Australia. (2009). *A future for food. Addressing public health, sustainability and equity from paddock to plate*. Sydney: Public Health Association of Australia.

Rendtorff, J. D., & Kemp, P. (2000). *Basic Ethical Principles in European Bioethics and Biolaw*. Copenhagen: Centre for Ethics and Law, and Institut Borja De Bioètica, Barcelona.

Röcklinsberg, H. (2006). Consent and consensus in policies related to food – five core values. *Journal of Agricultural and Environmental Ethics, 19*, 282–299.

Sen, A. (1981). *Poverty and famines: An essay on entitlements and deprivation*. Oxford: Clarendon.
The State and Local Food Policy Project. (2005). http://www.statefoodpolicy.org/docs/fpc_qna.pdf. Accessed 09 May 2013.
Timmer, C. P. (2001). Food Policy. In R. D. Semba & M. W. Bloem (Eds.), *Nutrition and health in developing countries* (pp. 781–792). Totowa: Humana Press.
United Nations. (1948). *The universal declaration of human rights*. United Nations.

Food in Ancient Indian Philosophy

Lenart Skof
Department of Nutritional Counselling - Dietetics, Faculty of Health Sciences, University of Primorska, Izola, Slovenia

Synonyms

Breath; Elements; Food cycle; Hospitality; Hunger; Indian philosophy; Natural philosophy; Vedas

Introduction

Ancient Indian natural philosophy of the Vedas offers a unique mythico-philosophical perspective on the role of food in nature, society, and the cosmos. In early Indian philosophies, food (anna) and breath (prana) are of a vital importance for the microcosmic (the body) as well as macrocosmic (nature and life cycle) "deities" or realities. In addition to their relevance for various disciplines of the body (e.g., yoga and vegetarianism), ancient Vedic teachings on food can also substantially inform contemporary environmental philosophy and ethics of hospitality.

Food in Ancient Indian Philosophy

For the Vedic philosophers, or the tradition of Vedism/Brahmanism, there existed five originary elements of the world: earth, water, fire, air, and ether (Aitareya Upanishad III). Given the natural relation between "food" (anna) and "eater" (attr), some Vedic philosophers included food among the originary elements and even attributed a primary role to it.

The Book XI of the Śatapatha Brahmana (Eggeling 1993) brings the legendary story of Bhrigu, the son and pupil of god Varuna. Being too proud and too confident, Bhrigu was sent to the jungle by his father. As Bhrigu looked to all four directions, he experienced horrible scenes of cannibalism, men dismembering men and eating their limbs. Upon his return to his father, Bhrigu receives Varuna's explanation: what he has seen were scenes from the yonder world, where men were representing angry souls of plants, trees, and animals, all of them seeking reward for being eaten and destroyed in their worldly lives. Bhrigu thus receives from Varuna a teaching about the interconnectedness of all of the living; he is instructed that the whole universe is nothing but the food. But at the same moment, the story of Bhrigu is also an early testimony for a deeper sacrificial awareness – not yet about vegetarianism, but about the elemental meaning of food and a lesson about the deeper meaning of food sacrifice (Ruben 1947). Later, this will lead to new ethical awareness, as exemplified in the teachings of Buddhism and Jainism and the traditions of vegetarianism in Hinduism.

In Taittiriya Upanishad III, there is another version of this legend. Bhrigu now learns the doctrine about Brahman and food. According to Varuna, Brahman is food, for it is from food that beings are born, on food they live, and to food they pass upon death. Given the Vedic meaning of Brahman as mysterious power of poetic formulation, or truth formulation (and later, in Vedanta, the absolute), and equating it with the food, Bhrigu is finally instructed by Varuna to practice austerities.

In the early Upanishads, food is recognized both as an originary material and as a spiritual substance: for TU II man is formed from the essence of food. Food is here listed among the other elements (space/ether, air, fire, water, earth) and worshiped as the highest of all, as Brahman itself. The poetic verse reads as follows: "From

food, surely, are they born;/all creatures that live on earth./On food alone, once born, they live;/and into food in the end they pass./For food is the foremost of beings,/so it's called 'all herbs'.//All the food they'll secure for themselves,/when they worship *brahman* as food/" (Olivelle 1998).

The oldest among the Upanishads, the pre-Buddhist Brihadaranyaka Upanishad (BU) from the seventh to sixth centuries BCE lists seven kinds of food, being created by the father of the gods, Prajapati. Among the various foods given to the creatures, milk is of the foremost importance. Next, by following the Upanishadic teaching and by the means of the daily sacrifice, the sacrificer who knows this (in famous Upanishadic phrase, "ya evam veda") and follows this ancient teaching – i.e., the sacrificer which firmly establishes himself/herself in a Person/Creator – also knows the inexhaustible spiritual origin (food) of everything and thus receives the inexhaustible amount of (material) food. Here, it is clearly stated how the food serves as both a material and spiritual basis of all. Food and liturgical acts (rituals, including various daily practices) are thus interdependent and have ethical consequences.

Vedic god Prajapati used wisdom and "heat" (tapas, or "ascetic ardor") in his creative process. The same is expected from the humans when they imitate the creational and sacrificial acts of god(s). In the beginning of the BU, there is a story about two primeval deities: Death (Mrityu, m.) and Hunger (f.). From Death emitted water, then it solidified into earth, and from the heat (tapas), emitted in this process, fire was created. Air is also added to the elements. Mrityu began to eat everything he created, and thus, he becomes the eater of this world and the entire world is his food (Olivelle 1998).

Finally, there is another important correlation, namely, between food and breath (prana). In the BU V, both "Brahman is food" and "Brahman is life breath" are uttered by the Vedic philosopher. But food and breath (air) are closely interdependent. In a story about Pratrida and his father, Pratrida is instructed about reaching the preeminence as follows: all beings need food, and all beings likewise need (life) breath. This ancient Upanishadic teaching of the elements of food and air suggests that bodies subsist on a hidden cosmic or empirico-metaphysical *reserve* of food and cosmic wind, or breath. The ancient "wind-breath doctrine," as present in the early Upanishads, strongly attests for this phenomenon (Boland 1997). Finally, the whole universe is nothing but the food. In his substance, man is now identical to the metaphysical food, or Brahman, the first and ultimate creator and consumer of everything (Geib 1976). As later exemplified in Maitrayani Upanishad VI (this Upanishadic text already refers to the teachings of Samkhya-Yoga), the whole universe is dualistically split between Purusha and Prakriti, as Eater and Food (Deussen 1938).

Another of the key early Upanishads, Chandogya Upanishad VI, reveals a cosmogonical story, closely related to food: in the beginning this world was one, without the second. In the process of becoming many, this primeval Being first emitted heat and then water (as a result of this cosmic perspiration), and finally, from the rain, it emitted food. Important teachings on the essence of food can be found also in Aitareya, Kaushitaki, and Mundaka Upanishads. Aitareya Upanishad I brings a cosmogonical story about hunger and thirst, which both affected the "deities" (i.e., various micro- and macrocosmic realities: human body and the cosmos). Immediately after they were created/emitted from the Self (atman), they fell into the cosmic Waters/Ocean. From these waters, food was created for them by this Self.

Food and Hospitality

Chandogya Upanishad (CU) VI (Ranade 1986) brings a teaching of Śvetaketu Aruneya, son of the famous Vedic sage Uddalaka Aruni. Part of this teaching is a philosophical discussion, or the Upanishadic doctrine on the beginning of the world and emitting of heat, water, and food from the primeval One, or Being. A reader of CU thus learns that everything in the world consists of heat (tejas), water (apas), and food (annam), i.e., three of the later five Upanishadic

elements. These three elements now build, or enter, as it were, the human body: heat becomes speech, water becomes breath (prana), and food becomes the mind (manas). But then Śvetaketu is taught about the nature of food and the relevance of eating. Aruni instructs his son not to eat for 15 days. After fasting for 15 days, Śvetaketu returns to his father and he is further ordered to recite the Vedas, but cannot fully remember them. The Upanishadic teaching thus shows how the human mind is essentially made up of food and how its cognition and memory are weakened without this vital element. But it is only later, namely, in the Taittiriya Upanishad and Kaushitaki Upanishad, that an ethical relevance of the doctrine of food can be observed for the first time.

As already shown, Taittiriya Upanishad (TU) brings a story about Bhrigu practicing austerities in order to learn about the Brahman. But in a contrast to his practices, Bhrigu is also instructed not to belittle food, not to reject food, and to prepare a lot of food – for everything in this world is based on food and man is firmly established only through food. This refers to cosmogonical contexts and thus to the cosmic or metaphysical level of thinking about the food. But TU III is also practical and concludes with a new ethics of food. According to this doctrine, no one should ever turn anyone away from one's home without giving him the food. This is the Upanishadic vow of hospitality.

Kaushitaki Upanishad II brings a more explicit instruction on food and hospitality. A beggar, praying in a village, utters a vow: "I'll never eat anything given from here" (Olivelle 1998). He then receives plentiful invitations (food) from the people. This teaching is a part of a teaching of the Upanishadic teachers Kaushitaki and Paingya; they both famously identified Brahman with breath. Now, in the Upanishadic teaching, giving alms is identified with giving offerings to breath. Namely, in Vedic thought, breath is the "best" among the five vital powers (hearing, sight, speech, thinking, breathing; in the Vedic Sanskrit, they are called "breaths" – after the first of them, breath). In CU VI, three main vital powers (thinking, breathing, and speech) arise from food. Both breath and food thus essentially and fundamentally refer to "life." Four vital powers give offerings to breath, without being asked. This is now an act of primeval hospitality, as exemplified in this secret teaching (Upanishad). Nourishing vital (cosmic) breath, on a (micro)cosmic level, means being hospitable to the gift of life; giving food, or inviting the beggar to a house and nourishing him or her, equally means to practice hospitality on a practical – i.e., ethical – level.

In the Book VIII of Śatapatha Brahmana, whatever evil there was, Prajapati had the power to drive it away by means of food, or sacrifice. The same was true for humans. Ultimately, all is food and eater in the circle of life – both in cosmico-sacrificial and in earthly practical domain, this precious gift of life is thus preserved with an act of a primeval hospitality. It is offered equally by gods and humans by ritualistic means and, ethically, by means of everyday rituals, such as various offerings (food, attention, later in Buddhism mindfulness) to beggars and strangers or all of them needing help and assistance.

Summary

In the ancient Indian philosophical traditions, we learn about the interconnectedness of everything. Food as an element has a deep philosophical as well as ethical relevance in the Vedic thought. It is both a material and spiritual substance of the world. Ancient Indian philosophy of the Upanishads closely relates food to breath. They both are of a vital importance for the life of a cosmos as well as of an individual. The Upanishadic teaching of the elements of food and breath suggests that "all this" (idam sarvam) subsists on a hidden metaphysical and empirical reserve of food in us. Food is the foremost of beings, as attested in verses from the TU II. Finally, food is also related to the emergence of hospitality in ourselves which, ritually and ethically, reveals as a vehicle of preserving life of the cosmos and life of all of the worldly creatures. It is in this hospitality that a sacrificial and sacred gift of peace can be revealed.

Cross-References

- ▶ Environmental Ethics
- ▶ Hinduism and Food
- ▶ Hospitality and Food
- ▶ Plato and Food
- ▶ Vegetarianism

References

Boland, M. (1997). *Die Wind-Atem-Lehre in den älteren Upanishaden*. Münster: Ugarit.
Deussen, P. (1938). *Sechzig Upanishad's des Veda*. Leipzig: F.A. Brockhaus.
Eggeling, J. (trans.) (1993). *Śatapatha Brahmana* (Vols. I–V). Delhi: Motilal Banarsidass Publishers.
Geib, R. (1976). Food and eater in natural philosophy of early India. *Journal of Oriental Institute, 25*, 223–235.
Olivelle, P. (1998). *Upanisads*. Oxford/New York: Oxford University Press.
Ranade, R. D. (1986). *A constructive survey of Upanishadic philosophy*. Bombay: Bharatiya Vidya Bhavan.
Ruben, W. (1947). *Die Philosophen der Upanishaden*. Bern: A. Francke AG.

Food Labeling

Sven Ove Hansson
Division of Philosophy, Royal Institute of Technology, Stockholm, Sweden

Synonyms

Codex Alimentarius; Food information; Marketing; World Trade Organization (WTO)

Introduction

The Roman town Pompeii was famous for its garum, a type of fish sauce. In one of the shops where it was sold, archaeologists have found a jar marked "kosher garum." It must have contained garum prepared according to Jewish rules, excluding shellfish and other nonkosher ingredients (Berdowski 2006, p. 249). Obviously, it was labelled because it would otherwise have been difficult to distinguish from a nonkosher garum. In modern terms, being kosher was a *credence attribute* of the fish sauce. By this is meant that the customer herself could not determine whether the garum had the attribute or not; she would simply have to rely on the merchant.

Today, food labelling is much more common than in the Roman era. One reason for this may be that consumers are now more concerned with credence attributes of food. Another plausible reason is the increasing length of food distribution chains. Information easily gets lost somewhere on the road from the farm to the modern grocery store, and the modern urban consumer may not know much about how food is produced.

In addition to credence attributes, foodstuff has two other major types of attributes, namely, search attributes and experience attributes (Nelson 1970; Darby and Karni 1973). A *search attribute* is one that consumers can determine before buying. One can for instance find out the ripeness of fruit or the freshness of bread by squeezing them. An *experience attribute* is one that consumers can only determine after buying the product. A typical example is the taste of meat or fish. Credence attributes are those that the consumer cannot even determine after buying the product. One can divide credence attributes into two subcategories. A *detectable credence attribute* is one that can be detected for instance by chemical or bacteriological analysis although it cannot be detected by the ordinary consumer. Nutritional value and absence of pesticide residues are examples. An *indetectable credence* attribute is one that cannot even be detected through laboratory analysis. Country of origin, worker's health and safety in the production, animal welfare, and many environmental aspects of the production belong to this category.

The need for labelling is greater for experience and in particular credence attributes than for search attributes. From an economic point of view, labelling can be justified as a means to reduce the information asymmetry between buyer and seller. From an ethical point of view, it can be based on the idea of the consumer's right to information.

Labelling can be either compulsory (legally required) or voluntary. Compulsory labelling is one of several methods in the arsenal available to regulators. Alternative methods include prohibition of products or production methods, liability legislation, and prohibition of certain messages on products such as false ascriptions of origin or unsubstantiated health claims. Voluntary labelling is primarily used as a means for companies to inform consumers of desirable product properties that are not subject to compulsory labelling. Voluntary labelling tends to have problems with its credibility. Certification schemes managed by credible, independent organizations have been used to solve the credibility problem of voluntary labelling.

Whereas mandatory food labelling has a strong focus on health-related issues, voluntary labelling schemes refer to much wider concerns. This should be no surprise, since food is much more than nourishment. Food choices are an integral part of many people's religious identity. They can also be expressions of cultural or family traditions. Increasingly, they are expressions of political standpoints in issues such as environmental policies, animal welfare, and workers' rights. Food has a role in expressing social and individual identities, and food labelling can help enable individuals to make the choices they want in these respects.

A distinction is commonly drawn between positive and negative labelling. Positive labelling reports the presence of an ingredient or an attribute ("enriched with vitamin C") whereas negative labelling reports its absence ("no added ascorbic acid"). The distinction between positive and negative labelling is fairly clear for specific ingredients, but less so for other attributes since one and the same attribute may be described in either positive or negative terms. ("No imported ingredients." "All ingredients are from Swiss farms.")

Below, current labelling regulations will first be described, with an emphasis on international agreements. A brief section reports some results on the effects of labelling. This is followed by three sections discussing major ethical problems in food labelling, namely, arguments for and against labelling, the choice between mandatory and voluntary labelling, and finally the ethical choices of the food industry.

Current Food Labelling

Food labelling is decided in national (and European) legislation, but it is strongly influenced by an international framework that has been developed within the World Trade Organization (WTO) as part of its efforts to reduce nontariff barriers to trade. The WTO labelling rules are administered within two agreements, that on the Application of Sanitary and Phytosanitary Measures (SPS) and that on Technical Barriers to Trade (TBT). The SPS is devoted to risks to the health of humans and animals and the protection of plants against pests and diseases. The TBT deals with non-health issues such as fraud and misrepresentation.

The SPS provides minimal standards for health-protective labelling. Countries are allowed to adopt higher standards than those of the agreement, but only if these standards are based on scientific risk assessment and constructed to have as small impact on trade as possible. Decisions on what counts as science-based in this context are made by the Codex Alimentarius Commission that has been set up jointly by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO).

The TBT agreement regulates labelling requirements on imports. It stipulates that such requirements "shall not be more trade-restrictive than necessary to fulfil a legitimate objective." The European Union has used this agreement to protest against the United States' mandatory nutrition labelling, whereas the United States has used it against the European labelling requirements for genetically modified foodstuff.

Generally speaking, labelling requirements apply only to prepackaged food products, not to restaurant food. In what follows, some of the more common labelling requirements are summarized.

Ingredients: Major labelling systems such as those of the EU and the United States require that

all ingredients be listed in decreasing order of weight. Certain allergenic food components have to be mentioned even at low doses, and even the risk of inadvertent contamination with an allergen due to the use of common processing equipment has to be stated.

Nutrition labelling is mandatory in most industrialized countries, with the exception of the European Union where it will only become obligatory in December 2016. Voluntary labelling of products that are healthy alternatives within their category (such as low fat sauce and high fiber bread) is promoted by several national European authorities.

Major legislations have a restrictive approach to *health claims* on food packages. Hence, the European legislation requires that health claims be based on reliable scientific evidence. Currently, this policy is put to test by the increased popularity of so-called functional foods that are marketed as health promoting (e.g., lowering total cholesterol or decreasing the risk of cancer) (Klompenhouwer and Van Den Belt 2003; Eden 2011).

Geographic origin labelling is usually not compulsory, but in the United States, country of origin labelling (COOL) is obligatory for fresh meat, fish and shellfish, fruits, vegetables, and nuts. This regulation was challenged by Canada, and in 2011, the WTO ruled in Canada's favor. The European Union has a system of protected geographic indications. Hence, cheese can only be named Gorgonzola if it was produced in a specific region in northern Italy, and Champagne has to be produced in the Champagne region in France (Cheftel 2005).

Irradiation is used to eliminate disease-causing organisms from certain foods. Labelling of irradiated food is mandatory both in the United States and the European Union. Since the authorities consider irradiated food to be safe, such labelling has the sole purpose of furthering the consumers' free choice.

Labelling of food with *genetically modified components* is mandatory in the European Union, Australia, New Zealand, and Japan but voluntary in the United States and Canada.

Organically produced food, i.e., food produced according to certain rules excluding synthetic pesticides and chemical fertilizers, is subject to voluntary labelling schemes controlled by certification bodies. In addition, both the United States and the European Union have regulations stating which products can be marketed as organic.

Religious requirements on food production such as the Jewish Kashrut (kosher) and the Islamic Halal are in most countries subject only to voluntary labelling. (Israeli law prohibits the import of nonkosher food.)

Environmental effects of food production are subject to many voluntary labelling schemes, usually run by certifying agencies, many of which are connected with environmental NGOs. In most industrial countries, there are several competing such schemes, with various and not always transparent criteria.

Social responsibility in food production: The fair trade movement that formed in Europe in the 1960s imported food and other products from third world producers for sale in specialized shops. The purpose was to treat farmers and workers more fairly than what conventional companies do. Beginning in the 1980s, the main focus has shifted to labelling schemes that allow mainstream retailers to sell fair trade goods from third world producers. Voluntary labelling schemes promoting corporate social responsibility have had a central role in this development.

Animal welfare is subject to voluntary labelling in many countries, often as part of environmental or social responsibility labelling schemes.

Effects of Food Labelling

There is extensive evidence showing that nutrition labels make consumers choose more healthy food. Unfortunately, it is not clear whether such effects are to some extent counteracted by compensatory consumption of other, less wholesome food. Do people add sugar or fat to increase the palatability of whole grain food? Or do they eat more of the (still rather unhealthy) reduced-salt snack than of a fully salted snack? The effects of

nutrition labelling on total food intake are not known, and it is the total intake that matters.

Food labelling can also have effects on the behavior of producers. In the United States and Canada where labelling of genetically modified contents is voluntary, GM content is almost invariably unlabelled so that these products cannot be identified by consumers. In these countries the majority of items sold in grocery stores contain genetically modified ingredients. In Europe and Japan that have mandatory labelling schemes, food retailers have decided not to sell GM products and therefore such products are virtually nonexistent. Similarly, in several countries requirements to label trans fat contents have induced industry to reformulate their products so as to avoid labelling that may have negative effects on sales.

Arguments For and Against Food Labelling

The primary purpose of food labelling is to make the consumer more well informed. This can be justified with economic arguments, since markets function better if buyers and sellers have the same information. It can also be justified with ethical arguments such as arguments to the effect that the consumer has a right to the information needed to make well-informed choices according to her own criteria. Such a right to know would presumably not be restricted to health-related issues but could extend to other concerns such as animal welfare, environmental effects of food production, working conditions of farmworkers, etc. Consumers may very well end up making different choices based on a much wider array of considerations than those that food authorities pay attention to – and this rightly so since the authorities have a limited mandate.

Like all safety legislations, food regulation is subject to the potentially conflicting demands to protect the public and not to restrict their freedom of choice. Prohibitions or other measures against unhealthy foodstuffs are often accused of being paternalistic, i.e., reducing people's freedom for their own good. Contrary to some other regulatory measures against unhealthy food, mandatory labelling would seem to be immune against accusations of paternalism. Labelling does not restrict consumers' freedom of choice but instead provides them with information that they can use if they so wish when exercising that freedom of choice.

Some libertarians have claimed that mandatory labelling is an indefensible restriction of the producers' freedom of expression. However, although this argument has often been heard from tobacco companies, it has seldom been voiced in discussions of food labelling. Freedom of speech, as it is commonly conceived, does not exclude a duty to disclose information about the properties of a product to prospective buyers. In his *On Liberty* (1859, Chap. 5), John Stuart Mill argued that mandatory labelling of drugs does not violate liberty: "Such a precaution, for example, as that of labelling the drug with some word expressive of its dangerous character, may be enforced without violation of liberty: the buyer cannot wish not to know that the thing he possesses has poisonous qualities." The same argument would seem to apply to food labelling.

Some types of labelling requirements have been criticized on the ground that consumers tend to misunderstand or misinterpret the information. This has particularly often been said about labels referring to irradiation or GM content. These are attributes that have caused much more worry among the general public than among experts on food safety and nutritional value.

There are two fundamentally different ways to see this from an ethical point of view. The consumers' right to know can be seen as valuable in itself, or it can be seen merely as a means to promote the right choices. According to the former viewpoint, mandatory food labelling can be defensible even if it makes consumers avoid healthy food that they wrongfully believe to be unhealthy. According to the latter view, such labelling would be difficult to defend.

The use of labelling to solve problems in food production has also been criticized from a quite different perspective: labelling can be a way to shift responsibilities away from authorities and producers to consumers. If the aim is to avoid the

cardiovascular diseases that trans fat gives rise to, why not just regulate fat composition in foodstuff instead of introducing labelling that shifts the responsibility to individual consumers? Since trans and non-trans fat taste the same, no plausible consumer interest in retaining the trans fat alternatives seems to be present (Resnik 2010). Similarly, if the aim is to avoid cruelty to animals, why then leave it to individual consumers to choose between foodstuff produced with and without such cruelty, instead of just outlawing the inhumane practices? If the aim is to reduce the negative environmental effects of farming, why not use more direct means than consumer choices of farm products? Labelling and consumer choice is only one of the strategies available to regulators, and in some cases, using this instead of other strategies has ethical implications that have not been sufficiently discussed.

Mandatory or Voluntary Labelling

One of the most contested issues in food labelling is the choice between mandatory and voluntary labelling. The critical issue is whether labelling should be mandatory for attributes that some but not all consumers wish to take into account in their food choices. In most countries the presence of allergenic components has to be labelled, and consumers can expect products without such labelling to be free of the common allergens. On the other hand, there is no requirement to reveal the use of synthetic pesticides. Consumers wishing to avoid pesticide-treated foodstuff have to look for food with (voluntary) labelling indicating that no pesticides have been used.

For discussing the choice between mandatory and voluntary labelling, it is useful to divide consumer concerns into three categories:

1. Consumer health-related concerns that are supported by medical science
2. Consumer health-related concerns that are not supported by medical science
3. Concerns other than consumer health

Concerns in the first category are usually supported by mandatory labelling, even if only a minority of the consumers are affected as in the example of food allergens. Concerns in the third category, such as animal welfare, environmental effects, the rights of farmers and farmworkers, kosher, Halal, etc., are seldom if ever supported by mandatory labelling. Some of these attributes, such as religious practices in food production, are usually considered not to be the government's business. Others, such as domestic animal welfare, concern issues where government has access to more direct means to impose its standards on food production.

Concerns in the second category are treated differently, sometimes inconsistently, by lawgivers. The United States is an interesting example of this. The country has mandatory labelling of irradiated food but not of food containing genetically modified organisms. In both cases there is popular concern about potential health effects, but these concerns are not supported by the mainstream science that the authorities rely on. It can be argued in favor of mandatory labelling in such cases that consumers who wish to avoid these products should have a right to do so. Mandatory labelling facilitates the exercise of such a right. (This argument need not extend to concerns in the third category. Concerns for one's own health may be particularly worthy of respect even if they are not based on science.) A major counterargument against labelling for concerns in the second category is that such labelling systems are costly. They largely deal with indetectable credence attributes, and therefore a system for tracking the origin of raw material throughout the production chain is needed. Arguably, the costs for this should be carried by the consumers who ask for the information. (This argument need not extend to the first category of concerns. Contrary to a wish to avoid irradiated food, being an allergic is not a personal choice and therefore more suitable for public economic support.)

The current European legislation that requires labelling of GM foodstuffs has been challenged on two fronts. On one side, there are promoters of a health-centered labelling scheme who claim that since there are no known risks with GM products, labelling will mislead consumers to believe that there are risks when there are in fact none. On the other side, some discussants maintain that

since people may have reasons to avoid some but not all GM products, GM labelling should be more extensive and also specify the origin of the genes that have been transferred. An environmentalist may be against food produced from herbicide-tolerant plants with the help of herbicides. A vegan may refuse to eat vegetables that contain animal genes, a Muslim or a Jew food with porcine genes, a Hindu food with bovine genes, and Christian or secular Westerners food with canine genes. In order to make informed choices, they would all need to know more than just whether or not the foodstuff has been genetically modified (Siipi and Uusitalo 2008).

In the choice between mandatory and voluntary labelling, public expectations may have to be taken into account. In Israel and Saudi Arabia, it makes much more sense to conspicuously label pork than in countries where consumers wishing to avoid pork are used to reading through the fine-print contents list to make sure that no porcine ingredients are present.

Labelling Ethics from the Producers' Perspective

Both mandatory and voluntary labelling give rise to ethical issues for the producers and sellers of food. One of the most obvious ethical issues for food companies concerns the use of misleading or deliberately ambiguous information in labelling and – in particular – in off-label package texts and pictures. Some of the more prominent deceptive formulations are "evaporated cane juice" for "sugar" and "90 % fat free" for "10 % fat." Pictures can be equally dishonest. Pictures of hens roaming free on a beautiful farmyard have been used on the package of products made from hens kept in battery cages. Pictures of cows in a Swiss landscape have been used to create the wrongful impression that a cheese is of Alpine origin. Many countries have legislation intended to curb such practices, but even with such legislation, much is left to the producing companies' choice of an ethical standard.

The assessment of health claims in marketing is often ethically intricate. On one hand, untruthful or exaggerated health claims can seriously mislead consumers, and few health problems are solved by just choosing a single food product. On the other hand, nothing would seem to be gained by withholding information that can help consumers make more healthy choices. The strict restrictions against health claims in current legislations have been criticized for blocking information that could have contributed to saving lives (Adams 2010).

The "may contain" labelling of allergenic components poses an ethical dilemma for producers. Some producers provide such labelling to be on the safe side, even if the risk of allergen contents is slight (Mills et al 2004). It would seem difficult to blame an individual producer for doing so. However, if all producers use this warning profusely, then it may become so common on foodstuffs that allergic consumers may end up neglecting it, thus putting themselves at larger risk.

Voluntary labelling gives rise to a market for labelling schemes. Corporations can choose among NGOs and certifiers who offer different labels at different costs and with different requirements for the label. At least one large corporation supported the formation of an NGO whose labelling requirements coincide with its own interests (Renard 2010). On the market for labelling schemes, consumers who buy the products are a third party with in practice very little information on the meaning of the different labels. The difference between labelling systems can be substantial. One ecolabelling organization allows its label to be used on all products with at least 25 % ingredients that satisfy its certification criteria, whereas others have much higher requirements (Ballet and Carimentrand 2010). The lack of transparency in the market for ecolabels, fair trade labels, and other such certifications gives rise to legitimate worries whether some of these labels fully serve the ethical objectives to which they pay allegiance.

Summary

Food labelling aims at providing consumers with the information they need to make well-informed choices of food products. It is ethically highly

contentious which characteristics of food should be subjected to mandatory, i.e., legally required labelling. Currently, mandatory labelling systems have a strong focus on health-related properties such as ingredients and nutritional value. In some countries, qualities such as GMO and irradiation have been included due to consumer demand of such information. Voluntary labelling schemes tend to focus on a wider range of qualities that may attract various segments of the population, such as environmentally friendly production, fair trade practices, or compliance with various religious requirements on food production.

Cross-References

- ▶ Fair Trade in Food and Agricultural Products
- ▶ Food Additives and International Trade
- ▶ Food Allergies: Ethical Issues
- ▶ Food Legislation and Regulation: EU, UN, WTO and private regulation
- ▶ Food Risk Communication
- ▶ Functional Foods, Marketing of
- ▶ GMO Food Labeling

References

Adams, R. J. (2010). Prescription drug labeling and "overwarning": The disturbing case of Diana Levine and Wyeth pharmaceutical. *Business and Society Review, 115*, 231–248.

Ballet, J., & Carimentrand, A. (2010). Fair trade and the depersonalization of ethics. *Journal of Business Ethics, 92*, 317–330.

Berdowski, P. (2006). *Garum* of Herod the Great (a Latin-Greek inscription on the Amphora from Masada). *Analecta Archaeologica Ressoviensia, 1*, 239–257.

Cheftel, J. C. (2005). Food and nutrition labelling in the European Union. *Food Chemistry, 93*, 531–550.

Darby, M. R., & Karni, E. (1973). Free competition and the optimal amount of fraud. *Journal of Law and Economics, 16*, 67–88.

Eden, S. (2011). Food labels as boundary objects: How consumers make sense of organic and functional foods. *Public Understanding of Science, 20*, 179–194.

Klompenhouwer, T., & Van Den Belt, H. (2003). Regulating functional foods in the European Union: Informed choice versus consumer protection? *Journal of Agricultural and Environmental Ethics, 16*, 545–556.

Mill, J. S. (1859). *On Liberty*. London:Parker.

Mills, E. N. C., Valovirta, E., Madsen, C., Taylor, S. L., Vieths, S., Anklam, E., Baumgartner, S., Koch, P., Crevel, R. W. R., & Frewer, L. (2004). Information provision for allergic consumers – Where are we going with food allergen labelling? *Allergy, 59*, 1262–1268.

Nelson, P. (1970). Information and consumer behavior. *Journal of Political Economy, 78*, 311–329.

Renard, M.-C. (2010). In the name of conservation: CAFÉ practices and fair trade in Mexico. *Journal of Business Ethics, 92*, 287–299.

Resnik, D. (2010). Trans fat bans and human freedom. *The American Journal of Bioethics, 10*, 27–32.

Siipi, H., & Uusitalo, S. (2008). Consumer autonomy and sufficiency of GMF labeling. *Journal of Agricultural and Environmental Ethics, 21*, 353–369.

Food Legislation and Regulation: EU, UN, WTO and Private Regulation

Oliver Hartmann
Keller and Heckman LLP, Brussels, Belgium

Synonyms

Food governance; Food laws; Food standards; Regulating food safety

Introduction

In general, food laws relate to a wide and multidisciplinary range of issues including health and safety, composition, science, labeling, and advertisement, but also abstract concepts such as culture and tradition come into play. In addition, food laws are no longer the exclusive domain of the government and public authorities, but also involve the influence of private actors that increasingly contribute and shape the development of food laws.

The purpose of this entry is to provide an overview regarding the different layers of food legislation in the EU. In order to provide a full picture of the legislative background, the development and evolution of food laws have to be considered. Also, the international dimension of

food laws will be presented which in particular comprises international fora like the UN and the WTO. In the following, focus will be laid on the food laws of the EU by taking into account that the formation of EU food laws has been marked by different stages. The entry then refers to private food laws and standards emphasizing the integration of such standards with public law requirements. Finally, this entry will speak about the enforcement and controls of food laws.

Development and Aims of Food Laws

As indicated in a Codex Alimentarius Document (see FAO/WHO 2006), the emergence of rules concerning trade in foods dates back to ancient times. Early civilizations, such as the Egyptians, have rules in place determining the labeling applicable to certain foods. Also, the ancient Greeks and Romans have established food safety requirements. In antique Athens manufacturers followed certain standards when producing wine and beer. In Rome food has been controlled with the aim of consumer protection. Together with the development of separate countries in the Middle Ages, national legislation prescribing rules for the quality and safety of certain commodities started becoming more and more common. For instance, laws regulating beer purity were passed in Germany in 1516. In the nineteenth century, general food laws came into existence on the European continent. An example is provided by the Adulteration of Food and Drink Act 1860 adopted in the UK prohibiting sales of knowingly adulterated food or food consisting of harmful ingredients (MacMaoláin 2007). Another example gives the Austro-Hungarian Empire with its *Codex Alimentarius Austriacus* developed between 1897 and 1911. The said document embodied standards and product descriptions for a broad range of foodstuffs which had been used as guidance for courts. This still existing (also known as Österreichisches Lebensmittelbuch – ÖLMB) system can be regarded as a predecessor of the Codex Alimentarius. Importantly, with the rise of science in the nineteenth century, the discipline of food chemistry was increasingly employed as an objective instrument for assessing food products' compliance with applicable rules (FAO/WHO 2006).

As indicated, the prime rationale for the establishment of law and rules for food is the protection of the consumer from unsafe, adulterated, and poor-quality products. The following section proves that these grounds serve still as the main objectives by current food laws and regulations. However – given the grown/growing globalized trade in food – focus is also laid nowadays on trade facilitation in the process of establishing food standards.

International Food Laws

United Nations (UN)

The International Covenant on Economic, Social and Cultural Rights (ICESCR) adopted by the General Assembly of the UN formulates economic, social, and cultural rights for the peoples. Notably, the multilateral treaty acknowledges the provision of food as a human right. In detail, Article 11 (1) of the ICESR states that:

> The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions [. . .]

The UN Committee on Economic, Social and Cultural Rights has elaborated on the meaning of this recognized right to adequate food. In accordance with the General Comment 12 of the Committee in 1999, this right involves the availability of a food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture.

Also, the UN Guidelines for consumer protection issued in 1985 and expanded in 1999 are of great importance as far as food safety is concerned. As it has been stated in Section 14 of the Guidelines, governments should intensify their efforts to encourage consumer organizations to monitor adverse practices, such as the adulteration of foods, false or misleading claims in marketing, and service frauds. Additionally pursuant

to the Guidelines, consumer education and information programs should cover health, nutrition, prevention of foodborne diseases and food adulteration, and product hazards and product labeling. Finally governments have been called to give priority to areas of essential concern for the health of the consumer, such as food, water, and pharmaceuticals. Policies should be adopted or maintained for product quality control, adequate and secure distribution facilities, and standardized international labeling and information, as well as education and research programs in these areas.

FAO/WHO Codex Alimentarius

UN-specialized agencies such as the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) have contributed to the development of international food law more specifically. This relates in particular to the creation of the FAO/WHO Codex Alimentarius, also referred to as the food code, in 1961. The conception of the code came partially in response to the increased need for harmonization of food standards in the view of differing domestic laws on foods acting as a barrier to trade. Consequently, Article 1 of the statutes of the Codex Alimentarius Commission enshrines the aim of protecting the health of consumers and ensuring fair practices in the food trade.

The Codex Alimentarius encompasses the formulation of international food standards, guidelines, and codes of practice that are achievable, taking into account the number and diversity of Codex members. In terms of content, standards developed under the Codex Alimentarius relate, inter alia, to the areas of food composition, codes of hygiene and technological practice, evaluation and limitation of the use of pesticides, and evaluation of additives and veterinary drugs. Furthermore, the food code lays down an international numbering system of food additives.

The importance of the Codex Alimentarius at international level is reflected in UN Resolution 39/248 which provides that national governments should to the greatest extent possible adopt standards from the Codex Alimentarius or from other generally accepted international food standards when developing domestic food policies.

With reference to the individual instruments adopted under the Codex Alimentarius, "Codex Standards" may either refer to a specific foodstuff, as for instance the commodity standards on fruit juices or on milk and milk products, or may establish general standards as exemplified by the General Standard for the Labeling of Prepackaged Foods.

Codex codes of practice provide for production, processing, manufacturing, transport, and storage practices for individual foods or groups of foods. An essential code of practice developed by the Codex Alimentarius is the one on the General Principles of Food Hygiene which includes reference to the Hazard Analysis Critical Control Point system (HACCP) which constitutes the risk management method. Furthermore, the Codex Alimentarius has adopted the Code of Ethics for International Trade in Food establishing principles for the ethical conduct of international trade in food.

Other texts adopted by the Codex Alimentarius are Codex guidelines which can be distinguished into interpretative guidelines for the provisions of certain Codex standards and principles laid down for specific areas including risk analysis of foods derived from modern biotechnology or food import and export inspection and certification.

World Trade Organization (WTO)

International trading rules established by means of the various agreements under the World Trade Organization (WTO), namely, the General Agreement on Tariffs and Trade (GATT), the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs), the Agreement on Technical Barriers to Trade (TBT), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), and the Agreement on Agriculture not only impact the global trading in food but also influence related legislation and regulations of WTO members.

Domestic laws regulating the labeling and packaging requirements of foods may obstruct international trade in foods. Equally, measures

adopted by countries in relation to guarantee safe food may also ultimately constitute barriers to trade when put in an international context. Against this background, the SPS and TBT agreement were signed by WTO members to reduce the impact of above mentioned measures on international food trade.

Importantly, the SPS Agreement provides for the right of governments to adopt sanitary and phytosanitary measures which are necessary for the protection of human, animal or plant life, or health. However, the agreement requires that measures in relation to food safety as well as animal and plant health standards must meet a certain level of scientific justification due to their trade-restrictive and protectionist character. The agreement further promotes the adoption of SPS measures on the basis of international standards, guidelines, or recommendations. Accordingly, the SPS Agreement refers to Codex standards for food additives, methods of analysis and sampling, contaminants, and codes and guidelines on hygienic practice.

The TBT agreement grants governments the right to adopt technical regulations and standards such as testing and certification procedures or labeling requirements as long as they do not constitute unnecessary obstacles to trade, and the measures pursue legitimate objectives as listed in the agreement as, for example, the protection of human health or animal or plant life or health. Similar to the SPS Agreement, the provisions of the TBT agreement promote the harmonization of standards by demanding the use of international standards in the context of technical regulations.

European Union Food Law

The development of EU food law can be divided into several phases: the first phase is related to the adoption of legislation covering specific food products (vertical legislation). The second was characterized by the principle of mutual recognition and the third by the overhaul and modernization of EU food law reflected in the adoption of the General Food Law (van der Meulen and van der Velde 2008).

Early Food Legislation

In pursuance of the goal to establish a common market, the European Economic Community (EEC) that has become today the European Union relied extensively on the four freedoms: the free movement of labor, the free movement of services, the free movement of capital, and the free movement of goods. The evolution of food law in the EU especially before the 1990s was based on the concept of free movement of goods. On this basis, the European Court of Justice in 1979 established in *Cassis de Dijon* judgment the principle of mutual recognition of product standards with the effect that when a food is legally marketed in one Member State, it can be lawfully marketed in all other Member States.

The ruling laid down the foundations of a market-oriented approach based on the mutual recognition principle within the context of EU food law rendering detailed harmonization in terms of laws and regulations between Member States less necessary. Prior to the *Cassis de Dijon* case, the EU institutions adopted specific food-product standards as regards composition in order to harmonize the differing food laws of the Member States. Although a horizontal approach, i.e., legislation applicable to all food products, had then been preferred to the product-specific approach of harmonization, certain foodstuffs remain subject to such vertical EU legislation, e.g., fruit juices, chocolate, fruit jam, etc. (van der Meulen and van der Velde 2008).

General Food Law

The emergence of several food safety crises in the 1990s, especially in the form of bovine spongiform encephalopathy (BSE) outbreaks, led to a fundamental change in EU food policy and legislation. The overhaul of EU food law was legally reflected in the adoption in 2002 of Regulation 178/2002, also known as the General Food Law (GFL).

The Regulation establishes general, overarching principles and requirements in relation to food law which are ultimately designed to protect human health and consumers' interests. Thereby, this EU food legislation shifts the focus from the harmonization of the common market to ensuring

food safety. It incorporates a holistic approach termed "from farm to the fork" indicating that the principles outlined therein are applicable at all stages of food production and distribution. Against this background, Article 3 defines food law as:

> the laws, regulations and administrative provisions governing food in general, and food safety in particular, whether at Community or national level; it covers any stage of production, processing and distribution of food, and also of feed produced for, or fed to, food-producing animals.

Given the establishment of a general framework of food, the Regulation's principles apply to food areas that were not subject to vertical legislation and only regulated through the mutual recognition principle.

As another novelty introduced by the GFL is the concept of risk analysis reflecting the acknowledgement by EU legislators that regulatory decisions in the area of food law should be underpinned by science. The risk analysis model is divided by the GFL into the components of risk assessment, risk management, and risk communication. The GFL also provided for the establishment of the European Food Safety Authority (EFSA), which represents the risk assessor, by providing scientific opinions and information to the risk managers. The European Commission and national authorities fulfill the role of risk managers predominantly. The process of risk management involves the weighing of policy alternatives by taking into account the results of risk assessment and other legitimate factors. Risk communication relates to the interactive exchange of information and opinions during the risk analysis process and includes for instance the explanation of risk assessment results.

Following the adoption of the GFL in 2002, further legal instruments were included. The legislative texts take largely the form of regulations and therefore are directly applicable in EU Member States whereas previously EU food legislations were given through directives requiring implementation at national level. Regulations passed by the EU legislators to contribute further to the modernization of EU food laws included, inter alia, Regulation 1829/2003 on genetically modified food, Regulation 1935/2004 on food contact materials, Regulation 1924/2006 on nutrition and health claims or Regulation 1333/2008 on food additives, and Regulation 1169/2011 on food information to consumers.

EU Legislative Acts on Food Products

Besides the general framework laid out in Regulation 178/2002 and applicable to the whole food sector, the EU legislator addresses in other documents particular food products. Prime examples of such legislations are the EU framework Regulations on enzymes, food additives, and flavorings. In detail, the said framework Regulations provide for general rules on the conditions of use of these substances in food as well as marketing requirements including specific labeling standards.

Common to the structure of the framework Regulations is the establishment of positive lists that are incorporated in the so-called Union lists. The establishment of positive lists implies that specific food additives, flavoring substances, or enzymes can only be marketed provided they are included in the respective list. Otherwise, the products cannot be placed on the EU market. Being part of the Regulation, the positive lists can only be amended so as to include new food additives, for example, by following a legally defined authorization procedure set out in Regulation 1331/2008.

In general, positive lists constitute an important instrument in EU pre-market approval schemes that are found in legislative texts relating to other product categories. Accordingly, novel foods for instance regulated by Regulation 256/97 will first need to be scientifically evaluated by EFSA prior to their placing on the market.

The integration of pre-market approval schemes in EU food law entailing scientific evaluation reflects the strong scientific dimension of EU food legislation.

Private Food Laws

Scope

By contrast with requirements stipulated by legislative texts that may also be described as public

law requirements and are binding on economic operators in the food sector, private food laws provide for rules that do not impose an obligation per se on operators. In other words, such private schemes constitute non-binding rules. However, these non-binding rules may nevertheless become binding by inclusion into a contract that binds the parties having concluded the contract (van der Meulen 2011). Due to the conclusion of the contract, obligations between parties come into existence with regard to the voluntary rules, and the parties are equipped with rights in case of noncompliance with the provisions of the contract, which then can also be invoked before courts.

Standards set by private entities concern food safety, food quality and production, or broader interests involving environmental aspects or corporate social responsibility. In particular, hygiene codes or codes of conduct serve as an illustration in this regard.

Also, often the term self-regulation is used for such kind of arrangements which has been, for example, defined by the EU in the interinstitutional agreement on better lawmaking as *the possibility for economic operators, the social partners, non-governmental organizations or associations to adopt amongst themselves and for themselves common guidelines at European level (particularly codes of practice or sectoral agreements)*.

The creation by businesses of own obligations in addition to legal requirements can have different motivations. Rationale behind private food schemes is to ensure food safety aspects and standards with the consequence of protecting liability and product quality. By implication, this also helps to comply with legal requirements established by the public legislator. Private standards are also beneficial in terms of international cooperation by using private regulation in order to impose certain obligations on producers that work in countries with different legal requirements. Other aspects such as the promotion of general interests including corporate social responsibility can play a role when private standards are adopted by businesses (van der Meulen 2011).

Relation with Public Law

Mostly, private food laws relate to requirements that are found in legal instruments. In this way, private schemes interconnect with public law requirements. Conversely, legal instruments can refer to private standards. In particular, at EU level Regulation 882/2004 makes reference to standards developed by the European Committee for Standardization (CEN) in the context of methods of sampling and analysis. The CEN provides voluntary standards for industry and business. Another possibility found in public law vis-à-vis private standards is the requirement on affected parties to regulate for themselves. A prominent example in this relationship is EU Regulation 852/2004 that imposes the obligation to set up procedures based on HACCP principles (van der Meulen 2011).

Enforcement and Control

EU Food Law

The food scandals prior to the adoption of the GFL revealed that enforcement of food safety legislation was not functional and that the legislation on food controls requires improvement. Consequently, a legislative revision of enforcement and control procedures regarding EU food laws was also undertaken.

Article 17 (2) stipulates the principle that national authorities are responsible to enforce food law and monitor and verify that the applicable food law requirements are fulfilled by food operators at all stages of the food chain. Therefore, in the context of official controls, national authorities are in charge of the inspection of premises run by food operators.

Despite this general obligation on part of the EU Member States, Regulation 882/2004 on official controls performed to ensure the verification of compliance with food law provides the Commission with supervision powers of national enforcement. Per the provisions of this Regulation, the Commission monitors the performance of national authorities with regard to enforcement.

Where the national authorities find noncompliance with relevant food law, Article 55 of Regulation 882/2004 provides the national authorities with several types of enforcement actions to remedy the situation. The imposition of sanitation procedures, restriction or prohibition of placing the noncompliant product on the market, monitoring and where necessary ordering the recall, and withdrawal and/or the destruction of the food are listed among the possible actions. One of the most stringent enforcement actions national authorities can apply is the suspension or withdrawal of the establishment's approval.

The Regulation further establishes that each Member State must lay down a system of sanctions for the infringement of food laws. These sanctions must be effective, proportionate, and dissuasive.

Private Food Law

As already implied in section "Scope" of this entry, noncompliance with private food standards can entail several consequences such as contractual fines as agreed in the contract between the parties.

To control the producer's compliance with the requirements set by a particular private standard, so-called certification schemes are applied. These certification schemes shall attest in principle that the "audited" producer complies with the given specifications of the standard. Normally, certification schemes are based on third-party control involving the provision of a certificate to the producer where compliance is proven (van der Meulen 2011). In contrast to certification systems, certain schemes exist on the basis of self-declaration (Commission Communication 2010).

Summary

This entry gave an overview of the major components forming food laws and regulations. In doing so, the entry distinguished in particular between international food laws, EU food laws, and private laws while taking into consideration the entanglement of the various spheres of food laws. The entry outlined first the development of food laws from a historical point of view. Then it presents the area of international food laws notably the UN contribution to the development of food laws, in particular through its agencies of FAO and WHO that launched the idea of an international food code, the Codex Alimentarius. As another actor at international level, the WTO affects international trade in food and the domestic laws of its members. This is in particular achieved through the SPS and TBT agreement. The following section dealt with EU food laws and its development in different stages. As explained, the adoption of the Regulation 178/2002 (GFL) led to a fundamental change in EU food legislation entailing significant legislative changes for the food sector in the EU Member States. Subsequently, this entry described the establishment of private food laws by business entities and their benefits. In the last section, the enforcement and control mechanisms to ensure compliance concerning food law requirements are shown in the context of EU food law and private food law. In detail, the enforcement and control apparatus under EU law is determined by Regulation 882/2004 whereas under private food laws certification schemes are of relevance.

In the future, food laws will have to continue evolving as quickly as possible to respond adequately to the upcoming scientific and technological developments in the food sector. These emerging technologies, such as nanotechnology enabling food industry to improve food products in terms of, e.g., taste or texture and thereby providing unprecedented opportunities to modify food products, entail fundamental changes in the food industry and hence potential risk for the consumers. Against this background, food regulators must be prepared to address these new challenges to food safety while not stifling innovation and research in the food sector.

Cross-References

- ▶ Food Standards
- ▶ Free Trade and Protectionism in Food and Agriculture
- ▶ Private Food Governance
- ▶ Right to Food in International Law

References

Literature

MacMaoláin, C. (2007). *EU food law. Protecting consumers and health in a common market*. Oxford: Hart Publishing.

van der Meulen, B. (2011). The anatomy of private food law. In B. van der Meulen (Ed.), *Private food law. Governing food chains through contract law, self-regulation, private standards, audits and certification schemes*. Wageningen: Wageningen Academic Publishers.

van der Meulen, B., & van der Velde, M. (2008). *European food law handbook*. Wageningen: Wageningen Academic Publishers.

Websites

Codex Alimentarius website: www.codexalimentarius.org

European Commission Directorate for Health and Consumers website: http://ec.europa.eu/dgs/health_consumer/index_en.htm

World Trade Organization website: http://www.wto.org/

FAO/WHO Documents

World Health Organization and Food and Agriculture Organization. (2006). Understanding the Codex Alimentarius.

EU Documents

Commission Communication – EU best practice guidelines for voluntary certification schemes for agricultural products and foodstuffs, OJ C 34, 16 Dec 2010, pp. 5–11.

European Parliament, Council of the European Union and European Commission interinstitutional agreement on better law-making, OJ C 321, 31 Dec 2003, pp. 1–5.

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004 Text with EEA relevance, OJ L 304, 22 Nov 2011, pp. 18–63.

Regulation (EC) No 1331/2008 of the European Parliament and of the Council of 16 December 2008 establishing a common authorisation procedure for food additives, food enzymes and food flavourings, OJ L 354, 31 Dec 2008, pp. 1–6.

Regulation (EC) No 1332/2008 of the European Parliament and of the Council of 16 December 2008 on food enzymes and amending Council Directive 83/417/EEC, Council Regulation (EC) No 1493/1999, Directive 2000/13/EC, Council Directive 2001/112/EC and Regulation (EC) No 258/97, OJ L 354, 31 Dec 2008, pp. 7–15.

Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives, OJ L 354, 31 Dec 2008, pp. 16–33.

Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No 1601/91, Regulations (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC, OJ L 354, 31 Dec 2008, pp. 34–50.

Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed, OJ L 268, 18 Oct 2003, pp. 1–23.

Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods, OJ L 404, 30 Dec 2006, pp. 9–25.

Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC, OJ L 338, 13 Nov 2004, pp. 4–17.

Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, OJ L 31, 1 Feb 2002, pp. 1–24.

Regulation (EC) No 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients, OJ L 43, 14 Feb 1997, pp. 1–6.

Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs, OJ L 139, 30 Apr 2004, pp. 1–54.

Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules, OJ L 165, 30 Apr 2004, pp. 1–141.

UN Documents

Committee on Economic, Social and Cultural Rights. (1999). Substantive issues arising in the implementation of the international covenant on economic, social and cultural rights: General comment 12.

International Covenant on Economic, Social and Cultural Rights (ICESCR). Adopted 16 December 1966 by General Assembly resolution 2200A (XXI).

United Nations. (2003). United Nations Guidelines for Consumer Protection (as expanded in 1999).

Cases of the European Court of Justice

Branntwein (1979) ECR 649.

Case 120/78 Rewe-Zentral AG v Bundesmonopolverwaltung für.

Food Miles

James McWilliams
Department of History, Texas State University, San Marcos, TX, USA

Introduction

The concept of food miles has been relevant for as long as humans have swapped food. Every bill of lading archiving the contents of every inbound ship was an implicit reference to a point of origin and, therefore, a record of the distance food traveled. Not incidentally, in most cases, the further afield a particular good originated from the point of consumption, the more it was valued for its exotic qualities. Throughout most of human history, the market rewarded distance and novelty. The more miles traveled, the better.

By the late twentieth century, popular evaluations of food production had shifted into the new framework of global sustainability. An emerging emphasis on the environmental consequences of food production, initially inspired by Rachel Carson's *Silent Spring* (1962), fostered critical changes in how consumers evaluated responsibly produced food. Perhaps most notably, consumers now took an interest in reducing the distance food traveled between "farm and fork." "Buying local" and nurturing local "foodsheds" became progressive agricultural goals. As these trends coalesced, socially conscious consumers demanded to know more about the distance food traveled. They called this figure "food miles."

The name arrived alongside a virulent form of food politics. What was once an objective and morally neutral measurement between the points of production and consumption evolved into a value-laden proxy for eco-correct consumer behavior. Today, a debate with strong ideological overtones plays out – and in some cases rages – over the impact that food miles have on the overall environmental impact of food production. There is, for all the concept's popularity, currently no consensus on the extent to which food miles matter as a reliable gauge of sustainability.

The immediate history of food miles per se began with Dr. Tim Lang, former director of the Sustainable Agriculture and Food Alliance. Lang coined the term "food miles" in the early 1990s. The basic intention behind this idea was to develop an accessible gauge for how consumers might judge the carbon emissions released during in the production of a particular type of food product. Lang explained in 2005:

> The idea behind food miles. . .was and remains simple. We wanted people to think about where their food came from, to reinject a cultural dimension into arcane environmental debates about biodiversity in farms..... Food miles have rocketed in recent years. Between 1978 and 2002, the amount of food trucked by heavy goods vehicles (HGVs) increased by 23 %. And the distance for each trip increased by over 50 %. In 2002, food transport accounted for an estimated 30bn vehicle kilometres. (Barclay 2012, p. 2)

The upshot for the environmentally aware consumer, as Lang advised, was clear: "shop locally and buy local produce" (Lang 2005).

Lang's emphasis on food miles as a measure of sustainable food production joined the quantitative efforts of Rich Pirog to pin down the precise extent to which food traveled in the global economy. Pirog, while working as the associate director of the Leopold Center for Sustainable Agriculture at Iowa State University, calculated in 2001 that the average distance that food travels between farm and table was about 1,500 miles (Black 2008). Locally sourced food, by contrast, traveled a mere 44.6 miles. The difference in CO_2 output consumed by transportation between the conventional and local food systems was notable. Conventional food production turned out to use from 4 to 17 times more fuel than local food production in order to move goods from farm to table. The implication was, yet again, perfectly clear: buy food locally whenever possible (DeWeert 2009). Research by Pirog and Lang spawned a cottage industry of quantitative research aimed to map the miles traveled within regional and global food systems.

Mathematical computations on food miles, and the implications therein, soon translated into concrete consumer trends. High-profiled efforts to eat locally captured the popular

imagination through glowing media reports. Before questions such as "what is local" or "do food miles even matter" were seriously examined, food activists joined bandwagons of advocates in pursuit of "the 50-mile" and "the 100-mile" diet fads, writing popular books, magazine articles, and blogs to chronicle their culinary adventures. Promoting the virtues of a diet that kept consumers tethered to local production while reducing reliance on fossil fuels, writers including Michael Pollan (in the *Omnivore's Dilemma*) and Barbara Kingsolver (in *Animal, Vegetable, Miracle*) became the unofficial leaders of an unofficial food movement that sought not only to reduce food miles but, building on that reduction, to reexamine the very basis of the entire post-World War II idea of food production. *Time Magazine* provided a capstone of sorts to this emerging movement with an article entitled, "Local-Food Movement: The Lure of the 100-Mile Diet" (Roosevelt 2006). In the forge of this critique, industrial food production – once the pride and joy of the United States – became enemy number one, at least for a small but vocal cohort of relatively privileged westerners willing to spend more to eat locally sourced food.

Several related developments emerged from this comparatively widespread quest for local food. The first was the addition of a single word that would jolt even more consumers to pay attention to food miles while anchoring the future of food reform. The word "locavore" entered the mainstream as the Oxford English Dictionary's "word of the year" in 2007. The term was coined by the Berkeley, California, chef Jessica Prentice in 2005 as a way to describe, as Ben Zimmer, editor of the American dictionaries at Oxford University press, put it, "food-lovers [who] can enjoy what they eat while still appreciating the impact they have on the environment" (Safire 2008).

A second development to emerge from the food mile frenzy was a sudden spike in the popularity of farmers' markets. According to the USDA, the number of active farmers' markets in the United States rose from 2,863 in 2000 to 7,864 in 2012, an almost threefold increase. One study exploring why people chose farmers' markets over conventional grocery stores found that 64 % of the customers at farmers' markets came to buy local produce (Wolf et al. 2005, p. 192). The website supporting Michele Obama's "Let's Move" initiative celebrated "access to fresh, locally grown foods" as the top reason for shopping at a farmers' market. In many ways, farmers' markets became the most visible evidence that the numerous goals promised by eating local were well within reach: eco-correctness, community cohesion, reduced food miles, and, of course, the hand of the farmer. Your farmer.

A third foundational change to emerge from the concerted effort to localize food production and consumption involves the cultural demonization of factory farming. The concentrated production of animal goods in industrial settings was increasingly illuminated by locavores to be unsafe, unsanitary, inhumane, and devastating to the environment.

While effectively channeling the anger of conscientious consumers who were fed up with the industrial food system, the locavore movement – which was broadened and reimagined by food reformers into the Sustainable Food Movement – struggled to overcome its image of elitism. For a wide variety of reasons (including reduced scale), local food requires higher labor and production costs. Leaders of the Sustainable Food Movement generally confronted this economic reality with feet of clay and a tin ear. Many examples abound.

When Michael Pollan explained to the *Wall Street Journal* in 2010, at a time when the country was deep in a recession, that it made perfect sense to spend $8 on a carton of locally sourced eggs, or when Alice Waters, executive chef and owner of Chez Panisse, chastised consumers for wanting "to buy Nikes, two pairs" rather than spend more on local food to "nourish themselves," middle-class consumers came to feel that they were not so welcome under what Pollan called the movement's "Big Umbrella." Josh Viertel, former president of Slow Food USA, spoke highly of the need to be all-inclusive. He wrote, "Should we be a movement that meets the interests of those who are naturally drawn to us and who

can afford to take part, or should we be a movement that meets the needs of those who are most dependent on our being successful – and who are most vulnerable if we fail?" Nobly, he declared his allegiance to the latter. Five months later, unable to blend the goals of slow food and high accessibility to it, he resigned amid considerable controversy.

Difficulties reaching a more socioeconomically inclusive audience did not prevent the Sustainable Food Movement from wielding the cause of local food as an ideological weapon in the war against globalization. In 2007, Vandana Shiva, an ardent Indian activist, wrote in *Manifestoes on the Future of Food and Seed* (2007) that "By eating local, we are taking power and profits away from global agribusiness, and strengthening our local food community." Her outrage against the expanding global food chain, including its dominance by multinational corporations such as Monsanto, was shared by Prince Charles who, in the same volume, touted local food production as a "significant challenge to the massed forces of globalization, the industrialization of agriculture, and the homogenization of food." Once again, at the core of this critique was food miles.

As eating locally sourced food for environmental reasons became a well-established form of food activism, trenchant criticisms of food miles began to question to concept's accuracy and viability. At the forefront of that criticism was a more comprehensive evaluation of the energy required to produce our food called a "life cycle assessment" (LCA). LCA's consider not just the distance food travels but, in so far as they can, other factors of production and consumption that are required to bring food from farm to table. Some of these factors include water usage, harvesting techniques, pesticide usage, fertilizer outlays, disposal and storage methods, packaging, crop drying techniques, and dozens of other inputs that consumers rarely think about when judging the eco-correctness of a food purchase. The reason why LCAs posed something of a challenge to the concept of food miles is that, when these other factors of production are taken into account, the distance food travels appears to play a relatively small role in the overall energy profile of food production.

Interestingly, one of the key figures to initiate the transition to LCAs as a better assessment of food's "carbon footprint" was Rich Pirog, originator of the 1,500-mile claim. Subsequent research he conducted found that, when it comes to food's extensive supply chain, 45.6 % of all fossil fuel used came from production and processing, 15.8 % from restaurant preparation, and another 25 in home usage and disposal. The shocking discovery, at least for supporters of food miles as a gauge of sustainability, was that transportation was the lowest of all factors, accounting for about 11 % of overall energy used in that product's life cycle (Pirog 2001). These findings led several scholars writing in the journal *Environmental Science and Technology* to claim that "although food is transported long distances in general. . .the GHG [greenhouse gas] emissions associated with food are dominated by the production phase" (Weber and Matthews 2008).

The shift in thinking, at least on the policy and academic levels, spawned a number of studies that made their way into the mainstream news, thereby providing further counterweight to the extremely popular food miles assessment and, in turn, the basis of the sustainable food movement as a whole. Most notable was a 2006 study to come from New Zealand's Lincoln University. Led by the researcher Catherine Saunders, the study found that grass-fed lamb shipped from New Zealand to London was four times more energy efficient than grain-fed lamb produced in the English countryside (Barber et al. 2006). What mattered, in essence, was not where the lamb came from but rather how it was produced. This study was soon joined by another much publicized study that discovered how German apple juice imported from Brazil was less energy intensive that apples grown and processed locally. The reason was that apples in Germany were grown largely in hothouses, which are generally very energy intensive, so much so that they countered the 10,000 miles journey from Brazil (Blanke et al. 2005).

Other scholars skeptical of food miles explored the practical dietary implications of

locally sourcing food. Considering New York State and the considerable opportunities therein to eat local fruit, Jennifer Wilkins found that, of all the fruit grown in the state, only one – the apple – could feed New Yorkers at a level that met the US Recommended Dietary Allowances. Not only could the other fruits produced in New York not be harvested on a level that would meet basic dietary needs but, as Wilkins noted, New Yorkers would have to forgo eating all tropical fruit, including bananas, a decision that could have deleterious health consequences (Wilkins 2009, p. 174). Other analysts began to wonder about the desirability of scaling down and localizing potentially onerous food processing centers. Writing in the *British Food Journal*, three scholars, wary of the emerging desire to localize food production, noted how "a return to small units within communities may well bring environmental problems such as smell, pollution, waste disposal, visual intrusion, and nuisance for those communities" (Jones et al. 2004).

Another critique of food miles and the localization that it inspired came through a sociological lens. Writing in the *Journal of Rural Studies*, the sociologist Clare Hinrichs argued that, "making 'local' a proxy for the good and 'global' a proxy for the bad may overstate the value in proximity" (Hinrichs 2003, pp. 33–45). Central to this line of thought was a growing skepticism that local communities necessarily made more democratic food decisions than regional or global ones. This concern was developed in some depth by Patricia Allen, a scholar at the center for Agroecology and Sustainable Food Systems at UC-Santa Cruz. Analyzing the Santa Monica farmers' market, she wrote, "The presumption that everyone can participate is a magician's illusion," noting how the internecine battles over limited space belied the fabled "fluid cooperation among groups with quite different interests" that farmers' markets were said to embody (Allen 1999, pp. 120–122).

As some scholars began to question the food miles rubric, others took a more reactionary bent. They began to dismiss local food systems altogether as boutique endeavors of the foodie elite. In turn, they sought to reclaim what they saw as the virtues of the global and industrial food systems: efficiency, accessibility, cost-effectiveness, and high productivity – all qualities necessary for a food system that aimed to feed an expanding global population a healthy diet. Few were more outspoken on this point that the Missouri corn and soy farmer Blake Hurst. In an essay called "The Omnivore's Delusion," Hurst argued that expansive supply chains did not undermine the agricultural community. He wrote: "the distance between the farmer and what he grows has certainly increased, but, believe me, if we weren't closely connected, we wouldn't still be farming." He lamented how the sustainable food movement, in its emphasis on localizing the foodshed, offered agricultural prescriptions that "ignore the 'industrial' farmer's experience and knowledge," much less the impending population explosion that had to be fed. Moreover, he added, most so-called industrial farmers were family farmers (Hurst 2009).

Hurst was joined by Pierre Desrochers and Hiroko Shimizu, authors of *The Locavore's Dilemma: In Praise of the 10,000-Mile Diet* (2012). In an acerbic tone highlighting precisely how politicized the food miles debate had become, the authors wrote that the quest for local and sustainable food "is essentially a fad promoted by bicoastal urban 'agri-intellectuals' whose knowledge of and practical experience with food production are typically limited to the world of hobby gardening and a once-in-a-lifetime foray into hunting or killing a backyard animal" (Desrochers and Shimizu 2012, p. 9). In an interview with *Reason* magazine, Desrochers wondered, "If everything was so great when most food was sourced locally centuries ago, why did we go through the trouble of developing a globalized food supply chain in the first place?" More and more critics thought this was an excellent question, one that highlighted a retrograde aspect of the local food movement and its slavish adherence to food miles.

As the science and politics driving the food miles discourse intensified, a related issue intervened to further complicate and polarize the food miles debate. It suggested that, when it comes to sustainable food production and transportation,

it's not where our food comes from that matters as much as what it was we ate. The split was between plants and animals. In 2006, the UN's Food and Agriculture Association published a groundbreaking report called *Livestock's Long Shadow*. The report provided a devastating assessment of the environmental impact of eating animal products. It found, most notably, that the global production of meat was responsible for more GHG emissions than transportation. In addition, it documented the extensive impact of animal agriculture on biodiversity loss, land degradation, and water pollution (Desrochers and Shimizu 2012). Subsequent assessments of the correlation between animal agriculture and climate change discovered that *Livestock's Long Shadow* may have understated the impact on GHG emissions. Two former scientists from the World Bank argued that the animal sector may have been responsible for as much as 51 % of global GHG emissions (Worldwatch n.d.). The authors of the 51 % figure suggested that switching to plant-based calories would "have far more rapid effects on GHG emissions and their atmospheric concentrations-and thus on the rate the climate is warming-than actions to replace fossil fuels with renewable energy."

In many respects the debate over sustainable food production and responsible consumer choice began to compare the benefits of eating local versus eating a plant-based diet. According to several studies, the comparison was not even close. After a comprehensive comparison of the two diets – plant-based and local – the authors of a study published in *Environmental Science and Technology* wrote, "we suggest that dietary shift can be a more effective means of lowering an average household's food-related climate footprint than 'buying local.' Shifting less than one day per week's worth of calories from red meat and dairy products to chicken, fish, eggs, or a vegetable-based diet achieves more GHG reduction than buying all locally sourced food" (Weber and Matthews 2008). In this context, Rich Pirog now explained, "Food miles are a good measure of how far food has traveled. But they're not a very good measure of the food's environmental impact" (DeWeert 2009).

Currently, an emerging emphasis on veganism as the most ecologically responsible diet coexists uneasily alongside the locavore counterargument that small-scale, locally sourced animal products are ecologically desirable, especially if they come from pasture-raised animals, and even necessary to the future of sustainable food production. On the one hand, the biologist Allan Savory recently (March 2013) delivered an electrifying TED talk in which he argued that rotationally grazing more cattle on global desert land would eliminate the prospect of global warning while simultaneously feeding local populations an abundance of beef. His talk was widely praised (McWilliams 2012). On the other hand, a couple of years earlier, Dr. Richard Oppenlander's book *Comfortably Unaware* argued that all animal production – be it factory farmed or pasture raised – was unsustainable. When it came to the addition of cattle to the landscape, Oppenlander ridiculed the notion, explaining that "greenhouse gas production is 50–60 % higher in grass-fed beef" (Oppenlander 2011, p. 125).

Summary

The future of food miles as a concept central to the evolution of sustainable food systems will remain, for all the criticism it has endured, a sound one. Even if the arguments against food miles – the idea that it's more sustainable to eat a plant-based diet or that globally scaled food economies are ultimately more efficient at feeding the world – are valid, the appeal of reducing food miles will continue to thrive due to the concept's effectiveness as a consumer response to a global food system that is as industrialized and alienating for many consumers as it has ever been in the history of human food production and consumption.

Cross-References

► Local and Regional Food Systems
► Urban Agriculture

References

(n.a.). (n.d.). Livestock emissions: Still grossly underestimated? *Worldwatch Institute*. Retrieved from http://www.worldwatch.org/node/. Accessed 25 May 2013.

Allen, P. (1999). Reweaving the food security safety net: Mediating entitlement and entrepreneurship. *Agriculture and Human Values, 16*, 120–122.

Barber, A., Taylor, G., & Saunders, C. (2006, July). Food miles – Comparative energy/emissions performance of New Zealand's agriculture industry (Research Rep. No. 285). New Zealand: Lincoln University. Retrieved from http://www.lincoln.ac.nz/documents/2328_rr285_s13389.pdf. Accessed 24 May 2013.

Barclay, C. (2012). Food Miles. Standard Note SN/SC/4984, Science and Environment Section, House of Commons Library.

Black, J. (2008, September 17). What's in a number? *Slate.com*. Retrieved from http://www.slate.com/articles/life/food/2008/09/whats_in_a_number.html

Blanke, M. M., Burdick, B., & Gallon. (2005). Energy use comparison of local and globally sourced food. *Environmental Science and Pollution Research International*, *12*(3), 125. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/15986993/

Desrochers, P. & Shimizu, H. (2012). The locavore's dilemma: In praise of the 10,000-Mile Diet. *Public Affairs, 9*. Retrieved from http://www.org/ag/magazine/0612sp1.htm. Accessed 25 May 2013.

DeWeert, S. (2009, May/June). Is local food better? *Worldwatch Institute*, *22*(3). Retrieved from http://www.worldwatch.org/node/6064

Hinrichs, C. (2003). The practice and politics of food system localization. *Journal of Rural Studies, 19*(1), 33–45.

Hurst, B. (2009, July 30). The omnivore's delusion: Against the agri-intellectuals. *The American*. Retrieved from http://www.american.com/archive/2009/july/the-omnivore2019s-delusion-against-the-agri-intellectuals. Accessed 24 May 2013.

Jones, P., et al. (2004). A case study of local food and its routes to market in the UK. *British Food Journal, 106*(4), 328–335.

Lang, T. (2005, August 3). Origin unknown. *The Guardian*. Retrieved from http://www.theguardian.com/politics/2005/aug/03/greenpolitics.foodanddrink

McWilliams, J. (2012, April 22). All sizzle and no steak: Why Allan Savory's TED talk about how cattle can reverse global warming is dead wrong. *Slate.com*. Retrieved from http://www.slate.com/articles/life/food/2013/04/allan_savory_s_ted_talk_is_wrong_and_the_benefits_of_holistic_grazing_have.html. Accessed 25 May 2013.

Oppenlander, R. A. (2011). *Comfortably unaware: Global depletion and food responsibility* (p. 125). Minneapolis: Langdon Street Press.

Pirog, R. (2001, June). Food, fuel, and freeways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions. Leopold Center for Sustainable Studies, Iowa State University at Ames. Retrieved from http://www.leopold.iastate.edu/pubs-and-papers/2001-06-food-fuel-freeways

Roosevelt, M. (2006, June 11). The local-food movement: The lure of the 100-Mile Diet. *Time Magazine*. Retrieved from http://www.time.com/time/magazine/article/0,9171,1200783,00.html

Safire, W. (2008, October 12). On language: Locavorism. *The New York Times Magazine*, 18. Retrieved from http://www.nytimes.com/2008/10/12/magazine/12wwln-safire-t.html?_r=0

Shiva, V. (Ed.). (2007). *Manifestoes on the future of food and seed* (p. 29). Cambridge, MA: South End Press.

Weber, C. L. & Matthews, H. S. (2008). Food-miles and the relative climate impacts of food choices in the United States. *Environmental Science and Technology*, *42*(10), 3508–3513. Retrieved from http://pubs.acs.org/doi/full/10.1021/es702969f. Accessed 25 May 2013.

Wilkins, J. (2009). Eating right here: The role of dietary guidance in remaking community-based food systems. In C. Hinrichs & T. A. Lyson (Eds.), *Remaking the North American food system* (p. 174). Nebraska: University of Nebraska Press.

Wolf, M. M. G., Spittler, A., & Ahern, J. (2005). A profile of farmers' market consumers and the perceived advantages of produce sold at farmers' markets. *Journal of Food Distribution Research, 36*(1), 192.

Food Not Bombs

David Spataro
Department of Earth and Environmental Sciences, CUNY Graduate Center, New York, NY, USA

Synonyms

Antiwar food justice; Community kitchens; Community meals; Food movement; Food waste and politicized food rescue; Sharing food in public space

Introduction

Food Not Bombs is the umbrella name for a loose network of self-organizing food justice groups that began in Boston in 1980 and whose work is

anti-hunger, antiwar, and pro animal rights. Currently the movement is made up of a decentralized network of 500 chapters in 60 countries (Food Not Bombs 2012). Food Not Bombs groups rescue food from various nodes in the food system including farms, restaurants, grocery stores, distributors, community-supported agriculture, and bakeries among many other places. Operating outside of the state, not-for- profit, and religious social service sector, Food Not Bombs food rescue efforts involve local connections with food businesses. These connections create mutually beneficial relationships whereby the businesses can reduce their food waste through regular donations. Once rescued, Food Not Bombs cooks vegan and/or vegetarian meals in shared kitchens and then serves the food in well-trafficked public spaces like parks and plazas. These community meals often feature nonsectarian political literature on poverty, hunger, animal rights, and the US military budget. In addition to regular meals, Food Not Bombs groups also engage in food solidarity projects: cooking food for demonstrations, fundraisers, conferences and/or meetings organized according to nonviolent social justice principles.

What is called Food Not Bombs is not a single, centrally run organization with a president, officers, board of directors, or staff. Rather, Food Not Bombs has a philosophical foundation in anarchism and direct democracy, a foundation that shuns hierarchical systems. In practice, any one Food Not Bombs chapter tends to be ideologically heterogeneous rather than entirely made up of anarchists. However, the overall texture of the group would be considered what Day (2005) calls "anarchistic." As such, Food Not Bombs is really a collection of guiding principles and organizational tools that encourage people to create their own local chapter while using horizontal organizational modes. In the same grassroots spirit of the Do It Yourself (DIY) and punk movements, people concerned with the issues of food waste, hunger, and militarization can claim the Food Not Bombs tools for their own communities and create an autonomous local chapter (Holtzman et al. 2007). This model emphasizes that one need not ask for permission – from a Food Not Bombs "leader" or from local politicians – in order to act ethically in the creation of community food security.

Food Not Bombs claims more than 500 chapters on their website, although the decentralized and all-volunteer nature of the movement means that new chapters are emerging while old ones may dissolve or temporarily scale back their work. Measurements of the size of the movement should be understood to be estimates rather than precise statistics. However, the group's impact can be gauged by examining the longevity of the movement, the growth of new chapters, and the increasing attention – both in favor and in opposition to Food Not Bombs – paid by journalists, academics, and municipalities. Several chapters, for example, have been in the mainstream press and scholarly literature in the late 2000s. This is primarily due to cities adopting copycat legislation that criminalizes sharing food with poor people in public spaces, which has led to arrests of Food Not Bombs activists (see The National Coalition for the Homeless and The National Law Center on Homelessness and Poverty 2010; Mitchell and Heynen 2009).

Origins and Growth of the Movement

Food Not Bombs originated in the dissolution of the antinuclear movement in the US northeast. Beginning in the latter half of the 1970s, the antinuke movement spanned from the end of the New Left social movements into the early 1980s. As a direct forebear, the antinuke movement's tactics, organizational form, and philosophy are all essential for understanding Food Not Bombs. Antinuke activists blended anarchist, radical pacifist, and Quaker political philosophies. Chief among these ideas was the notion that individuals need not wait to act on their ethical principles, nor act only in the arena of representative electoral politics (see Tracy (1996) for the radial pacifist roots to these ideas). Working in this tradition the antinuke activists occupied and blockaded construction sites and research facilities using nonviolent direct action. Additionally, these more spectacular confrontational actions were based

in quotidian forms of action such as prefiguration, consensus decision-making and affinity groups (Epstein 1991; Cornell 2010). Prefiguration is the name given to tactics that create in the present moment the world that people are struggling to create. Thus, the struggle for equality and direct democracy requires that groups eliminate hierarchies and oppressive processes in their organizations and in their everyday lives. For antinuke activists, making decisions horizontally (rather than hierarchically) and working in small groups with strong interpersonal bonds were two central methods of prefiguration.

As the antinuke movement waned, Boston-based activists began to blend political theater with serving food in public space into an innovative form of social protest. Two actions in 1981 in the ongoing campaign against the Seabrook Nuclear Power Plant in New Hampshire foreshadowed the first Food Not Bombs. Both actions involved food and public space and both contained the seeds of what later became the mature Food Not Bombs model.

At one action, organizers used political theater to protest a Boston bank that had investments in the nuclear arms industry. They created a depression-era soup-line, as if to say that the bank's investments were leading to social crisis on par with the depression. They brought soup and bread out to the sidewalk near the bank and invited all to join, including individuals in nearby shelters (Parson 2010). At the other event, the same group held a bake sale for the legal fund of an arrested friend. Like the soup-line protest, they used a bit of theater alongside their food to impute a political message into the event. Wanting passersby to envision a world where the military, not schools, faced budget shortfalls, they dressed up as members of the military attempting to sell baked goods (Parson 2010). Throughout this period they used political messaging that argued for basic goods such as food and schools instead of war, messaging which they distilled into the very simple and clear demand to "drop food not bombs." Hence the name Food Not Bombs.

As the group of Boston antinuke activists created what would become the first Food Not Bombs chapter, they continued to use many organizational elements of the antinuke struggle. They lived together and organized in an affinity group fashion using consensus for making decisions. Their public meals continued the tactical legacy of nonviolent direct action. Sharing food in public space is much less risky than some of the more famous direct actions of the civil rights and antiwar era - prison hunger strikes, lunch counter sit ins, ship blockades, construction site occupations - but the principles remain the same. The Food Not Bombs public meal embodies the ethos that individuals do not need to wait for the state to take action and create community solidarity; it can be and is done in the here and now by regular people.

Early on, Food Not Bombs in Boston provided food solidarity at a series of demonstrations while also making regular food deliveries to daycare centers, housing projects, and women's shelters. Members of the Boston chapter provided food at the mass rally for disarmament in June 1982 that was held in Central Park in New York City (Butler and McHenry 2000).

Starting in the late 1980s, differences between municipal policies and the Food Not Bombs philosophy lead to high-profile conflicts between police and activists. In San Francisco, Food Not Bombs activists found that their model for eliminating food waste, hunger, and militarism came up against the interests of the mayor and the Cole Valley Improvement District, a business improvement district (BID) in the city's famous Haight-Ashbury neighborhood. The ensuing arrests, which numbered over 1,000 from 1988 to 1996, were often for violations such as sharing food without a permit (Parson 2010).

While most of the arrests during this period were for violations of health codes, Food Not Bombs continued to conduct their direct action community meals while forging alliances with homeless people and their advocates (Parson 2010). Scholars identify this period in urban policy as one dominated by "quality of life" campaigns. Based upon research that argued that urban disorder is a precursor to more serious crime (see, e.g., Kelling and Wilson 1982), mayors such as New York City's Rudolph

Giuliani put emphasis on stopping smaller scofflaws such as "squeegee men," transit turnstile hoppers, and graffiti writers as well as homeless people who slept, drank, and urinated in public (see Clines 1993). Although Giuliani is perhaps the most well known for these policies, San Francisco's Matrix program began simultaneously to Giuliani's election. Under the Matrix program, the San Francisco police began to cite people for quality of life violations and to push homeless people out of public spaces. Scholars such as Mitchell (2003) argue that this use of the penal system is misguided because it ascribes criminal activity to the actions that poor and homeless people often must take in public space precisely because they do not have private resources. Since Food Not Bombs fed all people and especially the same poor people that the Matrix program sought to displace, activists and their supporters argued that the health codes were being used as an indirect tool for political purposes. Using police to prevent a community meal thereby reaffirmed one of the guiding principles of the group's direct action food sharing: to make visible food insecurity rather than disguising hunger and poverty (Parson 2010; Mitchell and Heynen 2009).

The criminalization of Food Not Bombs activists has continued along two fronts. First, as Food Not Bombs has spread in the aftermath of the San Francisco arrests, chapters have become nodes in the local networks of alter-globalization activists. Perhaps most widely known for their participation in the 1999 protests against the World Trade Organization (WTO) in Seattle, alter-globalization activists organized opposition at numerous summits of global leaders during the 2000s. Food Not Bombs' connection to these actions has lead to state surveillance and repression. This has been particularly the case in the years following 9/11, where the US state has consistently treated radical social movements as either terrorists or potential terrorists (see Heynen 2010). Secondly, as economic inequality in the United States has only grown over the past two decades, cities have continued to use displacement as their main tool for dealing with the families hit hardest by economic crisis. Food Not Bombs' uncompromising commitment to rescuing food and sharing nutritious meals in highly visible public places has led to more disputes with municipal governments and business improvement districts. In the late 2000s several municipalities passed legislation that directly led to the arrests of Food Not Bombs volunteers, a process that geographers Michell and Heynen call "criminalization of intervention" (Mitchell and Heynen 2009).

The major impetus for Food Not Bombs' actions are the abundance of food that needs rescuing, the proliferation of hunger and poverty, and the use of social wealth for producing weapons and engaging in warfare. Neither the actions of Food Not Bombs activists nor the policies of governments have ended these social dynamics. While the criminalization of the movement seeks to channel action into more socially accepted arenas, it has not been successful in changing the course of the movement. These social factors point to the continued presence of Food Not Bombs' direct action community meals in public spaces.

Issues Raised by the Food Not Bombs Movement

The Food Not Bombs movement raises several issues. The most prominent issue is the coexistence in the United States of individuals in need of food alongside system-wide food waste. According to the US Department of Agriculture (USDA), 17.2 million or 14.5 % of US households experienced food insecurity sometime during the year in 2010. When disaggregated, the data reveal that households of color are disproportionately food insecure, with 25.1 % of black households and 26.2 % of Hispanic households experiencing food insecurity during 2010. And because access to food is mediated by having money, one third of households with incomes below 185 % of the federal poverty line experience food insecurity (Coleman-Jensen et al. 2011). Additionally the National Resources Defense Council (NRDC) reports that 40 % of food in the United States in 2011 went to waste,

making wasted food the largest component of solid waste and contributing to greenhouse gas emissions from landfills (Gunders 2012). The NRDC report demonstrates unequivocally that there is an abundance of food produced alongside the existence of US households experiencing lack. Despite the common sense notion that food shortages are immanent threats due to population growth – a kind of persistent Malthusianism – abundance alongside hunger points to issues of distribution rather than production as the root cause of the problem.

Food Not Bombs activists engage in a form of grassroots direct action against this dual problem of abundance and lack. In cities throughout North America, Food Not Bombs volunteers rescue food that would otherwise be going to landfills from many points in the food system. From restaurants, bakeries, farms, distribution centers, and grocery stores, Food Not Bombs volunteers quite literally work with the food that makes up that 40 %, albeit a very small portion of it. Additionally, they combine this embodied knowledge with a criticism of the amount of social wealth that is used for various military expenditures versus social welfare programs. Food Not Bombs activists eschew politically neutral explanations for systematic food waste and budgets overwhelmingly skewed towards militarism. With the public meals they attempt to create a space where people can engage in dialogues that go against the naturalization of these phenomena. During the neoliberal era, policymakers stress that the self-regulating market, as opposed to governments or collective solidarity, is the best mechanism for dealing with social problems. The anti-capitalist principles that provide the foundation for Food Not Bombs contradict this orthodoxy. Under these circumstances, Food Not Bombs remains outside the realm of socially legitimate policy expertise and their work remains largely unknown except in instances where police arrest their volunteers.

Furthermore, the anarchist roots to the Food Not Bombs philosophy reveal issues about the role of the state, nonprofit, and charitable sectors in effectively dealing with these interconnected issues. One of the central outcomes of Food Not Bombs' anarchistic (Day 2005) model is their stance on state and nonprofit charities. The group's principles assert that ordinary citizens motivated by solidarity are the primary agents of social transformation, not governments, religious charities, or nonprofit services. These principles also derive from a criticism of state welfare and charity services (which today are increasingly inseparable) as serving to reproduce the market system and hence reproduce the system that produces the problems rather than eliminate them (see Heynen 2010). While the dominant political discourse debates government services as either fostering dependency (conservative political philosophy) or a temporary safety net for economic turbulence (progressive political philosophy), Food Not Bombs once again takes a different approach. The radical anarchist influence in the movement calls out the social welfare state as engaged in managing fluctuations in the labor market, not in ameliorating the problems that plague US households. These anti-statist philosophies that scaffold the movement sometimes overlap with anti-statist libertarian viewpoints. However, Food Not Bombs' collectivist emphasis on social solidarity and agitation to utilize social wealth for households in need have very little to do with individualist libertarianism.

The heart of this issue is an ideological debate between statist and anti-statist policies as a way to reduce hunger and food waste. Yet questions remain about the relationship between grassroots activism and state action. Historically, there are examples of activists taking on the role of direct action service providers – in other words creating services that help their community survive. Some of these projects led to the state taking on that role. Shepard (2007), for example, tells the story of the Housing Committee of the AIDS Coalition to Unleash Power (ACT UP). Facing the state's unwillingness to give homeless people with HIV/AIDS dignified housing, the Housing Committee decided that they would have to house people themselves. In Shepard's analysis, the group's ability to do both direct action protests and direct services established an embodied praxis for their broader demands, which eventually led to state action on the housing issue. Their success at

housing one another bolstered, rather than took away from, their goal of state support. Additionally, Heynen's (2009) analysis of the Black Panther Party's free breakfast program suggests that stalled legislation to create federal free breakfast was actually made politically feasible by the success of the BPP's solidarity breakfast program (see Heynen 2009). In both of these cases, the activists demanded a world where all people have access the means of survival. When faced with the ethical dilemma of their community needing resources in order for people to survive, these groups fused service with political action rather than divert resources into either movement building or depoliticized services.

The frames that individuals use to understand social action typically posit a binary between reformist and revolutionary action. Reformist action is an action directed at policy changes within a liberal framework, while revolutionary action is that which is geared towards changing or transforming state power. Mutual aid or direct action services, which are just other names for grassroots forms of community survival, pose challenges to this binary. On the one hand, they eschew typically reformist activities such as lobbying or asking for government permission, while they simultaneously focus on arenas of social life such as housing or food that are utterly quotidian compared to the grand scale of revolution. Furthermore, state responses to these actions can complicate the issue because the state may step in to perform services precisely in order to undercut the radicalism behind such services (see the discussion of the women's shelter movement in Enke 2003). Scholars of neoliberalism, conversely, argue that the contemporary penchant for cutting government services actively relies on community-scaled action. These scholars argue that activists doing direct services actually promote more cuts than they create the political pressure for increased services (see Herbert (2005) for an examination of community policing in this context). The history of Food Not Bombs does not present a clear case for either of these positions. However, confrontations between Food Not Bombs activists and city authorities suggest that even if they are feeding people, they are not doing it in the manner and/or in the spaces that the state prefers. At the very least, this suggests that the politics of community services, such as who is doing it and in what context, are a factor in how state forces respond to such work.

Furthermore, the criminalization of Food Not Bombs activists in public spaces across the United States brings up the issue of the legitimate uses of public resources. This issue is especially topical in the wake of the occupations of public parks across the United States in fall 2011 under the banner of the Occupy Wall Street movement. Under neoliberal governance, cities strive to control public spaces for the twin purposes of "quality of life" and "security." As a result the role of public parks in social life has transformed. While perhaps public space has never been the truly open space that the image of the Athenian *agora* implies (see, e.g., Mitchell 2003), these trends have increased privatization and decreased access, often through the mechanisms of user fees, public-private partnerships, and laws against basic functions such as sleeping or sharing food. Many scholars note that privatization has led to the exclusion of the most precarious individuals (see Low and Smith 2006). Food Not Bombs activists use a form of direct action to explicitly confront this trend, serving food to all comers in public places. As would be expected, these gatherings bring together a diverse group of people, including those that the state wishes to exclude.

The disputes that have ensued, from San Francisco to Orlando, while on the surface coded in the discourse of public health, often pit business and real estate interests against this pluralistic vision of public space. At the very core of this is a question of what collective wealth in the form of public parks, plazas, and open spaces should be used for. Real estate and business improvement districts seek to make public space more amenable to their property value and/or retail interests. They argue that broader social good derives from their success and that making public space available to society's marginalized people hinders their success. Food Not Bombs counters this discourse by actively creating radically open public spaces, arguing that spaces

created by social wealth should be available to all people.

Yet the mayor of Orlando, for example, called Food Not Bombs activists "food terrorists" during a protracted conflict about the use of Lake Eola Park ("Feeding Resistance" 2011; Jacobson 2011). The mayor's attempt to code community food sharing within the language of criminal behavior suggests the level of friction in these conflicts. While it is obvious that Food Not Bombs activists are not terrorists, it is also self-evident that they push anti-militarization demands and communalist views that are counter to the prevailing social and economic logic. A major challenge to unpacking these conflicts is that both sides strive to frame their positions through unassailable lenses. Municipal politicians and real estate interests argue that it is an issue of sanitation and park usage, while Food Not Bombs activists respond with the moral authority that comes from feeding hungry people and diverting food waste from landfills. If the debate stays at this level, the issues about the political economy of food waste, about inequality, and about the role of public space in private property values do not get addressed. Furthermore, there is a deeply insoluble element to these disputes. If the value of a neighborhood increases by eliminating marginalized people (see Katz (1999) for a discussion of this with regard to New York City's Grand Central Station), Food Not Bombs groups are not content to live in such an environment. The purpose of their efforts is to transform such social relationships, rather than conform to them.

Summary

Food Not Bombs is a 30-year-old food justice and antiwar social movement based in the principles of nonviolent direct action. Born in the waning years of the US antinuclear movement, Food Not Bombs began in Boston in 1980 as a collective of antinuke activists engaging in local food rescue, sharing the food in solidarity at women's shelters, public housing projects, and political demonstrations. Food Not Bombs developed into a decentralized and nonprofessional network of hundreds of local chapters in cities across the globe. Local chapters rescue food, cook vegetarian or vegan dishes, and then share a free communal meal in well-trafficked public spaces with nonsectarian literature about ending war and using social resources for people's basic needs. Through their nonviolent direct action community meals, Food Not Bombs advocates that communities take action for their basic needs and against the waste of resources for all aspects of war.

Cross-References

- Animal Welfare in the Context of Animal Production
- Community-Supported Agriculture
- Emergency Food System: Soup Kitchens and Food Pantries
- Environmental Justice and Food
- Ethical Activism with Consideration of the Routine of Food Culture
- Food and Class
- Food Security in Systemic Context
- Food Waste
- Food Waste and Consumer Ethics
- Poverty and Basic Needs
- Right to Food in International Law
- Vegetarianism
- War and Food

References

Butler, C. T., & McHenry, K. (2000). *Food not bombs*. Tucson: See Sharp Press.

Clines, F. (1993, September 26). Candidates attack the squeegee men. *New York Times*. Retrieved from http://www.nytimes.com/1993/09/26/nyregion/candidates-attack-the-squeegee-men.html. Accessed 22 Mar 2013.

Coleman-Jensen, A., Nord, M., Andrews, M., & Carlson, S. (2011) *Household food security in the United States in 2010*. Retrieved from http://www.usda.gov. Accessed 31 Dec 2012.

Cornell, A. (2010). The movement for a new society: Consensus, prefiguration, and direct action. In D. Berger (Ed.), *The hidden 1970s: Histories of*

radicalism (pp. 231–249). New Brunswick: Rutgers University Press.
Day, R. (2005). *Gramsci is dead: Anarchist currents in the newest social movements*. London: Pluto Press.
Enke, A. (2003). Taking over domestic space: The Battered women's movement and public protest. In V. Gosse & R. Moser (Eds.), *The world the sixties made: Politics and culture in recent America* (pp. 162–190). Philadelphia: Temple University Press.
Epstein, B. (1991). *Political protest and cultural revolution: Nonviolent direct action in the 1970s and 1980s*. Berkeley: University of California Press.
Feeding Resistance: Food Not Bombs Members Arrested in Orlando for Serving Meals Without a Permit. (2011). http://www.democracynow.org/2011/6/24/feeding_resistance_food_not_bombs_members#transcript. Accessed 31 Dec 2012.
Food Not Bombs. (2012). *Frequently asked questions*. http://foodnotbombs.net/faq.html. Accessed 31 Dec 2012.
Gunders, D. (2012). *Wasted: How America is losing up to 40 percent of its food from farm to fork to landfill*. Retrieved from http://www.nrdc.org. Accessed 31 Dec 2012.
Herbert, S. (2005). The trapdoor of community. *Annals of the Association of American Geographers, 95*(4), 850–865.
Heynen, N. (2009). Bending the bars of empire from every ghetto for survival: The Black Panther Party's radical antihunger politics of social reproduction and scale. *Annals of the Association of American Geographers, 99*(2), 406–422.
Heynen, N. (2010). Cooking up non-violent civil-disobedient direct action for the hungry: 'Food Not Bombs' and the resurgence of radical democracy in the US. *Urban Studies, 47*(6), 1225–1240.
Holtzman, B., Hughes, C., & Van Meter, K. (2007). Do it yourself. . . And the movement beyond capitalism. In E. Biddle, S. Shukaitis, & D. Graeber (Eds.), *Constituent imagination* (pp. 41–57). Oakland: AK Press.
Jacobson, S. (2011, June 2). *Three arrested, accused of illegally feeding homeless*. Orlando Sentinel. Retrieved from http://www.orlandosentinel.com/news/local/crime/os-homeless-feedings-arrests-20110601,0,7226362.story. Accessed 31 Dec 2012.
Katz, C. (1999). Excavating the hidden city of social reproduction: A commentary. *City and Society Annual Review, 10*, 37–46.
Kelling, G., & Wilson, J. (1982, March 1). Broken windows: The police and neighborhood safety. *The Atlantic*. Retrieved from http://www.theatlantic.com/magazine/archive/1982/03/broken-windows/304465/?single_page=true. Accessed 5 Apr 2013.
Low, S., & Smith, N. (2006). *The politics of public space*. New York: Routledge.
Mitchell, D. (2003). *The right to the city: Social justice and the fight for public space*. New York: The Guilford Press.
Mitchell, D., & Heynen, N. (2009). The geography of survival and the right to the city: Speculations on surveillance, legal innovation, and the criminalization of intervention. *Urban Geography, 30*(6), 611–632.
Parson, S. M. (2010). *An ungovernable force? Food not bombs, homeless activism and politics in San Francisco, 1988–1995*. Doctoral dissertation. Retrieved from Scholars' Bank. http://hdl.handle.net/1794/11179. Accessed 5 Apr 2013.
Shepard, B. (2007). Bridging the praxis divide: From direct action to direct services and back again. In E. Biddle, S. Shukaitis, & D. Graeber (Eds.), *Constituent imagination* (pp. 180–198). Oakland: AK Press.
The National Coalition for the Homeless & The National Law Center on Homelessness and Poverty. (2010). *A place at the table: prohibitions on sharing food with people experiencing homelessness*. Retrieved from http://www.nlchp.org. Accessed 12 Dec 2012.
Tracy, J. (1996). *Direct action: Radical pacifism from the Union Eight to the Chicago Seven*. Chicago: University of Chicago Press.

Food Preparation, Cooking, and Ritual in Judaism

Benjamin E. Zeller
Department of Religion, Lake Forest College, Lake Forest, IL, USA

Introduction

Judaism is one of the world's oldest religions and has a rich history of ethical approaches to food, eating, and cooking.

Although food and eating serve central roles in nearly all of the world's religions, they hold particularly outsized places in Judaism. The lived practices of many Jewish holidays often center on food practices. The daily routines of Jewish living frequently highlight issues of food, specifically the kashrut regulations that proscribe certain foods, types of meals, and their production and preparation methods. Communal and individual approaches to Jewish life in the contemporary world often hinge on the acceptance, rejection, or adaption of food-related practices, ranging from assimilationist attitudes that reject Jewish foodway particularity, to traditionalist

ones that enforce rigid separation (Greenspoon et al. 2005). Ethical questions regarding the appropriate means of producing, preparing, and eating food – and even what stuffs merit the designation of "food" at all – underlie all these issues.

Kashrut

The ethics of Jewish eating begin (and some might argue, end) with *kashrut*, the Jewish laws of food and eating laid out in the Torah (Pentateuch) – the first five books of the Hebrew Bible and the most important text in Judaism. Kashrut, also called the laws of kosher, set out what food Jews may eat; how they may produce, cook, and prepare it; and what the ramifications are for violation of said laws. The basic rules appear in two of the books of the Torah, Leviticus 11, and Deuteronomy 14. Leviticus 11 offers a list of permitted and prohibited foodstuffs. Explicitly permitted are animals that chew their cud and possess split hooves, as well as water-dwelling animals with fins and scales, birds that are not explicitly rejected, and various forms of locusts and other related insects. Numerous animals are explicitly rejected, famously including the pig, but the antiquity of the text makes impossible the precise identification of some prohibited animals with particular species. As numerous scholars have noted – most especially Mary Douglas – the permitted animals seem to occupy privileged positions within each category of animals (Douglas 2003). Split-hooved cud chewers are paragons of land animals, for example, whereas water dwellers with fins and scales serve as exemplars of water animals (see Table 1 below).

Food Preparation, Cooking, and Ritual in Judaism, Table 1 Permitted and prohibited foods according to Leviticus 11

Explicitly permitted	Explicitly rejected
Split-hooved cud chewers	Camel, daman, hare, swine
Water dwellers with fins and scales	Water dwellers without fins and scales
All birds not explicitly prohibited	Eagle, vulture, black vulture, kite, falcon, raven, ostrich, nighthawk, seagull, hawk, little owl, cormorant, great owl, white owl, pelican, bustard, stork, heron, hoopoe, bat
Winged swarming things that walk and leap on four-jointed legs: locusts, grasshoppers, and crickets	All other winged swarming things
(None listed)	Mole, mouse, great lizards, gecko, land crocodile, lizard, sand lizard, chameleon, four legged crawlers, belly crawlers, many-legged swarmers

Neither Leviticus nor Deuteronomy provides a clear ethical explanation for the prohibition of eating certain animals as food and the permission to eat other ones. The texts merely indicate that prohibited animals are "unclean," "impure," or "defiling." Yet both Leviticus and Deuteronomy do provide theological rationales. Leviticus 11.43 links unclean animals with unholiness and conversely clean animals with holiness. The next verse explicitly calls for Jews to "be holy for I [God] am holy." Eating clean animals and avoiding unclean ones therefore becomes a religious obligation, an enacting of holy mimesis. In classical Judaism, one follows these laws because God demands it, and because the rules are part of the ritual complex that defines Judaism. A more precise ethical basis of these food laws remained to be developed in the post-biblical tradition.

Several other major sets of biblical laws form the basis of kashrut beyond the set of permitted and forbidden animals. Deuteronomy 14.21, Exodus 23.19, and Exodus 34.26 prohibit the cooking of a young goat in its mother's milk. This statement – believed by Jewish leaders to be especially amplified since it appears three times – became the basis for the probation of mixing dairy and most types of animal flesh in the acts of cooking or eating.

Distinct from the prohibition on eating certain unclean animals, the biblical text provides no theological rationale. But unlike the rather arbitrary list of permitted and prohibited animals of

Leviticus and Deuteronomy, the prohibition of cooking a young animal in its mother's milk conjured a near-universal sense of ethical reprobation, at least in the minds of the ancient rabbis who codified the kosher system. This combined with the prohibition against the consumption of blood-eating in Genesis 9.4 to result in what Talmudist David C. Kraemer calls "an affirmation of life and a repudiation of death" (Kraemer 2008, p. 14). From an ethical standpoint, Judaism recognizes both milk and blood as the stuff of life and meat as the stuff of death. Not only is a mixing of the two unholy and inappropriate, but the very consumption of blood (life) raises problematic theological and ethical issues.

As the essence and symbol of life, blood belongs to God, not human beings. To eat it would therefore be to proclaim oneself similar to the divine, an act Judaism identifies as idolatrous. Like other ancient near eastern people, Judaism in antiquity called for blood sacrifices offered to the divine. Yet the Genesis text implies that drinking blood violated not only ritual decorum – since it positioned the drinker as similar to God – but ethical standards as well. The same chapter that prohibits blood drinking also prohibits the spilling of human blood on the grounds that God made humans in God's own image (Gen 9.6). The Torah here links the drinking of blood with the crime of harming another person and with a form of symbolic deicide. Similarly, it links the avoidance of drinking blood with respect for the divine image, justice, and profundity (Gen. 9.5-7).

Kosher slaughter and farming regulations provide another avenue for considering the ethics of Jewish eating as rooted in the Torah. Historians of Jewish practice disagree on to what extent these laws were followed during biblical times, but by the Talmudic period (first to fifth centuries C.E.) they had become an object of intense rabbinical interest (Berg 2008). Kosher slaughter, or *shechita*, requires a specific series of actions. First, the slaughterer must be a religious Jew acquainted with the rules of shechita as well as observant of the other ritual requirements of Judaism. Second, only an undamaged and extremely sharp blade may be used as the implement of slaughter. The blade must lack any nicks or other irregularities. Finally, shechita requires that the butcher kill the animal with a single deep cut across the neck, severing both the trachea and esophagus (Grunfeld 1982).

While debates continue over whether any method of slaughter can truly be ethical, the mainstream Jewish tradition has historically claimed that shechita is a less painful and more humane way to slaughter animals. Today, kosher authorities such as the Orthodox Union position shechita as an "instantaneous death with no pain to the animal" (Luban 2012). Importantly, the vast majority of traditionalist Jews such as those who operate and support the Orthodox Union follow the laws of kashrut out of ritual and spiritual obligation, and not primarily for ethical reasons. Yet the ethical support for shechita serves as an explanation for why God requires this form of slaughter, as well as a buttress to explain and defend the logic and practice of kosher slaughter to non-Jews and to liberal Jews more interested in ethical than ritual practices.

The agricultural laws of the Torah also prescribe a particular ethics of farming. Fields may not contain mixed plantings, and the corners of the fields must be left unharvested so as to provide available food for the poor, travelers, orphans, and widows (Lev 23:22, Deut 24:19). Similar laws required that grapes left on the vine, or olives left on the tree, must be left for such individuals as well (Lev 19:10, Deut 24:21). It is unclear to what extent such laws were actually practiced in ancient times, but throughout the Middle Ages and into Modernity, Jewish agriculturalists did engage in this form of charitable contribution. Today, some Orthodox Jews in Israel continue to consider these laws binding, whereas other Jews opt to follow the spirit rather than the letter of the law, by donating crops to foodbanks.

Talmudic interpretation of the laws of kashrut – which subsumes all of these biblical regulations – focus not so much on the ethics of individual practice or universal morality but the notion of proper table fellowship. As Jordan D. Rosenblum has argued, rabbinic interest in food fixated on with whom one could eat (Rosenblum 2010).

The appropriate and ethical answer, the rabbis of the Talmud explain, is other Jews who also follow the laws of kashrut. To do otherwise would be to tacitly permit idolatry and worship of foreign deities. In the nineteenth and twentieth centuries, liberal Jewish reformers would challenge this approach, also on ethical grounds, arguing that excluding gentiles from table fellowship with Jews was an affront to universal human notions of brotherhood. Yet today many Jews still follow the kosher laws. They are hardly a relic of the past, but a living tradition that provides ritual and ethical guidelines to Jews who consider normative Jewish law (*halacha*) binding.

Praying, Feasting, and Fasting in the Jewish Tradition

Kashrut and its interpretation serve as only the beginning of Jewish views of the ethics of food and eating. Talmudic and later rabbinic interpretations, as well as contemporary lay perspectives and creative changes, have resulted in a variety of Jewish ethics of food. Jewish perspectives on the ethics encompass mundane eating, festive eating, and fasting. Prayer and other ritual actions are central to all of these. In fact, one cannot separate prayer from ethics within the Jewish context.

Every Jewish meal begins and ends with a ritual blessing. The precise blessing depends on the nature of the meal. Strictly speaking, only sittings including bread merit the proper Jewish designation of "meal" and receive the full ritual of hand washing, *motzi* (the prayer over bread), and grace after meals. The central act in this ritual is the motzi, a short prayer that thanks God for bringing forth bread from the Earth. Alternative prayers address God in thanks for bringing forth grains, as well as fruits of the trees (nuts, apples, etc.), earth (vegetables, etc.), vine (wine or grape juice), as well as a "catchall" prayer that thanks God for creating all other foods. Grace after the meal similarly varies depending on the nature of the meal, but like the motzi blessings and its variants, these post-eating prayers focus on the nature of thankfulness and the grace of God.

The food prayers of Judaism serve to foster a system of recognizing the divine hand in the creation and production of food. The prayers explicitly thank God for creating the food and causing it to come forth out of the Earth. As historian David C. Kraemer has written of the Jewish tradition of blessing the meal, "eating will no more be a quotidian act but an act that notices the Creator and His design" (Kraemer 2008, p. 75). The tradition recognizes eating as a form of connecting with the divine and of offering thanks to God for having created a world wherein food can grow and nourish people. Judaism also rejects any idea of informal or unintentional eating. All eating becomes marked with prayers, separated from the other daily activities of life. From an ethical perspective, this marks eating as an intentional act. While certainly the tradition does not explicitly proscribe that Jews be mindful of the farmers, laborers, cooks, and others who produce and prepare the food, the prayers do insist that those eating it become aware that it is not them but rather the divine who created the food and therefore their enjoyment of it must be in the context of thankfulness.

Beyond the scope of normal everyday eating, Judaism also features an extensive tradition of festival eating. Religious authorities, texts, and cultural traditions require and suggest particular eating requirements for holidays such as Hanukah, Sukkoth, Purim, Shavuot, and of course Passover, the most notable food-related holiday of Judaism. The tradition ascribes particular meanings to foods eaten on each holy day, generally linking the foods to the religious meanings associated with the holidays. Rabbinic sources indicate that the miracle of Hanukah – the holiday commemorating the rededication of the Second Temple after its desecration by Greco-Syrians – was a single batch of oil that lasted over a week. The tradition therefore calls Jews to eat foods rich in oils, generally fried doughnuts or potato pancakes, depending on the regional variant tradition. Similarly, Shavuot – the holiday commemorating the giving of the Torah – is associated with sweet foods based on milk and honey, the biblical foods associated with the land

of Israel and the sweetness of the Torah. Again, eating becomes not simply a mundane activity but an intentional act of reconnecting with community, history, and tradition. Eating prescribed foods serves as a symbol of being a Jew and following the tradition of the people and religion.

Nowhere is this more evident than the holiday of Passover (*Pesach*), also called the Festival of Matzo (Unleavened Bread). By its very name, the Festival of Matzo clearly places food at the center of the theological and ritual menu. Passover commemorates the exodus of the ancient Israelites from bondage in Egypt and the culmination of that exodus in the receiving of the Torah at Mt. Sinai. Unleavened bread, or matzo, symbolizes this story because the tradition holds that the exodus was so alacritous that the Israelites had no time to allow their bread to rise. Regardless of the historicity of the exodus events – a matter of some dispute among both academics and many liberal Jews – Passover is one of the most celebrated of all Jewish holidays, even among secular and liberal Jews. Some scholars have noted that the holiday's association with food may explain part of that popularity (Weissman 1994, pp. 219–263).

The central ritual of the Festival of Matzo is the removal of prohibited grain and grain products (*chametz*) from the home and the abstaining from all grain products other than matzo and its derivatives throughout the weeklong festival (7 days in Israel and among some in the Reform Jewish community, 8 days otherwise). Like other forms of Jewish eating, Passover transforms eating into an intentional act that connects one to the community and to God. Throughout Passover, Jews must be especially observant of their eating so as to avoid eating or even benefiting from any use of *chametz* – generally defined as foods derived from one of the five prohibited grains: wheat, rye, spelt, barley, and oats. Jews of Central European ancestry also avoid *kitniyot*, various other grains, and legumes similar to *chametz*. Numerous variants exist, but all Jews agree that the essential ritual observance of Passover is the avoidance of these prohibited foods and the intentional eating of matzo, especially through the ritual retelling of the story of the holiday in the Passover Seder.

The Seder not only amplifies the intentional eating found throughout Passover and all Jewish eating, but adds to it an ethical obligation to welcome the stranger to the table and retell the story of freedom from bondage. While it has undergone many transformations over the centuries, the Seder is a ritual meal wherein Jewish families recount the narrative of Passover making use of symbolic foods. Matzo represents the "bread of affliction" and the need to flee from slavery. Other foods such as green herbs and eggs represent the resiliency of life and new beginnings, respectively. Since the middle ages, an ornamental platter called the Seder plate holds these foods and serves as ritual focus of the meal (Cooper 1993, pp. 113–115).

In what is generally recognized as one of the oldest prayers of the Seder, the *Ha Lachma*, the participants of the Seder ritually invoke the narrative of Jewish people as well as situate the Seder as an event intended to convey an ethical teaching and not merely a historical one:

> This is the bread of affliction that our fathers ate in the land of Egypt. Whoever is hungry, let him come and eat; whoever is in need, let him come and join in celebrating the Pesach festival. This year we are here, next year may we be in the land of Israel. This year, slaves, next year – free men. (Elias 2000, pp. 53–55)

The ethical position of the *Ha Lachma* is obvious. Matzo is not merely a bread product, but a symbol of slavery and freedom. All who want to eat and observe the festival – debate exists within the tradition of whether this applies only to Jews or any hungry person – are invited to attend the Seder and eat and observe. As numerous Jewish commentators have remarked, this prayer and those like it in the service transform the Seder from merely a meal to a pedagogical device intended to teach the necessity of remembrance, gratitude, feeding the hungry, and empathy for the enslaved (Elias 2000, pp. 52–56).

While feasting may attract far more interest than its inverse, the Jewish fasting tradition is as well developed within the religion as is the festive eating tradition. Judaism identifies six major fast days, the most notable of which are Yom Kippur (the Day of Atonement) and Tisha B'Av (the ninth

of Av, commemorating the destruction of the temples). The reasons for fasting vary by the observance, but generally they fall within one of two categories: repentance and commemoration.

The fast of Yom Kippur represents the most important fast of the Jewish calendar, and most Jews identify Yom Kippur itself as the most important and sacred of all Jewish holidays. Tradition indicates that on Yom Kippur, God issues his final decree as to the fate of all living beings over the coming year. It is a solemn day, filled with prayers and commemoration of those who have died. The Torah identifies the fast of Yom Kippur as one of repentance (Lev 16, Lev 23.26–32) and calls for the Jewish people to afflict themselves and seek forgiveness from God. Refraining from eating therefore becomes a symbol of bodily restraint as well as self-control. While a quasi-magical reading of the fast would see it as an invocation meant to spur divine favor and forgiveness, the tradition understands the fast as a means by which one seeks to purify and purge oneself. In recent decades, contemporary Jews have also reinterpreted the fast as offering an opportunity to empathize with the hungry and have organized food drives and other social justice events oriented around alleviating hunger.

The Tisha B'Av fast by contrast is one of remembrance, as are several of the more minor ones. Here fasting does not symbolize a request for forgiveness but an identification with Jews of past generations and forging of communal ties across generations, time, and distance. Tisha B'Av commemorates the destruction of the First and Second Temples in 586 BCE and 70 CE, respectively. (The tradition ascribes other remembrances to this day as well, though these are the most notable.) Though reasons for the fast vary among commentators, most understand the fast as a form of asceticism meant to recognize the loss of the temples. Fasting thus becomes a form of ritualized mourning for the destruction of tradition, life, and ritual observance engendered by the loss of the temples.

Contemporary Alternative Kashruts

While the laws of kashrut have been fixed for over a millennium in the Talmud and its interpretations within the Jewish legal corpus (*halacha*), those perspectives are not the terminus of Jewish ethical interpretation of kashrut. Today, progressive or liberal Jews look to vegetarian kashrut and eco-kashrut as contemporary options for Jewish ethics of eating. This is especially true among "post-halachic Jews": those who take the religious position that the traditional legal and ritual norms of Judaism must change in modern societies. In North America, these groups are primarily found among Jews associated with the Reform, Reconstructionist, and Renewal movements, as well as some secular Jews. More globally, such Jews often identify themselves as adherents of liberal or progressive Judaism.

Historically, Jewish thinkers have compared kashrut to vegetarianism. The Torah describes the Edenic paradise as vegetarian, and Genesis implies that meat eating was granted by God only belatedly. Supporters of "vegetarian kashrut" can point to statements by such respected thinkers as Rashi (1040–1105), Maimonides (1135–1204), and Nachmanides (1194–1270) as indicating that God's original intention had been for humans to eat a vegetarian diet. In more recent time, Rav Kook (1865–1935), the first Ashkenazi chief rabbi of Israel during the early twentieth century, argued that the kosher laws functioned to lead Judaism slowly back toward vegetarianism, a position that today many proponents of vegetarian kashrut accept (Schwartz 2001, p. 3).

At its heart, vegetarian kashrut envisions the kosher system as a foundation on which to build an entire edifice of Jewish vegetarianism. Following Rav Kook, proponents argue that kashrut in its traditional halachic form existed only as a tool to wean Jews away from meat and toward a more intentional form of eating. Vegetarian kashrut supporters note that kosher laws limit only the production, preparation, and consumption of animal flesh. They look to vegetarianism as the divinely intended goal of the kosher system and envision a Jewish food ethic that puts animal rights, animal welfare, and the human relationship with nature at the center of the religion's moral compass.

Other contemporary Jews have formulated a movement known as "eco-kosher" as an

alternative to traditional kashrut. Eco-kosher focuses on the means of production far more than the material consumed, unlike either halachic kashrut or vegetarian kashrut. Rabbi Zalman Shacter-Shalomi, the leading light of the American Jewish Renewal movement, coined the term in the late 1970s. Rav Zalman and other proponents of eco-kosher have offered multiple formulations of the meaning of the term, but all focus on the sustainable and just production of food that does as little damage as possible to the Earth's ecosystem, treats agricultural workers with dignity, and minimizes the suffering of animals.

Zalman intended eco-kosher as an evolution that encompassed halachic kosher, meaning that he insisted on following the traditional kosher laws in addition to the new eco-kosher principles. Other proponents of eco-kosher envision it as an alternative or even replacement of traditional kashrut. The American Reform movement's recent publication on the ethics of Jewish eating (*The Sacred Table: Creating a Jewish Food Ethic*) presents eco-kosher in this way, offering it as one option in a "buffet of educated choices" that include halachic kashrut, vegetarian kashrut, environmentally focused kashrut, social justice-oriented kashrut, and feminist kashrut. What unites all of these forms of Jewish eating is the idea of intentionality, ethical eating, and a proclaimed continuity with tradition alongside innovation – though more traditional critics would assail them on that last point (Zamore 2011).

Finally, just as Jews who accept kashrut in either its traditional halachic form or a newer alternative form can claim an ethical foundation to their practices, so too can Jews who reject kashrut. At its heart, the kosher laws function to create a separate Jewish community and establish boundaries of what counts as food, how one eats it, and with whom one can eat. Many secular or nonpracticing Jews reject kashrut on precisely those grounds: that it creates a separation between Jew and gentile and therefore is an unethical form of prejudice. David Kraemer characterizes such choices as "motivated by the desire to remove boundaries between Jews and their Christian neighbors . . . [and] motivated by the opinion that all humans are God's creatures, all members of a single human race" (Kraemer 2008, p. 138).

Judaism's ethical approaches to food and eating are extremely varied (Marks 2010). While rooted in the Torah and Talmud and developed throughout Jewish law and tradition, Jewish food ethics are quite diverse. Yet all approaches to Jewish eating emphasize the centrality of ethical and religious choices in the act of producing, preparing, eating, or abstaining from food. Far from a quotidian act, the Jewish tradition transforms eating into a central practice with far reaching implications.

Summary

Food ethics serve an important role in Judaism. The kosher system (kashrut) serves as its basis, delineating which foods are or are not appropriate to eat. The tradition identifies the act of following the kosher laws as ethical and holy, and as creating a holy community that follows divine mandate. Praying, feasting, and fasting cement food ethics in the daily lives and yearly liturgical lives of Jews. All food is blessed, making eating a sacred act in itself. Holiday feasting and fasting amplify this sense of intentional eating. In contemporary times, a variety of alternative systems of Jewish food ethics have developed. Eco-kashrut and vegetarian kashrut serve as two examples, as do Jewish groups that reject the kosher system on ethical grounds. Jewish food ethics are quite varied but all identify eating as an act of ethical value and not just nourishment.

References

Berg, T. (2008). From rules to principles: The transformation of a Jewish agricultural ethic. In S. R. Friedland (Ed.), *Food and morality: Proceedings of the Oxford symposium on food and cookery 2007*. Devon: Prospect Books.

Cooper, J. (1993). *Eat and be satisfied: A social history of Jewish food*. Northdale: Jason Aronson.

Douglas, M. (2003). *Purity and danger: An analysis of concepts of pollution and taboo*. London: Routledge.
Elias, J. (Ed.). (2000). *The Haggadah*. Brooklyn: Mesorah.
Greenspoon, L. J., Simkins, R. A., & Shapiro, G. (Eds.). (2005). *Food and Judaism*. Omaha: Creighton University Press.
Grunfeld, I. (1982). *The Jewish dietary laws*. New York: Soncino Press.
Kraemer, D. C. (2008). *Jewish eating and identity throughout the ages*. New York: Routledge.
Luban, Y. (2012). *The Kosher primer*. http://www.oukosher.org/index.php/prolearn/kosher_primer. Retrieved 3 April 2012
Marks, G. (2010). *Encyclopedia of Jewish food*. Hoboken: Wiley.
Rosenblum, J. D. (2010). *Food and identity in early Rabbinic Judaism*. Cambridge: Cambridge University Press.
Schwartz, R. H. (2001). *Judaism and vegetarianism*. New York: Lantern Books.
Weissman, J. J. (1994). *The wonders of America: Reinventing Jewish culture, 1880–1950*. New York: Hill and Wang.
Zamore, M. L. (Ed.). (2011). *The sacred table: Creating a Jewish food ethic*. New York: Central Conference of American Rabbis.

Food Riots, Historical Perspectives

Amy Bentley[1] and Christy Spackman[2]
[1]Department of Nutrition, Food Studies and Public Health, New York University, New York, NY, USA
[2]Food Studies, Food Chemistry, Food Studies, New York University, New York, NY, USA

Synonyms

Food boycotts; Food disturbances; Food protests; Hunger riots; Rioting over food

Introduction

As a wave of severe global crises swept across the world at the turn of the twenty-first century, a series of food riots broke out in many developing countries, including Indonesia, India, Mexico, and Brazil. These food riots, often centered on one iconic staple food item such as rice, tortillas, or onions, usually consisted of looting and pillaging stores, fast food restaurants, and supply depots, blockading farm and supply trucks, or protests in town squares. These items symbolized people's intense frustration and anger at being trapped in a global economic web in which they seem to have no agency. Government officials have been rightfully terrified of the potential for anarchy that exists if people do not get enough to eat, particularly enough of certain foods deemed essential and irreplaceable. Can anything ever stem this tide of need?

Cultural historian Robert Darnton once posed the question, "[Can] riots be understood as something more than mindless violence? [Are] they saying something? [Can] they be read?" (Darnton 1992, p. 44). Building off of Darnton's questions, one asks: Is it possible to make sense of food riots, particularly those in the past, by "reading" them? Can one gain increased understanding by paying attention to the one item – the bread, meat, or rice – that is held up as a symbol? What are the ethical implications of food disturbances when set against the backdrop of Western abundance, and how do these disturbances differ from those in developing nations?

A survey of histories of food riots reveals that scholars have understood public food disturbances in a number of illuminating ways, including as a preindustrial expression of collective action, as a gendered form of collective protest, and as a form of nationalistic display and identity tied to the consumption of material goods. Only a very few have employed a sustained, cultural exploration of the very food*s* at the core of the disturbance (the bread, meat, rice, or milk) – the deprivation of which stirs people to the point of collective action. Such an examination can provide rich information about the connection between food, cultural/national identity, and the ethics of policies that lead to scarcity and abundance.

To begin exploring these questions, it is important first to examine the relationship among collective identity, food, and collective protest. Food, at the base of civilization, contains deep, multilayered meanings and is a strong component and shaper of collective as well as an individual sense of identity (Narayan 1995).

Whether unprocessed or minimally processed foods (wheat, cooking oil), industrially manufactured items (Coca-Cola or commercially produced baby food), or handmade creations (tamales, holiday cookies), people imbue particular foods with deep-seated meaning and emotion, regardless of whether they are involved in its production (farmers, processors) or merely its consumption (tea drinking in Europe or North America). How and why these foods accrue special meaning can vary widely: method of preparation, tradition, particular "flavor principles," perception of purity, religious or political significance, signification of wealth or status, or any combination of factors. Whether through government intervention or the vicissitudes of a "free market" economy, a restriction of the availability of these meaning-rich foods carries significant social weight and can function as a catalyst for collective protest. This continues to prove true not only in relatively isolated communities, but in the ever-changing global villages of the twenty-first century (c.f. Bell and Valentine 1997, p. 191).

For the purposes of this inquiry, "food riot" can be defined as any gathering, whether planned or spontaneous, that may begin peacefully (such as a "food protest") but evolves into disorder, leading to loss of control, violence, bodily harm, or damage to property. The terms "food riot" and "food protest" can be understood and discussed together under the phrase "food disturbance" (Gilje 1996, p. 4). Food disturbances appear when people lack complete control of their own food supply: either they do not grow all or some of it, they are taxed by landlords or governments, prices (set by others) are beyond their notion of a "just price," or they are unable to freely determine the disposal of any surplus. Developing countries are more prone to food disturbances than industrialized ones: countries with developed transportation and communication systems, and the ability to stockpile food for times of need or subsidize its price, are more able to quickly redistribute food as needed. Food riots were especially frequent in the sixteenth through eighteenth centuries, then declined dramatically in number until the 1970s, when riots began again in earnest in developing countries as a result of severe economic austerity measures, including the removal of subsidies on food (Walton and Seddon 1994, p. 24).

Examining riots can reveal much about the political, economic, social phenomena of an era and allows better understanding of people who are neither wealthy nor politically prominent – the people whose lives do not normally become a part of the public historical record. Scholars have argued that despite the apparent unpredictability of time and place of riot and level of organization of rioters, an underlying order appears to exist: food rioters often act in logical, deliberate ways. That is, crowds do not just pillage any store, for example, but those stores that they feel have unfairly inflated prices. Historical and cultural context appears to play a key role in rioting.

Historians have generalized riots into three main categories: first, a blockage or *entrave* where protesters blocked shipments of grain or other foodstuffs; second, the price riot or *taxation populaire*, where peasants seized the goods from a retail shop whose prices were deemed too high, which would then be sold for a "just price," and often (amazingly) the money paid to the merchant; and finally, the market riot, where stores and supply depots are looted to protest high prices or the lack of goods (Tilly 1996, pp. 231–234; Thompson 1971, pp. 76–77; Gilje 1996, p. 6; Walton and Seddon 1994, pp. 25–26). Modern-day riots tend to conform to the latter category of market riots, characterized by looting and destruction of property. Additional twists include calculated demonstrations where the food at issue is ceremoniously dumped on the grounds of, for example, the local government headquarters. Twentieth-century food boycotts have proven particularly effective when centered on one item such as milk, bread, or grapes or on a single manufacturer, such as Nestlé (Linden 1994). Boycotts can evolve into full-fledged food riots if participants harass or attack those purchasing a targeted item or frequenting a targeted store.

A Historiography of Food Riots

Why do people riot over food? The obvious answer, that they riot because they are hungry, *fails*. Most who are poor and hungry do not riot. Moreover, why do people riot over particular foods and not others? Tortillas not chiles? Meat not cheese? What intervening variables determine who riots? As mentioned, historians have analyzed and explained food riots in the following ways: as collective action representing the "moral economy" of an era, as part of a so-called female consciousness, and as an exhibition of nationalism/patriotism.

The "father" of food riot history, the British Marxist historian E. P. Thompson, in 1971 published the article, "The Moral Economy of the English Crowd in the Eighteenth Century." With "The Moral Economy," a witty, erudite, and detailed analysis of food riots in England, Thompson provides a "thick description" of food rioters' motives in preindustrial England, an era when subsistence riots happened with great frequency. Thompson, using class as his organizing principle, argued that English peasant bread riots were symptomatic of a society caught between changing economic and political forces, of an England in the midst of moving from a looser collection of landed gentry to a stronger state, and from a mercantilist, feudal economic system to one of laissez-faire market capitalism. As England moved from a feudal system that provided bread at "just prices" (a reduced price for the poor as part of the communal moral ethos) to a market economy, which abandoned the notion of the just price, peasants rebelled and rioted. To the rioting peasants, the new system abandoned the long-held social pact that entitled them to affordable bread. People, argued Thompson, rioted not only because of hunger, but also out of a sense of injustice. Conflicts, Charles Tilly concurs, "occurred not so much where men were hungry as where they believed that others were unjustly depriving them of food to which they had a moral and political right" (Tilly 1975, p. 389). Eric Hobsbawm, similarly arguing that food disturbances were a preindustrial mode of exhibiting anger over economic and social inequity, called these "collective bargaining by riot" (Hobsbawm 1959, p. 110). As the peasantry became the industrialized working class, conflicts over food were absorbed into and displaced by organized labor strikes. This explains why the number of food riots diminished considerably in the nineteenth century and beyond. Although scholars have taken issue with Thompson's moral economy theory – some insist that the theory should focus on the newly emerging middle-class dissatisfaction, while others point to prevailing anti-Semitism and local begging customs as factors or see the community or national context as more important – nearly all historians studying food riots pay homage to E. P. Thompson for his path-breaking work in creating a multidimensional understanding of food rioting and rioters (Arnold 1979; Bohstedt 1992; Bohstedt 1988; Booth 1977; Gailus 1994; Kaplan 1985; Rogers 1987; Shashan 1980; Tilly 1983; Taylor 1996; Williams 1984).

Since women as well as men participated in food riots, in recent decades many historians have employed gender as a category of analysis (Davis 1996; Engel 1997; Frank 1985; Hufton 1971; Hyman 1980; Kaplan 1982; Ryan 1989; Smart 1986; Taylor 1996). While not disagreeing with the moral economists, historians such as Temma Kaplan, Phyllis Hyman, and Dana Frank point out that despite the decreasing number of food riots in the nineteenth century, food disturbances nevertheless continue. Moreover, they argue, food rioting takes on a noticeable female persona, in part because labor unions largely excluded women. Temma Kaplan, studying early twentieth-century food riots in Barcelona, argues that women participated in food riots as an extension of their roles as caregivers for home and family. Women who accepted the traditional division of labor, argues Kaplan, could be radicalized to action in the public sphere when prevented from fulfilling their domestic duties, particularly the feeding and care of their families. Female participation in food disturbances "politicize[d]. . . the networks of everyday life," as women extended their domain and sense of obligation into the public sphere (Kaplan 1982, p. 545).

Dana Frank and Paula Hyman, studying early twentieth-century food riots in New York City's Lower East Side, concur with Kaplan. Hyman examines a 1902 kosher meat boycott organized and dominated by women that at one time brought crowds of up to 20,000 protesting the high prices of meat. The boycott frequently erupted into violence, including women breaking into butcher shops and flinging meat into the streets and assaulting not honoring the boycott. While the women "did retain a traditional sense of a moral economy in which food should be available at prices which the working classes could afford," explains Hyman, in a nod to E. P. Thompson, "they were not simply expressing traditional forms of cultural resistance to industrial society imported from the Old Country," but providing evidence of a "modern and sophisticated political mentality emerging in a rapidly changing community" (Hyman 1980, pp. 97, 92). Dana Frank, examining the 1917 cost-of-living protests, similarly sees an emerging female consciousness. As New York's immigrant Jewish women protested against rising food prices, explains Frank, they "demonstrated their own perceptions of political economy: who they believed was in power; what they thought should be done to alleviate their distress, and, most importantly, how they believed they as women could affect the economic system in which they were enmeshed"(Frank 1985, p. 256. See also, Frieburger 1984).

While some have returned to topics such as the French Revolution to employ gender as a category of analysis (Bouton 1990), not all historians regard gender as a useful framework when examining food disturbances (Bohstedt 1988). For example, Iain J. M. Robertson argues that when investigating women's participation in food riots, at least those in turn-of-the-(nineteenth)century Scotland, using gender as a category of analysis obfuscates the fact that men and women held notions of ownership over the land equally. Thus, when denied ownership of farmland deemed to be theirs, they rioted in the same way for the same reasons. Assuming that women's protest is distinctly different from "'normative' masculine protest, and derived from their household role rather than from an underlying legitimizing ideology shared with their male counterparts," argues Robertson, does a disservice to the women who participated as equals with men (Robertson 1997, p. 187). Robertson neglects to discuss, however, those food disturbances that were comprised largely or exclusively of women.

Along with the moral economy thesis and gender as an analytical framework, *one can* gain insight into the meaning and nature of food riots *through* the examination of cultural meanings of consumption and their connection to nationalism. Two American colonial historians, Barbara Clark Smith and Timothy Breen, have examined food disturbances before and during the American Revolution as evidence of a growing sense of nationalism. In her study of over 30 food riots during the American Revolution, Smith sees such disturbances "at the intersection of several streams of historical experience" and acknowledges as pertinent both the moral economy and the female consciousness theses (Smith 1994, p. 3). Not only do they contain "elements of 'the common people's politics' in England and America," in their focus on the just price, but since women conducted nearly one-third of riots, Smith argues, they also must be examined in light of how women participated in community life (Smith 1994, p. 5). Looking at food riots as directly stemming from the Revolution, as "a patriotic action" not dissimilar from facing the British army (Smith 1994, p. 6), allows understanding of how food rioters, through their actions, "situated themselves as participants in the patriot cause" (Smith 1994, p. 8).

While Smith uncovers elements of nationalism in the act of rioting, T. H. Breen recognizes a growing sense of nationalism developing through the item (including food items) being rioted over. In his 1988 article, "'Baubles of Britain': The American and Consumer Revolutions of the Eighteenth Century," Breen explores the relation between the growth of national consciousness and the American rejection of the "Baubles of Britain." While noting the importance of women in colonial food disturbances, Breen focuses his attention on the fact that

manufactured goods imported from Britain, for the first time readily available to so many people, resulted in "the standardization of taste" (Breen 1988, p. 82). In the decades leading up to the Revolution, consumer goods took on "a radical, new symbolic function" of political proportions. This politicization provided a "shared language of consumption," providing a common experience and knowledge base for colonists of all classes, uniting them enough to wage war against the mother country (Breen 1988, p. 76). While Breen does not limit his analysis to food but explores the meaning of consumer goods of all kinds, Breen does focus on the struggle over tea – for Americans one of the best-known and loved stories of the Revolution. "Throughout America," Breen relates of the infamous Boston Tea Party, "the ceremonial destruction of tea strengthened the bonds of political solidarity" (Breen 1988, p. 99).

While this admirable work on food riots and protests contributes much toward explaining people's *mentalities* and motives for rioting, missing is an in-depth examination, a Geertzian "thick description," of the foods themselves. A sustained, cultural exploration of the very food at the core of the disturbance – the tea, meat, milk, or even such modern industrialized products as Coca-Cola – can provide rich information about the connection between food and cultural/national identity. A foray into the meanings of the foods themselves in their historical and cultural context can add yet one more important layer of understanding.

In addition to Breen, several of the works previously discussed do hint at such analysis. For example, although Dana Frank focuses on gender, she does touch on the symbolic significance of the foods being rioted over. While the price of food seems to have been high in general, according to Frank, the Jewish women were particularly focused on boycotting chicken, onions, potatoes, and fish. Frank writes:

[M]any women initially joined out of a sense of limits reached, as in the case of the woman who asserted her continuing right to butter. Those limits boiled down to an unwillingness to altogether abandon traditional foods. Potatoes, onions, and chickens were dietary staples to which they believed they had a basic right if they were to fulfill their responsibility to truly sustain their families. More importantly, the rituals of preparing kosher foods played a crucial role in the religious and cultural self-definition of New York's immigrant Jewish people. . ..Women bought and served traditional foods not only out of mere habit, but also because those foods expressed their commitment to a religious life (Frank 1985, pp. 276–277).

As Frank notes, these foods were important, even crucial, parts of the Shabbat dinner. Without them, could there even be a Sabbath seems to be the unspoken question. Fish, Frank somewhat inadequately explains, was boycotted because it could not be served without the boycotted onions. Moreover, the foods city officials tried to introduce as substitutes reveal all the more how culturally important chicken, onions, potatoes, and fish were. The large quantities of rice, smelt, Brazilian beans, and hominy that the city provided as substitutes were (not surprisingly) unequivocally rejected. A thick description of these foods in their historical and cultural context could provide further compelling analysis. Paula Hyman, in her gender-focused analysis of the New York City kosher meat boycott of 1902, similarly points to cultural elements: "The neighborhood, a form of female network, thus provided the locus of community for the boycott. [A]ll were giving up meat together, celebrating dairy shabbosim together, and contributing to the boycott fund" (Hyman 1980, p. 99). Hasia Diner examines the cultural and social meanings of the turmoil and contestation that existed among Jewish immigrants, including such food disturbances as boycotts and riots (Diner 2001). Finally, as anthropologist Sidney Mintz illustrates in his exceptional work on the historical, cultural, political, and economic meanings of sugar, there is much more that could be done on the cultural meanings and functions of tea – itself purely a product of British colonialism – in colonial America that can provide even more evidence of its centrality to life at the time and thus the catalyst for boycotts, riots, and even revolution (Mintz 1985).

While this survey of the literature of food disturbances is not exhaustive, Benjamin Orlove's article "Meat and Strength: The Moral Economy of A Chilean Food Riot" is the only sustained cultural analysis of a riot in terms of the food being rioted over identified to date. Orlove's work builds on Thompson's moral economy theory to argue that in 1905 the middle classes of Santiago, Chile, rioted over rising food prices because it prevented them from purchasing their accustomed quantity of meat. In this historical and cultural context, in this particular "moral economy," (Orlove 1997, p. 255), the ability to consume meat reflected one's place in the rigid social and political hierarchy of Chile. No longer being able to afford meat "undercut a deeply held sense of [Santiagoans'] social position" (Orlove 1997, p. 256). Orlove argues that "It is the distinctiveness of the specific moral economy [of Chile in the early 1900s] that allows a piece of beef to make the difference between an acceptable and unacceptable pot of stew" (Orlove 1997, p. 260).

Cultural Meanings of Food in Food Disturbances: An American Backdrop

It is possible to point to food riots in recent US history on which to focus a sustained cultural analysis of the foods involved. In comparison to most other countries in the world, the United States ranks high if not the highest in the number of calories per person available for consumption in the food supply. Food problems in the United States are less about hunger and more about health deficiencies resulting from too much food or too much of the wrong kinds of food.

Any analysis, then, of food disturbances in the United States must be made within the backdrop of the entrenched notion of abundance. Economic historian David Potter's 1954 study of American culture and politics in light of the abundance of material wealth, *People of Plenty*, argues that the United States and its citizens have been shaped, blessed, but also at times intellectually and socially hindered by living in one of the most resource-rich and economically successful countries in the world. This long history of plenty – a product of both natural resources and technological innovation – has shaped notions of such abstract terms as "freedom," "democracy," as well as immigration, foreign policy, and assumptions about individualism. As ideas such as "abundance" and "democracy" are conflated, many Americans (and, indeed, many immigrants to the United States) (mistakenly) equate such political notions as liberty and equality with capitalism. Other countries' experiences do not suggest the same equation. Even though all Americans have not partaken of this abundance, Potter insists that this promise of prosperity has shaped both the culture at large and individuals in particular. Potter attributes low political activism and voter participation, the lack of a viable socialist movement, and the American myth of classlessness to this abundance, despite the ever-growing economic disparity between rich and poor (Bentley 1995; Potter 1954).

Food is a central element of the American brand of abundance. Food disturbances can differ in shape and context between industrialized and developing countries. In the 1930s and 1940s, for example, farmers in the United States protested the removal of price supports, women boycotted dairies over high milk prices, and the public decried the destruction of edible grain and pork during the Depression. Other food disturbances have occurred since then, but most often in the form of boycotts and hunger strikes to protest and publicize a particular social or political cause (Gilje 1996, pp. 149–169; Poppendieck 1986; Bentley 1998, pp. 56–58). While significant, these are not the food riots of hungry, angry people hoping they have enough food to feed their families. For example, late-1990s riots on college campuses over restrictions on alcoholic beverages ("Student Rioters Demand the 'Right to Party'") need to be analyzed as "food disturbances" not only within this context of abundance, but against the unique backdrop of the history and culture of alcohol in the United States: the temperance movement, prohibition, American Protestantism, fears of non-Protestant immigration, and social and symbolic meanings of alcoholic beverages (e.g., Edmunds 1999; Fuller 1996).

While Potter's ideas are significant and compelling, they are subject to debate. For example, Mark Weiner, in his exploration of Coca-Cola's rise to becoming a totem drink During World War II, effectively details the cultural, social, political, and economic significance of Coke in the United States during the war and addresses the connection between consumerism and democracy ("Consumer Culture and Participatory Democracy: The Story of Coca-Cola During World War II,"). Weiner queries: What does the promotion of a highly sugared, caffeine-laced soft drink mean? Exploring what corporate image makers wanted Coke to represent to Americans and what Coke actually meant to civilians, distributors, and soldiers, Weiner describes the influence of commercial capitalism on democracy not as largely negative, as Potter and others generally conclude, but as complex and layered in its meanings. As advertisers, American corporations, and the US government cooperated to rally the American home front behind the war effort, Weiner *shows* how corporate conglomerates defined war aims in terms of commodities. Yet, Wiener argues, the soft drink gained this prominence in part because Coca-Cola held important personal meanings for many Americans, to the extent that it stirred political action and symbolized powerful ideas about American democracy.

In demonstrating the iconic nature of Coca-Cola, Weiner convincingly argues for the cultural importance of the soft drink in the lunch counter sit-ins of the post-World War II Civil Rights era. Following Breen's lead, Weiner sees the possibility for "participatory democracy" existing in consumer goods. In this case, democracy became the right to sit at a drugstore lunch counter and order a cold glass of Coke, something not available to African-Americans under the Jim Crow laws of the South. Being denied access to the lunch counter at Woolworths symbolized in part the denial of full citizenship to African-Americans (Weiner 1996).

There is plenty of work to be done exploring the cultural meanings of foods in food disturbances not only in the United States but globally as well. Historians of Europe, for example, have employed the backdrop of World War I and II to detail fine accounts of bread riots in Russia and of women's protests over food scarcity in WWI Berlin and in 1942 Vichy France (Engel 1997; Davis 1996; Ryan 1989). Yet there is room for so much more. One cannot think of food disturbances in European countries without mentioning the late-1990s protests by the French over American tariffs on foie gras. Images of a ransacking of a McDonald's and of French chefs and restaurant owners throwing food at the French Parliament to demand lower taxes are prime moments for cultural analysis ("Chefs Protest Tax"; "Farmers Protest"). Also, ripe for exploration are the cultural and symbolic meanings of the rice, tortillas, onions, and bread of the 1990s food riots, as well as such food disturbances in history as the salt demonstrations in 1940s colonial India. Such examinations will reveal much about the ethical implications of food riots from a historical perspective.

Summary

A survey of histories of food riots reveals that scholars have understood public food disturbances in a number of illuminating ways, including as a preindustrial expression of collective action, as a gendered form of collective protest, and as a form of nationalistic display and identity tied to the consumption of material goods. Only a very few have employed a sustained, cultural exploration of the very foods at the core of the disturbance (the bread, meat, rice, or milk) – the deprivation of which stirs people to the point of collective action. Such an examination can provide rich information about the connection between food, cultural/national identity, and the ethics of policies that lead to scarcity and abundance.

Cross-References

- ▶ Access to Land and the Right to Food
- ▶ Food and Class
- ▶ Food Boycotts

- ▶ Free Trade and Protectionism in Food and Agriculture
- ▶ Judaism and Food
- ▶ Political Consumerism: Consumer Choice, Information, and Labeling
- ▶ War and Food

References

Arnold, D. (1979). Looting, grain riots, and government policy in South India, 1918. *Past and Present, 84*, 110–145.

Bell, D., & Valentine, G. (1997). *Consuming geographies: We are where we eat*. London/New York: Routledge.

Bentley, A. (1995). American abundance examined: David M. Potter's people of plenty and the study of food. *Digest, 15*, 20–24.

Bentley, A. (1998). *Eating for victory: Food rationing and the politics of domesticity*. Urbana: University of Illinois Press.

Bohstedt, J. (1988). Gender, household and community politics: Women in English Riots, 1790–1810. *Past and Present, 120*, 88–122.

Bohstedt, J. (1992). The moral economy and the discipline of historical context. *Journal of Social History, 26*, 265–285.

Booth, A. (1977). Food riots in the North-West of England, 1790–1801. *Past and Present, 77*, 84–107.

Bouton, C. (1990). Gendered behavior in subsistence riots: The French Flour War of 1775. *Journal of Social History, 23*, 735–754.

Breen, T. H. (1988). 'Baubles of Britain': The American and consumer revolutions of the eighteenth Century. *Past and Present, 119*, 73–104. "Chefs Protest Tax" (12 October 1999), New York Times.

Darnton, R. (1992, October 22). Reading a riot. *New York Review of Books*, *39*, 44–46.

Davis, B. (1996). Food scarcity and the empowerment of the female consumer in World War I Berlin. In V. de Grazia & E. Furlough (Eds.), *The sex of things: Gender and consumption in historical perspective* (pp. 287–310). Berkeley: University of California Press.

Diner, H. (2001). *Memories of hunger: Food, migration, and ethnic identities, forthcoming*. Cambridge: Harvard University Press.

Edmunds, L. (1999). *Martini, straight up: The classic American Cocktail*. Baltimore: Johns Hopkins University Press.

Engel, B. A. (1997). Not by bread alone: Subsistence riots in Russia during World War I. *Journal of Modern History, 69*, 696–721.

Farmers Protest. (1999, September 1). *New York Times*.

Frank, D. (1985). Housewives, socialists, and the politics of food: The 1917 New York cost-of-living protests. *Feminist Studies, 11*, 255–286.

Frieburger, W. (1984). War, prosperity, and hunger: The New York food riots of 1917. *Labor History, 25*, 56–73.

Fuller, R. (1996). *Religion and wine: A cultural history of wine drinking in the United States*. Knoxville: University of Tennessee Press.

Gailus, M. (1994). Food riots in Germany in the late 1840s. *Past and Present, 145*, 157–193.

Gilje, P. (1996). *Rioting in America*. Bloomington/Indianapolis: University of Indiana Press.

Hobsbawm, E. (1959). *Primitive rebels: Studies in archaic forms of social movement in the nineteenth and twentieth centuries*. New York: Norton.

Hufton, O. (1971). Women in revolution, 1789–1796. *Past and Present, 53*, 90–108.

Hyman, P. E. (1980). Immigrant women and consumer protest: The New York city Kosher Meat Boycott of 1902. *American Jewish History, 70*, 91–105.

Kaplan, T. (1982). Female consciousness and collective action: The Case of Barcelona, 1910–1918. *Signs, 7*, 545–566.

Kaplan, S. (1985). The Paris bread riot of 1725. *French Historical Studies, 14*, 23–56.

Linden, M. (1994). Working-class consumer power. *International Labor and Working-Class, History, 46*, 109–121.

Mintz, S. (1985). *Sweetness and power: The place of sugar in modern history*. New York: Viking Penguin.

Narayan, U. (1995). Eating cultures: Incorporation, identity, and Indian food. *Social Identities, 1*, 63–86.

Orlove, B. (1997). Meat and strength: The moral economy of a Chilean food riot. *Cultural Anthropology, 12*, 234–268.

Poppendieck, J. (1986). *Breadlines knee-deep in wheat: Food assistance and the great depression*. New Brunswick: Rutgers University Press.

Potter, D. (1954). *People of plenty: Economic abundance and the American character*. Chicago: University of Chicago Press.

Robertson, I. J. M. (1997). The role of women in social protest in the highlands of Scotland, c. 1880–1939. *Journal of Historical Geography, 23*, 187–200.

Rogers, J. O. (1987). The 1866 grain riots in Sri Lanka. *Comparative Studies in Society and History, 29*, 495–513.

Ryan, D. (1989). Ordinary acts and resistance: Women in street demonstrations and food riots in Vichy France. *Proceedings of the Annual Meeting of the Western Society for French History, 16*, 400–407.

Shashan, B. (1980). Grain riots and the 'moral economy': Cairo, 1350–1517. *Journal of Interdisciplinary History X:3*, 459–478.

Smart, J. (1986). Feminists, food and the fair price: The cost of living demonstrations in Melbourne, August–September 1917. *Labour History (Australia), 50*, 113–131.

Smith, B. C. (1994). Food rioters and the American revolution. *William and Mary Quarterly, 51*, 3–38.

Student Rioters Demand the 'Right to Party'. (1998, May 15). *Chronicle of Higher Education*, A46–A48.
Taylor, L. (1996). Food riots revisited. *Journal of Social History, 30*, 483–496.
Thompson, E. P. (1971). The moral economy of the English crowd in the eighteenth century. *Past and Present, 50*, 76–136.
Tilly, C. (1975). Food supply and the public order in modern Europe. In C. Tilly (Ed.), *The formation of nation states in Western Europe* (pp. 380–455). Princeton: Princeton University Press.
Tilly, L. (1983). Food entitlement, famine, and conflict. *Journal of Interdisciplinary History, 14*, 333–349.
Tilly, C. (1996). Contention and the urban poor in eighteenth- and nineteenth-century Latin America. In S. Arrom & S. Ortoll (Eds.), *Riots in the cities: Popular politics and the urban poor in Latin America (1765–1910)* (pp. 225–242). Wilmington: Scholarly Resource Books.
Walton, J., & Seddon, D. (1994). *Free markets and food riots: The politics of global adjustment*. Oxford/Cambridge: Blackwell.
Weiner, M. (1996). Consumer culture and participatory democracy: The story of Coca-Cola during World War II. *Food and Foodways, 6*, 109–129.
Williams, D. E. (1984). Morals, markets and the English Crowd in 1766. *Past and Present, 104*, 56–73.

Food Risk Communication

Magdalena Bielenia-Grajewska
Scuola Internazionale Superiore di Studi Avanzati, Trieste, Italy

Synonyms

Communication in the alimentation sector; Communication on food issues; Food risk discourse

Introduction

The alimentation sector, as other types of industries, has to constantly respond to the changing conditions of modern times. The most important determinants responsible for alternations are connected with the reality of a contemporary epoch. First of all, the twenty-first century is influenced and shaped by the growing role of new technologies. Thus, the Internet, offering fast communication to a relatively large number of addressees, becomes an important medium in contacting current and potential stakeholders in the food industry. Secondly, the mobility of modern times concerns not only consumers but also food products since nowadays customers may have access to comestibles coming from very distant countries. In this case, such aspects as proper transportation, storage, and methods of dish preparations should be treated with great consideration. Thirdly, modern agriculture differs from the one that could have been observed in the previous centuries; the development of, among others, modern medicine, technology, and biology has changed the ways plants and animals are farmed. In addition, technological advancements have altered the ways of preparing, serving, and storing food. Furthermore, modern lifestyle has led to a new understanding of consumption and nutrition and the role of food in one's life. Taking all the mentioned issues into account, it is communication that plays a very important role in the alimentation sector, offering information how food is (and how should be) manufactured, transported, stored, and consumed. Analyzing all aspects of food issues, various hazards are connected with every stage of food production, distribution, and consumption, and, consequently, food risk communication is crucial in communicating alimentation challenges and threats to diversified groups of stakeholders, including, among others, food producers, public authorities, media, local communities, and various consumers.

Defining the Term *Food Risk Communication*

Discussing the place of communication in the discourse on alimentation threats, food risk communication, risk assessment, and risk management constitute the essence of food safety risk analysis. As far as the elements of food safety inquiry are concerned, risk assessment can be described as the process of evaluating risks by

applying both qualitative and quantitative approaches, coming from various disciplines, such as social studies, humanities, management, economics, biological and chemical domains, etc. Regarding risk management, it concerns the estimation of available options connected with risk avoidance and the assignment of control strategies to ensure protection. Since risk communication is needed to define and implement best management decisions (FAO/WHO 2001), interactions focusing on food risks are connected with creating and incorporating methods related to food management. Thus, food risk communication can be defined as a set of tools responsible for creating, implementing, executing, and controlling aims, strategies, and procedures to deal with food-related threats. Looking at this issue from the perspective of processes and stages, food risk communication is a term that encompasses various notions related to the chain of comestibles, especially the potential and real dangers of food production, preparation, distribution, storage, consumption, and utilization. Thus, food risk communication encompasses various forms of comestibles, from, e.g., the state of being a grain, through the periods of fruit and dish, to the stage of organic waste. All the mentioned "embodiments" of food are potentially subject to the discussion of challenges and threats in the sector of comestibles.

Elements of Food Risk Communication

As far as elements of risk communication are concerned, they can be divided into *care communication*, *consensus communication*, and *crisis communication*. In the case of care communication, discoursers have to take into account the lifestyle of diversified audience to adjust risk messages. Analyzing consensus communication, communicators have to observe the opinions, anxieties, and beliefs of stakeholders. Regarding crisis communication, the culture of a target audience should be taken into account in preparing and disseminating messages on crisis (Lundgren and McMakin 2009). Applying the mentioned typology, the following classification for food risk communication can be created. *Food care communication* encompasses diversified risks related to food consumption. Thus, such notions as food selection, ways of preparing food, and places of consumption determine food care communication. Thus, consumers should be informed how improper ways of preparing dishes may lead to health hazards. The next element, *food consensus communication*, involves opinions, knowledge, and fears regarding food. Consequently, the ways risks are perceived by various stakeholders should be visible in the applied communication tools and strategies. Moreover, the discussion on threats should be tailored to stakeholders' interests, knowledge, and capabilities. For example, information on food-borne diseases is constructed in a different way when directed at specialists and when the general public is addressed. On the other hand, in *food crisis communication*, speakers have to observe such issues as the culture of a target audience in communicating information on food risks. It involves, e.g., taking into account the type of farming in a given country, climate conditions that influence food production and storage, eating habits, and dietary preferences. Thus, the cross-cultural aspect of food risk communication involves taking into account individual and group differences as far as, e.g., the attitude to risk and the way it is communicated are concerned.

Participants in Food Risk Communication

The participants of discourse on food risks can be divided into different ways. One typology involves the role they play in the comestible chain. Private food producers include both individual farmers or producers who perform their duties mainly themselves as well as companies and manufacturers who operate on the food market on a large scale. Another group encompasses public authorities who have some executive power over food producers. Their activities in the food sector may involve, among others, introducing new legal regulations concerning comestibles or exercising control over food production.

The next important group constitutes of distributors who serve the function of intermediaries between producers and customers. Moreover, media belong to active participants in the food chain since both standard and novel methods of mass communication aim at informing individuals about challenges related to the food sector. A local community encompasses the group of stakeholders that is not necessarily involved actively in the food chain, but it is interested how the performance of food producers influences their community (potential pollution of the local environment, more jobs for local people, etc.). It should be stated, however, that many food stakeholders constitute consumers themselves. This type of participants includes the group of active users of a food product as well as the category of potential customers who may opt for it in the future. Customers can be further subcategorized by taking such aspects into consideration as age, gender, marital and economic status, etc. Another method of classifying contributors to food risk communication is connected with how active various stakeholders in the discourse on food threats are and which stage of information dissemination they participate in. For example, food health authorities play an active role in creating information on risks, whereas media, including new social media, are responsible for information spread. It should also be stated that the role of participants should not be limited by any factors. For example, knowledge of a language should not restrict the access to important information. Thus, in the case when individuals represent different linguistic communities, attention should be focused on how messages should be communicated to address various language groups. The same concerns people with disabilities. Messages should be prepared and disseminated in the ways that make disadvantaged groups access the data on food risks. In addition, an important notion in food risk communication is related to the position of interlocutors. Thus, in the case of food risk discourse, it should enhance the dialogue between food authorities and food stakeholders. Since active communication with stakeholders is especially important in risk and crisis communication (Bielenia-Grajewska 2011; Lundgren and McMakin 2009), mutual engagement in discourse is crucial in food-related risk situations, such as food poisoning and food-borne diseases.

Topics in Food Risk Communication

Popular topics in food risk communication involve the following issues: probability that past food-related problems may reappear, dangers related with different stages in food cycles, effects of food-related risks, and trust in food-related aspects of modern life. As far as the scope of interest is concerned, communication regarding food risks concerns various issues, such as food irradiation (Thompson and Knight 2006), genetically modified food (Qin and Brown 2006), food recall (Nucci et al. 2009), food contamination (Jacob et al. 2011), food-borne diseases (Bielenia-Grajewska 2014), food allergies (Rachul and Caulfield 2011), and food safety regulations (Winickoff and Bushey 2010). The interest in topics depends on the target audience; there are issues that are potentially directed at the general audience, whereas other notions focus on the needs and expectations of a selected community. Some of them attract a relatively large number of stakeholders (e.g., food-borne diseases, food additives), whereas some of them receive the attention of an interested community (e.g., food poisoning in a local bar or a canteen). For example, taking into account, e.g., the contamination of food for babies, the groups primarily interested in this issue are parents, babysitters, owners of nurseries or kindergartens, and others connected in some way with feeding young children. It should be stated, however, that a topic that was supposed to be of local interest often becomes an issue of global interest. It may be the case of food-borne diseases that start in a small locus (a bar, a canteen, a shop) and then turn out to affect a relatively large number of individuals, located in various settings and coming from different backgrounds. Taking into account the mentioned topics discussed in the literature of risks related to agriculture and food business, several of them have received broad coverage in the press. Discussions on them are often

accompanied by information campaigns on risks and threats related to food consumption conducted by either producers or public authorities. Topics that engage a relatively large number of potential interested parties are food-borne diseases, such as Escherichia coli, BSE (bovine spongiform encephalopathy), salmonella, or listeria, that receive broad coverage in the international press when new cases are reported. Another popular discussion point is the role of modern technological advancements in food production. These topics include GMO (genetically modified food), the role of pesticides in farming, and the usage of additives in food.

Selected Cases of Food Risk Communication

The cases related to food risk communication can be classified, among others, by taking into account their nature. One of them is the coverage of diseases that have rapid and violent outbreak. Food-borne diseases belong to this group. An example of food risk communication case can be the outbreak of E. coli epidemics in Germany in May and June 2011. The epidemics started in Hamburg, and later 16 countries reported the cases of this rare serotype of E. coli. Many people were affected by the disease; at least 50 individuals died, more than 4,000 were sick, and 852 suffered from kidney-damaging hemolytic uremic syndrome (HUS). As far as finding the cause for outbreak is concerned, since patients reported eating vegetables, crude vegetables were the first suspects of the epidemics. Laboratory tests proved that pathogenic E. coli was on Spanish cucumbers and, consequently, these vegetables were first associated with this outbreak. However, further tests showed that the bacteria found in these cucumbers were not responsible for the epidemic outbreak. Thus, researchers and public authorities had to continue their investigation in searching for the comestibles that caused epidemics. The European health officials checked more than 10,000 samples of food, but the outbreak strain was not detected. Another method led to the uncover of the source of infection; checking bills from company cafeterias where the patients were eating helped to discover that the served sprouts were the cause of illness. Thus, the investigation was further focused on how sprouts were infected. As far as food risk communication is concerned, some items turn out to be especially important in the coverage of this E. coli outbreak. First of all, sprouts were overlooked by patients in their description of what they have eaten. Thus, other food products were originally investigated by researchers and officials. Secondly, such information sources as menus, shopping lists, and bills are very important in investigating the sources of outbreak since they can be studied independently of what patients report (Flynn 2011). Thirdly, some vegetables were misidentified as the source of outbreak, and after further tests, the responsible factor of epidemics was found out. Thus, different channels of food risk communication were constantly updated to inform stakeholders about the newest findings related to the situation in focus and how investigation was conducted. It should also be added that due to the high mobility of people and products, information on E. coli outbreak received vast coverage in international media. Thus, this case shows that food risk communication should encompass different research materials as well as diversified information channels to keep the broad public informed on threats in the alimentation sector. Another group of cases is related to issues that are not as dynamic in character as the above-discussed example of food-borne disease but are characteristic of long-term influence on human beings. The examples include using additives in comestibles. These issues receive regular coverage in the press and in scientific publications, often following discussions on new regulations of colorants or preservatives, of natural and artificial origin, used in food production. Such data leads to customers being more informed about the food they consume and offer.

Food Risk Communication and Types of Risks

Food risk communication can be viewed from the perspective of threats related to domains

associated with different stages of the alimentation chains. Thus, one typology can encompass the risks associated with farming, food production, and food consumption. For example, *farming risks* can include various threats connected with the extensive use of pesticides, damages done by insects, or natural disasters. The second group, *food production risks*, encompasses the hazards connected with polluting or spoiling food in the processes of manufacturing comestibles. This element of typology includes producing food outside the factories (e.g., at home). The third category, *food consumption risks*, are associated with improper storing or serving food. The mentioned risks can be investigated further, by taking their nature into account. For example, *institutional risks* may enclose the decision of authorities (or its refusal) about subsidies or other forms of institutional help. *Market risks* include the factors responsible for successes or failures of products. For example, due to changing dietary preferences of the general public, there can be a lack of interest in some offered comestibles. In addition, *natural risks* environ threats connected with natural disasters or performance of animals. An example of such a risk can be the increase of population of some insects or animals that consume corn or the flood that damages the fields. *Financial risks* involve problems with access to credits, high interest rates, and irregular payment flows. An example of this type of risks is the delay in payments for sold food products. *Technological risks* involve the difficulties in having access to technological advancements. Apart from the external risks, food risk communication is also connected with threats on the personal level. *Individual risks* are directly connected with the performance of the person responsible for a given stage in food production. To such risks may belong the following examples: wrong decisions made by the farmer or a longer illness of a farmer (especially in the case of small farms run by one person). Food risk communication can also be discussed by taking into account types of risks. Since food risks can be classified into imaginary and real ones, the way they are communicated is also different. As far as the ones with no scientific record are concerned, they comprise individuals' attitudes to some food products and their opinions about their negative effects. One of the unproven fears toward novel comestibles is called *neophobia*; individuals who are neophobic about new food think it may be toxic. It may concern toddlers and young children as well as adults. As far as the group of adolescents is concerned, neophobia is greater among old people and those of low educational level (Frewer 2012). In this case, the role of information is crucial in showing people facts connected with food that may help them opt for new comestibles. Another important notion is individuals' past experience with food. Satisfaction or dissatisfaction with previously eaten products determines their future selections. Apart from the mentioned social determinants, attitudes to risks are shaped by individual perceptions. Some people may think they are less prone to risks than other individuals, and some are more pessimistic about health concerns than average representatives of a given group. It is especially visible in the case of food-borne diseases and the attitude of affected parties to food risks. After becoming acquainted with news on food-borne diseases, individuals may feel that risks do not concern them since a different geographical region is mentioned or a different age group is described as the one who has suffered during pandemic outbreaks. The attitude to food risks also depends on individuals' health and dietary requirements. For example, people suffering from food allergies may find some substances dangerous for their health in a product being safe for other individuals. Another feature characteristic of risk perception is the tendency to shed responsibility on other people. According to some studies on the meat industry, customers think that farmers are more accountable for safety than they are in reality, whereas farmers think customers are more responsible than consumers believe they are. Consequently, farmers and consumers perceive their role in the food system as less responsible than it really is. In addition, consumers think that the highest responsibility is located at the middle level in the meat food chain, whereas farmers think that the later stages in food production are the most responsible ones (Erdem et al. 2012).

Sources of Information on Food Risks

Taking into account the type of information diversified stakeholders are looking for, various information sources can be enumerated. The channels that are used for communicating risks related to food consumption are different. Their selection depends on target stakeholders as well as the type of food risks that are going to be communicated. Discursive methods can be classified as traditional and modern ways of communicating food risks. The traditional ways of gathering information encompass, among others, books, scientific journals, and brochures, whereas the modern ones include social media and various online methods of communication. Regardless of the variety of information on food risks, food packages belong to the most often used sources to obtain data on food characteristics. Consumers read labels to search for details on expiry dates, list of ingredients, and characteristics of nutritional elements. Apart from labels, individuals may use scientific and press articles to access information on comestibles they are looking for. Risks are likely to become a topic of interest in media since they often rely on the both verbal and nonverbal elements that strengthen messages. As far as the strong visual impact is concerned, a text may include, e.g., pictures of suffering (Bennett 2001). Moreover, food risks concern everyone, directly or indirectly, depending on which type of food danger is taken into account. In addition, food risks are very difficult to judge, and the number of those who are likely to suffer is hard to estimate. Thus, the mentioned features also make it a more dramatic topic. With the growing popularity of new technologies and the Internet in the reality of the twenty-first century, such tools of communication as e-mails, discussion forums, and other forms of social networking become the place of information exchange on food risks. The Internet offers individuals the possibility to obtain data when they do not have traditional media (e.g., newspapers, radio programs) at their disposal, for example, during a trip. Moreover, such a piece of information can be distributed quickly and at relatively low cost (Bielenia-Grajewska 2011). Thus, online applications facilitate food risk communication with a relatively large group of interested parties, without investing a great deal of time and money. It should be highlighted that in order to reach the highest possible number of stakeholders diversified methods and tools of communication should be employed. Thus, both standard and new forms of communication exchanges take part in effective food risk discourse. The selection of information medium depends, to a great extent, on individual characteristics. Food risks can be communicated in formal and informal ways. Informal communication (e.g., conversations in the workplace) about food safety can often have more impact on workers' behavior than formal forms of communications (e.g., e-mails sent to all employees).

Tools of Food Risk Communication

Effective food risk communication demands diversified and well-selected tools that allow for proper discourse. In order for the message to be created, communicated, and comprehended, communicators have to select such communication tools that will foster the understanding of food issues among diversified interested parties. Different linguistic, paralinguistic, and nonlinguistic elements of communication facilitate the understanding of food risks. As far as the linguistic dimension is concerned, figures of speech, such as different words or phrases describing the surrounding reality, shape the way risks are perceived and understood. Although both literal and nonliteral linguistic elements mirror and create the environment, figurative language that offers a novel understanding of regular words and phrases is often used in the discussion on new, difficult, or complicated matters. Thus, such tools as metaphors, similes, and idioms are often employed in food risk communication. Among symbolic methods of communication, metaphors constitute one of the most often used communication tools in the discourse on food risks. The reasons for the popularity of metaphors are different. One of them is related to the role of metaphors in journalism. Figurative

language induces interest in texts, and metaphors are important tools in the informational competition among journalists since the aim of a media person is to draw the attention of readers to his or her article. Thus, metaphor can be a tool for gaining information advantage and, consequently, a greater number of readership. Additionally, metaphors can also be used as an instrument of creating one's own journalistic identity, an outstanding writing style that can be easily recognized by readers. As far as the organizational dimension is concerned, metaphors shape the way organizations are perceived since metaphors provide a bridge that facilitates innovative thinking and a broad set of possibilities as well as enhances organizational capacity to prepare for crises (Cirka and Corrigall 2010). Taking into account different features of metaphors, some of them turn out to be especially outstanding in the discourse on food risks. For example, metaphors facilitate the understanding of novel or difficult concepts since they use well-known domains, easily perceivable by the general public (e.g., Bielenia-Grajewska 2009). The most popular metaphoric domains used in food-related communication are the ones of war, journey, and illness. The selection of metaphor domains depend on the result one wants to achieve. For example, if one wants to stress the prerequisite to be active in the face of food risks, then the warfare domain is used to highlight the necessity to fight with food-related hazards. Thus, consumers/patients are pictured in an active way, being able to respond to dangers. It should be stressed, however, that a war metaphor can also be used to show the power of food risks. For example, such verbs as *invade*, *attack*, and *fight* may stress the danger related to food risks (Bielenia-Grajewska 2014). Apart from metaphors, there are also other linguistic tools that facilitate food risk communication. One of them is the notion of numbers. Presenting real numerals in food-related discourse may make the content more appealing among the target audience. For example, information on the number of victims or people infected due to food poisoning may show the real danger. Additionally, the same figure can be presented by the use of numbers, percentage, or fractions. In this case, different numerical representations can evoke different reactions among stakeholders. For example, 100,000 victims can be perceived in a different way than 0.5 % of an affected population, although they may concern the same health situations. Another important role is played by adjectives. Thus, the message on threats related to comestibles can be strengthened by such attributes as *dangerous*, *fatal*, or *lethal*. Moreover, information on food-related risk may be supported by quoting some scientific investigations, researchers, food authorities, or well-known scientific journals. A next crucial notion as far as the linguistic layer of food risk communication is concerned is the ability to tailor messages to the needs of target audience. Thus, the type of stakeholders should be taken into account, by respecting their abilities to encode messages. This aspect entails not only the type of words and the tone of messages but also such paralinguistic features as the color and size of fonts. Moreover, any texts on food risks often entail the presence of some visual elements that may determine the perception of written information among various readers. The application of drawings or photographs to text messages may strengthen or weaken the perception of the text itself. For example, the discourse on food-borne diseases is often accompanied by some pictures of animals or vegetables (depending on the type of food topics), people analyzing stool samples in laboratories, or dishes made from the selected food products. Since the picture of a healthy animal evokes different emotions than the visual representation of creatures suffering from some diseases, the selection of illustration may be used to calm or frighten the readers of texts on food risks.

Summary

Food risk communication is a multidimensional and multifactoral concept. It encompasses diverse food-related risks that are connected with all stages of food preparation and consumption and all types of stakeholders from the alimentation sector. Taking into account the tools of

food communication, there are various linguistic and nonlinguistic elements that facilitate the understanding of food risks among diversified public. The way they are used determines the perception of food risks among various stakeholders. As has been discussed, there are different food risks, and the way they are perceived and comprehended by the interested parties is determined by those responsible for food risk communication.

Cross-References

- ▶ Company Identity in the Food Industry
- ▶ Corporate Social Responsibility and Food
- ▶ Food Labeling
- ▶ Geographical Indications, Food, and Culture

References

Bennett, P. (2001). Understanding responses to risk: Some basic findings. In P. Bennett & K. Calman (Eds.), *Risk communication and public health* (pp. 3–19). New York: Oxford University Press.

Bielenia-Grajewska, M. (2009). The role of metaphors in the language of investment banking. *Iberica, 17*, 139–156.

Bielenia-Grajewska, M. (2011). Rola Internetu w komunikacji prowadzonej przez polskie lotniska (na przykładzie sytuacji kryzysowych spowodowanych trudnymi warunkami atmosferycznymi. *Pieniądze i Więź, 51*, 156–162.

Bielenia-Grajewska, M. (2014). Metaphors and risk cognition in the discourse on food-borne diseases. In J. M. Mercantini & C. Faucher (Eds.), *Risk cognition*. Heidelberg Springer (in print).

Cirka, C. C., & Corrigall, E. A. (2010). Expanding possibilities through metaphor: Breaking biases to improve crisis management. *Journal of Management Education, 34*(2), 303–323.

Erdem, S., Rigby, D., & Wossink, A. (2012). Using best–worst scaling to explore perceptions of relative responsibility for ensuring food safety. *Food Policy, 37*, 661–670.

FAO/WHO. (2001). *The application of risk communication to food standards and safety matters*. Rome: Publishing and Multimedia Service.

Flynn, D. (2011). Top food safety stories of 2011: No. 1. *Food Safety News*. http://www.foodsafetynews.com/2011/12/europes-o104-outbreak-2011s-most-important-food-safety-story/. Accessed 20 Dec 2013.

Frewer, L. J. (2012). Risk perception, communication and food safety. In: H. Alpas, M. Smith & A. Kulmyrzaev (Eds.), *Strategies for achieving food security in Central Asia* (pp. 123–131). Bishkek: Springer.

Jacob, C. J., Lok, C., Morley, K., & Powell, D. A. (2011). Government management of two media-facilitated crises involving dioxin contamination of food. *Public Understanding of Science, 20*(2), 261–269.

Lundgren, R. E., & McMakin, A. H. (2009). *Risk communication: A handbook for communicating environmental, safety, and health risks*. Hoboken: Wiley.

Nucci, M. L., Cuite, C. L., & Hallman, W. K. (2009). When good food goes bad: Television network news and the spinach recall of 2006. *Science Communication, 31*(2), 238–265.

Qin, W., & Brown, J. L. (2006). Consumer opinions about genetically engineered salmon and information effect on opinions: A qualitative approach. *Science Communication, 28*(2), 243–272.

Rachul, C., & Caulfield, T. (2011). Food allergy policy and the popular press: Perspectives from Canadian newspapers. *Journal of Asthma & Allergy Educators, 2*(6), 282–287.

Thompson, B. M., & Knight, S. L. (2006). The effect of a multicomponent professional development training on the beliefs and behaviors of community health educators concerning food irradiation. *Health Education & Behaviour, 33*(5), 703–713.

Winickoff, D. E., & Bushey, D. M. (2010). Science and power in global food regulation: The rise of the Codex Alimentarius. *Science, Technology, & Human Values, 35*(3), 356–381.

Food Risks

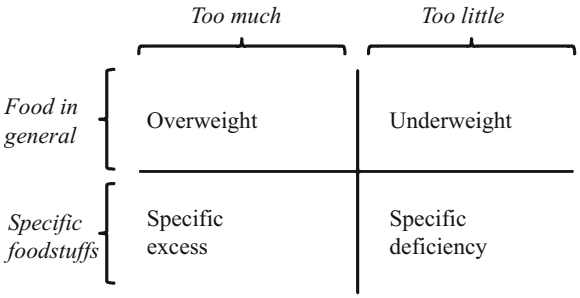
Sven Ove Hansson
Division of Philosophy, Royal Institute of Technology, Stockholm, Sweden

Synonyms

Diet; Health effects of food; Health risks from food; Nutrition; Obesity; Overweight; Starvation; Underweight

Introduction

> I will apply dietetic measures for the benefit of the sick according to my ability and judgment. *The Hippocratic Oath*



Food Risks, Fig. 1 The four major categories of food risks

Although the word "diet" had a wider meaning in ancient Greek than it has today, it certainly included the choice of food. This quote from the Hippocratic Oath confirms the important role for our health that has been ascribed to food for at least 2,500 years. Today the public is confronted with a bewildering mass of information about connections between food and health. Eating too much is unhealthy, but eating too little as anorectics do is equally harmful. There is a long list of (usually tasty) foodstuffs that are subject to health warnings and a similarly long list of (not always equally tasty) foods that are recommended. And then there are all the additives and pesticides, and other food risks like aflatoxin and Creutzfeldt–Jakob disease. It is not easy to orient oneself in this morass of food risk information.

Before turning to the ethical issues surrounding food risks, this entry will provide a résumé of current knowledge about food risks. For that purpose, a distinction will be made between four classes of food risks. Food risks can refer either to the total energy intake or to specific foodstuffs. They can also refer either to excesses or deficits. Combining these two distinctions provides the four categories shown in Fig. 1. The upper row contains the two risks referring to the total intake of food, as measured in an energy unit such as calories: overweight and underweight. On the bottom row, the other two types of food risks are found: excesses and deficiencies of specific food components.

Specific excesses can be divided into two subcategories. Some potential ingredients should be avoided altogether, such as solanine (a toxic compound found in green potatoes) and paraquat (a toxic pesticide). Others are harmless or even beneficial in small amounts but toxic at higher levels. A classic example is vitamin A poisoning that may result from a diet rich in liver from some wild animals or from abundant intake of cod liver oil or vitamin supplements. The high frequency of hip fractures among elderly people in some European countries may be due to overconsumption of vitamin A (Lips 2003). However, on a global scale, vitamin A deficiency is still a much larger problem.

As a further complication, the effects of reducing a foodstuff depend on what it is replaced by. Hence, although saturated fat is a risk factor for ischemic heart disease, reductions in saturated fat do not seem to be beneficial. The reason is that people who cut down on saturated fat tend to eat more carbohydrates instead (Lim et al. 2012).

Global Risk Estimates

Causal connections between nutrition and health are difficult to determine, since effects may be delayed and since it is difficult to isolate the effects of a single food component. The Global Burden of Disease Study 2010, GBD 2010, provides a summary of the health effects of a large number of risk factors on a global scale (Lim et al. 2012). Its data for diet-related factors will be summarized in the two following sections. The calculated global number of excess deaths from each risk factor will serve as a numerical estimate of the magnitude of the risk. Since risks differ between populations and between persons, these estimates do not correspond to individual risks. Regional data, of which some will be given below, are somewhat less inadequate for that purpose.

These estimates only include risk factors for which data of sufficient quality are available. Other dietary risk factors than these may have important health effects are not yet known.

Underweight and Overweight

High body mass index (3.37 million deaths/year). Obesity or overweight is measured in terms of the

body mass index that is obtained by dividing the person's weight in kilograms by the square of her height in meters. It is usually assumed that a BMI of 18.5–25 kg/m^2 corresponds to optimal weight. In this study, the "most healthy" BMI for comparison purposes was set at 21–23 kg/m^2. Obesity is associated with substantially increased risk of a large number of diseases, including diabetes, ischemic heart disease, and several types of cancer.

A similar estimate for the year 1990 showed a smaller number of deaths due to high body mass index (1.96 million/year). Obesity is a growing problem not only in rich countries but also in countries such as India where malnutrition and food shortage is still a problem for significant parts of the population (Sarkar et al. 2012).

Obviously obesity does not depend on high energy intake alone but on the balance between energy intake and energy expenditure (exercise). For the present purposes, however, it can be counted as a diet-related disease, not least since lasting reduction in food energy intake is an important component of all adequate treatment programs for obesity.

Childhood underweight (0.86 million deaths/year). Childhood underweight increases the risk of various infectious diseases including malaria that terminate the lives of starving children. The corresponding estimate for 1990 was much higher (2.26 million/year). It should be emphasized that although the number of children dying from starvation has decreased substantially, lack of food is still a major cause of death in many countries, in particular in sub-Saharan Africa.

Too Much or Too Little of Special Foodstuffs

Diet high in processed meat (0.84 million deaths/year). Processed meat is smoked, cured, or salted, or contains chemical preservatives. This includes sausages, bacon, and ham. The major health risks are colon and rectum cancer and diabetes.

Diet high in red meat (0.04 million deaths/year). Red meat, as the term is used here, includes beef, pork, lamb, and goat but excludes processed meat, poultry, and fish. The major health risks are colon and rectum cancer, diabetes, and ischemic heart disease. As the figures show (non-processed), red meat appears to be a much smaller risk factor than processed meat.

Diet high in sugar-sweetened beverages (0.30 million deaths/year). Soft drinks have been shown to give rise to diabetes mellitus and to obesity with its associated maladies such as cancers and cardiovascular diseases.

Diet high in trans-fatty acids (0.52 million deaths/year). Trans fat (unsaturated fat with *trans*-isomer fatty acid) occurs in nature, but most of the trans fat consumed is created through processing of vegetable oils. Trans fat is primarily used in fast food and bakery products. It has also been used to replace animal fat in products for vegetarians. It has been shown to give rise to ischemic heart disease.

Diet high in sodium (3.10 million deaths/year). Sodium (in practice sodium chloride, i.e., common salt) is an essential nutrient, but excess consumption increases blood pressure which leads to enhanced risk of several types of cardiovascular disease including ischemic heart disease. High intake of salt also increases the risk of stomach cancer.

Insufficient breastfeeding (0.55 million deaths/year). Breastfeeding contributes to developing the child's immune system. Babies who are insufficiently breastfed run increased risks of infectious diseases including diarrhea.

Maternal and infant iron deficiency (0.12 million deaths/year). Maternal iron deficiency leads to anemia also in the child. It contributes to both maternal and infant mortality.

Vitamin A deficiency in children (0.12 million deaths/year) increases the prevalence and severity of infections, including measles and intestinal infections. It is also a major cause of blindness.

Zinc deficiency (0.10 million deaths/year) increases the prevalence and severity of diarrhea and pneumonia.

Diet low in fruits (4.90 million deaths/year). Fruit consumption has been shown to decrease the risk of several types of cancer and cardiovascular disease including ischemic heart disease and stroke. The large number of deaths/year

associated with low intake of fruits depends both on the substantial positive health effects of fruit and on the large number of people who eat little or no fruit. Low intake of fruit is the only dietary risk factor in this study with a large difference between men and women. The number of deaths/year attributed to it was 1.5 times higher for men than for women. There are two major reasons for this difference: men eat less fruit than women and they are more often victims of cardiovascular disease.

Diet low in vegetables (1.80 million deaths/year). The health risks of low vegetable consumption are essentially the same as for fruits, namely, cancer and cardiovascular diseases. The large number of deaths/year is also explained in the same way as for fruits.

Diet low in whole grains (1.73 million deaths/year). Whole grains mean those cereal grains that contain cereal germ, endosperm, and bran in their natural proportions. (In refined grains only the endosperm is left.) Common sources are the whole grain variants of cereals, bread, pasta, and rice. A diet low in whole grains is associated with diabetes, ischemic heart disease, and cerebrovascular disease.

Diet low in fiber (0.74 million deaths/year). Fibers from all sources, including fruit, vegetables, legumes, and grains, decrease the risk of colon and rectum cancers and ischemic heart disease.

Diet low in nuts and seeds (2.47 million deaths/year). Consumption of nuts (also in the form of peanut butter) has been shown to have a protective effect against ischemic heart disease.

Diet low in milk (0.10 million deaths/year). Milk has been shown to decrease the risk of colon and rectum cancer (irrespective of whether it is non-, low-, or high-fat milk).

Diet low in calcium (0.13 million deaths/year). Calcium has a protective effect against colon, rectum, and prostate cancer. Milk, cheese, and other milk products are the major dietary sources.

Diet low in seafood omega-3 fatty acids (1.39 million deaths/year). The most important dietary sources of omega-3 fatty acids are cold water oily fish, such as salmon and herring. The effects of these substances are still under debate, but this study accepts evidence of positive effects on the risk of ischemic heart disease.

Diet low in polyunsaturated fatty acids (0.53 million deaths/year). The major part of dietary polyunsaturated fatty acids is omega-6 fatty acids. They are present in seeds, nuts, and vegetable oils such as palm, soybean, rapeseed, and sunflower oil. Studies have shown that replacing saturated fatty acids by polyunsaturated ones reduces the risk of coronary heart disease (Jakobsen et al. 2009; Mozaffarian et al. 2010). However, these results are controversial since some researchers claim that omega-6 fatty acids have negative health effects.

Summary of the Evidence

The evidence reported above can be summed up in the four categories introduced in Fig. 1. The total number of lost deaths/year due to food risks is estimated at 23.71 million and distributed as follows between the four categories:

Overweight: 3.37 million deaths/year (14 %)
Underweight: 0.86 million deaths/year (4 %)
Specific excesses: 4.80 million deaths/year (20 %)
Specific deficiencies: 14.68 million deaths/year (62 %)

It should be noted that alcohol consumption has not been included in this summation since alcohol is not usually considered to be food. If it is included, then 4.86 million deaths/year should be added to the "specific excesses," yielding a sum of 9.66 instead of 4.80 million deaths/year.

Food risks differ widely between different parts of the world. Regional information is only available in terms of DALY loss. DALY (deaths and disability-adjusted life years) is a measure constructed as a weighted sum of years lost and the estimated loss derived from years lived with disability. Table 1 shows how much the most important food-related risk factors were estimated to contribute to the global burden of disease in 1990 and 2010, measured as DALY loss. Hence in 1990, childhood underweight contributed 8 % of the global burden of disease whereas in 2010 it contributed 3 %. The remarkable changes from

Food Risks, Table 1 Major contributions of food risks to the global burden of disease in 1990 and 2010, as measured in DALYs, a weighted sum of years lost and the estimated loss from years with disability. The percentages indicate how much of the total burden of disease a risk factor contributes to. The risk factors included are those among the top 20 risk factors for the respective year that are food-related

Whole world 1990	**Whole world 2010**
8 % childhood underweight	4% too little fruits
5 % too little breastfeeding	4 % high body mass index
3 % too little fruits	3 % childhood underweight
2 % too little iron	3 % too much sodium
2 % high body mass index	2 % too little nuts and seeds
2 % too much sodium	2 % too little iron
2 % too little nuts and seeds	2 % too little breastfeeding
2 % too little vegetables	2 % too little whole grains
2 % too little Vitamin A	2 % too little vegetables
1 % too little whole grains	1 % too little omega-3 fat
1 % too little zinc	
1 % too little omega-3 fat	

1990 to 2010 are mostly due to economic and social progress in the third world. Table 2 exhibits the corresponding information for some of the world's regions in 2010. As the table shows, the food risk pattern differs drastically between different parts of the world, with sub-Saharan Africa and Northern America as the two extremes.

Many details in these tables are uncertain, but the general picture that they display represents the currently best available information about food risks in the world. They therefore provide an adequate starting point for a discussion of food risks, seen as public health problems. Food risks on an individual level may of course deviate substantially from this picture and are best determined by a competent physician.

Ethical Issues

Historically anxieties about food have focused on two types of problem: lack of food and food contamination (Scholliers 2008). The solutions to these problems are simple, at least in principle: produce and distribute more food and remove the contaminants. Although both types of problem persist, the picture is now dominated by two

Food Risks, Table 2 Major contributions of food risks to the burden of disease in 2010, in different regions, measured as in Table 1. The risk factors included are those among the top 20 risk factors in the respective region that are food-related

China	**South Asia (India, Pakistan, etc.)**
9 % too little fruits	4 % childhood underweight
5 % too much sodium	3 % too little fruits
4 % high body mass index	3 % too little iron
3 % too little whole grains	2 % too little breastfeeding
2 % too little nuts and seeds	2 % too little nuts and seeds
2 % too little vegetables	2 % too much soduim
1 % too little fiber	1 % too little whole grains
1 % too little omega-3 fat	1 % too little vegetables
1 % too little iron	1 % high body mass index
Brazil and Paraguay	1 % too little omega-3 fat
7 % high body mass index	**Bolivia, Ecuador, and Peru**
4 % too little fruits	4 % high body mass index
4 % too much processed meat	3 % too little iron
3 % too much sodium	2 % too little breastfeeding
3 % too little nuts and seeds	2 % too little fruits
2 % too little whole grains	1 % too little nuts and seeds
2 % too little iron	1 % too much sodium
1 % too little vegetables	1 % too little vegetables
1 % too little omega-3 fat	1 % too much processed meat
North Africa and Middle East	1 % too little whole grains
8 % high body mass index	1 % childhood underweight
4 % too little fruits	**Central sub-Saharan Africa**
3 % too much sodium	11 % childhood underweight
3 % too little nuts and seeds	5 % too little breastfeeding
2 % too little iron	2 % too little iron
2 % too little whole grains	2 % vitamin A deficiency
2 % too little breastfeeding	2 % too little zinc
2 % too little omega-3 fat	1 % too little fruits
1 % too much trans fat	0.5 % too little nuts and seeds
1 % too little vegetables	0.5 % too much sodium
USA and Canada	0.5 % high body mass index
10 % high body mass index	0.4 % too little whole grains
5 % too little fruits	**Western Europe**
4 % too little nuts and seeds	9 % high body mass index
3 % too much sodium	4 % too little fruits
3 % too much processed meat	3 % too little nuts and seeds
2 % too little vegetables	3 % too much sodium
2 % too much trans fat	2 % too much processed meat
2 % too little omega-3 fat	2 % too little vegetables
2 % too little whole grains	1 % too little omega-3 fat
1 % too little fiber	1 % too little whole grains
1 % too much soft drinks	1 % too little fiber
1 % too little polyunsaturated fat	1 % too little polyunsaturated fat

other types of problems: excess food consumption and improper balance between foodstuffs. The solutions to these problems are much less straightforward, since in both cases individual behaviors need to be changed.

It is important to recognize that food choices depend on much more than health considerations. The cost of food is a decisive factor for the vast majority of consumers. Social, religious, and cultural customs have a large role and so have family traditions. Increasingly, food choices reflect ethical standpoints such as vegetarianism, environmental concern, support for animal welfare, and solidarity with exploited farm workers. Any attempt to promote a more healthy diet will have to take the influence of non-nutritional preferences into account.

The major ethical problem facing dietary reform is that of paternalism, i.e., acting against people's will in what one believes to be their own interest. Urging a person to eat less or differently is an interference in her life, undertaken for her own good. Such interventions are commonly assumed to be both illiberal and disrespectful. However, there are two reasons why the paternalism problem in food risk policy may be less serious that it is often believed to be.

First, people do not make food choices only for themselves but also for their family and guests. When parents shape the tastes and food habits of their children, they also create conditions for their future health. Recommending parents to improve their children's diet is certainly an intrusion into family life, but it is not a paternalistic one (Hansson 2005). If the health of new generations is taken to be a national concern, then governmental and other public measures to promote healthier diets may be justified.

Second, an individual's food choices are much influenced by social and economic factors beyond her control. For instance, it would be misguided to see the current obesity epidemic as nothing more than the aggregate effect of a large number of individual choices to eat more. It is "extremely difficult to believe that people who are morbidly obese and who experience the social ostracism that goes along with it (not to mention the social inconvenience of just finding nice clothes that fit) want to be that way" (Banja 2004, p. 43). A more credible explanation is that fattening food is better tasting, more accessible, more promoted, and less expensive than healthy food (Schwartz and Brownell 2007). This, of course, is a situation amenable to change through social reform. From an ethical point of view, such reform has the advantage of being less intrusive into private life than health campaigns directed at individuals. On the other hand, it may have the disadvantage of interfering more with corporate freedoms.

Food prices are influenceable and in most countries already much influenced by taxes, subsidies, and trade policies. The fact that healthy food is more expensive than unhealthy, energy-dense food is in all probability an important factor contributing to the obesity epidemic (Adler and Stewart 2009). In many cases, agricultural policy has contributed to price relations that inhibit healthy choices. The European Union's common agricultural policy has kept up prices of fruits and vegetables by destroying parts of the production. In 1993 this led to the destruction of more than half of French apples, 70 % of Italian pears, 50 % of Greek nectarines, 50 % of Spanish clementines, and 97 % of Spanish lemons (Lobstein 1998, p. 84). Poland's decreased mortality in coronary heart disease in the early 1990s has been attributed to reduced subsidies for animal fats that led to replacement of dietary saturated fats by polyunsaturated fats (Zatonski and Willett 2005). The unintended positive health effects of these economic and agricultural policies stand in stark contrast to the inefficiency of other countries' attempts to reduce coronary mortality through health policies operating with education and behavior change (Lock and McKee 2005). In Canada, policies maintaining high prices for poultry have prevented healthful replacement of red meat by poultry meats (Cash et al. 2006, p. 623).

Three Examples

The following three examples will serve to exemplify the ethical situations surrounding different types of food risks.

Vitamin A deficiency is common among children in developing countries. In recent years, the frequency of this deadly disease has been substantially reduced through interventions that have largely been funded by foreign aid agencies and charities. The introduction of carotene-rich sweet potatoes, fortification of sugar with vitamin A, and vitamin A supplementation for young children are among the measures that have been successful (Boy et al. 2009). From an ethical point of view, these are obviously commendable interventions. The victims of this food-related disease are small children, and if there is any paternalism involved in what it takes to save them, then that is about as unproblematic as any paternalistic intervention can be. The major ethical problem in this context is that a substantial number of children in need of vitamin supplementation do not yet receive it.

Trans-fatty acids have been introduced into industrially produced food for technical reasons. Trans fat replaces other, healthier fat products. It does not taste differently, and therefore a ban on trans fats affects producers rather than consumers. Such a ban falls in the same category as hygiene standards for food manufacturers and the prohibition of poisonous food additives. Although some voices have been raised against prohibition of trans fat, the concern has usually not been the ban itself but whether it could open up for interventions against unhealthy foodstuffs that consumers may wish to choose. In itself, a ban of trans fats appears to be ethically unproblematic (Resnik 2010; Rubel 2010).

Soft drinks now comprise almost 25 % of the daily energy intake of American teenagers. The colloquial expression "empty calories" seems to be adequate in the sense that consumption of soft drinks does not decrease energy intake through other foodstuffs. The strong association with diabetes and obesity only holds for sugar-sweetened soft drinks, not for the diet variants (Caballero 2007; Vartanian et al. 2007). However, soft drink producers strongly oppose any measures that would reduce the consumption of their sugar-sweetened products. There are strong indications that a "sugar tax" would have considerable positive health effects, but political support is weak (Brownell et al. 2009; Wang et al. 2012). A major reason for political inertia seems to be that such taxes are perceived as paternalistic. However, corresponding taxes on tobacco products now have comparatively strong support. Arguably, the pros and cons of this and other potential antiobesity policies will have to be reassessed if child obesity does not recede in response to ethically less controversial measures such as education and public health campaigns.

The last of the three examples is the one that is most representative of the type of future ethical challenges that can be expected in food policies. Due to the changing nature of food risks, food policy increasingly involves difficult ethical choices between public health and the public's free access to unhealthy food.

Summary

Overweight is a growing problem, also in developing countries, and it now kills more people than underweight. Excess of sodium (salt) and lack of healthy foodstuffs such as fruits, vegetables, whole grains, and nuts are other important contributors to the global burden of food-related risks. In poor countries, a healthy diet is still beyond the economic means of large segments of the population. Even in the rich industrialized countries, the lower prices and greater availability of unhealthy food contributes substantially to the obesity epidemic. In public health policy, a major problem is to find ways to promote healthy food choices without interfering unnecessarily in the private sphere of people's everyday lives.

Cross-References

- ▶ Eating and Nutrition
- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Food Additives and International Trade
- ▶ Food and Class
- ▶ Food and Health Policy
- ▶ Food Risk Communication
- ▶ Obesity and Consumer Choice

References

Adler, N. E., & Stewart, J. (2009). Reducing obesity: Motivating action while not blaming the victim. *Milbank Quarterly, 87*, 49–70.

Banja, J. (2004). Obesity, responsibility and empathy. *The Case Manager, 15*, 43–46.

Boy, E., Mannar, V., Pandav, C., de Benoist, B., Viteri, F., Fontaine, O., & Hotz, C. (2009). Achievements, challenges, and promising new approaches in vitamin and mineral deficiency control. *Nutrition Reviews, 67*, S24–S30.

Brownell, K. D., Farley, T., Willett, W. C., Popkin, B. M., Chaloupka, F. J., Thompson, J. W., & Ludwig, D. S. (2009). The public health and economic benefits of taxing sugar-sweetened beverages. *New England Journal of Medicine, 361*, 1599–1605.

Caballero, B. (2007). The global epidemic of obesity: An overview. *Epidemiologic Reviews, 29*, 1–5.

Cash, S. B., Goddard, E. W., & Lerohl, M. (2006). Canadian health and food: The links between policy, consumers, and industry. *Canadian Journal of Agricultural Economics, 54*, 605–629.

Hansson, S. O. (2005). Extended antipaternalism. *Journal of Medical Ethics, 31*, 97–100.

Jakobsen, M. U., et al. (2009). Major types of dietary fat and risk of coronary heart disease: A pooled analysis of 11 cohort studies. *American Journal of Clinical Nutrition, 89*, 1425–1432.

Lim, S. S., et al. (2012). A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: A systematic analysis for the global burden of disease study 2010. *Lancet, 380*, 2224–2260.

Lips, P. (2003). Hypervitaminosis A and fractures. *New England Journal of Medicine, 348*, 347–349.

Lobstein, T. (1998). The common agricultural policy – A dietary disaster? *Consumer Policy Review, 8*(3), 82–87.

Lock, K., & McKee, M. (2005). Commentary: Will Europe's agricultural policy damage progress on cardiovascular disease? *BMJ, 331*, 188–189.

Mozaffarian, D., Micha, R., & Wallace, S. (2010). Effects on coronary heart disease of increasing polyunsaturated fat in place of saturated fat: A systematic review and meta-analysis of randomized controlled trials. *PLOS Medicine, 7*.

Resnik, D. (2010). Trans fat bans and human freedom. *American Journal of Bioethics, 10*, 27–32.

Rubel, A. (2010). Local trans fat bans and consumer autonomy. *American Journal of Bioethics, 10*, 41–42.

Sarkar, A., Aronson, K. J., Patil, S., Hugar, L. B., & van Loon, G. W. (2012). Emerging health risks associated with modern agriculture practices: A comprehensive study in India. *Environmental Research, 115*, 37–50.

Scholliers, P. (2008). Defining food risks and food anxieties throughout history. *Appetite, 51*, 3–6.

Schwartz, M. B., & Brownell, K. D. (2007). Actions necessary to prevent childhood obesity: Creating the climate for change. *Journal of Law, Medicine and Ethics, 35*, 78–89.

Vartanian, L. R., Schwartz, M. B., & Brownell, K. D. (2007). Effects of soft drink consumption on nutrition and health: A systematic review and meta-analysis. *American Journal of Public Health, 97*, 667–675.

Wang, Y. C., Coxson, P., Shen, Y.-M., Goldman, L., & Bibbins-Domingo, K. (2012). A Penny-Per-Ounce Tax on sugar-sweetened beverages would cut health and cost burdens of diabetes. *Health Affairs, 31*, 199–207.

Zatonski, W. A., & Willett, W. (2005). Changes in dietary fat and declining coronary heart disease in Poland: Population based study. *BMJ, 331*, 187–188.

Food Rituals

Emily J. Bailey
Department of Religious Studies, 2604 Cathedral of Learning, University of Pittsburgh, Pittsburgh, PA, USA

Synonyms

Food and culture; Food practice; Moral food; Religious food

Introduction

The study of ritual food practices and morality is, fundamentally, rooted in religious practice and belief. Methodologically, anthropology and sociology are best suited for analyzing ritual actions, intentions, and the boundaries of practitioners' moral or ethical motivations. Religion becomes a central component of ritual actions involving food preparation (cooking) and consumption (eating) when a higher power or supernatural authority is intentionally made part of the ritual food process. In this way, cooking and eating take on meaning beyond nutritional and physical sustenance, becoming modes for interacting with the spiritual or transcendent. There are three fundamental ways in which this occurs. First, an individual or community chooses a certain type of food as a sacramental or sacrificial source of nourishment. Second, a specific food is avoided or considered

taboo and is forbidden in ritual food practice. Third, fasting or abstinence from eating a certain food, or all foods, is undertaken as a form of negative ritual food practice. In each instance, ritual actions are performed which designate the significance of the foods that are eaten or avoided, usually with the goal of religious merit or atonement in mind.

History

The study of food and ritual began in earnest with the advancement of sociological and anthropological methods to understand foreign cultures and their ritualized behaviors in the early to mid-twentieth century. This study of ritual, implemented primarily by Western intellectuals, was fuelled by an ever-increasing globalized sense of the world and its inhabitants, albeit it often an ethnocentric one. Ritual practices (what will be broadly defined here as recurring spiritually motivated and intentional practices) were analyzed for content, efficacy, and outcome in a way that they had not previously been studied. Although food practices were not the only ritualized actions under investigation at this time, they were (and remain) central to sociological and anthropological studies of culture. Food, a fundamental aspect of life, is a universal cultural topic, as all people eat to survive, but at times have different interpretations of what types of food it is appropriate or not appropriate to eat. The designation between food that is acceptable and that which is not typically transcends the edible and inedible and is determined by some system of moral or ethical classification.

Sociologist Émile Durkheim demonstrated this distinction in his early twentieth-century study of religious life in which he noted that many of the indigenous communities that he analyzed had a collective self-image rooted in a totem figure, usually an animal (Durkheim 1995). The totem animal, as reflective of the communal consciousness, took on great power and meaning, and it became taboo to eat those animals that were sacred to the community. As sociological and anthropological approaches shifted away from the "armchair" and into the field, scholars like interpretive anthropologist Victor Turner turned their focus toward the ways in which religion and ritual could develop into "symbolic system[s]. . .that both express and shape social reality" (Morris 2006). In this reciprocal model, food practices become a means for understanding culture while also impacting how cultures view themselves.

A student of E.E. Evans-Pritchard, British anthropologist Mary Douglas is among the best-known scholars of food and ritual in the twentieth century. Douglas, striving to find cross-cultural meaning in dietary practices, turned to food and dirt as symbols of social and spiritual purity and defilement (Douglas 1966). This social system of food classification recalls Durkheim's understanding of totem and taboo, in which the totem animal is to be avoided as food, while other animals are acceptable sources of nourishment.

The study of food and ritual continues to gain momentum through the work of anthropologists like Gillian Feeley-Harnik and religionists like Wade Clark Roof (Feeley-Harnik 1995; Roof 2000). In her work on food and anthropology, Feeley-Harnik notes the value of earlier studies of food and ritual, concurring with Claude Lévi-Strauss and Douglas that it is not enough when studying cultures to reduce their food practices and consumption to mere cultural symbols (Feeley-Harnik 1995). Food practices are instead deeply intertwined with other innate human actions like sex and language and, like these, can be performed in ways that are interpreted as being acceptable or taboo depending upon a culture and what is socially acceptable in it. Roof's study is one that applies theories of ritual action to the cultural role of barbeque in the modern-day southern United States. For Roof the widespread prevalence of barbequing pork in the south has made the pig a kind of southern totemic figure, one that permeates local food culture from marketing to communal gatherings and is thus ritually prepared (Roof 2000).

Food Ritual Analysis: Ethical Parameters

Whether symbolic or actualized, ritual food preparation and consumption are often ethically

imbued. This happens in two ways, as moral standards are either projected onto the community by outsiders who observe them or are established within the community itself. Instances of these ethical parameters for ritual food practices can be applied to all three categories for ritual food analysis: (1) food as a sacramental or sacrificial source of nourishment, (2) the avoidance of specific foods as forbidden or taboo, and (3) fasting or abstinence from eating a certain food, or all foods, as a form of negative ritual food practice.

Sacramental Nourishment

Indigenous Traditions

Sacramental or sacrificial food practices are performed the world over, as individuals and communities strive to connect with, or even to imbibe the divine. These practices can be found particularly in indigenous traditions that have totem animals and in the Eucharistic practices of Christian churches. When a totem for a community is an animal (for instance, in an aboriginal community that identifies with and treats as sacred the kangaroo), contact with the totem animal may be taboo or off-limits because of its elevated position, or the animal may (rarely) be sacrificially eaten so that the community might ingest some of its power (Freud 1946). When the totem is eaten, it is important that it only be ingested by members of the community, as its sacred power is believed to be connected to them alone. For most communities, a collective identity is crucial for their survival as a unit, and the ritualized eating of their sacred animal becomes one way in which this group character is maintained. By performing the rituals associated with the cooking and eating of the totem animal, the community is able to reach into their shared past, participating in and perpetuating their own sacred myth (Eliade 1987).

Christianity

Many of the same principles hold true in the Christian tradition, as the Eucharistic meal is considered by participants to be powerful and is a way for individuals to collectively participate in and affirm their place within the church community. For Christian churches, the sacramental food (bread and wine) has different meaning depending upon which denomination one participates in. In the Roman Catholic Church, the ritual practice of the Eucharist is considered by members to be a process of transformation. The doctrine of transubstantiation means that for Catholics the communion elements of bread and wine are changed by the ritual actions of the priest, converting these elements in essence to the actual body and blood of Jesus Christ. The belief that the food elements are literally transformed into flesh and blood presents many ethical issues for the standards that determine the ways in which these food elements are handled and distributed. According to the tradition, this means that only a priest has the authority and ability to preside over the ritual process, that the bread and wine are not more than mere food and drink until after the ceremony is performed, that after being transformed the elements cannot be abused or discarded (other than to be ingested), and that only a select population (baptized, practicing Catholics) are permitted to touch and eat them. The ritual food and drink are only supposed to be consumed by those who have a clear conscience and with the proper spiritual intention.

As sacred food, the Eucharist is also central to ritual life in Protestant Christian churches. A historical point of contention between the Eucharistic practices of the Roman Catholic Church and its Protestant sister churches rests on the limitations of who can participate in the ritual. Protestant churches generally hold that the Roman Catholic Church's approach to the Eucharistic ritual is not in-line with the message of inclusivity central to the Christian tradition. For Protestant churches, this means a necessary ethical shift from the concept of transubstantiation in the ritual process to one of consubstantiation, or the belief that the presence of Jesus Christ in the Eucharist is more symbolic than literal. This consubstantiative approach to the Eucharistic meal led to a number of differences in ritual, including the ability for ordained women to perform the rite, for all believers to participate in the meal (and not just baptized Protestants), and to less formalized preparation, treatment, and storage of the food elements.

Taboo Foods

Judaism

For a number of the world's religious traditions, there are also foods that are designated as being taboo or forbidden. In Judaism, Islam, and eastern traditions like Hinduism and Jainism, specific foods are off-limits, and ritualized food preparation practices are put into place to ensure ethical consumption. As Douglas noted, in the Jewish tradition, special attention is paid to the dietary laws found in the Old Testament book of Leviticus (Douglas 1966). These laws are the foundation for what is considered to be kosher, or *kashrut*, and therefore morally acceptable for consumption. In order for foods to be pure, rather than defiled and unfit to eat, the process of their production must be certified by a rabbi or approved organization. In this religiously systematic way, their production becomes ritualized.

For foods to be considered kosher, their production and content follow a strict set of ethical criteria. Kosher animal products must be in good health before being slaughtered and have to be killed in a humane way. The blood from these animals has to be completely drained before they are able to be cooked and eaten. There are restrictions as to which foods meat and dairy can be mixed with, and they are not to be consumed together. While some foods made by non-Jews are permissible, those following a strict kosher diet try to only eat foods that have been prepared within the dietary parameters of the tradition. Food choice, production, preparation, and consumption become religiously ritualized through the kosher diet, which is practiced in different degrees by Conservative, Reform, and Orthodox Jews.

For Jews, the moral and ritual process of food production is carried beyond the butcher shop or factory and into the home. In the Jewish tradition, domestic ritual meals take place each week on *Shabbat*, and several times a year as a way of reaffirming one's faith and place within the Jewish past and wider Jewish community. Perhaps the best example of this type of food ritual is the observance of Passover, in which Jews recall, in part through a ritualized meal, the Old Testament Exodus story of the freedom of the Israelites from slavery in Egypt. Symbolic foods are eaten as part of this Passover *Seder* meal, including unleavened bread called *matzoh*, bitter herbs, lamb, and wine, with each item standing for a specific part of the Israelites' story.

Islam

In some ways similar to Jewish kosher dietary laws, many adherents of the Muslim tradition follow the food restrictions of *halal*. Halal dietary laws are firm and include the avoidance of pork and alcohol, in addition to not being able to eat the blood of any animal, and having to eat only humanely slaughtered animals. Like kosher dietary laws, halal food standards for production are highly organized and require certification to ensure that foods are spiritually and ethically pure for the Muslims buying them. In both the Jewish and Muslim traditions, all ingredients for processed food items have to be carefully chosen and labeled to ensure that even food additives are within the limitations of what can be safely and morally eaten.

Beyond physical production and ingredients, certified kosher and halal foods must be prepared with the right spiritual intentions in mind. In these traditions and many others, dietary laws are taken from divine scripture (the Qur'an in this case) and are believed to be directions for eating and food preparation as given directly to humans by God. Both methods of dietary guidance are therefore aimed at beneficial physical and spiritual nourishment. This is why so much attention is paid to the process of production. For a food item to remain ritually pure, it must be made with the least bit of harm and a heightened awareness of source.

Hinduism/Jainism

In the Hindu tradition, food has an "essence" – spiritual and social meaning beyond nourishment (Khare 1992). In India, food has traditionally been connected to caste as well as ritual life. In a tradition in which one's *dharma*, or moral duty, is central, eating in Hinduism became an act of adhering to cultural and thus spiritual order. Hindu dietary laws can be traced to holy books within the tradition. Food is a central topic in the

Laws of Manu, an early Indian text outlining the laws that governed all aspects of cut- repetitive life. Acceptable and taboo foods are outlined for the "twice-born" man (males born into the three higher Hindu castes) so that he can successfully navigate through dietary rituals and restrictions in order to uphold his dharma and maintain social and religious harmony (The Laws of Manu 1991). Special attention is also given to ritual actions that must be performed when some foods (certain birds and animals in particular) are prepared to be sacrificially eaten.

Like kosher and halal dietary laws for what is acceptable and what is taboo (based on spiritually ritualized food preparation practices), in Hinduism, there are certain foods that almost all adherents avoid, while there are others that only the strictest followers do not eat. For instance, many Hindus completely avoid eating beef out of religious and cultural respect for the cow. This practice extends for some into total vegetarianism, rooted in the belief that killing animals for food results in a bad karmic, or cumulative moral condition based on behavior or action. In the Hindu tradition, there is also an emphasis on treating all foods ritually because everything in life can potentially be considered a sacrificial offering to the divine (Bhagavad Gita 1986). To offer food to divinity is to communicate with the transcendent in a way that connects the sacred and mundane. In approaching all food practices as sacred, Hinduism invites adherents to partake in a primordial ritual of spiritual and physical nourishment that reaffirms belief in a natural hierarchy between human and divine (Morris 2006).

The Jain tradition, with its roots in earlier Indian spirituality, takes an even stronger stance on nonviolence, or *ahimsa*, with regard to what foods it is appropriate or not appropriate to eat. Jain ascetics take this to the extreme, avoiding killing in their consumption to the greatest extent possible. The men and women who take up Jain monastic life vow first to only eat that which is given to them, so as to not personally harm any creatures, large or minute, in the process of food preparation. Jain ascetics are vegetarians, trying to avoid accruing bad karma by eschewing meat and root vegetables (foods in which the entire plant dies when harvested), and only consuming strained water in order to minimize their effect on even the smallest bugs that might pass undetected through their diet. In sharing food with ascetics, the laity engage in the ritual process and are also able to work off their karma. Sharing food with ascetics thus becomes repetitive a mutually beneficial spiritual act. For the Jain laity, dietary practices are not as strict, but food remains sacralized. Though lay eating practices are not as ritualized as those of the ascetics who strain their liquid and accept food offerings, Jain lay people must navigate through issues of nonviolence in their worldly lives. As part of their spiritual commitments, Jain laity are not even permitted to take jobs that might cause harm, including butchery.

Fasting Rituals

Fasting, or abstaining from eating specific foods or all foods, is a cross-cultural phenomenon in the spiritual lives of many. To fast is to sacrifice eating, usually with the goal of some degree of spiritual purification. Although the practice of fasting fundamentally means an avoidance of food, it is nonetheless an aspect of ritualized food practice. Fasting in world religions typically takes place during periods of spiritual reflection or atonement like Passover (Judaism), Lent (Christianity), and Ramadan (Islam) and is by its cyclical nature ritualistic.

Like sacramental and taboo foods, definitions for fasting are different across cultures and traditions. For instance, in her study of the eating habits of medieval women, Caroline Walker Bynum reveals how fasting became a vehicle for piety – in stark contrast to the abundance of Catholic feast days during the period (Bynum 1988). For the men and women who chose to lead contemplative lives in the monasteries and cloisters of the Roman Catholic Church at this time, fasting was a way to strip an already austere life of one of its remaining pleasures (food) so as to show total attention and devotion to God. Fasting is not only a practice of ascetics however but one also undertaken by the laity.

While Protestant Christian denominations do not discourage the practice of fasting as part of

religious life, the role of fasting in Protestantism is historically not as prominent as it is in Catholicism. Fasting in the Roman Catholic Church, whether it is before receiving the Eucharistic elements as a measure of spiritual purification or abstaining from meat and not eating between meals on Fridays as a practice of penitence during the liturgical season of Lent prior to Easter, is a ritualized restriction or avoidance of food for religious purposes. By fasting, the Catholic hopes to bring herself or himself closer to God through self-sacrifice. In the Jewish tradition, fasting is also a spiritual exercise and a means of reparation. Jewish fasting is undertaken in particular on holy days like Yom Kippur (the Jewish Day of Atonement) as an expression of faith. In both Judaism and Christianity, ritual fasting is only required of those who are physically healthy enough to not eat for extended periods of time. Traditionally, rules for fasting are less severe for children, pregnant women, the ill, and the elderly, although these individuals are encouraged to participate in the fasting ritual to the extent in which they are able.

Ritual fasting is one of the five pillars of Islam and is practiced during the Muslim holy month of Ramadan, which commemorates the time in which the Qur'an was revealed to be the Muslims' Holy Scripture. Adherents fast from dawn to dusk each day for the entire month as an exercise in self-purification. Fasting is also part of the ritual lives of religious practitioners in eastern traditions. While extreme fasting is sometimes assumed by *sadhus*, or Hindu holy men, Buddhist monastics take a different approach. In the Buddhist tradition, it is believed that the historical Buddha, Siddhartha Gautama, in the sixth-century B.C.E. took up a life of grueling asceticism in order to become enlightened. In the process, he discovered a fundamental doctrine of Buddhism, the "middle path" or "middle way," in which a life of overindulgence or a life of excessive asceticism is not conducive to achieving enlightenment. Rather, the Buddha taught that it was necessary to live somewhere in between. This "middle path" applies to ritual food practices in Buddhism. Ascetics in the tradition are often given their food by the laity (with the laity gaining merit for feeding the monks) and, according to the *Vinaya*, or rules for Buddhist monastic life, vow to only eat before midday each day and to fast the rest of the time. They eat only what is necessary to be healthy and to survive.

Summary

Ritual food practices are often social and cultural manifestations of spiritual belief and adherence. The three primary categories in which these ritual practices can be consigned are (1) sacramental or sacrificial food practices (like the Christian Eucharistic meal), (2) the avoidance of taboo or forbidden foods (like beef in Hinduism), and (3) fasting or abstaining from food as a form of spiritual reflection and atonement (like Muslims during the holy month of Ramadan). From early studies of ritual food practices a century ago to scholarship of the present day, anthropologists and sociologists have worked to reveal the underlying religious, ethical, and moral implications of ritualized food practices in different cultures. Regardless of tradition, ritual dietary practices can serve as a means for cross-cultural study, as food and eating are significant to all people across time.

Cross-References

- ▶ Christianity and Food
- ▶ Ethnicity, Ethnic Identity, and Food
- ▶ Food Preparation, Cooking, and Ritual in Judaism
- ▶ Hinduism and Food
- ▶ Islam and Food
- ▶ Jainism and Food

References

Bynum, C. W. (1988). *Holy feast, holy fast: The religious significance of food to medieval women*. Berkeley: University of California Press.

Douglas, M. (1966). *Purity and danger: An analysis of concepts of pollution and taboo*. London: Routledge.

Durkheim, É. (1995). *The elementary forms of religious life* (trans: Fields, K.). New York: Free Press.
Eliade, M. (1987). *The sacred and the profane: The nature of religion* (trans: Trask, W. R.). New York: Harcourt
Feeley-Harnik, G. (1995). Religion and food: An anthropological perspective. *Journal of the American Academy of Religion, 63*, 565–582.
Freud, S. (1946). *Totem and taboo*. New York: Vintage Books.
Khare, R. S. (Ed.). (1992). *The eternal food: Gastronomic ideas and experiences of Hindus and Buddhists*. Albany: SUNY Press.
Morris, B. (2006). *Religion and anthropology: A critical introduction*. New York: Cambridge University Press.
Roof, W. C. (2000). Blood in the barbeque? Food and faith. In E. M. Mazur & K. McCarthy (Eds.), *God in the details: American religion in popular culture* (pp. 109–122). New York: Routledge.
The Bhagavad Gita: Krishna's council in times of war (trans: Stoler Miller, B.). (1986). New York: Bantam Books.
The Laws of Manu (trans: Doniger, W., & Smith, B. K.). (1991). New York: Penguin Books.

Food Safety

Paul B. Thompson
Department of Philosophy, Michigan State University, East Lansing, MI, USA

Synonyms

Food regulation; Food risks; Health; Responsibility and liability; Risk assessment; Toxicology

Introduction

The term "food safety" has come to be associated with a variety of technical and regulatory mechanisms designed to minimize the risk of morbidity and mortality associated with human consumption of food. The ethics of food safety comprises philosophical questions that arise in connection with conceptualization of risks tied to food consumption, the assignment of responsibility and liability for precautionary measures and for actualized harms, and interpretive ambiguity that occurs in the performance of regulatory standards and precautionary measures, including enforcement. More broadly, the emergence of food safety as a regulatory and conceptual paradigm is typical of the social, political, and cultural themes that define late capitalism and globalization. In this connection, contestation over the safety of food has become an element in broader forms of resistance to power relations that exist within the contemporary food system. Following a brief overview of emerging legal regimes, each of these four domains for examining the ethics of food safety is discussed below.

Food Safety and Regulation

Regulation of food processing and handling on grounds of safety dates back to the last decades of the nineteenth century. Legal codes for food safety emerged in part as a response to industrialized processing and food retailing: long-distance shipment of meats and grains, canning, chemical preservatives, the creation of branded foods, and the grocery industry. In each case, technology created new opportunity of adulteration of foods – an age-old problem that had previously been addressed under the legal regime of merchantability and caveat emptor. Louis Pasteur's work on microbial contamination and the development of technical means to control it reinforced a conception of food safety associated with the notion of purity. At the same time, chemists such as Frederick Schlink began to accumulate data on risks of preservatives and additives intended to increase the sensory appeal of processed foods. The net result has been the creation of national and local agencies charged with overseeing various aspects of the food system for the purpose of protecting public health (Vileisis 2008).

Food safety regimes are in fact a piecemeal aggregation of laws and government agencies, mostly created in response to episodes of public outrage. The US Food and Drug Administration was famously created in the wake of Upton Sinclair's colorful (but sickening) portrayal of abuse in the meatpacking industry. Inspection of imported foods often continues to be done by

agencies originally formed to regulate commerce and protect local farmers. Legal oversight extended to farming practice in the wake of Rachel Carson's *Silent Spring*, exposing the risks of chemical pesticides, and has grown to include rules requiring whole food-chain traceability of foods in the wake of mad cow disease and other incidents of contamination in Europe. The Codex Alimentarius is an agency within the Food and Agriculture Organization (FAO) of the United Nations that was initially formed to facilitate international coordination of food safety standards and which now operates in conjunction with the World Trade Organization. Meanwhile, inspection of restaurants or food service facilities remains a responsibility of public health authorities that may operate at a regional or municipal level (Millstone and Van Zwanenberg 2002).

Food Safety Risks

There is an obvious sense in which knowledge of whether foods can be consumed with inordinate risk of injury or death must be very nearly as old as civilization itself. Even in prehistory, humans must have had an implicit recognition of toxic potential. It may have been codified in terms of simple edibility and may have been reinforced by cultural or religious dietary norms. Some have speculated that kosher dietary laws may have evolved in part as a response to food safety risks (Regenstein and Regenstein 2001). The idea of edibility took further shape as an ideal of purity. Pasteur's development of the germ theory bolstered the idea that food safety could be achieved through limiting contamination by microbes. Works such as *100,000,000 Guinea Pigs* and *Silent Spring* further reinforced this way of understanding food safety. The idea that purity and naturalness are bound tightly to safety continues to influence many nonscientists' views on food safety (Thompson 2007).

Within toxicology, risk is conceptualized as function of *hazard* and *exposure*. A hazard is defined by the mechanism that induces harm to an organism. In the case of food safety, for example, it is important to distinguish between the acute toxicity that would be associated with caustic substances, poisons, and some allergens that trigger rapid and extreme inflammatory responses and those that occur either through multiplication of organisms (such as *Salmonella* or *E. coli* O157:H7) or through accumulation in cells. Carcinogens and mutagens cause harm by disrupting ordinary cellular functions, and both endocrine disruptors and prions are believed to cause harm because their molecular shape triggers disease processes in the body. Toxins in this last class may not exhibit harmful impacts for years.

Exposure concerns the probability or likelihood that hazards will actually materialize. Exposure typically varies according to the amount or degree of physical contact with a toxin (e.g., the dose), but one key area of uncertainty in food safety risk assessment concerns the question of whether a given toxin exhibits a threshold or minimum dose for inducing any harmful effects. Following influential work by Bruce Ames, the view on some mutagens is that purity – or lack of contamination and physical contact – may not be an accurate way to conceptualize risk or to formulate strategic responses to some food risks. Carcinogens – the target of the FDA's Delaney Clause (see Vileisis 2008) – may occur naturally and become disease agents within a matrix that also contains anti-mutagens capable of offsetting the cellular mechanisms that cause cancer (Ames 1983). Hormesis – a process by which some chemicals that are essential nutrients at low levels become toxic at higher levels – also introduces uncertainty into the quantification of exposures. Such uncertainties in food safety can be exploited by industry-supported risk assessments (Elliott 2011).

Quantified food safety risks are amenable to different ethically based management strategies. The dominant philosophy of industrialized food safety agencies adapts utilitarian cost-benefit reasoning by starting with quantified risk assessments as a measure of food safety value. A food safety decision is viewed as not ethically justified unless based on scientifically measured risk (e.g., a quantitative estimate of hazard and exposure). However, food safety agencies do not generally

calculate a trade-off between risk and benefit (though there are exceptions: the US Environmental Protection Agency does take benefits to farmers into consideration when evaluating pesticides). Instead, they adopt the de minimis rule: food-borne risks should be as low as is practically feasible. Emphasis on practical feasibility has led to the widespread use of Hazard Analysis and Critical Control Points (HACCP) as a risk management strategy within the food industry (Gaworski et al. 2006).

The science-based de minimis risk approach to food safety has been faulted for relying too heavily on expert judgment. In contrast, an extension of the informed consent principle used to manage risks to the subjects of medical research would call for measures that place ordinary consumers into a better position to apply their own values. Such an approach might rely on labels or values-based standards to provide opportunities for individuals to avoid foods based on whatever considerations they believe to be important. Judgments about safety might here be treated on a par with religious values or political values that relate to food choice (Thompson 2002). Alternatively, some authors have argued for more involvement of nonscientists in risk assessment or in the policy development phase of food safety regulation (Millstone 2009). In a similar vein, social impacts might be incorporated into food safety assessments along with more traditional toxicological hazards (Dreyer et al. 2010).

Safety of genetically engineered crops is the most widely discussed risk issue in the ethics of food safety literature. The debate over "substantial equivalence" is a key point of contestation. Although not strictly a principle of risk management, the doctrine of substantial equivalence was developed as a basis for deciding when genetically engineered crops required a fully developed risk analysis on food safety grounds. The terms and requirements of substantial equivalence are themselves debated in the literature, but the basic idea is that this decision should be based on whether the active protein created by a newly introduced transgene either has appeared previously in foods that are Generally Recognized As Safe (GRAS) or has itself been found safe in previous tests. Advocates have claimed that this test is sufficiently powerful to insure that genetically modified crops are at least as safe as the most genetically similar non-modified variety (Kearns and Mayers 1999). Critics have claimed that reliance on substantial equivalence will fail to detect inadvertent creation of novel proteins as a result of the process of genetic modification (Millstone et al. 1999).

Many who have opposed the introduction of genetically modified organisms (GMOs) have advanced "the precautionary principle" as the basis of their argument. Developed initially as a principle for the management of environmental risks, the precautionary principle states that lack of full scientific certainty should not be used as a basis for taking precautionary action. In the context of food safety, precautionary reasoning might provide a basis for taking steps to remove or control potential hazards well before the science has addressed some of the uncertainties discussed above. In the case of mad cow disease, for example, a precautionary stance might have provided a basis for steps to regulate beef well before the United Kingdom's food safety agency decided to do so (Millstone and van Zwanenberg 2001). Applied to GMOs, the precautionary stance justifies a suite of policy responses taken in Europe (Levidow 2001). Gary Comstock has provided an extensive ethics-based discussion of the GMO issue and the precautionary principle in which he concludes that the most obvious ways to apply precaution lead to logical inconsistencies (Comstock 2010).

Responsibility and Liability

There are numerous points in the food supply chain that extends from the primary producer to the final consumer where responsibility for food safety might be distributed. A review of the food safety literature in 2003 showed that many of the most damaging microbial contaminants to food are most effectively controlled during the final stages of food preparation and consumption (Redmond and Griffith 2003). Such findings support wide-ranging educational efforts on

appropriate storage and handling procedures and on the role of high cooking temperatures in destroying microorganisms that are the source of many food safety hazards. They can also be used to support the claim that food preparers bear the brunt of ethical responsibility for assuring safe food and should shoulder the liability when injuries arise. Alternatively, the rise of the regulatory regimes for food safety described above can be taken to imply that the primary responsibility for food safety resides with the state. In either case, the distribution of ethical responsibility might be portrayed as a way for industry to shift the responsibility for safe food away from its own shoulders and to reposition it on other actors in the food system (see Nestle 2002). At the same time, supermarkets and chain restaurants have also been in the process of developing their private standards for assuring the safety of products in their retail outlets. In part as a result of inaction by state agencies and also as response to the decline in consumers' confidence in science-based regulatory agencies, the private sector has become more involved in the development of technology and enforcement procedures (Hatanaka et al. 2005; Havinga 2006).

Food safety assurance is becoming a profession and food safety professionals are increasingly being placed in positions of internal oversight within food industry firms. Though versed in scientific principles, these food safety professionals must combine a practical understanding of inspection and HACCP procedures with skills of personnel management. They are often at the key juncture where pressures for filling orders and making profits may challenge the performance of sanitary procedures that are crucial for food safety. These individuals occupy a frontline position of responsibility for the protection of public health but may have little status within their company. There is thus a new and as yet not well-studied area of professional ethics associated with this group of employees within the food industry (Mather and McNiel 2006). In this context, ethical responsibility will encompass questions of corruption, fraud, and whistleblowing that have yet to be studied in the scholarly literature.

Similar issues of professional ethics apply to regulators and inspectors in the public sector. The 2006 contamination of powdered milk in China provides a case study. Melamine is a chemical that has been shown to exhibit toxic potential at sufficiently high doses. During a period of rapid growth in the Chinese dairy industry, producers of powdered milk adulterated the product with melamine in an effort to mask quality deficiencies and to frustrate tests that would have revealed low protein content and general poor quality. The practice was accompanied by bribery of inspectors and high-level officials in the Chinese food safety agency (Pei et al. 2011). Zenobia Chan and Wing-Fu Lai have argued that the melamine incident must be interpreted as an issue of ethics. The failure goes beyond one of law and policy in their view and implies the need for a wider appreciation that achieving food safety and protecting health are responsibilities grounded in ethical norms (Chan and Lai 2009).

Interpretive Ambiguity

While the Chinese melamine contamination case is an example of unambiguously unethical conduct on the part of many actors, the implementation of food safety policy and procedure is in fact fraught with numerous opportunities for differences in interpretation and work style. These ambiguities have practical significance in posing contrasting and sometimes incompatible forms of practice. They can also turn upon points of philosophical and ethical significance. Although national food safety regimes display significant overlap in the description of their elements, structure and policy, the implementation of this framework differs significantly from one nation to another. Some countries are far more responsive to input from nonexperts, while in other countries, any influence from sources other than the scientific community is viewed as political interference in an objective, scientific process (Lodge 2011). Food industry firms that introduce new food safety mechanisms may expect that these procedures will protect them from both legal liability and public censure, yet the plethora of

styles and practices that exist for pursuing food safety across the food industry virtually insures that corporations will be viewed as irresponsible actors and as potential threats to public safety (Maloni and Brown 2006).

Even fairly mundane food safety procedures can exhibit philosophically significant patterns of indistinctness and opportunities for ethically based analysis. Although cases such as the Chinese melamine contamination incident suggest that ethics calls for strict implementation of procedures that have no place for compromise, in fact, almost all implementation procedures require judgment. Employee compliance with crucial food safety rules may depend upon managerial supervision that emphasizes education and improvement over compliance. Food safety inspectors display distinct styles in deciding when to "write up" technical violations or to use them as opportunities to help managers or small companies improve their procedures. Food safety, in short, can be envisioned as an opportunity for cooperative collaboration between overseers and practitioners as readily as it can be viewed as an enforcement activity focused on strict compliance. This ambiguity becomes especially significant when the firms in question have relatively little economic power or may represent efforts by individuals who are typically marginalized by larger corporate actors in the food system. While an ethic of food safety requires that public health must not be endangered, there are nonetheless opportunities for improving safety and health by helping private sector actors achieve their business-oriented goals (Buckley 2013).

Food Safety as Culture

The conceptualization of food safety provides an instance of more general social phenomena that have been described as "risk society" by Ulrich Beck and as "discipline and power" by Michel Foucault. Like practices associated with health and sexuality, food has been a target for the emergence of scientific disciplines that regulate or "discipline" a host of individual and social practices. In building disciplinary practice around replicable results and statistical significance, these sciences normalize social practice in a manner that, while perhaps socially beneficial and justifiable, nevertheless excludes and marginalizes activities, traditions, and processes of food production, preparation, and consumption that have value to some individuals and groups. In this manner, scientific disciplines for defining and implementing food safety become part of a nexus of power relationships in which some individuals and groups inevitably find themselves caught up. In this respect, food safety is typical of key developments in other domains of society that have been studied by Foucault (Zwart 2000).

Beck's work has emphasized how the expansion of science into virtually all quarters of life and the growth in scientific literacy and scientific thinking has actually promoted a level of sophistication and skepticism that has undermined the public's confidence in science-based institutions (Beck 1992). Clearly, food safety stands at the forefront of such "reflexive modernization," as Beck calls it, although the science of food safety has expanded markedly over the last century and public governance institutions have been built upon it. The idea that trust, specifically either in science or in food safety regulatory institutions, is eroding is a frequent theme in recent food safety research (see Almas 1999; Knight and Warland 2005). Paul Thompson has argued that the themes of cultural transformation and risk can be addressed from an ethics perspective utilizing the work of Annette Baier. Here it becomes crucial to tease apart the difference between being trustworthy and being trusted and the question of whether the social relationship is even amenable to trust, in the first place. The types of disciplinary power relationships studied by Foucault are more fruitfully understood through an ethical analysis of resistance, rather than a failure of trust (Thompson 2007).

Summary

Although relatively few philosophers have undertaken systematic studies of ethics and food

safety, the topics surveyed above demonstrate that food safety is ripe for more nuanced philosophical scholarship, as well as more development of extended case studies. The field of food safety professional ethics is an especially important example of an area where new studies are needed. At the same time, the technical complexity of food safety science and toxicology suggests that some of the most useful philosophical work will come out of the philosophy of science (see, e.g., Elliott 2011). While social scientists are developing a strong literature in food safety policy, the creation of a strong literature reflecting the insights and conceptual tools of philosophical ethics largely awaits future developments.

Cross-References

- ▶ Food Labeling
- ▶ Food Legislation and Regulation: EU, UN, WTO and Private Regulation
- ▶ Food Risk Communication
- ▶ Food Risks
- ▶ GM Food, Nutrition, Safety, and Health

References

Almas, R. (1999). Food trust, ethics and safety in risk society. *Sociological Research Online, 4*(3). http://www.socresonline.org.uk/4/3/almas.html. Accessed 4 Feb 2014

Ames, B. N. (1983). Dietary carcinogens and anticarcinogens. *Science, 221*, 1256–1264.

Beck, U. (1992). *Risk society: Towards a new modernity*. London: Sage.

Buckley, J. A. (2013). Artisan food processing and food safety regulation in Michigan: An actor-network study of interactions, interests, and fluid boundaries. Ph.D. Dissertation, Department of Community Sustainability, Michigan State University, East Lansing, MI.

Chan, Z. C. Y., & Lai, W.-F. (2009). Revisiting the melamine contamination event in China: Implications for ethics in food technology. *Trends in Food Science and Technology, 20*, 366–373.

Comstock, G. (2010). Ethics and genetically modified foods. In G. Franz-Theo, H. W. Ingensiep, & M. Meinhardt (Eds.), *Food ethics* (pp. 49–66). New York: Springer.

Dreyer, M., Renn, O., Cope, S., & Frewer, L. (2010). Including social impact assessment in food safety governance. *Food Control, 21*, 1620–1628.

Elliott, K. C. (2011). *Is a little pollution good for you?: Incorporating societal values in environmental research*. New York: Oxford University Press.

Gaworski, M., Kaiser, M., & Lien, M. E. (2006). Ethics and transformation of Polish food chain. In *Ethics and the politics of food: Preprints of the 6th congress of the European society for agricultural and food ethics: EurSAFE 2006 Oslo, Norway, June 22–24, 2006* (pp. 270–273). Wageningen: Wageningen Academic Publishers.

Hatanaka, M., Bain, C., & Busch, L. (2005). Third-party certification in the global agrifood system. *Food Policy, 30*, 354–369.

Havinga, T. (2006). Private regulation of food safety by supermarkets. *Law & Policy, 28*, 515–533.

Kearns, P., & Mayers, P. (1999). Substantial equivalence is a useful tool. *Nature, 401*, 640–640.

Knight, A. J., & Warland, R. (2005). Determinants of food safety risks: A multi-disciplinary approach*. *Rural Sociology, 70*, 253–275.

Levidow, L. (2001). Precautionary uncertainty: Regulating GM crops in Europe. *Social Studies of Science, 31*, 842–874.

Lodge, M. (2011). Risk, regulation and crisis: Comparing national responses in food safety regulation. *Journal of Public Policy, 31*(1), 25–50.

Maloni, M. J., & Brown, M. E. (2006). Corporate social responsibility in the supply chain: An application in the food industry. *Journal of Business Ethics, 68*, 35–52.

Mather, E. C., & McNiel, P. (2006). The Online Professional Master of Science in Food Safety Degree Program at Michigan State University: An innovative graduate education in food safety. *Journal of Veterinary Medical Education, 33*, 272–278.

Millstone, E. (2009). Science, risk and governance: Radical rhetorics and the realities of reform in food safety governance. *Research Policy, 38*, 624–636.

Millstone, E., & van Zwanenberg, P. (2001). Politics of expert advice: Lessons from the early history of the BSE saga. *Science and Public Policy, 28*, 99–112.

Millstone, E., & Van Zwanenberg, P. (2002). The evolution of food safety policy–*Making* institutions in the UK, EU and Codex Alimentarius. *Social Policy & Administration, 36*, 593–609.

Millstone, E., Brunner, E., & Mayer, S. (1999). Beyond 'substantial equivalence'. *Nature, 401*(6753), 525–526.

Nestle, M. (2002) *Food politics: How the food industry influences nutrition and health*. Berkeley: University of California Press.

Pei, X., Tandon, A., Alldrick, A., Giori, L., Huang, W., & Yang, R. (2011). The China melamine milk scandal and its implications for food safety regulation. *Food Policy, 36*, 412–420.

Redmond, E. C., & Griffith, C. J. (2003). Consumer food handling in the home: A review of food safety studies. *Journal of Food Protection, 66*, 130–161.

Regenstein, J. M., & Regenstein, C. E. (2001). A brief introduction to the Kosher Laws and possible

implications for food safety. In C. Wilson & S. Droby (Eds.), *Microbial food contamination* (pp. 135–147). Boca Raton: CRC Press.
Thompson, P. B. (2002). Why food biotechnology needs an opt out, In B. Bailey and M. Lappé (Eds.), *Engineering the farm: Ethical and social aspects of agricultural biotechnology* (pp. 27–44). Washington, DC: Island Press.
Thompson, P. B. (2007). *Food biotechnology in ethical perspective* (2nd ed.). Dordrecht: Springer.
Vileisis, A. (2008). *Kitchen literacy: How we lost knowledge of where food comes from and why we need to get it back*. Washington, DC: Island Press.
Zwart, H. (2000). A short history of food ethics. *Journal of Agricultural and Environmental Ethics, 12*, 113–126.

Further Reading

Burkhardt, J. (2011). The ethics of food safety in the 21st century: Who keeps the public good? In D. Kaplan (Ed.), *The philosophy of food* (pp. 140–160). Berkeley: University of California Press.
Early, R. (2002). Food ethics: A decision making tool for the food industry? *International Journal of Food Science and Technology, 37*, 339–349.
Millstone, E. (1996). Food safety: The ethical dimensions. In B. Mepham (Ed.), *Food ethics*. London: Routledge.
Yiannas, F. (2009). *Food safety culture: Creating a behavior-based food safety system*. Dordrecht: Springer.

Food Security

Irene Hadiprayitno
Human Rights and the Right to Food, Leiden University, Leiden, Netherlands

Synonyms

Food security; The right to food

Introduction

Food security, despite its simple label, is an immensely complex concept, which has been defined in different but similar ways. Some estimate that approximately 200 definitions and 450 indicators of food security exist (Smith et al. 1992). Currently, the common definition applies: food security is a situation that "exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO 1996).

Food insecurity may occur because of the lack of availability of food, insufficient purchasing power, and inability to produce food and feed themselves at the household level. Additionally, inadequate care, especially for women and children, insufficient health service, and unhealthy environment that are closely connected to inadequate education and other societal factors are also the underlying determinants for food and nutrition status. Food insecurity may be chronic, seasonal, or transitory.

The Evolutionary History of Food Security

Food Security Before the 1990s

As a concept, food security has evolved since it was first developed in the 1970s. Then, the focus was on increasing availability and stability of world food supply to meet the growing demand. In 1981, the Noble Laureate, Amartya Sen, with his groundbreaking thesis on capability changed the focus from availability to food to access to food. Based on the series of studies in India, he argued that to say something about food supply is to say more than just commodity only, but about relationships between persons and that community (Sen 1981). This means that individual food security was primarily dependent on their possibility to access food, labor-based, trade-based, transfer-based, or other entitlement relationships. A shift was therefore made from national level to household/individual level (Maxwell 1996).

The food security agenda in the 1990s was also further broadened by health and nutrition research, which highlighted the fact that reciprocal and synergetic linkages exist between food intake and nutritional well-being (De Rose et al. 1998). The development allowed nonfood causes of food security to be looked into, such as inadequate care – particularly children who need not only sufficient healthy food but also

somebody to feed them. Since then, food security is connected with wider goals, such as adequate nutrition or nutrition security, adequate care, and adequate prevention and control diseases. The changes in defining the substantive meaning of food security are to a certain extent reflected in the transformation regarding the ways in which international community addresses the issue of feeding the world.

The World Food Summit's Approach on Food Security

Hitherto there have been three World Food Summits organized by Food and Agriculture Organization (FAO). In the World Food Summit, 13–17 November 1996, Member States adopted the Rome Declaration on World Food Security. The declaration mentions the new formula for defining food security at global, national, household, and individual levels. It is asserted that "food security is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life." This definition is the current working prescription applied on food security.

The Rome Declaration was completed with a Plan of Action that aims to lay the foundations for diverse paths to a common objective of food security. The Plan of Action contains seven commitment areas with a total of 27 objectives and actions relating to:

(i) Ensuring and enabling political, social, and economic environment most conducive to achieving food security for all
(ii) Implementing policies aimed at eradicating poverty and inequality and improving physical and economic access to food by all
(iii) Pursuing participatory and sustainable policies and practices in high and low potential areas
(iv) Striving to ensure that trade policies are conducive to fostering food security for all through a fair market-oriented world trade system
(v) Endeavoring to prevent and prepare for natural and human-made disasters and meet transitory and emergency food requirements in ways that encourage recovery, rehabilitation, development, and a capacity to satisfy future needs
(vi) Promoting optimal allocation and use of public and private investments to foster human resources, sustainable agricultural systems, and rural development in high and low potential areas
(vii) Implementing, monitoring, and following up the Plan of Action at all levels in cooperation with the international community

By the end of the World Summit, two important commitments were agreed upon. The first is to halve the number of undernourished people no later than 2015. The second is a commitment "to clarify the content of the right to adequate food and the fundamental right of everyone to be free from hunger." As to the latter, a concrete response came from the United Nations, which in the same year adopted the General Comment No. 12 on the Right to Food. As to the first commitment, the ambition was later reaffirmed in the Millennium Declaration adopted by the UN General Assembly in 2000.

Additionally, the Summit has created further discussions on international trade and food security. The recommendation for establishing a Working Group for Trade and Food security was adopted at the 1996 Singapore WTO Ministerial Conference.

In 2001, once again upon invitation of FAO, the second World Food Summit was organized. The Summit resulted, among others, in giving the mandate to FAO to install the Intergovernmental Working Group (IGWG) that was tasked to support the Member States' efforts to achieve the progressive realization of the right to adequate food in the context of national food security. After series of meetings in the period March 2003–September 2004, the Working Group delivered the final version of "the Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security." The guidelines give practical directions on 19 topics, based upon three underlying dimensions of the right to food: adequacy, availability, and accessibility.

The third World Food Summit was held in November 2009: the World Summit on Food

Security. In the final declaration, the goal to halve the number of people who suffer from hunger or malnutrition by 2015, which was also set during the first World Food Summit, was reaffirmed, and the declaration contained commitments and actions that would lead to food security.

Indicators for Food Security

FAO uses the indicators derived from the definition of food security itself, which include several specific measurements derived from the concepts of availability and access. Utilization is added to clarify the concept of access, by referring to households' use of the food to which they have access to, and individuals' ability to absorb nutrients – the conversion efficiency of food by the body. From the normative content of food security, some scholars propose additional indicators, adequacy and sustainability (Oshoug et al. 1994). Adequacy refers to nutritional adequacy, food safety and quality, and cultural acceptability. Sustainability entails environmental sustainability and social sustainability.

The most common indicators of food security revolve around measures of food consumption (Bouis 1993). A good measure requires data collected at the household level including the household size, age, and sex of individuals, as well as physical size and activity levels.

Another indicator is the use of coping strategies, which suggest that coping behaviors formed a set of patterns that could be monitored in famine situations (Frankenberger 1992). Coping strategies indicators can be decomposed to analyze separately those behaviors that increase the short-term availability of food and rationing behaviors aimed at dealing with outright short-term insufficiency of food (Maxwell et al. 1999).

Advocating the dietary diversity as food security indicator is not something new. In this approach, it is argued that households with low levels of dietary diversity are likely to have low level of consumption per person and low caloric availability. As such, dietary diversity can play a role in identifying the food insecure, monitoring changes in circumstances, and assessing impacts of interventions (Hoddinott and Yohanness 2002).

The Right to Food

What Is the Right to Food?

The human right to food is an older concept than food security. It received international recognition since 1948, with the adoption of the Universal Declaration of Human Rights. Article 25(1) stipulates that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including *food*, clothing, housing, and medical care and necessary social service." The International Covenant on Economic, Social and Cultural Rights, adopted in 1966 and entered into force in 1976, recognizes in Article 11 "the right of everyone to an adequate *food*, clothing and housing."

This recognition has repeatedly been incorporated in numerous normative instruments in international law, some of which are binding on states which have ratified them or can be applied as customary law.

Substantive and Procedural Contents of the Right to Food

On the right to food, Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) stipulates:

1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent.
2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international co-operation, the measures, including specific programmes, which are needed:
   (a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by

developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;

(b) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.

The General Comment defines the term "adequate food" more precisely and points out the different types of obligations for Member States resulting from the right to food. In Paragraph 8 of the General Comment No. 12, the Committee on Economic, Social and Cultural Rights has concluded that the "core content" of the right to adequate food implies ensuring:

> The availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture; The accessibility of such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights.

Like any other human rights, the state is the duty-bearer of the right to food. There are two ways on how state parties should approach their obligation. First is that state parties must act *immediately* for instance in relation to nondiscriminatory measures and to mitigate and alleviate hunger in emergency times. Second is that state parties to the ICESCR are required to take steps to *progressively* achieve the right to adequate food, also known as the principle of progressive realization. The principle compels the state parties to move 'as expeditiously as possible' toward this goal. Article 2(1) of the ICESCR further asserts the state parties to:

> . . .take steps, individually and through international assistance and co-operation, especially economic and technical, the maximum of its available resources, with a view to achieving progressively the full realisation of the rights recognised in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.

By ratifying the ICESCR and other international treaties recognizing the right to food, states agree to be bound to three categories of state obligation: the obligation to respect, protect, and fulfil. The state obligation *to respect* requires states not to take any measures that would result in preventing individuals from having access to adequate food and to feed themselves. Indeed, the right to adequate food is primarily to be realized by right holders themselves through their economic and other activities. The state obligation *to protect* implies that states take measures to ensure that third parties (individuals, armed groups, enterprises, etc.) do not deprive individuals of access to adequate food. Under this obligation, the state could be held liable for violations of the right to adequate food committed by non-state actors. The state obligation *to fulfil* demands proactive measures from the state to facilitate and provide access to food. For example, as a last resort, states must provide food whenever an individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal.

Current Implementation of the Right to Food

At the international level, the implementation and the current development of the right to food mostly rely on the work done by the Committee on Economic, Social and Cultural Rights and the Human Rights Council, which was before 2006 known as the Commission on Human Rights.

The Committee on Economic, Social and Cultural Rights, established in 1985, is responsible, among others, to monitor the implementation of economic, social, and cultural rights by receiving and assessing state reports. All ratifying states are obliged to submit regular report on adopted measures and progresses made in achieving the observance of the ICESCR rights, every 5 years. The Committee examines each reports and addresses its concerns and recommendation in the form of concluding observation. The Human Rights Council has mandated several working groups and expert individuals, referred to as "Special Rapporteur on the Right to Food," to investigate current challenges and further provide recommendations to meet such challenges. To meet the mandates, the Special Rapporteur usually conducts country visits and performs studies on specific topics, such as agroecology, land rights, seeds, nutrition, or value chains.

In several countries, the right to food is recognized in the national constitutions. According to a FAO right to food study in 2011, the right to food is recognized explicitly in the constitution of 23 countries. In addition, the right is recognized implicitly, for instance, by means of a broader right or by a directive principle, in the constitutions of 33 countries. Due to direct effect of international provisions, the right to food has effect in at least another 51 countries. Overall, the right to food is thus legally applicable in 107 countries (Knuth and Vidar 2011).

The current status of development of economic, social, and cultural rights in the United Nations is the establishment of an optional protocol to the ICESCR in 2008. Once entered into force, this protocol will empower the Committee on Economic, Social and Cultural Rights to also receive individual communications and interstate communications. At the time of writing, the protocol has been ratified by five states, which are half of its ten-ratification requirement.

The international profile of the right to food allows its realization to move beyond the national borders (Kent 2005).

Between the Right to Food and Food Security

There are some similarities between the concept of the right to food and food security, noting that both emphasize a situation, at the individual level, pertaining to food availability, accessibility, safety, and cultural acceptability.

It is observed that states recognized the concept of the right to food in both international documents pertaining to the food security. In Paragraph 1 of the Rome Declaration 1996, states "reaffirm the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger." As such it was again reaffirmed in 2002, at the World Food Summit: Five Years Later, where states also agreed "to develop a set of guidelines to support Member States' efforts to achieve the progressive realization of the right to adequate food in the context of national food security."

Regardless of such a concerted and long endeavor at international level, the meaning of food security in connection to the right to food is ambiguous. In an attempt to clarify the connection between the two requires one to compare the distinctive attribute of their objectives and procedures. With regard to the objectives, the motivation for achieving food security can be based on a number of grounds, ranging from moral grounds to more market-oriented motivations. Human rights, on the other hand, are exclusively based on the very idea of human dignity and autonomy which entails a priori values. Thus, from a human rights perspective, all other consideration would be secondary in nature. With regard to the subject of procedure, it looks at the nature of food security as part of international and/or national policy, rather than the legal concept as the right to food is (Alston and Tomasevski 1984). Such would imply recognizing the element of international treaty and customary international law of the right to food, with relatively clear and binding normative contents. Furthermore, the acknowledgement and internationally acceptance of the right to food, which are demonstrated by state ratifications, may conclude that as a human right, the right to food has a precise content. It can be violated and the violation can be the subject of judicial or quasi-judicial remedies (Mechlem 2004).

In conclusion, the concepts of food security and the right to food are closely linked to each other. It is in the procedural circumstances of the right to food that food security can be realized. Relying on the application of the doctrine of state obligation to respect, protect, and fulfil, one could expect a progressive realization of the right to food at the individual level. Furthermore, as the concepts of both food security and the right to food become more accepted and used interchangeably, realizing the right to food has been argued to include the application of the rights-based approach to food security (Barth-Eide 2005). This means applying good practices inspired by the human rights logic, namely, participation, accountability, nondiscrimination,

transparency, and empowerment into food security programs and policies. However, the right to food does not claim to eradicate hunger or to achieve food security faster, or to reduce the importance of experiences gained from food security policies. Indeed, considering the closeness of both concepts and the considerably similar international acceptance thereof, attempts to realize the right to food need to be integrated with existing experiences with food security, with additional new dimensions that pose some arbitrary limits to them.

Contemporary Challenges on Food Security

Scholars and analysts have generally defined three situations of food insecurity: chronic or long-term food insecurity, seasonal, and transitory. The first refers to a situation where people are unable to meet their minimum food requirement for sustained amount of time. The second and the third imply a temporary food insecure situation as a result of sudden drop in the ability to produce or acquire food, which can result from natural disasters of harvest failures.

Natural disasters such as floods, droughts, earthquakes, and other weather-related phenomena can affect food security, destroying, for example, physical and economic capitals of food stocks and harvests. The effects are particularly adverse for the poor. This is primarily the result of three factors. Firstly, most low-income countries are located in regions that happen to be at far higher risk of natural hazards. Secondly, within countries the poor are normally affected much more than others due to economic and social factors, including race, class, gender, and ethnicity. The majority of the poor cannot afford living in locations with lower risks, they live in poorly built houses, and women and children are often hit the hardest, bearing the brunt of food and nutrition security impacts. Thirdly, there may already initial discriminating practices towards the poor regarding the allocation of the targeting compensation for natural hazards (de Haen and Hemrich 2007).

As the impact of such events to food security can be long-lasting, establishing measures to reduce natural disaster risk and build resilience is being advocated. The aim is to develop the ability of a system, community, or society to adapt to shocks in order to maintain an acceptable level of functioning. Crucial in such endeavor is to adopt measures that aim not only to eradicate the immediate catastrophic impacts but also to integrate those efforts into food security strategies as part of overall poverty reduction (Skoufias 2003).

Indeed, while food security can result from unfortunate events, as a social phenomenon, its root of causes is often structural, manifested in persistent status of vulnerability. This implies investigating events as well as intrinsic characteristics of exposed groups of people to determine who will be affected and to what degree (Dilley and Boudreau 2001). Vulnerability approach emerged from the realization that the underlying vulnerability status of a population is a more important determinant of the extent and duration of a food security crisis, and thus relevant for adopting its solutions, than the discrete natural hazards or sudden drop of food stocks that may trigger food security (Prowse 2003).

In addition to vulnerability framework, the Household Livelihood Security (HHLS) framework grew out of a food security perspective but is based on the observation that food is not the only basic need. A livelihood "comprises the capabilities, assets (resources, claims, and access) and activities required for a means of living; a livelihood that is sustainable can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation" (Frankenberger 2003). Livelihood security, then, refers to adequate and sustainable access to income and resources to meet basic needs. This means to include a wide range of issues, such as land tenure, sustainable agriculture, potable water, health facilities, educational opportunities, involvement in policymaking, and time for community participation. Livelihoods include a range of on-farm and off-farm activities that together provide a variety

of procurement strategies to make a living. Notably, the status of each individual and household's livelihoods is based on the household's endowments and its position in the legal, political, and social fabric of society (Baro and Deubel 2006).

Consequently, political and economic interventions on food security as well as humanitarian food aid may be not directly related to food itself. Power relations influencing the distribution of land, military insecurity, and political oppression impeding people to produce food are a case in point. Additionally, the increasing roles of private actors, as well as the relationship between state and market, is dominantly influencing the governance of food security policies at the national level (Hospes and Hadiprayitno 2010). Pollution affecting the safety of food and food production are another case in point. Against this framework, the future of food security is closely connected to the complexity of law and practice that govern the arrangements of food production, distribution, consumption, and sustainability, as well as accountable economic growth policies and active preparedness measures.

Summary

Several major shifts in food security studies and policies have occurred since the 1970s. First, the unit of analysis has moved from the global/national level to the local/household/individual level. Second, the scope of analysis has shifted from a "food availability" approach to an emphasis on the performance and sustainability of household access to livelihoods. Third, subjective perceptions of food security among local populations now complement objectively measurable indicators of food security.

International organizations, national governments, and nongovernmental organizations who are responsible and assuming the tasks to carry out the food security programs and policies in the world hold a wide variety of opinions and have developed a wide variety of frameworks for tackling the issue of food security. These frameworks are congruous with specific scientific approaches to food security and act as frameworks for orienting policies.

The parallel between food security and the right to food is particularly relevant as the concept of "adequate" food has been further elaborated along and beyond the lines quoted above on food security. Both concepts argue that on the one hand the availability at all times is relevant and on the other hand adequacy is understood to mean sufficient to satisfy dietary needs, free from adverse substances, and acceptable in a given culture. While food security offers its flexibility and adaptability into different measurable indicators and policy measures, the right to food advances the concerted effort of eradicating hunger as legal obligation, to which some limits and requirements apply to hold the duty-bearer, state accountable, and protect the entitlements of rightholder, the individual.

Current challenges pertaining to climate change; natural disaster; pollution; corruption; decreasing availability of land, water, and other resources; as well as the impact of food security to nutrition and health status particularly to vulnerable groups are analyzed and addressed using different approaches. Frameworks on vulnerability and household livelihood security are only few that have been advocated to provide solutions as well as to understand the complexity of persistent problem of food security.

Cross-References

- ▶ Extraterritorial Obligations of States and the Right to Food
- ▶ Food Security in Systemic Context
- ▶ Right to Food in International Law

References

Alston, P., & Tomasevski, K. (Eds.). (1984). *The right to food*. Dordrecht: Nijhoff.

Baro, M., & Deubel, T. F. (2006). Persistent hunger: Perspectives on vulnerability, famine, and food security in Sub-Saharan Africa. *Annual Review of Anthropology, 35*, 521–538.

Bouis, H. (1993). Food consumption surveys: How random are measurement errors? In J. von Braun & D. Puetz (Eds.), *Data needs for food policy in*

developing countries. Washington, DC: International Food Policy Research Institute.
De Haen, H., & Hemrich, G. (2007). The economics of natural disasters: Implications and challenges for food security. *Agricultural Economics, 37*, 31–45.
De Rose, L., Messer, E., & Millman, S. (1998). *Who's hungry? and how do we know?: Food shortage, poverty, and deprivation*. Tokyo: United Nations University Press.
Dilley, M., & Boudreau, T. E. (2001). Coming to terms with vulnerability: A critique of the food security definition. *Food Policy, 26*(3), 229–247.
International Covenant on Economic, Social and Cultural Rights, UNGA Resolution 2200A (XXI) of 16 Dec 1966.
Eide, W. B. (2005). From food security to the right of food. In W. B. Eide & U. Kracht (Eds.), *Food and human rights in development volume I. Legal and institutional dimensions and selected topics*. Antwerp: Intersentia.
Food and Agriculture Organization. (1996). Rome Declaration on Food Security and World Food Summit Plan of Action.
Frankenberger, T. (1992). Indicators and data collection methods for assessing household food security. In S. Maxwell & T. Frankenberger (Eds.), *Household food security: Concepts, indicators, measurements: A technical review*. New York/Rome: UNICEF and IFAD.
Frankenberger, T. (2003). *Managing risks, improving livelihoods: Program guidelines for conditions of chronic vulnerability* (2nd ed.). Tucson: Tango.
Hoddinott, J., & Yohannes, Y. (2002). *Dietary diversity as a food security indicators* (Food consumption and nutrition division discussion paper, Vol. 136). Washington, DC: International Food Policy Research Institute.
Hospes, O., & Hadiprayitno, I. (2010). *Governing food security: Law, politics and the right to food*. Wageningen: Wageningen Academic.
Kent, G. (2005). *Freedom from want*. Washington, DC: Georgetown University Press.
Knuth, L., & Vidar, M. (2011). *Constitutional and legal protection of the right to food around the world* (Right to food studies). Rome: FAO.
Maxwell, S. (1996). Food security: A postmodern perspective. *Food Policy, 21*, 155–170.
Maxwell, S., et al. (1999). Alternative food-security indicators: Revisiting the frequency and severity of 'coping strategies'. *Food Policy, 24*(4), 411–429.
Mechlem, K. (2004). Food security and the right to food in the discourse of the United Nations. *European Law Journal, 10*(5), 631–648.
Oshoug, A., et al. (1994). Human rights: A normative basis for food and nutrition-relevant policies. *Food Policy, 19*(6), 491–516.
Prowse, M. (2003). *Towards a clearer understanding of 'vulnerability' in relation to chronic poverty* (CPRC working paper, Vol. 24). Manchester: Chronic Poverty Research Centre, University of Manchester.
Sen, A. (1981). *Poverty and famines: An essay on entitlement and deprivation*. Oxford: Clarendon Press.
Skoufias, E. (2003). Economic crises and natural disasters: Coping strategies and policy implications. *World Development, 31*(7), 1087–1102.
Smith, M., Pointing, J., & Maxwell, S. (1992). *Household food security, concepts and definitions: An annotated bibliography* (Development bibliography, Vol. 8). Brighton: Institute of Development Studies, University of Sussex.
Universal Declaration of Human Rights, UNGA Resolution 217A (III) of 10 Dec 1948.

Food Security and International Trade

Ryan Cardwell
Department of Agribuisness and Agricultural Economics, University of Manitoba, Winnipeg, MB, Canada

Synonyms

Famine; Food insecurity; Hunger; Malnutrition; Starvation

Introduction

International trade has the potential to significantly affect food security outcomes. Changing production and consumption patterns that result from increased international trade flows affect income levels and income distribution, which are the fundamental determinants of food security. The debate over the role of international trade in food security is often framed as a debate over the ethics of international trade; such a framework misdirects the debate onto an unproductive path. There is (almost) universal agreement on the objective of universal food security, and there is very little gray area in the ethics surrounding this objective. The debate about international trade's role in achieving food security is more productively framed as a debate over the effects of international trade

on food security. These effects are complex and difficult to identify, however, and most studies do not provide conclusive results.

Measuring Food Security

Food security is an evolving concept. The most commonly cited definition is from the Food and Agricultural Organization's (FAO) (2001) State of Food Insecurity, which describes food security as existing "when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life." This is a broad definition that captures many important innovations in measuring and defining food security. The evolving understanding of food security has resulted in new ways to measure food security and generated new perspectives on the effects of trade and policy strategies to address food security. Three important structural changes in the understanding of food security are described here.

The first important change is a movement from food security indicators based on food supply to indicators based on peoples' access to food. Food security was historically assessed at the national level by comparing a country's estimated supply of food (measured by aggregating domestic production, imports, carry-over stocks, and food aid) per capita to an approximation of an individual's minimum caloric requirements (e.g., the average number of calories required for a moderate level of daily activity). If available caloric supply per capita was greater than or equal to this estimated level of need, then a country could be said to be food secure.

The fundamental drawback of food security measures based on national supply is that they abstract from issues of intranational distribution. Most developing countries are characterized by wide income inequality, and periods of high food prices can reduce access for low-income people in a country that would be viewed as having sufficient quantities of food per capita, if measured at an aggregate level.

Sen (1981) formalized the concept of access or "entitlements" to food and showed that measures of food supply at the national, or even regional, level are not sufficient indicators of food security. Individuals' access to sufficient quantities of food determines their food security status. This access was first understood to mean sufficient income to purchase food at prevailing prices, but has since taken on a broader interpretation to include social access (e.g., intra-household distribution) and access to safe and nutritious food.

The units of analysis in food security studies have narrowed to better measure food access in recognition of the entitlement concept. Household surveys have become important tools in assessing food security at a more micro level than national supply data would allow. Surveys are evolving over time to include components of intra-household distribution, which provide researchers and policymakers with information on allocation of food between male, female, and child members of a household.

A second important structural change has been the use of anthropomorphic measures, such as stunting and low weight, in assessing food security status. These measures provide information about outputs of food security (i.e., current status) instead of just inputs into food security (i.e., food supplies and purchasing power). Anthropomorphic measures can provide accurate snapshots of the current state of food security, but are necessarily backward looking and do not consider the potential for future entitlement failures or subjective feelings of future food access.

A third major change in the analysis of food security has been an increased emphasis on micronutrient deficiencies. Traditional measures of food security that were based on available calories neglected the importance of micronutrients and could have overlooked "hidden hunger" (IFPRI 2010). Deficiencies of important nutrients such as iodine, iron, vitamin A, and zinc have serious short-term health consequences and can generate long-term developmental delays and deficits. These include anemia, susceptibility to infections, and blindness in the short run and reduced cognitive capacity in the long run.

Despite significantly different approaches (see Masset (2011) for a discussion of some methodological issues), most international measures of food security report progress in reducing the prevalence and severity of global food insecurity. The FAO's (2011) State of Food Insecurity in the World reports decreasing rates of undernourishment in all aggregated geographic regions, though not all countries, since 1990. Global undernourishment is estimated to have decreased by 19 % since 1990. Likewise, IFPRI's Global Hunger Index (2011) reports lower hunger scores in all regions (but not all countries) than in 1990. Several Asian countries have made enormous progress in improving food security, led by large changes in China and South East Asia. Latin American and Caribbean countries have also made significant progress, led by sharp declines in hunger in Brazil. African progress has been mixed, with worsening situations in the Democratic Republic of Congo and the Ivory Coast.

The Links Between Food Security and International Trade

Discussion about attaining food security at a national level is often framed as ethical debates over domestic food self-sufficiency versus openness to international trade. Ideology often overtakes such debates, but if the ethical objective is to improve food security outcomes, then it is more useful to center the debate on international trade's effects on food security. The effects are complex and there are several confounding factors that can cloud the identification of causal relationships. The important avenues through which international trade can affect food security are discussed below.

1. Specialization and Income Growth

One of the core tenets of economic theory is that countries that are free to trade with each other will specialize in the production of products in which they have comparative advantages. Specialization will increase production and generate higher total income in both countries. Higher income, when viewed through the lens of Sen's entitlements, should result in better economic access to food and improved food security. This argument extends to countries that adjust their production patterns away from food; higher income that is generated by more efficiently producing and exporting nonfood products can be used to import more food than was available prior to undertaking international trade. Lower domestic food production need not reduce food security – the linkages run from specialization to income growth to poverty reduction to improved food security.

Specialization involves reallocating resources and necessarily increases demand for some inputs and reduces demand for others. Such reallocation changes relative factor payments (wages to laborers, rent to land and capital owners) and generates winners and losers in the short run. A large portion of poor, food-insecure households derive the majority of their income from wage labor, so the direction of real wage movements after liberalization will have important effects on food security. As a country specializes in production of products that are labor-intensive, demand for laborers will increase and there will be upward pressure on wages. Such specialization could, however, reduce demand for land, thereby reducing rental rates and income to landowners. It is impossible to generalize the effect of liberalization on wages across countries, as each country's experience will depend on the directions of specialization.

2. Terms of Trade and Food Prices

The relative prices of imports to exports will change as countries remove, or reduce, trade-distorting policies. Again, it is impossible to generalize the direction of food prices across countries because of the complicated nature of distortionary policies that are commonly found in agricultural industries and the incomplete nature of trade agreements. For example, consider a liberalizing agreement to reduce import barriers between trading partners. As import barriers are reduced in large importing countries, demand for imported food will increase, thereby increasing the world price of food; this is expected to increase income and improve food

security for net food producers and worsen food security for net food consumers. The effects of broad-based multilateral trade agreements (in the tradition of World Trade Organization agreements) on food prices are much more difficult to identify. The World Trade Organization's (WTO) Uruguay Round agreements (which include the Uruguay Round Agreement on Agriculture) and the Doha Development Agenda (DDA) proposals include disciplines on a wide range of trade-distorting polices. Lower import barriers in large countries are expected to exert upward pressure on world food prices, but these effects would be dampened by lower levels of domestic support in developed countries. Disciplines on other trade-distorting policies, such as food safety regulations and export competition, further complicate the analysis. The net effects of a new round of trade liberalization on food prices would depend on the breadth (coverage of a range of policies) and depth (size of cuts to distortionary policies) of new rules. Computable general equilibrium models that incorporate DDA proposals generally predict increased prices for staple food commodities (see discussion, below).

3. Foreign Direct Investment

International integration can also involve closer investment ties between trading partners, which manifests as foreign direct investment (FDI). More than 2,700 bilateral investment treaties have been signed (UNCTAD 2010) and many preferential integration agreements extend beyond trade in goods to include rules on FDI. The primary avenue through which FDI can improve food security in developing countries is income growth as a result of technology transfer from developed countries. Foreign direct investment brings modern technology and production methods to relatively inefficient industries in developing countries and can increase productivity, and therefore income, in host nations. The ownership of the proceeds from increased productivity is an important factor in determining the benefits of FDI, however. It can be difficult to find a balance in which the innovating foreign firm receives sufficient returns to justify the FDI and workers in the host country receive a portion of the fruits of higher productivity. See Saggi (2002) for a survey of FDI and technology transfer.

The acquisition of agricultural land by foreign firms and state governments has received a great deal of attention in media sources (von Braun and Meinzen-Dick 2009) and led to public pressure to block some proposed projects. State actors, including China, South Korea, and several Middle East states, have been motivated to acquire foreign agricultural land in attempts to stabilize future food supplies. Though such projects have the potential to improve productivity in low-productivity host nations, this form of FDI has been controversial because of concerns about foreign investors' commitments to control environmental impacts and concerns about the insecurity of land tenure in many developing countries. Such land is often formally owned by the state, and inhabitants who use the land without formal title may be forced to relocate.

4. Stability

Shocks to agricultural production are inherently covariate across producers – weather, pest, or violence shocks that affect one producer are likely to affect all producers in the surrounding area. The covariate nature of shocks makes production of food in any one geographic area unstable and a population that relies only on regional production is vulnerable to production failures that could significantly affect market supply and prices. Reliance on regionally produced food is one end of the trading spectrum, with global free trade marking the other end. A population that acquires food supplies from a global market without trade barriers is necessarily less vulnerable to production-induced supply and price volatility, because a larger market diversifies the production risks that affect agriculture. A globally integrated food market would transmit price signals from locations with shortages to locations with surpluses and trigger arbitrage-induced movements of commodities.

The food crisis of 2008 laid bare one of the important downside risks that developing countries face by increasing their dependence on foreign food supplies. Several governments in net food exporting developing countries imposed export restrictions on food in attempts to

constrain domestic food price inflation. Such policies are necessarily beggar-thy-neighbor because lower world supply applies upward pressure on world prices and negatively impacts net food-importing countries. Net food-importing developing countries that had historically relied on these products were forced to either pay higher prices or find alternative sources. This raises a clear ethical question for governments that impose export restrictions, but such decisions are political and it may be unrealistic to expect that concerns about negative effects on trading partners will trump domestic political pressure in times of high food prices.

World Trade Organization disciplines on export restrictions did not apply to the types of policies that were implemented over the past few years (Headey 2010), and such anti-trade behavior remains unchecked. Trust in the global food trading system has been shaken by these policies and there have been movements in several countries to reduce reliance on imported food. It is important to note that restricting exports (anti-trade policies) form the core of the problem, not the opening of importing countries to food trade (pro-trade policies).

Economic theory, and some empirical evidence, suggests that free trade will increase income growth, reduce poverty, and stabilize food availability and prices. It is important to note, however, that these predictions are made in the theoretical vacuum of a first-best world in which there are no deviations from best policies. If one or more of the foundational assumptions of these models is violated, then accurate predictions about, for example, lower import barriers improving food security cannot be made. This is the basis of Lipsey and Lancaster's (1956) theory of the second best, which is crucial to understanding the effects of international trade agreements. WTO agreements allow implementation periods over which countries can adjust policies to adhere to their obligations, and not all industries are not liberalized to the same degree (e.g., trade-distorting policies in agricultural industries were not subject to many disciplines prior to the 1995 Uruguay Round Agreement on Agriculture). Such complications make it very difficult to project, even at a theoretical level, what will happen to income and food security in the short term as trade is liberalized. The case of export restrictions is a clear example of this – net food-importing countries that lowered food import barriers in anticipation of lower and more stable prices were met with new anti-trade export restrictions in exporting countries. This sequence of events may have worsened food security in some importing countries in the short run.

International Agreements

The trade rules that are most relevant to food security in developing countries can be found in the agreements of the WTO. The WTO is an international organization that oversees a range of trade-related agreements between 157 member countries, several of which are developing countries in which food insecurity is prevalent. The primary motivation for countries to pursue multilateral trade agreements under the WTO is to provide a stable and predictable rules-based international trading environment in which countries can specialize and reap the gains from trade. Most WTO agreements have been designed to reduce the prevalence of trade-distorting policies (i.e., policies that change producer and consumer behavior in a way that affects trade flows) in member countries. The WTO does not have a development, or food security, mandate (like international organizations such as the International Fund for Agricultural Development or IFPRI), but the policy reforms required of its member countries can have significant effects on income and welfare. The principle on which WTO negotiations rests is that freer trade will induce specialization, which will in turn increase incomes and improve food security outcomes.

The Uruguay Round Agreement on Agriculture (URAA), entered into force in 1995, is the WTO agreement that is most directly linked to issues of food security. The URAA spells out member countries' obligations with respect to food trade and domestic agricultural support policies, and its disciplines are categorized into three pillars. Market access rules outline the maximum

tariff rates that member countries agree to place on other members' imported products. Such rules could positively affect food security in two ways: first by increasing income in developing countries' export industries (through lower tariff barriers into developed countries) and second by decreasing the price of food imports into developing countries (through lower tariff barriers into developing countries). Producers in developing countries will, however, face more competition from international producers as import barriers fall.

The second pillar contains disciplines on domestic support measures that governments provide to agricultural producers. Domestic support is typically very low (and sometimes negative, through taxation policies) in developing countries, and these disciplines are most relevant to developed member countries. Lower domestic support in developed countries can reduce production levels, thereby increasing world prices; this can have offsetting effects on food security by increasing world food prices and by making exports from developing countries more competitive on the world market. The third pillar concerns export competition and contains rules on subsidies and export credit guarantees. It is most relevant for developed-country policies – the European Union accounts for almost all of global agricultural export subsidies. Export subsidies are used by exporting countries to unload domestically produced surplus commodities that are uncompetitive at world prices. A reduction in such subsidies could increase the prices for such products in importing developing countries but also render production from developing countries, from where exports are not subsidized, more competitive in global markets.

World Trade Organization member countries recognized that trade policy reforms could have negative short-term effects on food security in some net food-importing developing countries. This led to the Marrakech Decision (WTO undated) that acknowledged this possibility and has framed DDA round of trade negotiations. The proposals that have emerged from DDA negotiations target deeper and wider cuts in agricultural tariff barriers and domestic support measures and include binding disciplines on food aid shipments. International food aid is widely viewed to have been used as a tool of surplus disposal by some donor countries, and competing exporters are seeking to limit the circumstances in which food aid shipments would be allowed. New rules on food aid will be difficult to enforce and are becoming less relevant as most donors have transitioned away from using food aid as a vent for disposing of surplus commodities (Cardwell 2008).

Several developing-country WTO members believe that they were not provided the market access to developed-country markets that was promised in UR negotiations because of "dirty tariffication" (in which tariff rates are inflated so that mandated tariff rate cuts do not result in improved market access) by developed countries. This practice did not violate member countries' obligations, but was outside the spirit of the WTO's liberalizing agenda and has been viewed as unethical by some commentators. Developing countries have responded by taking firmer bargaining positions in DDA negotiations, which has contributed to the glacial pace of progress. One result of developing countries' stance is that they are likely to continue to receive "special and differential" treatment in future WTO agreements, in which they are granted extended implementation periods and special provisions for least-developed countries.

Other agreements in the WTO can also significantly affect food security. Disciplines on nonagricultural market access (NAMA) have the potential to impact trade flows more significantly than agricultural rules because the value of global nonagricultural trade far exceeds the value of agricultural trade. Access to developed countries' services and manufacturing markets can have important income effects in developing countries with burgeoning nonagricultural sectors. Note, however, that trade barriers in nonagricultural industries are much lower, on average, than for agricultural industries. The effects of future NAMA policy changes will likely be smaller than the effects of changes to trade-distorting agricultural policies because there are fewer reforms to be made.

There has been a proliferation of preferential trade agreements (PTAs) – sometimes referred to as regional trade agreements – in recent years, in which two or more countries agree to preferential trade barriers. There are currently more than 240 such agreements in force, and many involve blocs of developing countries. The effects of PTAs on food security vary, depending on the breadth and depth of their coverage. Some PTAs provide deep integration across countries by eliminating most trade barriers (e.g., the Southern Common Market, MERCOSUR), while others are narrow in scope and do not liberalize trade across a wide range of industries (e.g., the Southern African Development Community, SADC). The effects on food security will be proportional to the level of integration with trading partners. There are two important differences between PTAs and multilateral agreements that differentiate their effects on food security. First, most PTAs do not contain provisions for reduced domestic support to agricultural industries. This means that distortionary subsidies that induce overproduction in some countries may not be affected by PTAs. Second, some of the largest effects of multilateral trade agreements are expected to arise from improved access to developed-country markets. Preferential trade agreements that are struck between developing countries will not provide such access.

Evidence on Food Security and International Trade

The path of causal links from international trade to food security is long and complicated. There are several intermediate and confounding factors that have to go right for increased trade to improve food security outcomes. The nature of economics as a social science makes the identification of these effects difficult. Economic analyses of international trade policies cannot be conducted within the framework of repeatable randomized controlled trials that cleanly identify cause (change in trade policy) and effect (change in food security status). Instead, economists rely on observational data to infer causal links through statistical studies. These studies leave much to be desired in the identification of the effects of international trade on food security. Three approaches to identifying the links have been summarized.

Case studies that describe individual countries', or regions', food security status before and after trade liberalization can be instructive about selective experiences but are problematic from an analytical perspective. Case studies are not internally valid, meaning that they do not control for the range of confounding factors that could impact food security outside the effects of trade changes. Nor are case studies externally valid; any conclusions drawn from such studies are relevant only to the case being studied. The very specific conditions of the market in which the study was conducted would not generalize across countries with different policies in different time periods. Policy prescriptions that are based on such analyses are viewed with caution because of these limitations.

Simulation models use economic theory and statistically estimated parameters to evaluate the expected effects of trade liberalization scenarios ex ante. These analyses better control for confounding factors by using parameters that have been estimated in statistical models. Simulation models typically take one of two forms (Abler 2006). Partial-equilibrium models simulate market behavior in disaggregated sectors to estimate the welfare effects of trade liberalization. Partial-equilibrium models are useful because trade liberalization occurs across industries that are very different, and such disaggregation allows for the modeling of industry-specific peculiarities. The primary drawback of partial-equilibrium models is that they do not allow for interindustry connections, which can be very important in the links from trade to income growth to food security.

Computable general equilibrium models also use econometrically estimated parameters to analyze trade liberalization scenarios ex ante but do so in a framework that aggregates across commodity groups and includes several, or all, sectors of the economy. These models include interindustry connections and can generate estimated income effects, from which poverty and

food security estimates can be derived. Computable general equilibrium models are the most commonly used tools for estimating the effects of international trade agreements, and several organizations manage large-scale models of this kind (e.g., GTAP at Purdue University and the MIRAGE model at IFPRI).

Anderson et al. (2006) use the World Bank's LINKAGE model to show that trade liberalization, as outlined in the DDA negotiations, would reduce poverty, particularly in developing countries. They do not explicitly estimate food security status, but the estimated reductions in poverty can be extrapolated to generate positive effects on food security. Hertel and Winters (2006) provide an overview of GTAP-based studies that estimate the effects of a DDA agreement on poverty. They find mixed short-term effects (increased poverty in some countries, decreased in others) and reduced poverty in the long run. Note that a link from poverty reduction to food security (through entitlements) must be made for one to draw conclusions about food security from such studies.

A third approach is to analyze the effects of trade liberalization ex post by econometrically modeling a measure of poverty or food security as a function of the implementation of international trade agreements. One such study (Bezuneh and Yiheyis 2009) finds that food availability decreased in the short run after trade agreements, but long-term effects are uncertain. The findings of such studies must be viewed with caution, however, because of the difficulty in identifying the effects of trade agreements on food security. There are important methodological problems in identifying cause and effect in econometric models of this type. Also, Bezunah and Yiheyis (2009) use national food availability (production plus imports plus food aid) as a dependent variable; food supply is not an accurate representation of food security.

Summary

The ethics of food security are clear; the pursuit of universal food security is almost unanimously viewed as valuable. The role of international trade in food security is not clear, but it is important to analyze its effects scientifically instead of ideologically. Such analyses are necessarily incomplete, and the empirical evidence on the effects of increased international trade on food security is mixed. There are compelling theoretical reasons to believe that more international trade will improve food security outcomes in the long term, but pronouncements on the prospective effects of future trade agreements must be made with caution. International trade agreements are piecemeal and are implemented in countries with a wide range of economic conditions that may not conform to the simplifying theoretical assumptions of economic models.

Cross-References

- Agricultural and Food Products in Preferential Trade Agreements
- Food and Agricultural Trade and National Sovereignty
- Food Assistance and International Trade
- Food Security
- Food Security and Rural Education
- Free Trade and Protectionism in Food and Agriculture
- Multilateral Trade Organizations, Food, and Agriculture
- Trade and Development in the Food and Agricultural Sectors
- WTO Dispute Settlement and Food and Agricultural Trade

References

Abler, D. (2006). Approaches to measuring the effects of trade agreements (Commissioned Paper 2006–1). Canadian Agricultural Trade Policy Research Network.

Anderson, K., Martin, W., & van der Mensbrugghe, D. (2006). Market and welfare implications of Doha reform scenarios. In K. Anderson & W. Martin (Eds.), *Agricultural trade reform and the Doha development agenda*. New York: Palgrave Macmillan.

Bezuneh, M., & Yiheyis, Z. (2009). *Has trade liberalization improved food availability in developing*

countries? An empirical analysis. Contributed paper for presentation at the international association of agricultural economists conference, Beijing.
Cardwell, R. (2008). Food aid and the WTO: Can new rules be effective? *The Estey Centre Journal of International Law and Trade Policy, 9*(1), 74–93.
Food and Agriculture Organization of the United Nations. (2001). The state of food insecurity in the world 2001, Rome.
Food and Agriculture Organization of the United Nations. (2011). The state of food insecurity in the world 2012. Frequently asked questions.
Headey, D. (2010). Rethinking the global food crisis the role of trade shocks (IFPRI Discussion Paper 00958).
Hertel, T. W., & Winters, L. A. (2006). Poverty impacts of a WTO agreement: Synthesis and overview. In K. Anderson & W. Martin (Eds.), *Agricultural trade reform and the Doha development agenda*. New York: Palgrave Macmillan.
International Food Policy Research Institute. (2010). Global hunger index 2010 -The Challenge of Hunger: Focus on the Crisis of Child Undernutrition, Washington, DC.
Lipsey, R., & Lancaster, K. (1956). The general theory of second best. *The Review of Economic Studies, 24*(1), 11–32.
Masset, E. (2011). A review of hunger indices and methods to monitor country commitment to fighting hunger. *Food Policy, 36*(S1), S102–S108.
Saggi, K. (2002). Foreign direct investment, and international technology transfer: A survey. *The World Bank Research Observer, 17*(2), 191–235.
Sen, A. (1981). *Poverty and famines: An essay on entitlement and deprivation*. London: Oxford University Press.
UNCTAD. (2010). World investment report 2010: Investing in a low-carbon economy, New York.
Von Braun, J., & Meinzen-Dick, R. (2009). *"Land grabbing" by foreign investors in developing countries: Risks and opportunities* (IFPRI policy brief 13).
World Trade Organisation (Undated). Decision on measures concerning the possible negative effects of the reform programme on least-developed and net food-importing developing countries.

Food Security and Rural Education

R. John Halsey
Sidney Myer Chair of Rural Education and Communities in the School of Education, Flinders University, Adelaide, Australia

Synonyms

Agriculture; Community; Education; Food; Rural; Schools

Introduction

The purpose of this chapter is to consider how rural education, and rural schools more particularly, might contribute towards food security. The practice and policy context for this is Australia which, it is recognized, has points of distinction when compared to other countries. Notwithstanding, there are ways to generalize from the specificity of the Australian context, including through a set of principles for progressing an ethics of sustainability which are presented and considered later.

Why an ethics of sustainability? Why link it with food production, food security, and schools in rural contexts? Fundamentally because profiling an ethics of sustainability brings together critical matters of choice with regard to purpose, and principally *moral* purpose, and taking action to "do what is right, to do what is required" in the light of overwhelming evidence. Food production and distribution and security challenges confronting the globe underpinned by unprecedented population growth rates are an instance of overwhelming evidence *for something to be done differently*. Kurlansky's deeply insightful and disturbing book on the biography of the cod and its demise overtime – "abundance turned to scarcity through determined short sightedness" (Kurlansky 1997) – epitomizes how a potentially sustainable resource has been pushed to the brink of extinction by an absence of an ethics of sustainability to inform and govern choices.

Schools and education are used to reinforce values and attitudes about national priorities as well as deal with emerging challenges and problems. Put another way, schools induct the young into society and nurture their agency; they are also used to "fix problems." Drawing on nearly half a century in education working from preschool through tertiary levels, some illustrations are as follows: sex education to deal with sexuality and sexually transmitted diseases, consumer education to make students more informed consumers, environmental education to bring the natural world into the foreground of thinking and action, parent education for preschoolers to

ensure children get a "better start to life," and so forth.

Context and Dimensions

Australia comprises six states and two territories, each of which has an elected parliament as well as a national government. It has a population of 22.5 million, the majority of who live in the three most populous states – New South Wales, Victoria, and Queensland – and a land mass of 7.5 million square kilometers. Distance and very low population density are two of the dominant challenges of ensuring all children can access schooling. Under the Constitution, the states and territories are essentially responsible for providing and managing schools. In recent years though, the national government has played an increasingly important role in education, principally through its financial powers and by developing coalitions of support for national initiatives like the Australian Curriculum, the public release of school performance data, and literacy and numeracy testing.

There are approximately 9,500 schools in Australia for 3.5 million full-time equivalent students from preschool through year 12. Direct responsibility for running schools is vested in the states and territories. As well, there are three main schooling sectors – government (6,743 schools), catholic (1,708 schools), and independent (1,017 schools). Definitions of a rural school vary by jurisdiction and by sector. However, around 40–50 % of schools are in nonurban locations in communities which vary in size from about 100,000 to less than 100. In some locations, schools are literally in the corner of a farmer's paddock. Most rural schools are government because governments are required by legislation to ensure children can access education. As well, most rural schools are in close proximity to a primary industry and, in some instances, have direct engagement with primary industries through agriculture topics and farm practices, aquaculture projects, and courses which provide support services for primary industry enterprises like technology studies and economics. (There are also a few urban schools which have a direct link with food through curriculum specializations).

Food Security

Food security is inextricably linked to the principal social, political, economic, and cultural dimensions of a society and particularly to environmental health, well-being, and sustainability because of the fundamental connection between nature and food. Flannery argues that "[o]ur search for sustainability . . .[is] the greatest challenge we have ever faced" (Flannery 2008). Pretty's focus on sustainability and agriculture foregrounds human activity as central to understandings of it and highlights "not damaging the environment" (Pretty 2002). Goldie, Douglas, and Furnass draw upon the Brundtland Report of 1987 for their definition of sustainability: "the capacity of human systems to provide for the full range of human concerns in the long term" (Goldie et al. 2005). Their definition accentuates imperatives for survival.

Food production and food security are not discretionary items of national policy or of national productivity. As Pretty argues, "[w]ithout food, we are clearly nothing. It is not a lifestyle or add-on fashion statement. The choices we make about food affect both us, intrinsically, and nature, extrinsically. In effect, we eat the view and consume the landscape. Nature is amended and reshaped through our connections—both for good and bad" (Pretty 2002). Put another way, "will there be sufficient nutritious food available for nine billion people by the year 2050?" (Persley and Blight 2008). The majority of the food consumed daily in Australia is produced in rural areas. To illustrate, the Murray–Darling Basin, while comprising only 14 % of Australia's landmass, supports around 42 % of Australia's farms (Cullen 2005). Producing food, even where it has "gone the way of high tech," still requires large numbers of highly skilled and semiskilled workers. Unlike mining, agriculture and horticulture are not as conducive to a fly-in/fly-out model of labor supply, even with the advent of agribusiness.

Ensuring that Australia remains a country that is food secure cannot be taken for granted. As Australia's population grows and changes over time and the impacts of climate change "kick in," new problems and opportunities will emerge. These changes, and others that food production and distribution are reliant on, provide new policy development and program opportunities for rural education, rural educators, and rural communities.

Rural Education and Food Security

Exploring new relationships and partnerships between rural education and food production and security has the potential to build new understandings and practices about them and also arrest, or at least slow, the marginalization of rural education and rural communities in relation to contributing to Australia's future. Rural education needs to partner with other essential human services like health services and local government and the private sector to address the challenges of ensuring that people who work in primary industries or who are directly impacted by the vibrancy and profitability of them can access high-quality education. As Allison concludes, following an analysis of the possibility of "'ordinary' landscapes or communities within which we live, work and educate", to reinvigorate ways of shaping the future "sustainability [of food production] immediately shifts the perception of 'ordinariness' of these... landscapes" and opens the way to new possibilities (Allison n.d.).

Linking rural schools and rural education with food production and food security creates new spaces of opportunity of an intellectual kind as well as a locational and physical kind. Intellectual in the sense of "pushing the envelope" of the broadly accepted roles and functions of schools in society. Physically in terms of how the spaces provided for schooling in rural communities – classrooms, specialist learning areas, offices, playing fields, and so forth – might be enjoined in the "big project" of food production and food security.

Soja provides theoretical tools to assist with reconceptualizing the role and function of schools, of education in rural contexts. He argues that the preferencing given to social and historical perspectives on issues is key to understanding why space and spatiality are virtually absent from critical discourse on major matters like food and food security (Soja 1996). Thinking differently about space and spatiality according to Soja may produce insights about phenomena, such as transforming rural schools to play a significant part in progressing food production and food security. This "thinking differently" Soja calls "Thirdspace," "a purposefully tentative and flexible term that attempts to capture what is actually a constantly shifting and changing milieu of ideas, appearances, and meanings" (Soja 1996).

The central challenge of "Thirdspace" is to "begin to think about the *spatiality* of human life in much the same way that we have persistently approached life's intrinsic and richly revealing historical and social qualities: its *historicality* and *sociality*" (Soja 1996). This is because, from Soja's perspective, while it can be assumed that "rightfully" there will always be historical and social dimensions brought to bear on issues or problems, there *is* more. Integral to "Thirdspace" is an invitation to "set aside the demands to make an either/or choice and contemplate instead the possibility of a both/and also logic..." (Soja 1996).

Following are three brief case studies of rural schools in South Australia which illustrate various ways of engaging with local rural communities, food production, and education. For the Cowell Area School, it is aquaculture; for the Cleve Area School, broadacre cropping; and for Mypolonga Primary School, it is local horticultural produce coupled with tourism.

Cowell Area School enrols students from preschool age through year 12, the final year of secondary education in Australia. The school is located 500 km northwest of Adelaide (the capital of South Australia) in the township of Cowell which is situated on Franklin Harbour. The district population is approximately 1,070, and at the time of writing, the school had an enrolment of 178. The school has a community library – as do

all other area schools in the state – which serves the needs of students and adults of the community.

Over 20 years ago, it started becoming very clear that Cowell was essentially dying due to the impact of poor grain yields from drought and near-drought conditions and the added continuing drift of young people out of the town to greener pastures. Sitting on the town's doorstep, however, was a 49 km^2 pristine body of protected water, Franklin Harbour. There was also a local council keen to do whatever was necessary to save their town, a state government who was active in trying to support local communities take action, and a school leader willing to go beyond the confines of policy and established ways of being a school principal – ideal "raw materials" for a new venture in aquaculture.

The school's website tells the story:

> The Aquaculture Course at Cowell Area School has grown from an idea put forward by a group of local oyster growers to a structured course undertaken over two years of senior secondary schooling.
>
> In 1991 Cowell oyster growers initiated contact with Cowell Area School and requested a course that would suitably equip students for entry into the Aquaculture industry. 1992 was spent developing a curriculum, in consultation with local oyster, yabby, abalone, and fin-fish growers, Department of Education, TAFE (Training and Further Education), AFA (Australian Fisheries Academy) and SAFITC (South Australian Fishing Industry Training Council).
>
> The course was appropriate for the industry, while still maintaining the educational outcomes of a senior secondary program. The first course was offered in 1993 and has continued to grow to this day, with a 90 % success rate of all students undertaking the course.
>
> 1999 saw the implementation of a full time farm manager (Tom Kenny) and a 0.5 time teacher to directly support students whilst in the classroom. Since 2000 the teaching position has been full time (1.0). Skills in aquaculture are gained through work placements within the industry, at the school's oyster lease and fish farming tanks at the school.
>
> Aquaculture in Cowell is now a major local industry with an annual turnover of around $5 million and employing 40 or more people. These achievements are due in no small way to the preparedness of the school to respond very positively when first approached about playing a formative role in providing skilled workers. Over time, aquaculture courses available at the local school have changed to place greater emphasis on sustainability and particularly sustainable technologies. Critical to achieving these changes has been school leaders who have embraced a vision of education in a rural community as being more than just what happens inside the school fence. The success of Cowell Area School's engagement with aquaculture has been the catalyst for other schools in the region to review their programs and develop options and pathways for youth to transition into marine environment food production (http://acacia.cowellas.sa.edu.au/cms/).

Cleve Area School is located on the Eyre Peninsula approximately 600 km from the capital of South Australia. It provides education for students from entry through year 12 and has an enrolment of around 350 students. While providing local and district students with a broad and high-quality general education, the school also specializes in agriculture from years 10 to 12 with an emphasis on dryland farming. The school's website provides the following information on the specialization:

> The Cleve Area School Certificate in Agriculture Course is offered to year 10, 11 and 12 students attending the school. Students can enter either at year 10 or 11 and will require a minimum of 2 years to complete the required Certificate II or III competencies.
>
> The Cleve Certificate is delivered entirely at Cleve Area School's Sims Farm by Cleve Area School and Regional Skills Training (RST) Pty Ltd (Registered Training Organisation) staff. The course is nationally accredited, under the Australian Qualifications Framework.
>
> The course prepares students for the following:
> - tertiary study in the field of Agriculture;
> - direct entry into the workforce;
> - and/or further vocational training (eg Cert III & IV courses offered by Technical and Further Education, TAFE, or other Registered Training Organisations, RTOs).
>
> The course does this by offering students both South Australian Certificate of Education (SACE) subjects and competency based learning. These dovetail together such that students gain one SACE unit for every 70 hours of learning in the Certificate II & III.
>
> Cleve Area School's 400 Ha Sims Farmis used extensively to deliver the course. A self-replacing merino flock, prime lamb, and cereal cropping enterprises are run and studied by the students at Sims Farm. Students carry out as many of the day to day tasks involved in these as possible, and learn

> to shear and crutch sheep. Students also have 'ownership' of a paddock where they plan and implement the cropping year by operating all of the necessary machinery (tractors, GPS guidance and mapping programs, airseeder, boomspray, harvester).
>
> Workshops, day excursions, and guest speakers (from farmer groups, Primary Industries and Resources South Australia (PIRSA), Agribusinesses etc) are accessed as 'opportunities' arise. These provide excellent learning opportunities for students and an excellent way for students to build personal links with their future peers.
>
> Camps are another highlight which aim to expose students to a broader range of agricultural environments and enterprises. In recent years year 11 students have travelled to New Zealand's south island, Northern Territory (Katherine and Darwin regions), Victoria's Wimmera district, South East, Northern SA's station country and Rangelands, Mid North & Barossa, and Kangaroo Island (http://acacia.cleveas.sa.edu.au/cms/).

Note: certificate levels are based upon the Australia Qualifications Framework which covers all formally recognized national education and training certification from entry-level workforce (Certificate 1) to doctoral level.

Studying agriculture – food production and food security – at the Cleve Area School "comes alive" because of high-quality teaching and through the school's "state-of-the-art" model farm which is based upon sustainable dryland practices. It is also assisted by the school having a boarding facility so students from outside the district can take the program.

Since 1975, there have been well over 400 graduates from the Cleve Area School Agriculture program. An estimated 60 % of these graduates have stayed in the district to work on farms or in agribusinesses. A further 20 % have gone onto tertiary education, and another 20 % returned to their out-of-district farms and other employment. The Cleve agriculture specialization directly supports a multimillion dollar broadacre farming enterprise and through this, employment in a wide range of commercial businesses and human services.

Mypolonga Primary School opened in 1916 and has an enrolment of 130 students. It is located in a fruit growing and dairy district near the banks of the River Murray, Australia's largest river. The school has a shop which is the centerpiece for its community engagement around food and food products as well as other things. The website continues:

> The School Shop started in 1994 in the disused Post Office across the road from the school. Originally selling student-made crafts, we quickly realised when a bus tour from the then Proud Mary, now Murray Expedition Paddle Steamer added the Shop to its itinerary, that we needed to source high quality, locally made crafts. (The students also make locally sourced dried fruit confection and sell jams and preserves on consignment.)
>
> We sell locally made crafts, taking 20 % commission. Each class also makes their own produce. The Junior Primary class makes book marks, the Lower Middle Primary makes fridge magnets, the Middle Primary makes recipe books and the Upper Primary makes chocolate coated apricots and home-made lemon cordial.
>
> We, the students are responsible for all financial record keeping. With a turnover of $15,000 per year and over 30 consignors, we work hard to balance the books. We learn a lot about providing customer service, balancing the books and always improving what we do (http://mypolongaps.sa.edu.au/wp/).

Essentially, year 6 and 7 students (the final 2 years of primary school) engage with local people, as well as a few suppliers from the metropolitan area and some other schools in the district, to acquire stock for the shop, sell it, and ensure that suppliers are paid when their goods are sold. Profits go into school funds for special projects. Each student involved in the shop initiative is required to keep a computer inventory for each of their suppliers. They are also required to rotate through the various jobs of opening and running the shop, for example, greeting the tourists when they arrive each week, presenting them with complimentary samples to encourage purchases, ensuring shelves are well and attractively stocked, accurately counting and recording takings, and keeping the garden associated with the shop in good shape. Students are assessed on each of these tasks.

While the school's direct income may be modest by some scales, by others it is very significant. It is certainly very significant for the Mypolonga school and community because in and behind the dollars are countless stories that build and sustain

relationships across age groups and with people from the four corners of the globe and provide an "edge of difference" about what makes "our town and why we want it to endure." As Wheatley and Kellner-Rogers assert, "[t]he future of community is best taught to us by life" (Wheatley and Kellner-Rogers 1998).

Discussion

Rural contexts have evolved and changed over time and will continue to do so. Looking forwards, there will need to be "an openness to ruralities that are quite different from those we are familiar with" (Cocklin and Dibden 2005). The capacity to accelerate the speed at which the evolution and change of rural contexts occurs has been dramatically increased through globalization – especially via ICT, interconnectedness, acceleration, dis-embedding, and standardization (Eriksen 2007) – and through the continued growth of the world's population. The pressures these place upon the ways that community functions and on the environment, finite resources and relationships at a multitude of levels, are profoundly significant. The changes require – demand – a radical reframing of the role rural education, and rural communities might play in nation building and nation sustaining through food production and food security.

Education is a powerful and pervasive resource for perpetuating and for changing ways of thinking and perceiving, ways of being, and ways of doing and responding. Rural schools function as they do because of a complex mix of legislative requirements, policies, established practices, and expectations about "what schools should do." The "giveness of schools," however, is constructed and therefore is "open" and "available" for change. Put another way, rural schools are as they are because of a long history of decisions, and they would have been different than they are had different decisions been taken. Or in the words of Lefebvre quoted by Soja "*(t)here is always Other*" (my emphasis) (Soja 1996).

Transforming rural schools to become active agents in food production and security and championing ethics of sustainability, either directly though primary production or via designing, teaching, assessing, and accrediting courses which prepare youth for careers in primary production and associated areas, are major undertakings. The undertaking falls most directly to school leaders. Staying with Soja's theorizing, the primary challenge is to embrace the pursuit of *Other*. Doing this requires rural educational leaders spending time creating and seeking out opportunities that have the potential to disturb and shift the status quo towards some other state which they, and desirably others, believe is likely to be more beneficial for students, staff, and the community *and* the "big agendas" of food production, food security, and sustainability.

School leaders need to do this in many different ways including by questioning, by influencing meeting agendas, by developing links and alliances within and beyond the school, by moving around and through the school picking up clues, and by making suggestions as to "what might be done instead." They also need to create and seek out opportunities that have the potential to shift the status quo by sharing images they have about the purpose and essence of education and by projecting a sense of control blended with a preparedness to enter into collaborations with others. As well, they need to draw upon the experiences and advice of colleagues and community and use various ways for reducing multidimensional possibilities into "manageable bits" to progress schooling transformations which contribute to overall deeper engagement with food production and food security efforts.

Principles which frame the global challenge and imperative of sustainability in light of the growing pressures on the planet, primarily through population growth, are also a resource for transforming rural schooling towards producing explicit learning about and for food production and food security. Principles "capture" the essences of issues and challenges and help to scope dimensions and complexities. They serve as bridging agents between the "big picture" and local contexts and provide indicators of the specific work required in order to change policies and practices. As well, principles are a basis for

taking the content of a particular context, evaluating and assessing the merits of them and then generalizing to other situations.

The following are principles that could help the transformation of rural schooling as being advocated:

1. The sustainability of rural contexts and communities and those who live and work in them is central to sustainability nationally and globally.
2. Rural contexts and communities require a productive blend of internal (or endogenous) and external (or exogenous) factors and resources to influence and facilitate sustainability.
3. Human services which are available, accessible, affordable, acceptable, and adaptable, at a local community level, are essential for the sustainability of rural contexts and communities.
4. Resourcing of human services for rural contexts and communities is an investment in sustainability.
5. Sustainability is more likely to be optimized when interconnections between human, natural, institutional, produced, and social forms of capital are recognized and used.
6. Sustainability is more likely to be optimized when government funding and accountability requirements are able to flexibly transcend portfolio boundaries.

As argued at the 2008 National Community Education Association in Dallas, Texas, rural schools are complex organizations, and processes of change, especially ones that challenge schools and school leaders to step outside conventional ways of functioning, can disturb and disrupt "taken-for-granted" patterns of behavior. For instance, what happens during a financial crisis when depositors withdraw their funds and trust in banks, so too a community can withdraw its support of a school if it is being seen to be not paying attention to "core business" – children and their learning. Using schools as a platform for progressing deep engagement of students in food production, food security, and the ethics of sustainability requires leaders to work across several change fronts simultaneously and iteratively. This in turn means that rural educational leaders need to know and understand deeply the cultural contexts – or as MacGilchrist, Myers, and Reed would say, they need "contextual intelligence" (MacGilchrist et al. 2004). They also need to have a sound grasp of the main elements of school operations that, in essence, "define" what a school is and what sustains the work of a school and indeed that single a school out from all other organizational forms. Of primary importance, here are curriculum, pedagogy, care of and relationships with students, relationships with parents and community members, concern for standards, and concern for a school's credibility.

In a book of contributions on the future of leadership by various authors, written to celebrate the life and work of Warren Bennis, Bennis has the privilege of authoring the final chapter. His last words in the chapter are especially pertinent for rural educators and leaders and the educational challenges of food production, food security, and the ethics of sustainability. While acknowledging how history had influenced his career, he particularly emphasized the power of "the spirit of *place*" (Bennis et al. 2001). This is a fundamental challenge for rural leaders, rural schools, and rural communities in pursuit of new purposes and realms of operation – to discern and harness the "spirit of *place*."

Summary

Schools and education are used to reinforce values and attitudes about national priorities as well as deal with emerging challenges and problems. Put another way, schools "fix problems." This chapter considers how rural education and rural schools more particularly might contribute towards food security and an ethics of sustainability. To do this, three brief case studies of rural schools which are engaged in various forms of food production education are presented and discussed. While the practice and policy context is Australia, principles for progressing an ethics of sustainability incorporated in the chapter are a basis for generalizing to other places.

Cross-References

- ▶ Community-Supported Agriculture
- ▶ Economy of Agriculture and Food
- ▶ Food Ethics and Policies
- ▶ Sustainability of Food Production and Consumption

References

Allison, J. (n.d.). Learning landscapes: The (Re) interpretation of ordinary landscapes and navigating a future in rural and remote areas. Resource document. Rural Education Foundation, Australia. http://www.refa.edu.au

Bennis, W., Spreitzer, G. M., & Cummings, T. G. (Eds.). (2001). *The future of leadership*. San Francisco: Jossey-Bass.

Cleve Area School. http://acacia.cleveas.sa.edu.au/cms/

Cocklin, C., & Dibden, J. (Eds.). (2005). *Sustainability and change in rural Australia*. Sydney: University of New South Wales Press.

Cowell Area School. http://acacia.cowellas.sa.edu.au/cms/

Cullen, P. (2005). Water: The key to sustainability in dry land. In J. Goldie, B. Douglas, & B. Furnass (Eds.), *Search of sustainability* (pp. 79–91). Collingwood: CSIRO Publishing.

Eriksen, T. H. (2007). *Globalization*. Oxford: Berg.

Flannery, T. (2008). Now or never: A sustainable future for Australia? *Quarterly Essay, 31*, 1–66.

Goldie, J., Douglas, B., & Furnass, B. (Eds.). (2005). *In search of sustainability*. Collingwood: CSIRO Publishing.

Kurlansky, M. (1997). *Cod: A biography of the fish that changed the world*. New York: Walker and Company.

MacGilchrist, B., Myers, K., & Reed, J. (2004). *The intelligent school*. London: Sage.

Mypolonga Primary School. http://mypolongaps.sa.edu.au/wp/

Persley, G. J., & Blight, D. G. (Eds.). (2008). *A food secure world: how Australia can help. Report of the Crawford Fund World Food Crisis Task Force (Summary version)*. Melbourne: Australian Academy of Technological Sciences and Engineering (ATSE).

Pretty, J. (2002). *Agri-culture: Reconnecting people, land and nature*. London: Earthscan Publications.

Soja, E. W. (1996). *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*. Malden: Blackwell Publishing.

Wheatley, M. J., & Kellner-Rogers, M. (1998). The paradox and promise of community. In F. Hesselbein, M. Goldsmith, R. Beckhard, & R. F. Schubert (Eds.), *The community of the future* (pp. 9–18). San Francisco: Jossey-Bass Publishers.

Food Security in Systemic Context

Kirsten Valentine Cadieux[1] and Renata Blumberg[2]

[1]Departments of Sociology and Geography, Society and Environment, University of Minnesota, Minneapolis, MN, USA

[2]Department of Geography, Society and Environment, University of Minnesota, Minneapolis, MN, USA

Synonyms

Anti-hunger work; Emergency food; Food access; Food insecurity; Food justice; Food policy councils; Food sovereignty; Hunger; Right to food; Social and spatial contexts of food insecurity

Introduction

Food security has become an increasingly prominent topic in the last four decades, given escalating concerns related to volatile food prices, climate instability (and related crop unpredictability), and losses of resilience in agro-ecological and institutional food systems related to the restructuring of global agri-food regimes. While the most austere definitions of food security equate being food secure with the availability of some number of calories, more systemic definitions describe food security as being "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" (Hamm and Bellows 2003, p. 37).

As the flagship organization attempting to coordinate international efforts to address hunger, the Food and Agriculture Organization of the United Nations has provided a central forum for discussions of food security, nominally since the inception of the World Food Programme in the early 1960s and the World Food Summit of 1974 (see also "▶ Food Security"). In this debut on the

world stage of anti-hunger politics, food security was defined as the "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices" (FAO 2003). Since that time, and the creation of the Committee on World Food Security as an intergovernmental body for developing and reviewing food security policies, the term's meaning has been heavily contested, challenged, and transformed. The FAO's accepted definition has changed multiple times in response to the complexity confronted in attempts to ensure food security through development (World Bank 2008). Similarly, the scale of assessment and policy has changed, from a focus on global and national scales to the household and individual. Current FAO food security approaches can be reviewed in the regular publication *The State of Food Insecurity in the World*, which has been published jointly almost every year since the 1996 World Food Summit by the Food and Agriculture Organization of the United Nations, the International Fund for Agricultural Development, and the World Food Programme to discuss underlying causes of hunger and malnutrition and monitor progress toward hunger reduction targets established at the 1996 World Food Summit and the 2000 Millennium Summit.

In the wake of the catastrophic failures of food markets to feed people adequately in 2008 and 2011 (partially under the stress of speculation in food commodities), a critical minority of discussions on food security have shifted away from charity-based food aid – and even away from entrepreneurial promotions of market access for agricultural producers – toward consideration of the structural conditions that enable or disrupt food security. Generally, in the postcolonial period, after modern governments were supposed to have vanquished vulnerability to famine, the persistence – and, in fact, rise – of hunger as what the World Food Programme calls "the world's greatest solvable problem" has complicated approaches to food security that focus largely on caloric availability in favor of more systemic approaches (see also "► Food Assistance and International Trade," "► Food Security and International Trade"). This shift toward systemic understanding of food security has not only been from global to more local scales and from caloric sufficiency to *nutritional* sufficiency but also to an explicit emphasis on ensuring food security across time and the idea that food security should not be dependent on emergency food supply. Systemic approaches to food security focus not only on the prevention and amelioration of hunger, but on the challenges to the integrity of food cultures and moral economies posed by the commodification of food.

The following exploration of food security briefly touches on the genealogy of the term's significant usage as well as some of the tensions around food security in agri-food practice and scholarship. It reviews key themes that help illuminate why this term has remained central to anti-hunger work while not entering public discourse in clear ways. It describes challenges involved in assessing what food security would mean and in securing it. It reviews paradigmatic analyses across a continuum of food security approaches. Finally, in the context of contemporary struggles over the legitimacy of different approaches to food security, commodification of food commons, and the right to food, this entry considers the relationship between the related strategies of food security and food sovereignty.

Understanding Food Security

As discussed in a few scenarios below, food security is a commonly understood concept, but one that is often understood in significantly different ways, leading to tensions over approaches to addressing food security and perhaps contributing to common underestimations of the persistence of food insecurity, even in wealthy societies and nations with food surpluses. Food security has been named as a human right in international governance regimes for over 50 years, most notably with the mention of food in the 1948 Declaration of Human Rights, and in other work of the United Nations, particularly via the programs and committees focused on food, described above,

and more recently via the office of the UN Special Rapporteur on the Right to Food.

Despite decades of attention to food security named as such, as well as considerable official consensus about the desirability of including the right to food as an unalienable human right (see also "▶ Right to Food in International Law," "▶ Food Security"), the concept remains a specialized one used mainly in professional circles related to hunger relief and community empowerment. A major report on *Perceptions of the U.S. Food System*, commissioned in 2005 by the Kellogg Foundation, identifies food security as one of a set of key ideas that "act as de facto, and sometimes deliberate and explicit, anchors of communications about food systems" (FrameWorks 2005, p. 61). The report concludes that the idea of "food security" is not well understood, like many paradigms used by specialists to describe food systems most people know well, at least in part, through everyday experience. Based on extensive public discourse research in the USA, the authors conclude that they (p. 6)

> Are confident not only that the phrase is unfamiliar, but that it would strike people as puzzling, since they tend to feel little or no insecurity related to food. . . . In order to understand the idea of food security, in something like the way it is understood by experts, people would need to have more of a sense of the ownership of food production, who decides where and how to distribute food for sale, and how prices are set, for example.

They continue, highlighting how a lack of a conceptual understanding of food security means that (p. 7)

> Members of the public are also unlikely to appreciate the different values messages offered by advocates which relate the food supply to democracy, community empowerment and social justice (related to redlining, for instance). Instead, given their current dominant patterns of thinking, people are likely to associate this term with safety against terrorism, food tampering or shortages – i.e. vivid, concrete and immediate types of danger that can easily be associated with food.

This emphasis on safety and protection is a common US distortion of the idea of "food security" as securing food from intentional or unintentional contamination, at all points along the food chain. The FrameWorks study notes that this orientation toward security in everyday life makes people more likely to engage in defensive ignoring of food system problems than in cooperation to address the systemic problems that contribute to food insecurity.

If an emphasis on securing food against fear of contamination is one source of confusion stemming from the way that the concept of "food security" has been used in some discourses (most notably US government funding sources that provide grants for projects to secure food supply chains), security in the context of financialization has also entered popular vocabulary in the wake of the global financial crisis. Since the "security" as a financial instrument is not what is meant in the phrase "food security," this form of food "security" is not examined here, except to note that such financialization of food appears to be an increasingly problematic threat to systemic food security, as the Institute for Agriculture and Trade Policy primer on Excessive Speculation in Agricultural Commodities explores in some detail.

In addition to further confusing popular understandings of "food security," the successful propagation of both food safety and food financialization discourses underlines the tactical nature of food in political and economic domains: from war to colonialism to the maintenance of class hierarchies (or, in contrast, to the securing of sovereignty), control over means for securing sufficient food is a central necessity of social organization (see also "▶ Land Acquisitions for Food and Fuel," "▶ Food Security and International Trade"). When considering the ethics of misunderstanding food security, it is useful to recognize how much efforts to ensure – as well as define – food security are bound up within state and industry politics as well as geopolitics. As scholars from the social sciences and humanities have pointed out, utopian expectations related to "technocratic fixes" to the problem of food insecurity, such as the Green Revolution (and its contemporary manifestations), often substitute for sustained engagement with the social organization needed to ensure food access (Cullather 2010; Hinrichs 2013).

Systemic Understanding of Food Security

Systemic approaches to food security start with the position that striving for food security requires not only addressing the acute or chronic experience of food insufficiency but also the broader *social* and *spatial* contexts that contribute to being either food insecure or food secure. Historically, food security measures by both national governments and the FAO focused on increasing the availability of food through production increases and grain reserves (see also "► Poverty and Basic Needs"). Increasing food production is often touted as a remedy for starvation and a presumed guarantor of increased food security to be achieved, for example, via GMO use and agrochemical inputs to increase yields. Despite the logic of this approach to problems of acute and chronic food scarcity, though, work such as Amartya Sen's on the causes of famine has shown that the relationship between food supply and food security is not straightforward: "starvation is the characteristic of some people not *having* enough food to eat. It is not the characteristic of there *being* not enough food to eat. While the latter can be a cause of the former, it is but one of many *possible* causes. Whether and how starvation relates to food supply is a matter for factual investigation" (Sen 1981, p. 1).

Such work has only slowly helped complicate public discourse about the importance of power in securing food by revealing that famines have historically occurred in times when food was available and abundant (Sen 1981; Davis 2000). This dynamic continues today, with high rates of hunger persisting (estimates suggest world food insecurity above 10 %) despite contemporary production of more than enough food to feed the world population (even if concerns about future production keeping up with demand appear legitimate from many perspectives). Even in nations that stockpile row crops to buffer national sovereignty in cases of shortage (see also "► Food Assistance and International Trade"), supply-side approaches do not necessarily translate into food security. Emergency grain rations may be caloric without being nutritious, and many people (particularly farmers, for whom yield-increasing technologies have translated into lower prices for their crops) cannot afford even subsidized food. Commodification poses an ongoing challenge to food security because as food, a necessity, becomes a commodity it can only be exchanged for money, thereby creating disadvantages for those with less financial resources.

As Nick Cullather explains in his exploration of the political dimensions of the Green Revolution, "With its 20-million-ton buffer stock of grain to preserve self-sufficiency, India has more undernourished citizens than any other nation, some 213 million without enough to eat. The paradox of plenty continues to underscore the fallacy of addressing hunger exclusively as a supply-side problem" (2010, p. 266). Many of the world's least food secure people (the "bottom billion") are current or recent food producers – in this light, rural to urban migration into the informal urban settlements that are projected to house a quarter of the world's population in the next two decades can be seen in terms of structural ways that food insecurity is related to existing social structures. In addition, a recent FAO report revealed that one third of the food produced globally is wasted or lost each year. This suggests that food shortage (production shortfalls), food poverty (inadequate food availability), and food deprivation (malnutrition) are not causal problems, but are rather manifestations of social and spatial organizations that prevent access to food (DeRose et al. 1998).

Historically, communities organized a variety of mechanisms to ensure secure access to adequate food in times of food scarcity. For example, in preindustrial England, the existence of "common" land ensured that peasants, "commoners," had access to grazing land. With the expansion of capitalism, these "common" social institutions have been dismantled as part of a general process of commodification in which social and economic spheres became increasingly integrated and dominated by market relations, and extractive commercial interests in food production serve to systematically dismantle elaborate institutional supports for food security, such as state

grain supplies and emergency distribution systems (Davis 2000). For small farmers, particularly in poorer countries, commodification of farming inputs, such as seeds, also creates barriers to access.

In the postcolonial period, pressures to intensify commodification of public resources have grown with the increasing dominance of neoliberal policies since the 1980s. Neoliberal policies were pressed upon indebted nation-states by international lenders such as the International Monetary Fund and its structural adjustment programs (McMichael 2011). Neoliberal reforms espoused the efficiency of markets and the benefits of trade liberalization, while condemning the distortions of state interventions; in other words, the market was entrusted to deliver food security by endowing individuals with choices and by breaking down barriers to trade through deregulation and privatization. In practice, the neoliberalization of agricultural and food policies in developing countries encouraged their orientation away from producing staple food crops toward crops for export, leading to increasing dependence upon imports of staple products (see also "▶ Economy of Agriculture and Food," "▶ Multifunctionality of Agriculture and International Trade"). Furthermore, the "free" trade doctrine has privileged Northern, industrialized countries at the expense of the rural poor in developing countries (Schanbacher 2010). Not only has this development strategy failed to deliver upon its promises, it has also led to increased food insecurity, as reliance on world markets exposes importing countries to spikes in food prices. Compelling research has now demonstrated that in response to the global food crisis of 2007–2008, countries with adequate food production, such as Mali, fared much better than countries like the Gambia or the Côte d'Ivoire, which are much more dependent on imports of staple crops (Moseley et al. 2010). However, adequate financial resources and sufficient food production at the national scale still do not guarantee food security for all communities, households, and individuals. In the USA, households headed by woman, as well as African Americans and Latinos/Latinas, experience food insecurity at disproportionately higher levels than the rest of the population (Heldke 2009).

In summary, systemic examinations of food security often focus on the way that institutions, particularly those that many argue are a central part of important social contracts around food, have been eroded or completely eradicated through the commodification of common property regimes, colonial expansion, and more recently, neoliberal erosion of state supports for agricultural and entitlement programs and other social safety nets. These processes do not impact all groups equally; divisions based on gender, race, and class continue to shape food security. In addition, war and other conflicts along with degraded environments all continue to pose significant challenges and obstacles to achieving food security worldwide (see also "▶ Food Security"). As multiple scholars and food security activists have noted, narrow definitions of food security that do not consider these ongoing systematic challenges underestimate the structural dimensions that reproduce conditions of food insecurity.

The Challenge of Systemic Assessment

Even recognizing the importance of the way that social and spatial relations produce food insecurity for some, and food security for others, the dynamics of food security are very difficult to assess. DeRose, Messer, and Millman summarize this challenge in their review *Who's Hungry? And How Do We Know?* "Given the definition of hunger as consumption of a diet inadequate to sustain good health and normal activity, growth, and development, an ideal measure of hunger would involve a comparison between the diet actually consumed and that required for these purposes … however [one] encounters significant difficulties both in measuring or estimating the diet and in defining the requirements against which it should be compared," not least because of the practical difficulty of measuring whether people are getting enough to eat and assessing what is "enough." While food insecurity may have outcomes severe enough to be

measured (such as death rates), standards of what normal or adequate "growth" or development are difficult to define, given the wide range of possibility in healthy growth patterns (DeRose et al. 1998, p. 20).

Regardless of the complexity inherent within the concept of food security, what is often counted in assessments of food security is caloric intake, which is both easy to measure and emphasized by prevailing models of productivism in agri-food systems and allied paradigms of food aid. Although the FAO has developed more complex measurements of food security that attempt to integrate more subjective, qualitative, and also nutritional indicators (and to support food aid regimes that strengthen rather than undermine regional food security), systemic conceptualizations of food security that include social justice and sustainability are even more challenging to assess and evaluate. According to Hamm and Bellows (2003), a systemic approach requires that food security be assessed and evaluated through participatory research, which draws on community-generated knowledge to assess needs and formulate improvement strategies. Holistic measures and approaches that are defined by and for affected communities, in coordination with policy makers and researchers, have the potential to be both adjustable to each individual setting while providing information for cross-referencing between places.

The Food Security Continuum

Systemic action for food security builds beyond short-term emergency assistance to encompass long-term strategies to build a "sustainable food system that maximizes community self-reliance and social justice" (Hamm and Bellows 2003, p. 37). A prime example of a systemic approach across multiple scales and levels of food security is the Food Security Continuum, a framework developed in Canada and used by food policy councils and nonprofit organizations to identify and act upon both the immediate and long-term obstacles to achieving food security. The food policy councils and food security networks that use this continuum framework (e.g., of Alberta and Newfoundland and Labrador) demonstrate their systemic approach by asserting that "food security is dependent on a healthy and sustainable food system" and committing to ensuring food security not only by providing emergency food aid but also by building capacity and adopting "systemic change strategies" in long-term food policy and activism. This three-part system also bears some resemblance to the three paradigms of food security Lisa Heldke laid out in her 2009 critical analysis of the central conceptions of food access: charity, co-responsibility, and rights. The following section outlines this three-pronged approach with illustrative examples and briefly discusses some tensions related to these various dimensions of approaches to food security and their integration in something like a "continuum."

Charity, Emergency, and Short-Term Relief Strategies

By far, the most dominant approach to hunger relief and food insecurity is the charitable distribution of food through food banks, international donations, and other voluntary means (see also "► Food Assistance and International Trade"). Although charity may provide necessary immediate relief, it is problematic because it empowers the giver with a sentimentally satiated sense of *noblesse oblige*, and it signals that "benevolent gifts are just that – gifts – benefactors labor under no obligation to include recipients in decisions about the form gifts should take" (Heldke 2009, p. 216; Poppendieck 1999). In addition, charitable giving by itself does not address the causes of food insecurity. Consequently, although perhaps acutely motivating, charity will always be insufficient without capacity building at multiple scales as well as efforts to work for systemic change.

Nevertheless, some relief initiatives framed as charity might cultivate capacity building in the long term. For example, in the wake of Hurricane Sandy on the east coast of North America in late 2012, millions were left without power, water, heat, and adequate supplies. Tens of thousands were left homeless, but established

disaster-response organizations were unable or too slow to take adequate care of the vast affected area and its population. Occupy Sandy, an outgrowth of Occupy Wall Street, was collaboratively developed to provide warm meals, distribute supplies, and organize volunteers for assistance and cleanup activities. Although explicitly providing charity in the face of acute necessity, like much food security work, this initiative spurred capacity building, as volunteers got involved, as well as a systemic critique of existing state and nongovernmental organizations and their failure to ensure food security.

Capacity Building and Co-responsibility

A focus on capacity building sheds light on the fact that achieving food security relies on creating and sustaining social organizations that respect the integrity of food cultures. Capacity building can occur at a variety of scales, connecting *across* scales as systemic approaches recommend – potentially constructing relational dynamics that evoke the co-responsibility by both individuals and society for food security called for in Heldke's analysis (2009). In the USA, the community food security movement has been instrumental at mobilizing community-scale changes in food policy since the demise of most remaining federal supply management programs in the mid-1990s (between 1994 and 2012, the Community Food Security Coalition provided a focal bridge in the USA between grassroots organizers, nongovernmental organizations, foundations, and government community food security programs as a broad membership-based organization). However, an ongoing problem with capacity-building work related to food security initiatives has been that people who disproportionately experience food insecurity have been "the objects of [food security] work but not the leaders of it" (Slocum 2006, p. 330). In the USA and elsewhere, community food security initiatives risk replicating the institutionalized racism prevalent in the dominant society and the agri-food system by acting with disregard to the power and persistence of racism and white privilege (Slocum 2006), particularly when they are allied with charity models. Not only does this social dynamic encumber food security, it disregards the relationality and webs of dependence that forge the food system, producing its variegated outcomes of food security for some and insecurity for others (Heldke 2009). Privilege and racism are relationally produced, and therefore, confronting them while building capacity for food security requires a cultivation of Heldke's paradigm of co-responsibility between people and places, as well as an antiracist practice that strives to eradicate systems of oppression and exclusion (Slocum 2006). Such critiques bring attention to how initiatives that frame and practice food security have implications for their capacity to generate change.

One of the most successful and well-publicized food security initiatives is the capacity-building system organized at the urban scale by the government of Belo Horizonte, Brazil (Rocha and Lessa 2009). With the goal of providing access to healthy food for all residents, reducing rural to urban migration due to rural impoverishment, and equitable community empowerment, this municipality has conducted a multifaceted program over the past two decades, including a number of subsidized "popular" restaurants that have served up to 5,500 inexpensive and healthy meals a day, nutrition programs in schools, subsidized food baskets of nonperishable goods, support for farmers' markets and alternative modes of distribution, and urban agriculture programs (Rocha and Lessa 2009). At the national scale, Brazil has built on this model to create a National System for Food and Nutrition Security, "SISAN, through which the State, with the participation of organized civil society, will formulate and implement policies, plans, programmes and actions towards ensuring the human right to adequate food" (quoted in Rocha and Lessa 2009, p. 397). This initiative has prompted replication across Latin America and, particularly because of the ways that it navigates the complex and interwoven dynamics of charity, co-responsibility, and rights, has increasingly been taken up as a model for other broad regional efforts (e.g., in Africa) highlighted extensively by the UN Special Rapporteur on the Right to Food, De Schutter, who, since his

appointment in 2008, has been a constant promoter of the systemic links between agroecological food production systems and the right to food.

System Change Strategies and Rights

The basic premise of the food system interventions in Belo Horizonte involves making food a basic right by providing many ways to access food and by promoting food-based livelihoods, confronting some of the limits of the commodification of food by providing some level of food security as a common benefit. By integrating key aspects of food production chains (small-scale rural production livelihoods, rural-urban linkages, food distribution, preparation, and service, both direct and through institutions), this model echoes the aspirations of the Food Security Continuum in strategically using responses to food security needs, charity impulses, and politicized rights discourses to effect systems change across a range of scales.

The much analyzed negotiation between participatory decision making in these examples and the determination to legitimize rights to food regardless of demonstrated worthiness addresses some of the limitations Heldke notes in her critique of rights-based as well as charity paradigms (2009, pp. 219–220). Robust trends suggest that popular attention will continue to focus on food price volatility, projected production shortfalls, food aid, land grabs, and the political economy of who controls the scale and scope of food provisioning and the policy that governs it. Both in wealthy countries, where the control of food has been extensively protected from market forces by policy and cultural norms, and also in poorer countries that have been subject to dramatic price fluctuations and labor regime shifts of contemporary food market regimes, individuals and societies struggle to come to terms with neoliberal efforts to continue to transform collective rights into individual rights and also to face the ramifications of opening to market dynamics the control of food (McMichael 2011). Alternative agri-food scholars point out tensions involved in rhetorics of free trade by nations with protected food economies, as well as in the significant emergence and institutionalization of support for common moral economies that value food security in a range of ways beyond their economic value as commodities (Thompson 1971; Cullather 2010; Hinrichs 2013).

Conclusion: Moral Economies and Ecologies of Food Abundance and Scarcity

As a concept, food security potentially helps denaturalize hunger as inevitable by highlighting the social and spatial organizations that can promote or prevent food security. The concept can also be used to empower and illuminate alternative modes of social organization that help to maintain food security even in situations of scarcity (Thompson 1971; DeRose et al. 1998; Cullather 2010). A systemic approach to food security requires looking beyond food procurement to consider the food system holistically, in order to enact "sustainable community food production, processing, and availability" (Hamm and Bellows 2003, p. 42).

Various conceptualizations have been proposed to guide systemic thinking about the food system and to provide a pathway for change. Since the 1990s, food sovereignty, defined as "the RIGHT of peoples, countries, and state unions to define their agricultural and food policy without the 'dumping' of agricultural commodities into foreign countries" (Schanbacher 2010, p. 54), has emerged as a powerful conceptualization to counter the dominance of limited, economistic, and paternalistic understandings of food security at the global scale. The growing global movement for food sovereignty prioritizes the values of sustainability; attention to social and power relations between producers and consumers, particularly at local and regional scales; and the rights of small-scale and indigenous farmers and peasants, especially to access productive resources. The focus on rights and entitlements differentiates food sovereignty from even the most progressive articulations of food security (and food justice), which focus centrally on

ensuring food access. In fact, food sovereignty was articulated, in part, as a critique of dominant narratives of food security, especially those utilized by the World Bank and other international institutions.

Some of its proponents have argued that food sovereignty promises a more radical conceptualization in framing food system change and therefore holds the greatest potential in unifying movements and achieving systemic changes to the food system. Systemic approaches toward food security (Hamm and Bellows 2003) are not incompatible with food sovereignty, suggesting that both could be used in a complementary manner as they articulate with systemic contexts, especially as agroecological methods are gaining respect as legitimate (if not always profitable or large scale) means for successfully ensuring global food security (see also the International Assessment of Agricultural Knowledge, Science, and Technology for Development).

Summary

This exploration of food security briefly touches on the genealogy of the term's significant usage, as well as some of the tensions around food security in agri-food practice and scholarship. It reviews key themes that help illuminate why this term has remained so central to anti-hunger work while not entering public discourse in clear ways. It describes challenges involved in assessing what food security would mean and in securing it. It reviews paradigmatic analyses across a continuum of food security approaches. Finally, in the context of contemporary struggles over the legitimacy of different approaches to food security, commodification of food commons, and the right to food, this entry considers the relationship between the related strategies of food security and food sovereignty.

Scholars have demonstrated that food security has not been a problem of food supply, but of access. Multiple processes contribute to food insecurity, such as commodification of food commons and the dismantling of social institutions that supported food security, as well as social exclusion, marginalization, and alienation from foodland. Considerable scholarly effort has helped critically support work on food security, encouraging efforts to secure food access to move beyond the provision of emergency rations to address the systemic processes that prevent food security by building capacity through social institutions, understanding the relational processes that confer values to food, and negotiating across the many different cultures represented across any food system.

Cross-References

- ▶ Economy of Agriculture and Food
- ▶ Food Assistance and International Trade
- ▶ Food Security and International Trade
- ▶ Land Acquisitions for Food and Fuel
- ▶ Multifunctionality of Agriculture and International Trade
- ▶ Poverty and Basic Needs
- ▶ Right to Food in International Law

References

Cullather, N. (2010). *The Hungry World: America's Cold War battle against Poverty in Asia*. Cambridge: Harvard University Press.

Davis, M. (2000). *Late Victorian Holocausts: El Niño Famines and the making of the Third World*. London: Verso.

DeRose, L., Messer, E., & Millman, S. (1998). *Who's hungry? And how do we know?* Tokyo: United Nations University Press.

FAO. (2003). *Trade reforms and food security: Conceptualizing the linkages*. Rome: Commodity Policy and Projections Service, Commodities and Trade Division. http://www.fao.org/docrep/005/y4671e/y4671e00.htm

FrameWorks. (2005). *Perceptions of the U.S. food system*, commissioned by the Kellogg Foundation. http://www.wkkf.org/~/media/115A21593F2548C396AB4A5ABD5E9474/44172.PDF

Hamm, M. W., & Bellows, A. C. (2003). Community food security and nutrition educators. *Journal of Nutrition Education and Behavior, 35*(1), 37–43.

Heldke, L. (2009). Food security: Three conceptions of access—Charity, rights, and coresponsibility, Ch. 14. In L. Walter & L. E. Phoenix (Eds.), *Critical food issues: Problems and state of the art solutions*. Santa Barbara: Praeger.

Hinrichs, C. C. (2013). Regionalizing food security? Imperatives, intersections and contestations in a post-9/11 world. *Journal of Rural Studies, 29*, 7–18. http://www.sciencedirect.com/science/article/pii/S0743016712000782.

McMichael, P. (2011). *Development and social change: A global perspective* (5th ed.). Thousand Oaks: Sage.

Moseley, W. G., Carney, J., & Becker, L. (2010). Neoliberal policy, rural livelihoods, and urban food security in West Africa: A comparative study of The Gambia, Côte d'Ivoire, and Mali. *Proceedings of the National Academy of Sciences, 107*(13), 5774–5779. http://www.pnas.org/content/107/13/5774.full.pdf+html.

Poppendieck, J. (1999). *Sweet charity? Emergency food and the end of entitlement*. New York: Penguin.

Rocha, C., & Lessa, I. (2009). Urban governance for food security: The alternative food system in Belo Horizonte, Brazil. *International Planning Studies, 14*(4), 389–400.

Schanbacher, W. D. (2010). *The politics of food: The global conflict between food security and food sovereignty*. ABC-CLIO. Santa Barbara: CA.

Sen, A. (1981). *Poverty and famines: An essay on entitlements and deprivation*. Oxford: Oxford University Press.

Slocum, R. (2006). Whiteness, space and alternative food practice. *Geoforum 38*(2): 327–349.

Thompson, E. P. (1971). The moral economy of the english crowd in the 18th century. *Past & Present, 50*, 76–136.

World Bank. (2008). *World Bank development report 2008: Agriculture for development*. http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327599046334/WDR_00_book.pdf (See also the 2009 *Journal of Peasant Studies* special issue 36(3) about this report).

Food Standards

Tsunehiro Otsuki[1] and Keiichiro Honda[2]
[1]Osaka School of International Public Policy, Osaka University, Toyonaka, Osaka, Japan
[2]Kumamoto Prefectural University, Higashiku, Kumamoto, Japan

Synonyms

Exports; Food safety regulations; Global food system; International trade; Poverty alleviation; Sanitary; phytosanitary standards; Technical regulations

Introduction

Food safety standards are a part of technical regulations categorized as sanitary and phytosanitary (SPS) regulations that principally aim to ensure food safety of consumers and plant and animal health (Josling et al. 2004). Due to their potential adverse effect on international trade, however, the growing attention has recently been paid to food safety standards and other technical regulations as trade has been substantially liberalized through tariff reduction. Inherent difficulty in reaching a desirable policy solution regarding food safety standards lies in the fact that there are various losses and benefits associated with their application. Because food safety standards are designed to achieve the level of safety that is acceptable to the society, reduction or elimination of food safety standards to advance trade liberalization could conflict with this social objective. On the other hand, producers, particularly those in developing countries, may suffer from the additional production costs due to their compliance with food safety standards that are normally more stringent in developed country markets.

A quantitative assessment of the losses and benefits associated with various food safety standards would assist policy makers to determine appropriate levels of regulation. This justifies coordinated effort between social and natural science because food safety standards, economic outcomes, and consumer's safety are closely interconnected. Effort to synthesize the findings in the related academic fields such as economics, and food and biological science, would considerably benefit policy decisions.

This entry attempts to provide an integrated picture in regard to the economic and scientific aspects of food safety standards by drawing on studies on health risks of regulated chemical and microbiological elements and the impact of food safety standards on trade and producer's performance.

The subsequent section provides definitions and background for food safety standards. Section "The Economic Analyses of Food Safety Standards on International Trade" discusses the

economic impact of food safety standards on trade and producer's performance. Section "Health Consequences of Food Safety Standards and Consumer's Perception" discusses the impact of food safety standards (or food safety risks) on human health and the consumer's perception of foods safety risks. Section "Summary" summarizes the discussion and provides policy recommendations.

Food Safety Standards and Their Role

Food safety generally refers to the contents of various chemical and microbiological elements in food (Burlingame and Pineiro 2007). Food safety standards may be categorized into product standards that specify set of safety characteristics and their bounds of the food in the final form and process standards that define how the food should be produced. Product standards are applied typically in the form of numerical standards such as maximum residue limits. Process standards are sometimes more efficient than product standards in reducing food safety risks as appropriate production process can reduce incidence of contamination to microbial elements (Josling et al. 2004). Food safety standards also correct the information asymmetries about product attributes associated with food safety between producers and consumers as consumers are often not fully informed about product attributes.

The World Trade Organization (WTO) Agreements on SPS and technical barriers to trade (TBT) established in 1995 make sure that the member countries set technical regulations in line with the international standards, thereby preventing the technical regulations of member countries from constituting nontariff barriers (NTB) to trade. Major international standard setting bodies include the joint Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO) Codex Alimentarius Commission (Codex) for food safety and plant health and the World Organization for Animal Health (OIE) for food safety and animal health. The SPS and TBT agreements recognize the importance of food safety standards as effective regulatory instruments to protect food-related safety, but require the regulating countries to submit scientific evidence to justify the regulations if they are more stringent than the international standards where exist.

The Economic Analyses of Food Safety Standards on International Trade

The Country-Level Evidence of the Effect of Food Safety Standards

Trade impact of food safety standards is one of the essential pieces of information for policy decisions. Since the stringency of food safety standards tends to be positively correlated with the stage of economic development as shown in Wilson and Otsuki (2003), developing countries tend to have difficulties in exporting to developed countries. Moreover, high dependency of developing country's income and employment on food production implies the high potential loss in food export from developing countries when they are required to comply with the level of food safety standards of developed countries. If trade loss is small, then stringent standards may be permitted. If trade loss is large enough, however, the levels of standards should be set with a particular care.

Otsuki et al. (2001a) analyzed the effect of the EU aflatoxin standards on imports of groundnuts from 15 major groundnut-exporting African countries. The aim of the study was to investigate the impact of the European Union's harmonization of maximum aflatoxin limit in imported foodstuffs in 2002. The limit was set at a very stringent level compared to the Codex's international standard, and it triggered serious concerns among exporters of food products. For example, a representative of the Gambia claimed that "the proposed standard would effectively restrict entry of the Gambia's groundnuts and essentially the groundnuts from producer countries in the European world to the EU" (World Trade Organization 1998). Otsuki et al. (2001a) aimed to examine whether a tightened food safety standard really reduced groundnut export from developing countries. Otsuki et al. (2001b) found the

trade-restricting effect holds for an expanded set of product – cereals, dried fruits, and nuts – in the same set of importing and exporting countries.

Xiong and Beghin (2012) reexamined the analysis of Otsuki et al. (2001a) by a theory-oriented gravity model. This study reported an insignificant net effect of EU aflatoxin standards on African groundnut exports. Importantly, their model allowed to decompose the supply and demand effects of standards, thereby accounting for the result as an interaction of these two effects; a demand-enhancing and trade-cost effects of standards may have been cancelled. Standards may attract demand by enhancing transmission of information on product characteristics and improving product safety and quality whereas constraining export supply by increasing compliance costs. Xiong and Beghin (2013) also reported similar results regarding the counteracting demand and supply effects of food safety standards for animal and plant products as a whole.

Wilson et al. (2003) found a negative effect of residue limit standards on tetracycline, as an antibiotic veterinary drug, on beef exports from the major beef-exporting countries. Wilson and Otsuki (2003) also found a negative effect of residue limit standards on chlorpyrifos, as a pesticide, on banana exports from the major banana-exporting countries. Anders and Caswell (2009) studied the impact of US HACCP standards on food trade from the top 37 suppliers of seafood using the standard gravity model. They found HACCP impeded exports from developing country exporters, but trade promoting for developed countries.

Disdier et al. (2008) examined the effect of TBT and SPS on agricultural and food imports from the OECD countries. They also compared the effect of a 1 % increase in the tariff equivalent of SPS/TBT on trade value between the cases of developing and OECD countries as exporters and found that tightening of SPS/TBT could lead to a moderate decrease (0. 14 %) in trade.

Drogué and DeMaria (2012) studied the impact of pesticide residue limits of importing countries on apple and pear exports worldwide. They found that the more similar are the regulations of importing and exporting countries, the greater the trade flows. Chile, South Africa, and Brazil (although insignificant) follow this pattern (trade promoting). Winchester et al. (2012) estimated the impact of pesticide residue standards on all plant products and found that the heterogeneity of the regulations can deter the trade of both developing and developed countries. Winchester et al. (2012) analyze the effect of bilaterally differing food safety standards on trade of all plant products.

The Microlevel Evidence of the Impact of Food Safety Standards

Capacity constraints that producers face in complying with food safety standards, typically in developed countries, may be significant as several case studies have descriptively demonstrated (see, e.g., Wilson and Abiola (2003) and Aloui and Kenny (2005)). Among quantitative analyses, Ragasa et al. (2011) investigated the effect of firm's compliance to food safety regulations using the survey data from seafood production firms in the Philippines. They estimated incrimination of production cost due to food safety standards is over 100 %. Maertens and Swinnen (2009) and Maertens et al. (2011) demonstrated that stringent food safety standards on fresh and processed fruits and vegetable in Senegal can rather increase developing country export to developed countries through increased employment of rural poor farmers in the export sector aiming at high-standard market.

The World Bank's TBT Survey Database of 17 developing countries on the firms' response to various technical barriers in their domestic and export markets revealed that for approximately 70 % of the surveyed developing country firms, the cost of testing and certification prevented them from exporting to major developed country markets. The firms tried to comply with the technical requirements by expanding their plant or equipment, redesigning products, and hiring labor for production/testing. The actual total compliance cost is, on average, 4.4 % of the firm's production cost – not prohibitively high, but it still presses down the firm's export. Maskus et al. (2013) quantified the amount of fixed costs

of compliance with various technical regulations and the degree of additional firm-level variable costs due to the technical regulations using the TBT Database. Chen et al. (2008) estimated firm-level export function of intensive and extensive margins using the same database. They identified the factors to promote the amount of export in a firm's total sales (intensive margin) and the number of export markets and products to be exported (extensive margin). Compliance with quality standards is found to increase the export amount as well as the number of export markets and products to be exported. On the contrary, standard certification procedures are found to reduce the number of export markets and products to be exported.

Health Consequences of Food Safety Standards and Consumer's Perception

Hazards and Health Relationship

Scientific research on relationships between an intake of regulated food safety hazards and health consequences is inconclusive in many cases. Based on scientific research, Etzel (2006) described potential effects of mycotoxins on child health, and they vary from vomiting to severe disease such as liver cancer. Sherif et al. (2009) provided a comprehensive survey on the relationship between a mycotoxins intake and child health, particularly in developing countries. They synopsized the major potential adverse health effect as poor growth and development and suppressed immune as well as cancer. However, they noted that risk assessment is complicated and is constrained by lack of data.

Otsuki et al. (2001b) compared the economic gains and loss of human lives from relaxing aflatoxin standards in the EU, based on JECFA is analysis of potential health effect of aflatoxin for two hypothetical levels (10 parts per billion (ppb) and 20 ppb).[1]

Otsuki et al. (2001b) calculated the cancer death risks associated with different regulatory scenarios they examined – the new harmonized EU standard (2 ppb) and a Codex standard (9 ppb) in terms of an Aflatoxin B1 equivalent. Approximately 0.2 cancer deaths will be saved each year by tightening total aflatoxin standards by one ppb, if a linear relationship is assumed between cancer death risk and aflatoxin intake. Assuming that 60 % of all aflatoxins are in fact Aflatoxin B1, by adopting the average of the lower (50 ppb) and upper. For groundnuts, other nuts, dried and preserved fruits, and cereals for direct consumption, the difference between the codx and the new EU standards is 7 ppb. Provided that these foods fully account for the aflatoxin intake in the JECFA's scenario, this implies that the EU standard will result in 2.3 less cancer deaths per year than when the baseline level is taken.

This finding does not necessarily weaken the importance of food safety standards, but rather stresses the importance of consideration of both economic gains and effects on human health in setting standards. It also motivates the need for interdisciplinary research that directly combines economic and scientific analysis associated with a specific policy. It is also important that scientific research should update their findings with a more modern and advanced assessment methodologies as well as an increased availability of data to be used for the assessment.

Consumer's Perception of Food Safety Risks

Consumers play an important role in setting food safety standards because consumer's demand for safety would be reflected in actual regulations. Consumer's demand for food safety may be affected by publicly available information on the causality as well as subjective perception of food safety risks. Consumer's demand for food

[1] JECFA estimated that implementing a 10 ppb total aflatoxin standard leads to a risk of 39 cancer deaths per year per billion people, with an uncertainty range between 7 and 164 people. In comparison, a 20 ppb standard yields a risk of 41 cancers per year per billion people with an uncertainty range between 8 and 173 cancer deaths. This implies that reducing the standard from 20 to 10 ppb in countries where percentage of carriers of hepatitis B1 is around 1 % (e.g., members of the European community) would result in a drop in the population risk of approximately two cancer deaths a year per billion people.

safety does not necessarily reflect the fact that scientific risk assessment has found because of the presence of subjective perception of risks. This subjective perception of risks also involves unknown future risks. Risk aversion of consumers against unknown future risks leads to precautionarity. Therefore, the targeted level of food safety will depend on whether the level should be based purely on the scientific facts or on consumer's perception of risks. This deviation tends to be greater when consumers are not precisely informed of the scientific facts. The health effect of food safety hazards may vary across individuals, locality, and countries (Sherif et al. 2009). Reaction to food safety hazards also may be heterogeneous.

Hypothetical valuation of consumer's willingness to pay for food quality and safety tends to yield a large estimate of price premium due to the so-called hypothetical bias (Caswell and Joseph 2007). This consumer's tendency may at least partly account for the demand for country-level food safety regulations that are far more stringent than the international standards. Furthermore, lack of information on food safety may reduce credibility of safety of imported products. Information on food quality and safety characteristics also plays an important role in affecting consumer's behavior (Caswell and Joseph 2007). In order to avoid excessive demand for food safety, it would be important to provide information on both product characteristics and their effects on human health.

Summary

The studies on the relationship between food safety standards and food trade generally find trade-off between them. However, some of them also find a demand-enhancing effect of tightened standards, implying a potential payoff to the suppliers from complying with the standards. The microlevel studies also suggest the existence of both the trade-cost effects and the demand-enhancing effects. Therefore, it is important to promote compliance of the suppliers to a certain level of food safety standards while avoiding to impose unnecessarily stringent standards at the same time. Thus, it is important that the international standards are carefully set at the appropriate level which ensures a sufficient level of human, animal, and plant health without causing a significant loss of international trade and profits of suppliers. Such standards should be revised periodically reflecting an improved economic and scientific research. Also, it is important for international standards to cover a broader set of products and food safety hazards.

It is also important to provide consumers with information on food safety and quality characteristics in order for them to make an informed decision by providing information on product characteristics through labeling and information on the scientific fact on the health effects of food safety hazards. Thus, we can avoid departure of the standards based on risk assessment from those demanded by consumers, thereby achieving an efficient function of agricultural and food market.

Cross-References

- Food Additives and International Trade
- Food Risks
- Informed Food choice
- WTO Dispute Settlement and Food and Agricultural Trade

References

Aloui, O., & Kenny, L. (2005). *The cost of compliance with SPS standards for Moroccan exports: A case study* (Agriculture and rural development discussion paper No.47843, pp. 1–33). Washington, DC: World Bank.

Anders, S., & Caswell, J. A. (2009). Standards as barriers versus standards as catalysts: Assessing the impact of HACCP implementation on U.S. Seafood imports. *American Journal of Agricultural Economics, 91*(2), 310–321.

Burlingame, B., & Pineiro, M. (2007). The essential balance: Risks and benefits in food safety and quality. *Journal of Food Composition and Analysis, 20*(3–4), 139–146.

Caswell, J. A., & Joseph, S. (2007). *Consumer demand for quality: Major determinant for agricultural and food trade in the future?* (Department of resource

economics working paper, no. 2007-4). Amherst: University of Massachusetts.
Chen, M., Otsuki, T., & Wilson, J. (2008). Standards and export decisions: Firm-level evidence from developing countries. *Journal of International Trade and Economic Development, 17*(4), 501–523.
Disdier, A. C., Fontagné, L., & Mimouni, M. (2008). The impact of regulations on agricultural trade: Evidence from the SPS and TBT. *American Journal of Agricultural Economics, 90*(2), 336–350.
Drogué, S., & DeMaria, F. (2012). Pesticides residues and trade: The apple of discord? *Food Policy, 37*(6), 641–649.
Etzel, R.A. (2006). "What the primary care pediatrician should know about syndromes associated with exposures th Mycotoxins," Current Problems in Pediatric and Adolescent Health Care 36 (8), 282–305.
Josling, T., Roberts, D., & Orden, D. (2004). *Food regulation and trade: Toward a safe and open global food system*. Washington, DC: Institute for International Economic.
Maertens, M., & Swinnen, J. F. M. (2009). Trade, standards, and poverty: Evidence from Senegal. *World Development, 37*(1), 161–178.
Maertens, M., Colen, L., & Swinnen, J. F. M. (2011). Globalisation and poverty in Senegal: A worst case scenario? *European Review of Agricultural Economics, 38*(1), 31–54.
Maskus, K. E., Otsuki, T., & Wilson, J. S. (2013). Do foreign product standards matter? Impacts on costs for developing country exporters. *Asia Pacific Journal of Accounting and Economics, 20*(1), 37–57.
Otsuki, T., Wilson, J. S., & Sewadeh, M. (2001a). What price precaution? European harmonization of afflation regulations and African groundnut exports. *European Review of Agricultural Economics, 28*(2), 263–283.
Otsuki, T., Wilson, J. S., & Sewadeh, M. (2001b). Saving two in a billion: Quantifying the trade effect of European food safety standards on African exports. *Food Policy, 26*(5), 495–514.
Ragasa, C., Thornsbury, S., & Joshi, S. (2011). Are food certification costs misestimated? Exporter-perspective on the European standard. *Journal of Agricultural Economics, 62*(3), 669–689.
Sherif, O., Salama, E. E., & Abdel-Wahhab, M. A. (2009). Mycotoxins and child health: The need for health risk assessment. *International Journal of Hygiene and Environmental Health, 212*(4), 347–368.
Wilson, J. S., & Abiola, V. O. (2003). *Standards and global trade: A voice for Africa*. Washington, DC: The World Bank.
Wilson, J. S., & Otsuki, T. (2003). Food safety and trade: Winners and losers in a non-harmonized world. *Journal of Economic Integration, 18*(2), 266–287.
Wilson, J. S., Otsuki, T., & Majumdar, B. (2003). Balancing food safety and risk: Do drug residue limits affect international trade in beef? *Journal of International Trade and Economic Development, 12*(4), 377–402.
Winchester, N., Rau, M. L., Goetz, C., Larue, B., Otsuki, T., Shutes, K., Wieck, C., Burnquist, H. L., Souza, M. J. P., & Faria, R. N. (2012). The impact of regulatory heterogeneity on agri-food trade. *The World Economy, 35*(8), 973–993.
World Trade Organization. (WTO). (1998). *The committee on sanitary and phytosanitary measures (Submission by the Gambia)* (G/SPS/GEN/50). Geneva: WTO.
Xiong, B., & Beghin, J. (2012). Does European aflatoxin regulation hurt groundnut exporters from Africa? *European Review of Agricultural Economics, 39*(4), 589–609.
Xiong, B., & Beghin, J. (2013). *Disentangling demand-enhancing and trade-cost effects of maximum residue regulations* (Working Paper 13-WP 544, pp. 1–35). Ames: Iowa State University, Department of Economics.

Food Waste

Erica Giorda
Sociology, Michigan State University,
East Lansing, MI, USA

Introduction

Food spoils: for centuries the fight against food decay has been central to the survival of human civilizations. Protected storage facilities, brining, freezing, drying, refrigerating, and more recently canning and adding chemical preservatives: by all means humans have tried, and to a point succeeded, to preserve food and keep it from spoiling. Yet, in the twenty-first century, the world is divided between countries that are still struggling to keep their food reserves safe, where populations struggle with hunger, and countries that overproduce and throw away up to 50 % of their agricultural production and whose populations struggle with overnutrition.

Current research on food waste, while growing, is still in a developing phase. A significant amount of applied research on the subject is targeted to the food industry, with the aim to reduce wastage during the production phases and control for damaging compounds in outgoing waste to limit pollution. In the last 10 years,

different projects and a worldwide round of new surveys helped creating a more detailed picture of how food goes wasted worldwide, but data are still fragmentary and likely to underestimate the size of the problem (FAO 2011; USDA 2009). A larger project on human waste (the WRAP project in GB) is now devoting more interest to food waste in particular; the University of Bologna has a large applied project on food waste reduction (Last Minute Market), but others (the Garbology project) just ended. At the same time numerous grassroots organizations and individual activists are engaging the subject. These last initiatives, as much as the bulk of the institutional programs, are mostly devoted to tackle household waste through educational tools (website, recipes, blogs).

Even if wasting food is occasionally used as a means to show power and wealth, there are also many well-ingrained cultural norms that strongly discourage it. In the nineteenth century, avoiding food waste was still a clear concern even for well-heeled urban households in the industrialized world. Household management manuals from the late 1800s offer suggestions to better manage iceboxes and home storage and recipes to make the most of leftovers (Strasser 1999). Industrialized countries were still fighting hunger in the twentieth century: the Great Depression after WWI, the famine in Europe during and after WWII, and even minimal rationing in the United States in the same period encouraged households to manage their food supply tightly. Governments on both sides of the ocean issued pamphlets and educational materials to help households (or, to be precise, the ladies of the houses) to be thrifty and avoid wasting food. Nowadays the many websites and pamphlets and books devoted to the same goal repeat very similar suggestions, yet household food waste adds up to about 100 Kg per person a year in North America, Europe, and Oceania. In these same countries, food losses throughout the food production chain total about 300 Kg per person each year: about ½ of it is discarded before even reaching the processing plants (FAO 2011).

Attitudes surrounding food waste tend to be idiosyncratic: wasting food is generally frowned upon, yet the intertwined and frequently contradictory moral, economic, social, and institutional pulls that spur wasting make it difficult to estimate what could be an achievable level of waste and how to effectively reach it.

To understand food waste, it is important to look at different factors. The first part of this entry provides an analysis of the food distribution chain aimed at understanding at what stages waste occurs and what are the main causes for it. Subsequently, Boltanski and Thévenot's (2006) work on convention theory helps to highlight the various kinds of solution proposed to deal with food waste at different points of the chain in relation with the different kinds of moral values attached to waste within different polities. Within this framework, the social and environmental impacts of food waste are analyzed, and recent lines of research and public engagement are discussed.

Accounting for Food Waste?

Tons of edible food go wasted, and tons of food scraps head to landfills every day, posing challenges to those who handle them, increasing environmental pollution, and adding costs throughout the food production chain. At the same time, millions of people suffer from hunger: this striking paradox makes the issue of food waste central to the quest for global sustainability.

In a 2010 report, the European Commission (2010, p. 24) defines food waste as raw or cooked food materials that do not reach the final consumer or are discarded without being consumed, at anytime between farm and fork. The US Department of Agriculture (2009, p. 1) distinguishes between "three general types of losses: (1) loss from primary (e.g., farm) to retail weight; (2) loss at the retail level; (3) loss at the consumer level." These definitions connect food waste to the global food production and distribution chain, whose complexity makes the food waste problem daunting. Additional elements further compound the picture, because by wasting food we also deplete other resources. First, water waste and pollution are a crucial side effect of food waste and are present at every level of the food chain

(Lundqvist et al. 2008). Second, as food production is resource intensive, wasting food increases nonfood waste collateral to food production: fertilizer runoff, pollution caused by CAFOs and fish farms, the methane generated by food rotting in landfills, etc. Finally, we should account for a significant energy loss: about 230 trillion BTU a year in the United States alone are used to produce the amount of food that ends up in the landfill (Cuéllar and Webber 2010).

When and Where Is Food Wasted?

Food is wasted differently in different areas of the world: the most striking contrast is due to the fact that the industrialized world wastes little during the processing phases and a lot at the end of the chain (consumption). In less industrialized, developing, and underdeveloped countries, food waste is minimal at the consumption level and high during processing (FAO 2011). In these areas, faulty storage and antiquated processing methods appear to be the most relevant cause of food waste, combined with crumbling infrastructures, improper weather protection, and lack of investments in this sector (Smil 2004). Detailed research on food waste in the nonindustrialized world is still minimal, and while the food distribution chain and the distribution of waste in the industrialized world are better researched, most data available are still rough estimates (FAO 2011).

At each link in the supply chain, there are different elements that contribute to create waste. Exogenous and endogenous aspects affect waste throughout the production phase. Exogenous waste is created by non-preventable events: crop damage caused by weather or pests, animal illnesses, and so on. These are especially significant in the nonindustrialized world, but they can of course occur everywhere: global climate change is expected to exacerbate these issues. Endogenous waste is caused by the way the globalized food distribution system is set up. Interestingly, the amounts of food losses and/or wastage at the production level are not significantly different throughout the world, but the causes for loss and waste are very different.

Industrialized agricultural production is set up for *over*production because only the best quality produce will reach the market, and wholesalers and distributors need to have an array of producers ready to deliver at any given time (Stuart 2009). Produce that does not meet the aesthetic standards set up by either the buyers or national and international institutions will not be harvested, or it will be thrown back in the fields after harvest. For example, until 2011 the EU prohibited the sale of irregularly shaped, yet safe to eat, vegetables. Only in few cases soup kitchens and food pantries are able to distribute small parts of this lost harvest. On the distribution front, farmers who are not able to deliver their produce at the time required by the buyer risk not to be able to sell their crop at all, while overproduction in some areas might flood the market making it too expensive for some farmers to even harvest. Current estimates point out that about 50 % of farm production is discarded in industrialized countries before reaching the final consumer (FAO 2011).

Another wasteful sector is the fishing industry: in many cases bycatch fish cannot be brought to shore and is put back in the water even if dead; in the farm animals sector, intensive feeding operations expect a fixed degree of mortality despite the widespread use of antibiotics (Lundqvist et al. 2008; FAO 2011). Transportation is another link of the chain where both external and institutional factors determine waste: the presence of a proper infrastructure reduces waste and facilitates the movement of food. In countries where the infrastructure is poor, even durable food gets wasted in transport, and nondurable foods cannot be shipped at all. Significant amounts of food spoil during transportation in warm areas where refrigeration is not available and packaging is primitive (FAO 2011).

In the production phase, food waste, from peels to carcasses, is costly to dispose of and sometimes dangerous, but food processors have all the incentives to minimize waste. Industrialized meat packing plants, for example, increase the amount of meat that is not detached form the bones: hygienically safe methods to reduce waste have been developed, but – as the 2012 public

outrage against "pink slime" demonstrated – consumers are not necessarily keen to buy the final product.

At the marketing stage, in the industrialized world, the amount of food waste varies greatly with respect to the different categories (canned, frozen, packaged, fresh, dairy, etc.) of food sold. Fresh produce is the most perishable item on the shelves, followed by dairy products. Moreover, for marketing reasons, stores are compelled to keep the shelves overstocked, which promotes waste. Bigger chains as Walmart have developed very efficient ways to manage stocks and move the burden of disposing waste either on producers or consumers: they demand producers to manage their shelf space and keep it stocked and up to date and use price rebates to lure consumers into buying more than they need (Stuart 2009).

Food safety and hygienic standards and predetermined portions affect the amount of food wasted by institutions (schools, hospitals, prisons, etc.), where recycling and reuse of leftovers is impossible, portions are not necessarily geared to the needs of the recipients, and standardized menus leave little possibility of choice. The larger portions that proliferated in the last 15 years in the fast food industry have a similar effect.

Finally, about 30 % of the food households acquire goes wasted in the industrial world (WRAP – Waste & Resources Action Programme 2007; USDA 2009; FAO 2011). The large amount of food waste at this level has multiple causes. First and foremost, as long as food is cheap and provisions are abundant, households do not have huge incentives to waste less. Consumers are also confused by "best-before" and "sell-by" dates, which do not necessarily imply food is not edible after that date, but are frequently perceived as so. USDA (and other agencies) food safety tools for households support this tendency, as they encourage throwing away any food item that looks suspicious. Lack of knowledge on how to cook or reuse leftovers, the presence of kids in the household, lack of organization, and limited time to spend in the kitchen are also likely to increase food waste (WRAP 2007).

The Moral Economies of Food Waste

In a world where millions face hunger, wasting almost half of the food we produce looks ominous: it hurts human decency that people are starving while so much food goes wasted. This striking contrast drives much of the efforts of institution and activists alike, but solutions that only look at making the distribution chain more efficient or try to educate consumers to be thriftier might miss the point. While it is the contemporary presence of hunger and waste that mostly fuels moral calls (the infamous "bread lines knee deep in wheat" of Great Depression memory), reducing waste does not per se affect hunger and, in some cases, might even exacerbate it for people who rely on discarded food for their survival (Stuart 2009).

Boltanski and Thévenot's (1991) work on justifications outlines several conflicting sets of values (moral worlds) that govern behavior in contemporary western societies. Boltanski and Thévenot outline six "worlds," governed by distinct values: the Domestic world, the Civic world, the Industrial world, the Market world, the Inspired world, and the world of Fame. By analyzing how worth is attributed in the different contexts, they argue that conflicts arise when certain actions are evaluated according to principles pertaining to different worlds or when the set of values that justifies actions in one world is forced upon actions or things pertaining to another world. In our case, thriftiness would be a Domestic virtue that is frequently emphasized by food waste activists, but it has no value in the world of Fame, where conspicuous consumption is a way to acquire status, and it contradicts the goals and values of the Market world, where increasing consumers' spending is a crucial goal. This perspective helps in highlighting some of the contradictions that affect food waste management and reduction in the industrialized world.

Conflicting Values Surrounding Food Waste

Value conflicts around food production, consumption, and waste are especially evident in the industrialized countries, as they stem out the

industrial agricultural processes and the commercial practices of the food industry at large. Revisiting the food chain within the framework of convention theory highlights the tensions within the different actors and sets of values governing the various links.

Most of the industrial food production chain is governed by the values of the Industrial world: here the higher common principle is efficiency, and "the ordering of the industrial world is based on the *efficiency* of beings, their *performance*, their *productivity* and the capacity to ensure *normal operations* and to respond usefully to *needs*" (Boltanski and Thévenot 1991, p. 204). The way waste is produced and treated at the production stages of the chain has mostly to do with efficiency and productivity: to stay on the safe side and secure enough production to cover possible exogenous losses, farmers tend to plant more. Quality standards – a measure of value in the Industrial world – influence how much of the crop can reach the market, and safety issues and the timing of subsequent crops discourage or prohibit gleaning. Farmers act in order to maximize their outcome and control costs: when a crop is overabundant, or partly damaged, it is cheaper to let it rot in the field than harvest it.

The processing sector has been so far the most effective and motivated to tackle waste, as at this stage it is difficult to pass it over other links in the chain and the economic advantages of wasting less and increased productivity are evident and valuable in the Industrial context. Upgrades and fine-tuning of the production cycles increase efficiency and lead to significant waste reduction, while repurposing scraps (peels, juices, meat scraps, etc.) as raw materials for pet products or nutraceuticals (Zall 2004) increases productivity and creates additional revenues. Waste management at this stage seems not to be afflicted by conflicting values, and it works well.

An interesting tension is visible at the marketing and distribution levels: appealing to Civic values of solidarity and responsibility, since the 1990s, producers, wholesalers, and retailers have relied on food banks to manage surpluses. By diverting damaged or nearly expired products to food banks and soup kitchens, wholesalers and retailers do not only reduce their landfill bills but can obtain tax rebates and positive news coverage for free. Food banks are now a highly efficient industry in the United States and are gaining popularity in the EU too. In recent years more agricultural producers are also using this channel to dispose extra production or lesser quality produce. This solution fosters solidarity and provides an outlet for food otherwise destined to the landfill and contemporarily exacerbates the stigma against the poor as it delivers second-class food to those who do not have access to the market. It has been argued that it might also reduce the responsibility of governments in fighting poverty and of the food industry to better deal with systemic food wastage (Poppendieck 1999; Stuart 2009).

Other waste disposal programs appeal to environmental values to propose solutions that transform food scraps from waste to resource: experimental animal feed operations are tapping the restaurant industry and smaller retailers to convert leftovers and wasted food into – mostly –swine food. This practice is well developed in various Asian countries and used worldwide in small farming operations (Westendorf 2008). Biogas production through digesters is another option that is available and frequently used in agricultural setting as a way to dispose waste and produce energy for farms. Some restaurant chains (Baja fresh, Burgerville) are also setting up internal composting/biodigesting programs that collect the food and the recyclable plates and silverware used in their location, as part of environmentally conscious brand programs that exploit environmental values to increase market visibility.

Further contradictions appear at the consumption level: low food prices, large availability of food, and aggressive marketing campaigns do nothing to suggest the need for constraint; producers and distributors thrive on their ability to convince consumers to buy more, as this not only creates profits but also shifts the burden of waste disposal from the distributors to the consumers (Stuart 2009). On the other hand, interventions aimed at curbing consumers' waste are rarely aggressive and rely mostly on educational tools,

whose content did not change significantly since the Great Depression: they make appeals at Domestic values of thriftiness and decorum and Civic values of social responsibility. From the academic perspective, this is the most explored and debated link of the chain. National governments and government-sponsored groups, as well as a number of activists and academics, are studying domestic food waste and suggesting possible solutions consumers can pursue to reduce the amount of food they waste. One common finding is that households do not have a clear perception of how much food they waste, and they tend to underestimate it (WRAP 2007). Proposed solutions are addressed at the Domestic environment and foster decorum, thriftiness, and "household's arts": teaching how to use leftovers, storage management, and organizing grocery shopping are typical examples. Education alone, however, rarely changes behaviors when the surrounding infrastructure and the local culture are not conductive to waste reduction. The latest lines of research are looking at how effective the institutional educational projects are in changing consumers' habits with respect to food waste, and reveal sobering findings. Appeal to Domestic values alone seems to bring little change: structural limitations such as lack of space to devote for separate garbage bins and tight schedules that favor take-out meals trump appeals to better organization, plus the low cost of food itself does not justify the extra effort unless higher orders of values are engaged. Increasing trust in institutions and a strong system of incentives and supporting tools are more effective tools to curb wastage (European Commission [DG ENV – Unit C2] 2010), moving the possible solutions to food wastage more in the realm of Civic engagement.

Finally, one specific group, acting freely outside the boundaries of institutions, seems to follow mostly the values pertaining to the Inspired world. Positioning themselves visibly outside institutional boundaries, freegan activists scavenge supermarkets' garbage disposal areas to rescue wasted food, and groups such as Food Not Bombs distribute for free food they collect from stores at the end of the day. While some freegans are moved mainly by necessity, many of them consider themselves activists fighting against the incongruences of capitalist society and present their activism against food waste as a cultural and political choice (Katz 2006; Stuart 2009).

An Institutional Problem

The conundrum surrounding food waste shows clearly in the contradictory policies that affect the food chain. At the beginning of the chain, values from the Industrial world (safety, efficiency, productivity, product quality) justify waste. Similar values promote waste reduction in the processing phases, but waste is justified again by Market values during distribution and marketing. Meanwhile, at the end of the chain, Domestic, Environmental, and Civic values ought to stimulate consumers and municipalities to save money and energy, reduce impacts, and protect the environment.

International governance bodies and national safety standards have powerful influence on food waste. For example, the European Union defines the rules for agricultural production for member states and sets up production quotes. If a state produces more than the quantity allotted, it is supposed to reduce the production, dispose the product, and pay a fine. Fishing regulations not only define how much each state is allowed to land but also notoriously demand bycatch to be discharged. This issue afflicts the fishing industry worldwide, with discard rates of more than 10 % (FAO 2011). Quality and safety standards also affect the agricultural production. For fear of contamination, leaf vegetables grown in fields where inspectors find wildlife tracks get discarded, slightly damaged items are not deemed fit for the market, and institutional and retailers' quality standards reduce the amount of edible but aesthetically unpleasant fruits and vegetables that reach the shelves (Stuart 2009).

Once products reach the market, a relevant source of confusion and wastage is the dates stamped on perishable items. With the exception of few categories (meats, baby food, ready-to-eat salads), most food is still edible and safe well after the sell-by or best-before dates, but it gets discarded either by retailer or by consumers. The legislation defining the meaning and the

scope of "expiration" dates (best-before, use-by, sell-by, etc.) changes across countries (EU rules are different from US one and so forth), but consumers appear to be universally confused by these standards and tend to discard food after the date stamped on the package is passed or even when it is approaching (Strasser 1999; WRAP 2007; Stuart 2009).

Yet, the same institutions whose regulations foster waste production along the chain are affected by and concerned with overconsumption of energy, water, and fertilizers and the pollution generated by organic waste in landfills and as results of meat and fish processing. In few industrialized countries, landfill management practices have been implemented to harvest or burn methane, yet food still constitutes about 21 % of garbage dumped into landfills in the United States (EPA 2012), increasing the burden on municipalities as landfill costs increase. The methane that leaks out of landfills where organic material is left to rot also increases the environmental burden of food waste.

Rising costs of garbage disposal are driving better post-consumption food waste collections, but they require well-managed composting facilities and separate collection bins for organic waste. Enforcing separate collection proved effective in many EU countries, but southern Europe is still lagging behind, mostly due to lack of proper funding and citizens' trust in the institutions responsible for managing the waste (European Commission [DG ENV – Unit C2] 2010), while public composting facilities are still rare in the United States where only 3 % of food waste is incinerated or composted (EPA 2012).

Summary

In a world where millions of people are still struggling with hunger, almost ½ of all food caught or produced ends up wasted throughout the production and distribution chain. Food is wasted differently in developing countries compared to the industrialized world. In areas where poverty is endemic and infrastructure rudimental, most wastage occurs in the early links in the chain. Crops are more easily damaged and frequently harvested too early; rudimental packaging and lack of refrigeration during transportation contribute to spoiling; lack of sanitation during processing phases further increases waste. In these areas, however, households waste very little.

In the industrialized world, food is wasted mostly at the very beginning and at the very end of the chain. Waste is high in the fields because the system is geared towards overproduction, and quality standards prevent farmers from providing the market with fruit or vegetables that are less than perfect. National and international regulations, constraint imposed by distributors, and price fluctuations also affect the amount of crops harvested. The other point in the chain where waste is significant in the industrialized world is at the consumption level: households waste about 30 % of the food they buy. Wasting food not only has huge impacts on our ability to feed the planet but also causes direct and indirect environmental damage, affects water supplies, and has a high impact on energy consumption.

While the debate around food waste is growing in the western world, most of it is centered on the last link of the chain: the individual consumer. Systemic causes are rarely taken into account, as the consumers are considered to be individually responsible for their (wasteful) behavior. However, current research suggests that institutional factors also have huge impacts. Moreover, the contrasting sets of values characterizing the various links of the food chain foster contrasting attitudes towards waste and make it difficult to evaluate what an acceptable level of waste could be and how to define it.

Cross-References

- ▶ Food Labeling
- ▶ Food Standards
- ▶ Waste and Food

References

Boltanski, L., & Thevenot, L. (2006). *On justification: Economies of worth*. Princeton: Princeton University Press.

Cuéllar, A. D., & Webber, M. E. (2010). Wasted food, wasted energy: The embedded energy in food waste in the United States. *Environmental Science & Technology, 44*(16), 6464.
European Commission [DG ENV – Unit C2]. (2010). *Final report – Preparatory study on food waste* (Technical Report – 2010–054, p. 210).
FAO. (2011). *Global food losses and food waste. Extent, causes and prevention* (p. 38). Rome: Food and Agriculture Organization.
Katz, S. E. (2006). *The revolution will not be microwaved: Inside America's underground food movements*. White River Junction: Chelsea Green Pub.
Lundqvist, J., de Fraiture, C., et al. (2008). *Saving water: From field to fork – Curbing losses and wastage in the food chain* (SIWI Policy Brief, Vol. 36). Stockholm: Stockholm International Water Institute.
Poppendieck, J. (1999). *Sweet charity?: Emergency food and the end of entitlement*. New York: Penguin Books.
Smil, V. (2004). Improving efficiency and reducing waste in our food system. *Environmental Sciences, 1*(1), 11.
Strasser, S. (1999). *Waste and want: A social history of trash*. New York: Metropolitan Book.
Stuart, T. (2009). *Waste : Uncovering the global food scandal*. New York: W.W. Norton & Co.
USDA. (2009). Supermarket loss estimates for fresh fruit, vegetables, meat, poultry, and seafood and their use in the ERS loss-adjusted food availability data. *Economic Information Bulletin*, *44*, 26.
Westendorf, M. L. (2008). *Food waste as swine feed*. Ames: Iowa State University Press.
Waste & Resources Action Programme (WRAP). (2007). *Understanding food waste* (Research Summary). Banbury, Oxon: WRAP, p. 28.
Zall, R. R. (2004). *Managing food industry waste: Common sense methods for food processors*. Ames: Blackwell.

Food Waste and Consumer Ethics

Mickey Gjerris[1] and Silvia Gaiani[2]
[1]Danish Centre for Bioethics and Risk Assessment, Institute of Food and Resource Economics, Department Food and Resource Economics, University of Copenhagen, Frederiksberg C, Denmark
[2]Department of Agricultural and Food Science, University of Bologna, Italy

Synonyms

Consumption; Environment; Food loss; Justice; Nature

Introduction: Food Losses and Food Waste (Definitions)

The ethical issues related to food losses and food waste are very complex and to a large degree dependent upon at which part in the food supply chain they are identified. In this entry for reasons of clarity and space, the emphasis is placed on food waste occurring at consumer level and mainly on the discussion of the ethical responsibilities that can be said to exist at this stage. This can be justified as the largest percentage of waste occurs at consumer level. It is, however, important to remember that this waste is to varying degrees dependent on other factors such as retail strategies, production limitations, etc.

The definition of food waste is a contentious subject and often developed on a situational basis; definitions of food waste vary in what food waste consists of, how it is produced, at which stage of the food supply chain it originates, and where or what it is discarded from or generated by.

A study by the Swedish Institute for Food and Biotechnology (SIK) on behalf of the Food and Agriculture Organization of the United Nations (FAO), *Global Food Losses and Food Waste*, distinguishes between food losses and food waste (Gustavsson et al. 2011).

Food losses refer to the decrease in edible food mass throughout the part of the supply chain that specifically leads to edible food for human consumption. Thus, food losses take place at production, postharvest, and processing stages in the food supply chain (Parfitt et al. 2010). They are a major factor in developing countries where infrastructures and technologies are poor. Such definition of loss also includes biomass originally meant for human consumption but eventually used for some other purpose, such as fuel or animal feed.

Food waste generally refers to the deliberate discarding of food that is "fit for purpose and perfectly good to eat" (Knight and Davis 2007). This occurs in the latter part of the food chain, in food companies, wholesaling, retailing, and households and is mostly common in developed/wealthy countries.

Smil (2004) also includes overnutrition in the definition of food waste. Overnutrition in this context signifies the gap between the energy value of *consumed* food *per capita* and the energy value of food *needed per capita*. In the European Union, until 2000, food waste was defined by the Directive 75/442/EEC and considered as "any food substance, raw or cooked, which is discarded, or intended or required to be discarded." This directive was replaced by Directive 2008/98/EC where there is no specific definition of food waste, but just a broad description of "categories of waste."

Other issues that are closely related to food waste but are typically not discussed as food waste but rather as a question of sustainable use of resources are (excessive) transportation of foods and use of resources as water, arable land, fertilizers, energy, etc.

Attempts have been made over several decades to quantify global food waste, motivated partly by the wish to highlight it in relation to global malnutrition. Such assessments are currently reliant on limited datasets collected across the food supply chain (FSC) at different times and extrapolated to show the larger picture. Each study analyzes food waste in a different way making it difficult to use one study to corroborate another. For instance, one report uses a caloric evaluation of the entire food supply, while another evaluates waste only at the consumer level, combining in-home and out-of-home meals.

The most often quoted estimate is that "as much as half of all food grown is lost or wasted before and after it reaches the consumer" (Lundqvist et al. 2008). More precisely, per capita food wasted by consumers in Europe and North America is estimated to be around 95–115 kg/year, while this figure in sub-Saharan Africa and South/Southeast Asia is only 6–11 kg/year. Such estimates are difficult to scrutinize but highlight the need for greater resource efficiencies in the global FSC.

Food Waste: Estimations and Impacts

A research carried out by Smil provides a global overview of losses and waste that take place "from field to fork." On average, only 43 % of the products cultivated for food are actually consumed. Farmers are on a global average able to produce the equivalent of 4,600 kcal/capita/day. In addition to the losses because of inefficiencies in the harvesting, transportation, storage, and processing stages, which cause an initial reduction (600 kcal), the conversion of food production (mainly grains) into food intended for livestock has the most significant impact on the amount of daily kilocalories actually available for human consumption. This conversion causes a further net decrease of 1,200 kcal/capita.

While not really food waste per se, allocating food to animals raises many questions among those studying food security. Another issue along the same lines is the food used for companion animals that are not themselves used for food. Even though food for companion animals often contains e.g. parts of the carcass that is not usually used for human consumption, some resources suitable for human consumption is "lost" in the process. Finally, food retail distribution causes additional waste (equal to 800 kcal), leading to a usable caloric content of just 2,000 kcal (Smil 2004).

Volumes of food waste vary from country to country. In the United States losses at the farm level are about 15–35 %, depending on the industry (Jones 2004). For the fresh vegetable industry, losses are naturally higher at 20–25 %. The retail industry has high rates of waste at about 26 %, while supermarkets, surprisingly, only lose about 1 %. "Overall losses amount to somewhere around USD 90 to USD 100 billion a year" (Jones 2004) and "...households, in the US alone, throw away USD 48.3 billion worth of food each year" (Jones 2006). An average family of four persons in the United States wastes 60 kg of food per month (Martin 2008).

Food losses and wastage are also reported from Europe. According to a recent DG Environment study from the European Commission, the quantity of food discarded in the 27 Member Countries amounts to 89 million tons, or 180 kg per capita per year. Waste at home contributes the most significant percentage: it is equal to 42 % of the total and amounts to about 76 kg/year/person

(60 % of which could be avoided because constituted by edible food). The portion attributed to food processing (39 %) and the portion from catering and restaurant services (14 %) are also quite substantial (European Commission 2010).

On the national stage the level of food waste can be exemplified as follows: In the United Kingdom, Knight and Davis (2007) estimate that "...about five million tonnes of food goes into household waste" and that "...total consumer and industrial food waste reach 17 million tonnes annually." Reports from Sweden suggest that families with small children throw away about 25 % of the food they buy and that total losses and wastage in the food chain are close to 50 % (Kungl. Skogs-och Landbruksakademien 2007). Figures are, however, uncertain. The Dutch Ministry of Agriculture, Nature and Food Quality has estimated that Dutch consumers throw away approximately 8–11 % of food purchased (Parfitt et al. 2010), equating to 43–60 kg. As easily seen these numbers from different nations differ consistently. This is due both to national and regional differences in food culture, living patterns, prices, infrastructure, etc. and also to the lack of common methodologies and definitions.

Regardless of these methodological issues and the scientific uncertainty, it is important to recognize that food waste has significant consequences from a natural resource and environmental perspective.

In terms of food production, agriculture is responsible for a significant amount of total anthropogenic greenhouse gas emissions (GHG). Livestock production alone accounts for about 18 % of total GHG emissions according to conservative estimations (Steinfeld et al. 2006). In addition, there are substantial environmental costs associated with transport, storage, processing, packaging, and improper disposal of discarded food. If discarded food is used for landfills rather than being properly disposed of through, e.g., composting or for biogas production, the organic content will generate gases, including methane, which is a very potent GHG (Knight and Davis 2007). The GHG emissions attributed to food waste are calculated by dividing by three the total GHG emissions contributed by the food system, which is estimated at 9,800–16,900 MtCO2e/year (Vermeulen et al. 2012).

Wasting food also means wasting resources like:

- Energy (the calories in wasted food are never consumed, and therefore, the energy that went into growing, processing, packaging, and transporting food to the consumer is lost)
- Water (water losses accumulate as food is wasted before and after it reaches the consumer: calculations estimate that food waste accounts for more than a quarter of total freshwater consumption globally)
- Land (arable land is used to produce food that is not consumed)
- Labor (the work of famers to produce food is lost when food is discarded)

Besides environmental impacts, food waste also imposes an economic cost on consumers and retailers. Estimates for Great Britain also show that 30–40 % of the annual production of discarded food has an estimated economic value equivalent to about €18 billion.

Food Waste Along the Supply Chain: Causes and Consequences

Food waste in the food system occurs throughout the supply chain. Food is lost for a variety of reasons at each stage: on farms, during processing, distribution, and storage, in retail stores and food service operations, and in households. As mentioned in the beginning, the loss occurs at different stages in the process in countries in the developing and the industrialized world. However, the significant inefficiency of the food system at different levels has received virtually no attention to date, resulting in a dearth of data that could otherwise illuminate key drivers of the problem or possible solutions (Stuart 2009).

At the farm level, food loss falls into two categories: (1) food that is never harvested and (2) food that is lost between harvest and sale. Produce may not be harvested because of damage

caused by pests, disease, and weather or for economical reasons: if market prices are too low at the time of harvest, growers may leave some crops in the field because they will not have their costs covered after accounting for the costs of labor and transport. Another cause of unharvested produce is food safety scares (e.g., in 2008 a warning was issued by the Food and Drug Administration in the United States of possible salmonella contamination in tomatoes).

Once crops have been harvested, culling is the primary reasons for losses of fresh produce. Culling is the removal of products based on quality or appearance criteria, including specifications for size, color, weight, blemish level, and brix (a measure of sugar content). Quantities vary significantly by product and situation. Processing facilities generate food losses mostly through trimming, when both edible portions (skin, fat, peels, end pieces) and inedible portions (bones, pits) are removed from food. Overproduction, product and packaging damage, and technical malfunctions can also cause processing losses, though these may be difficult to avoid. Proper transport and handling of food are critical throughout the supply chain, particularly with perishable goods that require cold conditions. Inconsistent refrigeration is less of a problem today than in the past, but it still occurs when cooling systems malfunction or human errors cause the cooling chain to break down (Segrè and Gaiani 2011).

Most of the loss in retail operations is in perishables – baked goods, produce, meat, seafood, and, increasingly, ready-made foods. The USDA estimates that supermarkets lose $15 billion annually in unsold fruits and vegetables alone. Unfortunately, the retail model views waste as a part of doing business. Some of the main drivers for in-store retail losses include overstocked product displays (customers tend to buy more from fully stocked displays); expectation of cosmetic perfection (retailers feel compelled to have only produce of perfect shape, size, and color); inadequate pack sizes; availability of fresh, ready food until closing time; and expired "sell-by" dates (products are discarded when they are near their sell-by dates). Products are also discarded due to damaged packaging or promotions that have passed (postholiday discards are most common). At the retail and end-consumer stages of the supply chain, perishables make up the majority of food losses due to the high volume of consumption and the food's tendency to spoil. In terms of total mass, fresh fruits and vegetables account for the largest losses, followed closely by dairy and meat/poultry/fish.

Drivers for household losses include lack of awareness and undervaluing of foods (cheap, available food has created behaviors that do not place high value on utilizing what is purchased), confusion over label dates (label dates on food are generally not regulated and do not indicate food safety), spoilage (food spoils in homes due to improper or suboptimal storage, poor visibility in refrigerators, partially used ingredients, and misjudged food needs), impulse and bulk purchases (store promotions leading to bulk purchases or purchases of unusual products often result in consumers buying foods outside their typical meal planning, which then gets discarded), lack of meal planning and shopping lists, and over-preparation (cooking portions have increased over time and large portions can lead to uneaten leftovers; Parfitt et al. 2010).

Ethical Aspects of Food Waste

Food waste is seen as so obviously ethically wrong that it is seldom spelled out what the ethical issues related to food waste are. There are however many interesting discussions hidden underneath, e.g., people's gut reaction drawing into question whether food waste is not a necessary price to be paid for the culture of affluence in the Western world that by many are seen as part of the good human life. In this light food waste becomes more a clash of values creating ethical conflicts than a mere accidental and correctable side effect. Further food waste can be understood more as a symptom of deeper problems connected to the relation between humans and nature than just an issue in itself.

In the next paragraphs four areas where food waste raises ethical issues are presented. These

are food waste consequences for humans, food waste consequences for the environment, the relation between consumerism and food waste, and the relation between view of nature and food waste.

Consequences for Humans

Food waste can be considered an unnecessary waste of resources that could have benefited others. Food waste at the consumer level, however, can only seldom directly be utilized for helping people in need. Food thrown away in Western European households can hardly be made useful for those worse off in other places of the world. Indirectly though, a reduction of food waste could benefit those impoverished as the money saved from not wasting food could be directed towards them. Other factors than just a reduction in food waste are required. There is little gain for those in need of food, if the money saved from reducing food waste is directed towards other kinds of consumption such as buying more expensive cars, holidays, furniture, clothes, etc. in private households private households or building new societal infra structure such as roads and shopping malls to accommodate a growing consumer society in the Western world. A reduction in food waste thus needs to be followed by other actions intended to benefit other human beings directly.

This raises the ethical question whether those who live in affluence are obligated not to waste food and instead use the saved resources to help others. If the answer to this is yes, the question then becomes: why is this so in the area of food waste, but not in other areas of consumption? Why is food so special that food waste seems self-evidently wrong, whereas the waste of resources connected, for example, to fashion is not debated to the same degree? And to what extent are humans compelled to change their consumption patterns to help those worse off than themselves (Aiken and LaFollette 1996)?

Consequences for the Environment

The production of food has negative environmental consequences. Much has been written on the consequences of different agricultural practices on the environment especially focusing on animal production. Some of these consequences are detrimental to nature and the environment. Furthermore, if agricultural and animal products are not used for their primary purpose – i.e., to feed humans or animals – but are simply thrown away, this contributes to a waste of resources and a deeper pressure on the ecosystems: desertification; eutrophication; pollution of air, land, and water; depletion of scare assets such as freshwater and phosphorous; and climate change are just some of the negative consequences that again have effects on humans (FAO 2011). As mentioned before, the problem is not simply solved by reducing food waste. Human beings consume and throw away food and material objects at a high speed. Reducing food waste in itself will not solve the problems, if not seen as part of a larger context focusing on reducing consumption in general.

Food Waste as Overconsumption

As described in the previous sections, there are many and often interwoven reasons for food waste. One that attracts special ethical attention is connected to affluence in Western societies that enables consumers to choose from a multitude of foods when they visit restaurants, canteens, supermarkets, and shops. The choice of the individual entails that all that is not selected risks ending up at food waste. Consumers indirectly pay for these products too as producers, retailers, canteens, etc. simply place the value of the expected waste on the products that are sold. Part of the money paid when shopping thus finance the multitude of choices we have when shopping and the luxury of not wondering what there might be to eat, but rather wondering what we would like to eat.

The question is: is this ethically wrong? Or could it be argued that it is up to consumer self-determination how they choose to spend their money? Obviously consumers are not supposed to spend money in ways that hurt other human beings, but as there no predetermined restrictions or limits to wasting resources as energy, land, water, etc. as long as consumers are willing to pay for a system that entails food waste, it could

be argued that considering food waste as especially problematic seems arbitrary.

However, reasons for this reaction can be found. It is not that long ago – even in affluent Western societies – that food was sometimes a scarcity and hunger a sensation that most had felt. Throwing away food simply feels morally wrong, as it is such a tangible sign of richness bordering on decadence. While Western people eat whatever they want, they are confronted with news stories from not that far away where hunger is still a part of the everyday lives of nearly 900 million human beings. When dealing with a cultural phenomenon, it is hard not to react at such visible inequality in the world. Food waste thus becomes a symbol of human injustice that hits us right in the face (Edwards and Mercer 2007).

Nature and Food Waste

Another reason why food waste is experienced as ethically problematic is that it can be seen as disrespectful to the organisms, ecosystems, and biosphere that provided the food in the first place. Food is one of the most basic ways humans interact with the more-than-human nature that sustains their lives. Food is in that sense participation in the rhythm of life on the planet where humans constantly stand in a very intimate relation with the world. The strong reaction towards food misuse can thus be interpreted as pointing to deep-seated experiences of human existence as being closely knitted into the beings and rhythms of a nature that is valuable and worthy of respect and love for its own sake, experiences that point towards gratitude and community. Throwing away food is a rejection of this understanding of nature as a relational subject and a reduction of it to an external object with only an instrumental value. Respect for the fruits of the earth and thankfulness towards the abundance of life that surrounds us have found expression both within religion and philosophy. The poet Gary Snyder has expressed it this way: *Every meal is a sacrament* (Snyder 1990). Food waste can thus be interpreted as a kind of "sacrilege."

The strong reactions towards food waste can thus be understood by the illumination the phenomenon throws on distance between those who live in poverty and hunger and the ones living in affluence the distance between Western consumers and the more-than-human nature that they are embedded in. Food waste is not just an unfortunate by-product of Western culture, but a market-driven necessity in a culture of affluence. The distance between the way people relate to food in that culture and the way humans have related to food through the most of history is what makes the phenomenon so hard to accept.

Reacting to food waste on a personal level can be difficult as the discarding of food is often an unconscious/non-reasoned act. Following Ajzen's theory of planned behavior, this kind of food waste can thus be seen as an action based on social norms and identity, external conditions, and habits (Ajzen 1991). Wasting food has become in some cases a persistent habit, and as such, it is very often a non-reasoned action and therefore it is not immediately influenced by normative social discussions. Food waste is an integrated part of life in Western consumer societies, and to change this, more than moralizing is needed.

Here raising awareness of the problem and developing a more community-oriented way of thinking of the role of humans in the ecological systems could be seen as a solution. Drawing on different traditions within the broad framework of ethics of nature, spiritual sustainability, ecocentric thinking, etc., we suggest that developing what Goleman has labeled an *ecological intelligence* (Goleman 2009) could be a way to address the issue of food waste as the change in behavior needed is embedded within a cultural context that needs to be changed, if the problem is not to be the problem of the individual consumer fighting a hopeless battle against a culture of affluence.

Summary

The definition of food waste is a contended subject and often developed on a situational basis; definitions of food waste vary in what food waste consists of, how it is produced, at which stage of the food supply chain it originates, and where or what it is discarded from or generated by. Attempts have been made over several

decades to quantify global food waste: such assessments are currently reliant on limited datasets collected across the food supply chain (FSC) at different times and extrapolated to show the larger picture. The most often quoted estimate is that "as much as half of all food grown is lost or wasted before and after it reaches the consumer" (Lundqvist et al. 2008). Food waste has environmental, socioeconomic, and ethical impacts. There are many contributing factors to food waste. Most importantly, it seems to be not just an unfortunate by-product of Western culture, but a market-driven phenomenon in a culture of affluence. It is one of the most visible symbols of the distance between rich and poor and between consumers and the more-than-human lifeworld that they are embedded in and dependent on.

Cross-References

- ▶ Climate Change, Ethics, and Food Production
- ▶ Economy of Agriculture and Food
- ▶ Food and Place
- ▶ Sustainability of Food Production and Consumption

References

Aiken, W., & LaFollette, H. (1996). *World hunger and morality*. Upper Saddle River: Prentice-Hall.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Edwards, F., & Mercer, D. (2007). Gleaning from gluttony: an Australian youth subculture confronts the ethics of waste. *Australian Geographer, 38*(3), 279–296.

European Commission (DG ENV). (2010). *Preparatory study on food waste*. European Commission (DG ENV). Belgium: Brussel.

Food and Agricultural Organisation of the United Nations (FAO). (2011). *The state of the world´s land and water resources for food and agriculture. Managing systems at risk*. Rome: FAO.

Goleman, D. (2009). *Ecological intelligence, how knowing the hidden impacts of what we buy can change everything* (p. 54). New York: Random House.

Gustavsson, J., Cederberg, C., & Sonesson, U. (2011). *Global food losses and food waste*. Swedish Institute for Food and Biotechnology and Food and Agricultural Organisation of the United Nations. Sweden: Gothenburg.

Jones, T. (2004). *The value of food loss in the American household*. San Francisco: Bureau of Applied Research in Anthropology.

Jones, T. (2006). Addressing food wastage in the US. *Interview*: *The Science Show*, 8 April. http://www.abc.net.au/rn/scienceshow/stories/2006/1608131.htm. Accessed 17 March 2013.

Knight, A., & Davis, C., (2007). *What a waste! Surplus fresh foods research project*. http://www.veoliatrust.org/docs/Surplus_Food_Research.pdf. Accessed 17 March 2013.

Kungl. Skogs-och Landbruksakademien [Royal Swedish Academy of Agriculture and Forestry] (2007). *Den beresta maten – matens kvalitet i ett globalt perspektiv* [*The well-travelled food*]. KSLAs TIDSKRIFT, No 10.

Lundqvist, J., de Fraiture, C., & Molden, D. (2008). *Saving water: From field to fork – Curbing losses and wastage in the food chain. SIWI policy brief*. Stockholm: SIWI.

Martin, A. (2008). One country's table scrap, another country's meal. *New York Times*, May 18.

Parfitt, J., Barthel, M., & Macnaughton, S. (2010). Food waste within food supply chains: Quantification and potential for change to 2050. *Philosophical Transactions at the Royal Society, 365*, 3065–3081.

Segrè, A., & Gaiani, S. (2011). *Transforming food waste into a resource*. Cambridge, UK: Royal Society of Chemistry.

Smil, V. (2004). Improving efficiency and reducing waste in our food system. *Environmental Sciences, 1*, 17–26.

Snyder, G. (1990). Survival and sacrament. In G. Snyder (Ed.), *The practice of the wild* (pp. 187–98). Berkeley: USA.

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M., & de Haan, C. (2006). *Livestock’ s long shadow: Environmental issues and options. Food and Agricultural Organisation of the United Nations*. Rome: Italy.

Stuart, T. (2009). *Waste: uncovering the global food scandal*. London: Penguin.

Vermeulen, S. J., Campbell, B. M., & Ingram, J. S. I. (2012). Climate change and food systems. *Annual Review of Environment and Resources, 37*, 195–222.

Food Worlds, Film, and Gender

Margaret A. Crouch
Eastern Michigan University, Ypsilanti, MI, USA

Synonyms

Cinema and food; Femininity and food; Masculinity and food; Motion pictures and food; Sex and food

Introduction

Food and film are a recognized subfield in film scholarship (Ferry 2003; Keller 2006; Zimmerman 2010; Bower 2012; Baron et al. 2014), and food and gender are thoroughly explored in women's and gender studies (Allen 1984; Counihan 1999; Bordo 2003; Avakian and Haber 2005; Inness 2011). This entry brings together these two areas by way of the concept of "food worlds." I shall begin with a brief description of the concept "food world," describe existing scholarship on food and gender and on food and film, and then show that most films assume and illustrate gendered food worlds.

I am using the term "food world" to refer to the meanings that food and the activities surrounding food and eating have for a person. Each of us bears particular relationships to eating and food, and these relationships are shaped by our experiences, as well as biologically and culturally influenced likes and dislikes. Our relationships to food have to do with the procuring of food, preparation of food, and, most importantly for my purposes, attitudes to and emotions regarding food and eating. Our food worlds also include how much time we spend thinking about food. They are constituted by our feelings about our bodies and how much time we spend thinking about them. They include how we react to feelings of hunger; how we experience the sensations of fullness and emptiness, that is, the meanings of the physical sensations related to food and eating to us; and how we behave in response to those meanings. Is eating pleasurable? Anxiety producing? Different in different circumstances? One's relationship with food thus involves physical, emotional, and psychological aspects. It is this web of relationships between oneself and food that I call a "food world." We all inhabit food worlds, but our individual food worlds are different. Whether one is sensitive to these differences is also part of one's food world.

One's emotional relationship to food and eating is a significant part of one's food world. Both negative and positive emotions make up that world. Many feel negative emotions, such as "anxiety, guilt, fear, and shame" about "how we eat, what we eat, and, above all, how much we eat" (Iggers 1996). Most people also feel positive emotions about eating and food. The planning and preparation of food can bring great pleasure, especially when we make food for those we love. Food can comfort, and the sensual pleasures of eating can be intense and fulfilling. Anthropologists have introduced the concept of "foodways" and have analyzed film from the perspective of foodways. Food worlds seem to be a subset of foodways and to focus more on the personal meaning of food than the foodways perspective.

Though each of us has our own food world, there are discernable patterns that link these worlds according to group membership. I am interested in the gendered patterns evident in the food worlds depicted in film. First, I will introduce food and gender and then discuss both of these in relation to film.

Food and Gender

Much has been written about gender and food, especially women and food. Susan Bordo's *Unbearable Weight* is a classic of this genre (2003). As she points out, the history of Western philosophy identifies women with the body more than it does men, and devalues the body in relation to the mind, thereby devaluing women. Women's identification with the body is identification with appetite and desire, which, in this history, threatens reason and rationality. Appetites must be controlled by reason. But, paradoxically, women, considered weak in reason, are culturally gifted with the role of control of appetites. This is very clear in traditional conceptions of heterosexual relationships, where women are supposed to control their sexuality, and that of males, by means of their refusal or acceptance. We also see this in the case of food and hunger. Women are not supposed to express hunger or the desire for sex or food. Their bodies are not supposed to be "excessive," though this seems directly related to heterosexual sexual attractiveness. It is more acceptable for a woman to be overweight if she is "beyond" youth. In Hollywood, everyone is eternally young, and so women are eternally thin.

These norms for women affected by them require constant monitoring of food intake, both the amount of food and the kind of food. Sandra Bartky describes the disciplining of the body required by heterosexual femininity (1990). The constant monitoring of one's body, its appearance, and the relation of this to eating is a part of this discipline. It is part of the heteronormative food world of a woman.

One might think that the "thin woman" obsession is peculiarly Western. It might once have been, but according to Bordo and others, this ideal has spread to much of the rest of the world, with the accompanying eating disorders and food-related behaviors. Bordo blames Western media, arguing that media images teach us how to see bodies. The availability and widespread consumption of Western media, including film, has altered preferred body types in cultures that previously accepted different body types. One oft-cited study showed that prior to the introduction of television to Fiji, there were almost no reports of eating disorders, and many women were substantial; thinness was ridiculed. After 3 years of exposure to *Baywatch*, young women showed eating disorders, and thinness was becoming the dominant body ideal (Becker 2004). The slim body ideal for girls and the muscled body ideal for boys are most influential among higher socioeconomic populations. As developing countries increase the middle classes, body dissatisfaction and eating disorders increase. Though much might be said about gender and food outside the United States, constraints on length require that this entry focus on food, gender, and film in the United States.

What about men and food? As Bordo pointed out in the 2003 edition of her book, body image problems are spreading to men. In fact, the dominant male body ideal, as displayed in magazines, television, and especially action films, is the lean and muscular body Morrison and Halton (2009). Such bodies need fuel to power their actions. In action films, where these bodies are most often displayed, men regard eating as fueling. Men are allowed to be hungry, to be thirsty, and to express and fulfill their desires. Men can eat and drink as much as they want, with not too much concern about what is eaten. To be hungry, to have appetite, is to be masculine. To act so as to satisfy that hunger is also masculine.

There are exceptions to this, of course. Men are not supposed to be obese, though they may be overweight or out of shape with fewer negative social consequences than women. They may also be competent cooks, but only if they are professional, or semiprofessional. If they show too much interest in cooking and recipes, or are vegetarian or vegan, their masculinity may be questioned.

Food and Film

In bringing film into this analysis, one is faced with an enormous difficulty. It turns out that people hardly ever *eat* in movies. In a content analysis of the ten top-grossing Hollywood films between 1991 and 2000, researchers found that, although food did appear regularly in films, it was not typically the focus of the scene in which it appeared. Furthermore, it was rarely eaten by anyone in the scene. Alcohol was the most commonly appearing food or drink in these films and was much more likely to be ingested by someone than food Bell et al. (2005). But it is the ingestion of food that best shows us the gendered norms of eating behavior and attitudes toward food.

In his account of the genre of "food films," *Food in the Movies*, Steve Zimmerman makes this point. For most of the history of film, food was "ignored or hidden from view. . ." (Zimmerman 2010). This was in part for practical reasons. In the early days of film, prepared food would have had to sit under very hot lights for shot after shot and would not survive the treatment. But there are also aesthetic reasons for omitting eating from films. Eating ordinary meals makes for slow, uninteresting viewing. The main uses of food in films do not require eating.

One of the main uses of food in film is as a prop, that is, "something that's there while people do other things, like talk about love, family problems or matters more sinister" (Zimmerman 2010). In many films, a meal that is talked about or anticipated never arrives. In other cases, the food arrives, but is never actually

eaten. When one observes a film in which people sit down to a meal at a table – something very common in films – one will see that those at the table may take one bite, but hardly ever two. Most of those at the table eat nothing. As we all know, scenes of meals at tables are not usually about food or eating. They are about other things, such as conflict, relationships, community, or power.

Another common use of food in film is as a "transition (or time-compression) device" (Zimmerman 2010, Introduction). We might see the preparation of a meal, or the beginning of the meal, or the table being set and then the washing up. Another major way that food is used in film is "to enrich the narrative by imparting a deeper sense of meaning to the story that is being told. Often this is accomplished symbolically and metaphorically to call attention to a significant event or a person's character, lifestyle, class, race or economic status" (Zimmerman 2010, Introduction). For example, in the film *The Upside of Anger* (2005), which contains many kitchen and dining room scenes, a boyfriend of whom the mother disapproves is shown loudly slurping his soup.

Zimmerman's exhaustive analysis of the use of food and eating in US film does not pay much attention to the gendered portrayal of food and eating. He does point out that, for years, films portrayed food prepared in homes by women, whereas in posh restaurants, it was prepared by men. Though this has changed somewhat, the representation of men and women as professional chefs is quite different. (See below.)

Zimmerman's analysis of food in film has been challenged by anthropologists using the concept of "foodways." This concept includes both personal and sociopolitical aspects of food, though the emphasis seems to be on the latter. A book using foodways as an analytical perspective on film claims that the concept "denaturalizes a culture's norms, values, and beliefs about food products, meal systems, and the procurement, preservation, preparation, presentation, consumption, and cleanup of food" (Baron et al. 2014, Chap. 1). Though this analysis of film does not challenge Zimmerman's claim that there is little eating in films, it focuses more on the sociopolitical aspects of food in film and how these reflect the social and economic structure of food generally. Interestingly, the book referenced above does not use gender in its analysis. However, we can make use of the notion that a gendered analysis of food in film denaturalizes gendered norms. The naturalness of the appearance of food scenes that do not call attention to the food, or the eating, allows us to examine them for the gendered norms that make them seem "natural."

Food, Film, and Gender

What food worlds are represented in film? Here, I shall limit my analysis to US films and primarily to popular Hollywood films. According to popular films, women and men inhabit different food worlds: their pleasures in food, their anxieties about food, their intimate relationships with food, and their control of food differ, revealing the way that food, as so much else, is ruled by heteronormativity. Women rarely eat, though they often prepare food. When they do eat, they typically eat tiny amounts of low-fat or low-carb foods, often commenting on their eating. They do not, usually, seem to take pleasure in eating. This kind of eating is called "restrained eating" in medical scholarship. "Restrained eating refers to a persistent pattern of eating-related cognitions and behaviours in order to reduce or to maintain body weight" (Macht 2008, p. 2). It appears that, generally, women in film are restrained eaters, with all that that implies about their food worlds. Of course, there are exceptions, but such women are defeminized or represented as psychologically unstable. For example, the independent film *Disfigured* portrays an anorectic woman and an overweight woman, both of whom are psychologically troubled (2008).

The restraint of women eaters, especially at restaurants, is often remarked on negatively in comedies. One example of this is in the hit US film *Shallow Hal* (2001). The film stars Jack Black, a popular lead in Hollywood comedies. Black's body does not correspond to the typical Hollywood male romantic lead, though the range of such bodies is broader than for female stars. He is shorter than most, and stockier. He is not lean

and muscled. In this film, he and a friend, played by actor Jason Alexander, who is also short and stocky, are hypercritical of the bodies of the women they are interested in. This is supposed to be amusing, since they are not supposed to be such prizes themselves, but their hypercriticism mirrors the way that many women evaluate their own bodies and the bodies of other women.

Hal meets a positive-thinking guru in an elevator, and the man puts a spell on him that makes him see the "inner beauty" of people. He is promised that the women he likes and finds attractive will also like him. What follows is supposed to be a critique of "lookism" and a hypercritical attitude to the appearance of women. Hal is shown dancing with beautiful, model-thin women. When we are shown the women from his friend's perspective – the non-magical perspective – we see that they do not meet his hypercritical requirements for female beauty. He meets a woman named Rosemary Shanahan, played by Gwyneth Paltrow, and they begin to date. At a restaurant, Rosemary orders a cheeseburger, chili fries with cheese, and a milkshake. And then we hear a variation on one of the most common lines in films about women ordering in restaurants:

> Hal: It's nice to see a girl order a real meal. I can't stand it when you guys order a glass of water and a crouton. It ruins the whole point of going out.

When we see Rosemary from an "objective" perspective, she is very overweight. One of the most offensive parts of the film is when Rosemary, who, remember, has "inner beauty" – she has been in the Peace Corps – takes Hal to a hospital where she volunteers with children. He sees the children as healthy and whole. He treats them as such and they have a great time. Eventually, the spell is removed, and Hal sees Rosemary's body as it really is. He agrees to marry her anyway and go with her into the Peace Corps.

If the film is a critique of "lookism," it undermines itself by portraying the people that Hal sees as beautiful, perfect, and healthy as "normal," while their true appearance is contrasted as not conventionally beautiful and certainly not perfect. This happens with the women he dances with and then when he returns to the children's ward of the hospital and sees the injuries and effects of illness on the children. He is shocked and put off. It is also offensive in that it splits women into two groups: pretty, or not pretty, but funny, smart, and nice. So women can only be unattractive, good people, or attractive, bad people. Never is there any suggestion that Hal might not have a "normal" male body.

According to content analysis studies of films that earned more than $250 million outside the United States between 1990 and 2007, the most common scenes of men and food involve men using eating or drinking to "share news or information or make plans" (Parasecoli 2009, p. 141). Very commonly, a woman is serving the food or drink. Men do not spend much time worrying about the type of food they eat, or its quality. Of course, these are men of action, not gourmands. But they represent the common heteromasculinity seen and imitated around the world. This is the food world of ordinary guys and of lean, muscular men of action.

Both men and women are portrayed as chefs or bakers in films. However, the ways in which they are portrayed are quite different. In *Mostly Martha* (2001) and its US remake, *No Reservations*, a female chef in a restaurant is a perfectionist, obsessive about controlling her kitchen and the food she creates. Her boss requires her to go to an analyst because of her reactions to restaurant patrons who send their food back to the kitchen. She is "fixed," not by the analyst, but by inheriting her sister's child and by working with a male chef who is more emotional and sensual and eventually works his way into her life. Once she has sex, has a man, and has a child, she is a better cook and a better person. In other words, she is "feminized." Interestingly, in the German version of this film, the male chef is Italian, making use of stereotypical conceptions of the Latin lover and the sensuality of Italian cooking as opposed to French or German nouvelle cuisine. In films, women who cook professionally are masculinized and unstable; they must be brought into the heteronormative fold to become "normal."

A number of films about women who make food professionally involve the presence of magic in their food. They change other people's lives, always by infusing love, passion, and emotion. They do not seem to be able to do the same for themselves. Their fulfillment is in helping others. Examples include *The Mistress of Spices* (2005), *Chocolat* (2000), *Woman on Top* (2000), *The Recipe* (2010), *Like Water for Chocolate* (1992), and *Simply Irresistible* (1999).

Male chefs who are uninspired or otherwise lacking are often made whole by a return to their ethnic roots. For example, in *Today's Special* (2009), Samir is a classically trained chef whose food lacks inspiration, passion. It is "correct." To get the passion he lacks, he returns to his father's Indian restaurant, where an itinerant Indian immigrant taxi driver, who used to be a chef in Mumbai (among other things), provides Samir what he needs to find his inspiration in a combination of French and Indian food. In a man's case, it is a return to the ethnic family roots that gives him back the passion he needs to make truly inspired food.

When men are the makers of food, their ethnicity is often emphasized. Ang Lee's *Eat, Drink, Man, Woman* (1994) and the US remake, *Tortilla Soup* (2001), feature families without mothers and fathers who are professional chefs. In both films, the fathers are losing their sense of taste, even as they continue to prepare huge, complex meals of their respective ethnic traditions for their daughters. The fathers use their elaborate meals to try to hold on to their daughters, who are adults and are moving away, into their own lives. The loss of the sense of taste is a symbol of loss of self. The fathers are confused, losing the lives they have lived, unsure of how to move to the next stage of life, how to renegotiate their relationships with their daughters and others.

Interestingly, it is when a daughter takes up the father's expertise and cooks for her father that the men regain their sense of taste – like magic. So, once again, women are sensually connected with food. As in the films mentioned above, they imbue their creations with love, which acts on the loved ones to return sensuality and enjoyment – pleasure in the senses or joy itself.

According to popular films, women stop being reticent eaters only when they know they are going to die. Queen Latifah, as Georgia in *Last Holiday* (2006), makes exquisite meals following TV food programs, but only eats Lean Cuisine meals. She gives away the food she makes. She is also pleasure denying to herself in other ways. In the film, Georgia receives a diagnosis giving her just a few weeks to live. She takes all of her money and goes to a hotel in the mountains in Europe where one of her favorite chefs heads the kitchen. At dinner the first night, we see guests ordering food, but asking that certain ingredients be omitted. For example, one guest, a woman, asks whether they can make "the risotto without the dairy." As he receives these orders, the chef throws a fit, as people want his dishes with no fat, no this, no that. Georgia, however, orders everything on the menu just as it is described, and the chef is so delighted that he comes to meet her. She continues to eat rich, beautiful food, but only because she believes she is going to die. Her changed attitude toward the pleasures of eating is not resolved at the end of the film, when she learns that the diagnosis was incorrect, and she will not die any time soon.

In *Seeking a Friend for the End of the World* (2012), earthlings have just learned that the last attempt to save the earth from an asteroid has failed and that everyone will die in 2 weeks. At a dinner party, guests are asked how they will spend the remaining days of their lives. A single woman – portrayed as silly and vapid – says that one of the things she will do is "eat whatever I want, and not even care." This speaks volumes about her food world and that of many other women.

The gendered norms regarding food are largely true of norms about sex in film. In mainstream films, women are not supposed to desire sex, or to exhibit that desire, except under certain very specific conditions. Interestingly, when women eat like men and approach sex as men do, they are masculinized, and the two – food and sex – usually go together. In *La Femme Nikita* (1990) and its US remake, *Point of No Return* (1993), Nikita, a killer who is offered her freedom if she agrees to become an assassin for the

government, eats heartily, stuffing her face, shocking the man invited to share her meal. The meal is followed by an aggressive sexual overture, another sign of her masculinity. The man says that he is used to making the invitation, but goes along. The effect is to feminize him and masculinize her. She is, after all, a trained assassin. In her training to be an agent, she has been explicitly schooled in femininity, in the French film by Jeanne Moreau. Part of that training is learning how to eat – in public.

The close relationship between women's repression of appetites generally – eating and sex in particular – is evident in film portrayals of female vampires. They become masculine in their appetites. They feed voraciously, and they are sexually aggressive as well. Male vampires are also, but their predatory behavior, both sexual and food related, is not of a different kind from their ordinary masculine behavior, though many vampires are depicted as bisexual, which, for some, threatens their masculinity. Vampire women feed and feed, have sex with everyone, and never get fat or pregnant. They are not restrained eaters.

Summary

Though there is not much eating in films, what eating there is and the role of food in films reflect gendered food worlds. The identification of women with the body and appetites, and the responsibility of women to control those appetites, both for themselves and for men, is commonly portrayed in films. Women in films are "restrained eaters." When they are not, they are depicted as masculinized and often as psychologically unstable. Women may cease to be restrained eaters when death is near. Men, on the other hand, eat whatever is available and eat as much as they want. The heterosexual food world for men in Hollywood films is one where eating is necessary, like refueling, but not worth much thought. Men are rarely the preparers or providers of the food they eat.

When men do think about food, they are either professional chefs or not heterosexual. Rock Hudson's famous scene with Doris Day in *Pillow Talk* is a classic example of the latter. He is trying to make her uninterested in him, so he starts acting "gay;" one of the ways in which he does this is to show excessive interest in a recipe for a dip. Even today, in films, such codes are used, often still for comic effect.

Films in which men and women are chefs differ significantly. Women who are singularly focused on their craft are portrayed as masculine and as therefore abnormal. They must be re-feminized by male lovers, children, or nurturing. Male chefs are not feminized by their cooking, because being a chef is a traditionally masculine role. When male chefs lack passion in their craft, they get inspiration not from romantic love, but by returning to their ethnicity, often by way of their fathers, or by passing on their profession to their child, acting as the *pater familias*.

The relationships between eating, types of food, relationships to food, and gender in the movies reflect those of cultures at large. In film, as in life, food worlds are gendered.

References

Allen, J. (1984). Women and food. *Journal of Social Philosophy, 15*(2), 34–41.

Avakian, A. V., & Haber, B. (Eds.). (2005). *From Betty Crocker to feminist food studies: Critical perspectives on women and food*. Amherst: University of Massachusetts Press.

Baron, C., Carson, D., & Bernard, M. (2014). *Appetites and anxieties: Food, film, and the politics of representation*. Detroit: Wayne State University Press.

Bartky, S. (1990). *Femininity and domination: Studies in the phenomenology of oppression*. New York: Routledge.

Becker, A. E. (2004). Television, disordered eating, and young women in Fiji: Negotiating body image and identity during rapid social change. *Culture, Medicine and Psychiatry, 26*, 533–539.

Bell, R. A., Berger, C. R., Cassady, D., & Townsend, M. S. (2005). Portrayals of food practices and exercise behavior in popular American films. *Journal of Nutrition Education and Behavior, 37*(1), 27–32.

Bordo, S. (2003). *Unbearable weight: Feminism, Western culture, and the body* (10th anniversary ed.). Berkeley: University of California Press.

Bower, A. L. (2012). *Reel food: Essays on food and film*. New York: Routledge.

Counihan, C. M. (1999). *The anthropology of food and body: Gender, meaning and power*. New York: Routledge.
Ferry, J. F. (2003). *Food in film: A culinary performance of communication*. New York: Routledge.
Iggers, J. (1996). *Garden of eating: Food, sex and the hunger for meaning*. New York: Basic Books.
Inness, S. A. (Ed.). (2011). *Cooking lessons: The politics of gender and food*. Landham: Rowman & Littlefield.
Keller, J. R. (2006). *Food, film and culture: A genre study*. Jefferson: McFarland.
Macht, M. (2008). How emotions affect eating: A five-way model. *Appetite, 50*, 1–11.
Morrison, T. G., & Halton, M. (2009). Buff, tough, and rough: Representations of muscularity in action motion pictures. *The Journal of Men's Studies, 17*(1), 57–74.
Parasecoli, F. (2009). *Food and men in cinema: An exploration of gender and blockbuster movies*. Doctoral dissertation. Available from Kim Bibliotheksdienste.
Zimmerman, S. (2010). *Food in the movies* (2nd ed.). Jefferson: McFarland.

Films

Arau, A. (Director). (1992). *Like water for chocolate*. Santa Monica: Miramax Lionsgate.
Badham, J. (Director). (1993). *Point of no return*. Burbank: Warner Brothers.
Berges, P. M. (Director). (2005). *The mistress of spices*. Westmount: Christal Films.
Besson, L. (Director). (1990). *La femme Nikita*. Beverly Hills: MGM.
Gers, G. (Director). (2008). *Disfigured*. Canoga Park: Cinema Libre.
Gordon, M. (Director). (1959). *Pillow talk*. Universal City: Universal Studios.
Hallstrom, L. (Director). (2000). *Chocolat*. Santa Monica: Miramax Lionsgate.
Hicks, S. (Director). (2007). *No reservations*. Burbank: Warner Brothers.
Kaplan, D. (Director). (2009). *Today's special*. Niwot: Flatiron Films.
Lee, A. (Director). (1994). *Eat, drink, man, woman*. Beverly Hills: MGM World Films.
Lee, A. (Director). (2010). *The recipe*. Seoul: Film It Suda.
Nettelbeck, S. (Director). (2001). *Mostly Martha*. Hollywood: Paramount Classics.
Ripoll, M. (Director). (2001). *Tortilla soup*. Culver City: Sony Pictures Home Entertainment.
Scafaria, L. (Director). (2012). *Seeking a friend for the end of the world*. Universal City: Universal Studios.
Tarlov, M. (Director). (1999). *Simply irresistible*. Los Angeles: 20th Century Fox.
Torres, F. (Director). (2000). *Woman on top*. Los Angeles: Fox Searchlight.
Wang, W. (Director). (2006). *Last holiday*. Hollywood: Paramount Pictures.

Food, Agriculture, and Trade Organizations

Carmen Bain
Department of Sociology, Iowa State University, Ames, IA, USA

Synonyms

Trade associations; Trade institutions; Trade groups

Introduction

Trade organizations establish and enforce the rules of trade. The exemplary example of such an organization is the World Trade Organization (WTO). Established in 1995, the WTO marked the first time that an international organization had the legal mandate to regulate trade between nations, a role previously under the purview of individual nations. The objective of the WTO is to replace national trade rules, such as tariffs and quotas, and prohibit nontariff trade barriers, such as technical barriers or rules of origin, with a single institutional framework designed to allow trade to flow "as smoothly, predictably, and freely as possible" (World Trade Organization 2013). Changes wrought by the WTO led to the deepening of market relations globally, including the expansion of global value chains (GVC), where production is integrated from start to finish (Busch and Bain 2004; Bair 2009). Here, large-scale corporations, such as a Walmart, source a significant proportion of their product from thousands of different suppliers around the globe. The development of the WTO and GVC has had two significant effects on trade: first, it has led to a massive expansion in global trade in food and agricultural products, and second, corporations themselves have emerged as important trade organizations, establishing and enforcing rules to regulate the trade within their value chains.

The shift in global rule setting and the concomitant expansion in global trade gave rise to a number of ethical concerns. In particular, the WTO and large-scale corporations became the target of antiglobalization critics who argued that these organizations favor enforceable rules that encourage global market expansion, while rules that promote social goals, such as human rights, environmental sustainability, and labor standards, were largely absent (Ruggie 2003). Critics argued that as a result, inequality and injustice both within and between countries is exacerbated due to the combined effects of, first, market integration globally that constrains the ability of nation-states to function and to regulate trade and, second, the growing dominance of organizations, such as the WTO, that advocate economic rather than social objectives (Little 2003). In other words, liberalized trade rules facilitated the mobility of capital and goods, but equivalent rules that could adequately regulate the negative consequences of international trade were absent (Clapp and Fuchs 2009).

Within this context, many nongovernmental organizations (NGOs) concluded that traditional campaigns for social, economic, and environmental justice and equity were no longer effective. Recognizing the weakened role of the nation-state in policing international trade, many NGOs turned their attention instead to try and change the practices and policies of those actors they held responsible: corporations (Ruggie 2003). Through campaigns for corporate social responsibility (CSR), the goal of NGOs was to compel individual companies to integrate rules and policies into their production and trading practices that would address social, economic, and environmental concerns. This strategy has proved remarkably successful at encouraging corporations to do so.

A useful concept for considering the ethical issues involved in global trade is governance. In contrast to government (legislative, executive, judicial)-centered analyses of regulation, scholars are increasingly interested in emphasizing transnational governance structures (Gary Gereffi 2005). Scholars use the concept of governance to investigate the multiple actors, sites, and forms of governing that regulate the global agrifood sector (Higgins and Lawrence 2005, p. 13) and to consider its social, political, and ethical implications. Scholars who utilize this concept are particularly interested in considering how the regulatory boundaries between the state, market, and civil society have blurred and to analyze the development and role of novel actors and contexts through which governing occurs (such as global value chains, business and industry associations, or multi-stakeholder-led initiatives (MSIs)) (Higgins and Lawrence 2005; Smith and Mahutga 2009).

Governance structures and practices within global agrifood chains create a division of labor that effects how resources, as well as costs, risks, and rewards, are distributed among actors (Ponte and Gibbon 2005). From an ethical standpoint, therefore, a focus on governance is useful for understanding relationships of power and inequality within the agrifood sector including the distributional effects of global value chains (Ransom 2007; Bain 2010b; Prieto-Carrón and Larner 2010) and for helping to reveal the social relations bound up in the production of commodities (Guthman 2009). To accomplish this, governance scholars focus analytical attention on how actors and organizations use their power and authority to shape this division of labor within value chains as well as the tools, techniques, and activities, such as standards and audits, that they use to influence and coordinate the production, exchange, and consumption of food and agricultural products (Higgins and Larner 2010; Tallontire et al. 2011).

This entry examines two new nongovernmental organizational forms that have emerged to regulate trade and which explicitly seek to embody rules to advance socially responsible and ethical trade. The first example is the food retailer initiative, GLOBALG.A.P., and the second example is that of multi-stakeholder-led initiatives (MSIs) or "roundtables." I discuss governance efforts by these organizations to develop standards and auditing systems that incorporate rules to address the social, economic, and environmental performance of corporations within the global marketplace. The entry then outlines some of the major ethical concerns that have emerged from these developments.

Historical Development of Trade Organizations

After World War II, international trade in food and agricultural products was limited by national tariffs, quotas, and a host of nontariff trade barriers, such as sanitary and phytosanitary measures, designed to protect domestic industries and agricultural sectors. The WTO's mandate was to devise rules for international trade that would facilitate global trade by reducing and even eliminating trade barriers. The WTO has international legal status with enforcement powers similar to the United Nations (UN), and its rules are binding on member states. Initially, the goal was to reduce and phase out tariffs and quotas. However, as states began to recognize that a proliferation in nontariff trade barriers could threaten the system, attention was turned to developing a series of subsidiary agreements. These agreements restrict the use of nontariff trade barriers through the establishment of consistent, harmonized, and transparent standards based on scientific principles and evidence, which are enforceable (Busch and Bain 2004). For example, the Sanitary and Phytosanitary (SPS) agreement established rules for meeting standards for food safety and animal and plant health that do not function as a trade barrier. To ensure that standards do not act as a trade barrier, the WTO expects individual countries to base their standards on those established by the Codex Alimentarius Commission (Codex), the World Organization for Animal Health (OIE), and the Secretariat of the International Plant Protection Convention (IPPC).

The liberalization of global rules on trade had a profound effect on market relations globally. Of particular significance was the expansion of global commodity or value chains. Rather than international, business-to-business, or the use of spot markets, trade is increasingly organized through value chains where production is integrated from start to finish at a regional or even global scale (Bair 2009). Scholars involved in global value chain analysis (GVCA) emphasize the importance of global buyers, especially retailers and brand-name companies, as key organizations in the formation and regulation of global production, trade, and marketing (Gereffi et al. 1994; Bair 2009). These scholars argue that GVC are increasingly "buyer driven" rather than "producer driven." In buyer-driven value chains, lead firms, such as retailers, play a central role in making and enforcing decisions about practices and structures in the global economy, even though they do not own any of the production or manufacturing facilities themselves.

Today, for example, large-scale retailers, such as Walmart or Tesco, directly source a significant proportion of their product especially fruits and vegetables from thousands of different suppliers around the globe. To ensure consistent quality (e.g., food safety) and quantity (year-round supply) of product within their value chain, retailers are directly engaged with governing their value chains, especially through the use of standards and third-party certification, thereby shaping the conditions under which food and agricultural products are produced and traded globally.

Corporate Social Responsibility

Concerns regarding the ethics of corporate behavior are especially pertinent within the agrifood sector since the sector arguably represents the convergence of human rights, animal rights, and community and environmental issues more than any sector. As supermarkets have globalized, their supply chains have become increasingly complex while at the same time demands by stakeholder communities have become more challenging to meet. This sector has to deal with concerns not only about food safety but also regarding environmental hazards, genetically modified organisms, the use of pesticides, child and forced labor, health and welfare issues related to agricultural laborers, and animal welfare (Barrientos and Dolan 2006).

NGOs have questioned the social and environmental impacts of global food production in a context where the capacity of individual nation-states to regulate trade as well as to govern public goods, such as food safety or worker welfare, within this trade has diminished (Barrientos

and Dolan 2006, p. 4). Instead, many NGOs have turned their attention to campaigns for CSR with the goal of advancing their social, ethical, and environmental objectives by compelling individual companies to change their production and trade practices wherever they happen to operate within the global marketplace. Today, the dominant philosophical belief is that in the era of globalization, it is the corporate sector that has "the global reach and capacity" as well as the "ability to make and implement decisions at a pace that neither government nor intergovernmental agencies can possibly match" (Ruggie 2003, p. 107).

It is important to note that there is no single, coherent definition of CSR and the vagueness of the concept has allowed it to be interpreted and adopted by different actors for different purposes (Blowfield and George 2005). Blowfield and George (2005, p. 503) argue that it is better to think of CSR as a concept that incorporates a range of theories and practice, which all recognize the following:

> (a) that companies have a responsibility for their impact on society and the natural environment, sometimes beyond legal compliance and the liability of individuals; (b) that companies have a responsibility for the behaviour of others with whom they do business (e.g. within supply chains); and (c) that business needs to manage its relationship with wider society, whether for reasons of commercial viability or to add value to society.

Nor are NGO campaigns for CSR homogeneous. Rather, the strategies and goals tend to reflect the particular ideological perspective of the organization involved.

One of the most effective approaches early on was to publicly shame and stigmatize corporations into changing their behavior by publicizing cases of malpractice within their supply chains. These early campaigns were inspired by a number of high-profile social and environmental catastrophes in the mid-1990s including the toxic leak at a Union Carbide pesticide factory in Bhopal, India; the *Exxon Valdez* oil spill in Alaska; Shell Oil operations in Nigeria; the spread of genetically modified (GM) food and agricultural crops; continued tropical deforestation; and exposés of sweatshop labor by major branded corporations, such as Nike and Gap (Utting 2005). Working on the idea that "high-profile brand-name corporations can run but they cannot hide" (Utting 2005, p. 380), these campaigns target highly visible, reputation-sensitive, corporate brands at the retail end of the supply chain, those with direct links to consumers. By focusing on brand names with high visibility or symbolic value, such as McDonalds, Starbucks, or Walmart, campaigns are more likely to attract media interest and resonate with the wider public (Bendell 2005; O'Rourke 2005). Below, I discuss two examples of CSR.

Business-Sector-Led Initiatives

Food retailing has become increasingly concentrated, resulting in a handful of major supermarkets in Western Europe, the UK, and the USA, wielding enormous power and influence in determining how food is produced, traded, and consumed (Campbell et al. 2006; Lawrence and Burch 2007; Vorley 2007). Ironically, the reliance by these retailers on centralized procurement systems has increased their vulnerability to activist and media campaigns spotlighting unethical practices within their global value chains (Barrientos and Dolan 2006; Konefal et al. 2007). Food retailers have found that their valuable brands can be severely damaged if they are linked with unethical practices, such as child labor, destructive environmental practices, or genetically modified organisms. Furthermore, public concerns about the ethics or safety of the food system – whether real or perceived – have the potential to negatively affect the entire industry, not just the firm or producers responsible. Ignoring social and environmental problems, and failure to demonstrate due diligence in finding or preventing such problems, can pose considerable reputational and financial risks not simply to an individual retailer but the industry as a whole.

To address this, retailers seek to control their global supply chains by incorporating requirements for CSR that suppliers are obliged to meet if they wish to participate in the global marketplace (Barrientos and Dolan 2006).

Retailers use institutions, such as standards and third-party certification, in addition to other criteria to determine what products get traded, which producers can participate in the value chain, and under what conditions. For example, Walmart has developed its "Live Better" campaign as part of its global responsibility initiative, which includes standards to ensure ethical sourcing within its global supply chains. UK food giant, Tesco, has its "Nurture" program that sets standards for Good Agricultural Practices, including rules regarding the environment and worker welfare.

From the perspective of corporations, voluntary self-regulation is preferable to control by the state and many businesses value CSR initiatives as a means of protecting their brand-name reputation and managing economic risk. Voluntarist approaches to regulate corporate behavior within the global agrifood system have also garnered support from governments, especially in the UK and Western Europe, and among international organizations, such as the European Union (EU) and the United Nations (UN).

A preeminent example is GLOBALG.A.P., a consortium of major food retailers who created and implemented a set of agrifood standards to govern trade within their value chains. Launched in 2001, GLOBALG.A.P. (called EurepGAP until 2007) was conceived by a group of supermarkets from the UK and Europe who were concerned with establishing a set of harmonized, independently verified standards intended to address public concerns about food safety, environmental impacts, and the health, safety, and welfare of workers and animals. The basis for collaboration reflected the desire by GLOBALG.A.P.'s founders to avoid a situation where each company was engaged with developing its own standards and auditing system. Not only would this prove enormously expensive and time-consuming but company-based standards could make it difficult to sustain guaranteed supplies of certified product from producers.

These retailers recognized that they had a common interest in creating a harmonized set of requirements that would facilitate global trade within their supply chains by ensuring that supplies were interchangeable between companies (Bain 2010a). The intent was that GLOBALG.A.P. would function as a baseline standard with individual companies then free to develop additional standards and audit schemes (e.g., Tesco's Nurture) if they wished to do so.

The protocol was originally focused on fresh fruit and vegetable suppliers but has since expanded into other crops (including coffee, tea, and flowers), livestock, and aquaculture. To participate in GLOBALG.A.P., producers are required to meet a broad array of food safety and quality standards as well as labor and environmental standards and, in the livestock sector, animal welfare standards. To demonstrate compliance, producers must be independently audited by a third-party certifier who is approved by GLOBALG.A.P. While these standards are not mandated by law and thus considered voluntary, the reality is that compliance with GLOBALG.A.P. has essentially become an "entry ticket" for trading within the UK and EU marketplace (Campbell et al. 2006; Fox and Vorley 2006). Consequently, producer participation in GLOBALG.A.P. has continued to grow since 2001 with GLOBALG.A.P. establishing itself as the world's leading farm assurance program with some 130,000 producers from more than 110 countries certified in over 400 products (International Trade Centre 2013).

Multi-stakeholder-Led Initiatives

Business-led efforts to incorporate standards and codes of conduct for CSR within their trading relations have been significant. Yet, many proponents of CSR remained concerned about the lack of accountability, transparency, and participation within such efforts. Subsequently, in recent years, one of the most significant trends intended to enhance "stakeholder dialogue, participation, and partnership" (Bendell 2005, p. 362) within global value chains is multi-stakeholder-led initiatives (MSIs) or "roundtables" where a range of stakeholders concerned about the same issues sit down at the same table (Bailis and Baka 2011; German et al. 2011; Partzsch 2011). With MSI, nongovernmental organizations (NGOs) collaborate with businesses to

develop company codes of conduct, labor and environmental standards, and auditing systems designed to improve business practices within the global trading environment (O'Rourke 2005; Djama et al. 2011; Levidow 2013).

Proponents argue that since MSI are more inclusive than business-led initiatives, a broader range of interests and concerns can be addressed (Schouten and Glasbergen 2011). Many large-scale corporations are motivated to participate in these novel organizations as a means of harmonizing their global standards and establishing their public credibility as socially responsible, thereby minimizing social and economic risk (Ponte and Cheyns 2013). Examples of MSI within the agrifood sector include the Marine Stewardship Council's (MSC) Sustainable Fishing Programs, the Rainforest Alliance Certified Programs, and the UK's Ethical Trade Initiative (ETI).

Significantly, MSIs have flourished in the biofuels sector where the expansion in global trade in biofuels and the establishment of MSI have developed almost hand in hand. The rapid expansion in the production of biomass crops such as corn, palm, soy, and sugar in developing countries to produce biofuels, especially for the European market, has raised a number of complex ethical issues concerning food security, land grabs, water grabs, deforestation, loss of biodiversity, labor rights, and greenhouse gas (GHG) emissions (Selfa et al. forthcoming).

The establishment of the EU's Renewable Energy Directive (RED) in 2009 provided impetus to many MSIs. The RED includes several environmental sustainability criteria; however, its major focus is that 20 % of all energy and 10 % of transportation fuels will come from renewable sources by 2020 and that an initial 35 % GHG reduction will increase to 60 % for new biofuel installations by 2017 (Bailis and Baka 2011; Levidow 2013). In 2012, EU member states approved seven nongovernmental standards and certification schemes created to ensure that biofuels traded within the EU meet the RED sustainability rules, including the MSI's Roundtable on Responsible Soy (RTRS), the Roundtable on Sustainable Palm Oil (RSPO), and Bonsucro.

For example, Bonsucro is a MSI that has developed sustainability standards and certification for sugar and sugarcane ethanol production. Bonsucro's membership includes NGOs (e.g., the World Wildlife Fund and Solidaridad), sugarcane producers and ethanol production companies, and end-user companies, such as BP and Shell. Bonsucro excludes governments from its organization, which is the norm among MSIs (Ponte 2008; Cheyns 2011). Bonsucro explains on its website that its standards and certification will ensure "that a farmer sees better yields, human rights are respected, the planet benefits from better stewardship, the miller becomes more efficient, the trader gains more visibility, the end user greater transparency of origin, and we all. . .benefit from knowing that Bonsucro certified means 'sustainable'" (cited in Selfa et al. forthcoming).

Establishing Legitimacy

Despite efforts to incorporate CSR, the growing role of business, business associations, and MSI in determining the organization and rules of trade continues to pose important ethical concerns and dilemmas related to trade. One concern is the challenge that these organizations pose for democratic systems of government (Bendell 2005). Within this context, scholars have become increasingly interested in how such organizations establish legitimacy. Legitimacy is concerned with normative aspects of authority, who is understood to have the authority or right to rule and who is obligated (but willing) to obey that rule (Partzsch 2011).

Within liberal democracies, the state's authority to rule, and the willingness of its citizens to accept that rule, is derived from democratic norms (e.g., elections) whereby citizens can hold representatives accountable for their performance (Partzsch 2011). The challenge for non-state actors is how to gain approval from different stakeholder groups in society since rules imposed through the use of market power are vulnerable to challenge as undemocratic and therefore illegitimate (Clapp and Fuchs 2009; Higgins and Larner 2010).

Discursive and communication practices are mechanisms through which organizations attempt to establish legitimacy (Gibbon and Ponte 2008; Clapp and Fuchs 2009; Higgins and Larner 2010). Of particular interest to scholars is the importance of organizations appealing to technoscientific norms and values (Konefal and Hatanaka 2011) and "expert knowledge and practice" (Gibbon and Ponte 2008, p. 366). Here, organizations assert that institutions such as standards should be based on technoscientific values such as objectivity and value freedom with rules of measurement that are quantifiable and scientific. In other words, a good standard should incorporate rules of measurement, which become the means through which standards can be quantified (Bain et al. 2010).

For example, Bonsucro conveys the idea that its legitimacy is premised on its use of scientific standards that are politically independent from the government. Bonsucro explains that it has developed a "global metric standard" based on a "set of metric measurements" designed to measure the sustainability of sugarcane and its impact. Bonsucro frames its standard as superior to government regulation because it is scientific, nonpolitical, and value neutral (Selfa et al. forthcoming).

To help establish legitimacy for its standards, GLOBALG.A.P. emphasizes that its standards are based upon technoscientific principles, such as risk assessment, which are independently verified by accredited third-party certifiers. For example, GLOBALG.A.P. argues that its "protocol has been developed by experts and is heavily risk assessed. By adhering to good agricultural practice we reduce the risk and there are a number of other significant benefits with respect to worker safety and welfare. To achieve [our] goals, [GLOBALG.A.P.] seeks to achieve global consistency in their standards by verifying best practice objectively" (cited in Bain 2010a).

In addition, GLOBALG.A.P. emphasizes its use of risk assessment to discern just how rigorous its standards need to be. For example, in 2007, GLOBALG.A.P. developed a module to address high-risk instances of worker health, safety, and welfare known as "Good, Risk-Based Agricultural Social Practice" (GRASP). This module is separate from the GLOBALG.A.P. general protocol and is only intended as a voluntary standard that retailers can demand for regions of the world or sectors of the industry where the "risk of social misbehavior" is higher (GLOBALG.A.P et al. 2007, p. 6). In not requiring this module for all workers, GLOBALG.A.P. argues that mainstream agriculture cannot afford to implement broad-based labor standards or full social audits (GLOBALG.A.P. et al. 2007). Rather, it argues that rigorous labor standards and social audits are only realistic and affordable in niche markets where consumers are willing to pay (e.g., Fair Trade or the Ethical Trading Initiative (ETI)) or where the risk of a problem is especially high (e.g., GRASP) (GLOBALG.A.P et al. 2007).

To gain legitimacy, the rules established by private-sector trade organizations must be accompanied by a system of oversight that is perceived as independent, transparent, and expert based (Hatanaka et al. 2005; Campbell et al. 2006; Campbell and Le Heron 2007). Within the global agrifood system, third-party certification (TPC) is understood to embody such practices and norms, and TPC has emerged as one of the primary mechanisms through which organizations attempt to achieve legitimacy. Third-party certifiers are responsible for assessing, evaluating, and certifying whether a producer has met an agreed-upon set of standards (Hatanaka et al. 2005). TPC then conveys information about specific safety or quality claims of a product (e.g., maximum residue levels for pesticides, good labor practices, or animal welfare) from the producer to the buyer and/or consumers and government regulators.

TPC creates organizational legitimacy based on the assumption that its audits utilize technoscientific expertise and that it provides transparency and accountability to stakeholders and the public (Konefal and Hatanaka 2011). In addition, its independence from producers, buyers, NGOs, or government regulators enhances its broad appeal and authority as objective and impartial since it is viewed as having no stake in the outcome of the audit (Hatanaka et al. 2005).

The certification process, therefore, is presumed to be fair to all participants within the value chain (Bain and Hatanaka 2010).

Technoscience as the Practice of Power and Exclusion

Organizations involved with trade rely on standards and TPC to coordinate and govern the global agrifood system. In the struggle over whose rules should rule, organizations appeal to technoscientific norms and values to legitimize their standards or TPC and thereby assert their authority to govern across industry sectors, nations, and global value chains. However, questions of power are often hidden behind the language of scientific objectivity and value neutrality, and if standards and TPC within the agrifood system are about power, "then they must also be about ethics and justice" (Busch 2011, p. 239).

A growing body of literature suggests that this emphasis on technoscientific values and practices in the standards setting processes, together with the use of TPC, tends to privilege powerful actors and sideline the concerns of less powerful stakeholders, such as small-scale producers and workers, about justice and equity within the global trade system (Tallontire and Vorley 2005; Bain 2010b). It is a means to limit participation by producers and workers in the Global South within the decision-making process (Bain and Hatanaka 2010; Partzsch 2011).

For example, GLOBALG.A.P. emphasizes that "complete social audits with in-depth investigations and worker interviews are NOT in the scope of GRASP," its third-party audit program for high-risk agrifood chains (GLOBALG.A.P. et al. 2007, p. 3). Studies of the structures and functions of organizations, such as MSI, suggest that despite efforts to make these organizations more participatory and democratic, their emphasis on certain technoscientific values and discourse tends to marginalize "nonexpert" stakeholders, such as workers, small-scale producers, and rural communities, who cannot conform to these discourses (Bain 2010a; Bain and Hatanaka 2010; Cheyns 2011; Ponte and Cheyns 2013). A focus on techno-legal language reinforces existing power relations by discrediting alternative "forms of proof" that communities in the Global South typically use to provide evidence about, for example, land rights (Silva-Castaneda 2012). Cheyns (2011) found that MSI tend to depoliticize standards by focusing on "strategic engagement" thereby stifling efforts by local communities to debate questions of justice. Similarly, recent work on biofuels has suggested that "the institutional, discursive and symbolic value of sustainability certification" depoliticizes and legitimizes the expansion of monocultural biomass production (e.g., sugarcane, corn, soy, palm plantations) together with its concomitant land and water grabs by elites and "dispossess[ion] of rural communities" (Levidow 2013, p. 211; see also, Schouten and Glasbergen 2011; Selfa et al. forthcoming). In sum, despite claims of CSR, most trade organizations continue to emphasize the technoscientific values within their governance strategies, which are then used "to privilege some actors and forms of knowledge while marginalizing others" (Konefal and Hatanaka 2011, p. 125).

Summary

Corporations, business associations, and MSI have emerged as key players in the regulation of production, trade, and consumption, establishing governance mechanisms, such as standards, codes of conduct, and TPC, designed to regulate people and things within global value chains. Here, scholars are concerned with understanding the role that these organizations play in enhancing – or diminishing – the social, ethical, and environmental performance of business throughout the global agrifood system. Scholars have been particularly concerned with understanding how these organizations create legitimacy by utilizing technoscientific and expert practices and discourse. The governance literature has emphasized that this is an area that is deeply political even while posing "as depoliticized" (Ponte et al. 2011, p. 289). In other words, institutions – norms, rules,

conventions, and certification – always unfold within specific political economies and power relations (Ponte 2008; Bain and Hatanaka 2010; Busch 2011; Klooster 2011).

Moving forward, it is important to continue to explore the practices, structures, and forms of asymmetrical power that exist within organizations, including MSI, and the implications of this asymmetry for social and ethical practices (Cheyns and Riisgaard forthcoming). Moreover, if institutions are inherently political and ethical, then one of the fundamental challenges that remain is how to construct democratic processes that allow us to adjudicate questions of fairness and justice within the agrifood system.

Cross-References

- ▶ Free Trade and Protectionism in Food and Agriculture
- ▶ Multilateral Trade Organizations, Food, and Agriculture
- ▶ NAFTA and the Food and Agricultural Industries
- ▶ Private Food Governance
- ▶ WTO Dispute Settlement and Food and Agricultural Trade

References

Bailis, R., & Baka, J. (2011). Constructing sustainable biofuels: Governance of the emerging biofuel economy. *Annals of the Association of American Geographers, 101*(4), 827–838.

Bain, C. (2010a). Governing the global value chain: GLOBALGAP and the Chilean fresh fruit industry. *International Journal of Food and Agriculture, 17*(1), 1–23.

Bain, C. (2010b). Structuring the flexible and feminized labor market: GlobalGAP standards for agricultural labor in Chile. *Signs: Journal of Women in Culture and Society, 35*(2), 335–370.

Bain, C., & Hatanaka, M. (2010). The practice of third-party certification: Enhancing environmental sustainability and social justice in the global south? In V. Higgins & W. Larner (Eds.), *Calculating the social: Standards and the reconfiguration of governing* (pp. 56–74). New York: Palgrave Macmillan.

Bain, C., Ransom, E., & Worosz, M. (2010). Constructing credibility: Using technoscience to legitimate strategies in agrifood governance. *Journal of Rural Social Sciences, 25*(3), 160–192.

Bair, J. (2009). Global commodity chains: Genealogy and review. In J. Bair (Ed.), *Frontiers of commodity chain research* (pp. 1–34). Stanford: Stanford University Press.

Barrientos, S., & Dolan, C. (2006). *Ethical sourcing in the global food system*. London: Earthscan.

Bendell, J. (2005). In whose name? The accountability of corporate social responsibility. *Development in Practice, 15*(3&4), 362–374.

Blowfield, M., & George, F. J. (2005). Setting new agendas: Critical perspectives on corporate social responsibility in the developing world. *International Affairs, 81*(3), 499–513.

Busch, L. (2011). *Standards: Recipes for reality*. Cambridge, MA: MIT Press.

Busch, L., & Bain, C. (2004). New! Improved? The transformation of the global agrifood system. *Rural Sociology, 69*(3), 321–346.

Campbell, H., & Le Heron, R. (2007). Supermarkets, producers and audit technologies: The constitutive micro-politics of food, legitimacy and governance. In D. Burch & G. Lawrence (Eds.), *Supermarkets and agri-food supply chains: Transformations in the production and consumption of foods* (pp. 131–153). Cheltenham: Edward Elgar.

Campbell, H., Lawrence, G., & Smith, K. (2006). Audit cultures and the antipodes: The implications of EurepGAP for New Zealand and Australian agri-food industries. In J. Murdoch & T. Marsden (Eds.), *Between the local and the global: Confronting complexity in the contemporary agri-food sector* (pp. 69–94). Oxford: Elsevier.

Cheyns, E. (2011). Multi-stakeholder initiatives for sustainable agriculture: Limits of the 'inclusiveness' paradigm. In S. Ponte, P. Gibbon, & J. Vestergarrd (Eds.), *Governing through standards*. London: Palgrave Macmillan.

Cheyns, E., & Riisgaard, L. (forthcoming). Introduction to symposium: The exercise of power through Multi-Stakeholder Initiatives for sustainable agriculture and its inclusion and exclusion outcomes. *Agriculture and Human Values*.

Clapp, J., & Fuchs, D. (2009). Agrifood corporations, global governance, and sustainability: A framework for analysis. In J. Clapp & D. Fuchs (Eds.), *Corporate power in global agrifood governance* (pp. 1–25). Cambridge, MA: The MIT Press.

Djama, M., Fouilleux, E., & Vagneron, I. (2011). Standard setting, certifying and benchmarking: A governmentality approach to sustainability standards in the agro-food sector. In S. Ponte, P. Gibbon, & J. Vestergaard (Eds.), *Governing through Standards* (pp. 184–209). New York: Palgrave MacMillan.

Fox, T., & Vorley, B. (2006). Small producers: Constraints and challenges in the global food system. In S. Barrientos & C. Dolan (Eds.), *Ethical sourcing in*

the global food system (pp. 163–177). London: Earthscan.

Gereffi, G. (2005). The global economy: Organization, governance, and development. In N. J. Smelser & R. Swedberg (Eds.), *The handbook of economic sociology* (pp. 160–182). Princeton: Princeton University Press.

Gereffi, G., Korzeniewicz, M., & Korzeniewicz, R. (1994). *Commodity chains and global capital*. Westport: Praeger.

German, L., Schoneveld, G., & Pacheco, P. (2011). Local social and environmental impacts of biofuels: Global comparative assessment and implications for governance. *Ecology and Society, 16*(4). http://www.ecologyandsociety.org/issues/article.php/4516

Gibbon, P., & Ponte, S. (2008). Global value chains: From governance to governmentality? *Economy and Society, 37*(3), 365–392.

GLOBALG.A.P, Coop, & GTZ. (2007). *The GRASP project report: Towards good social practices in agriculture* (pp. 1–24). Switzerland: GLOBALG.A.P.; Coop, GTZ.

Guthman, J. (2009). Unveiling the unveiling. Commodity chains, commodity fetishism, and the "value" of voluntary, ethical food labels. In J. Bair (Ed.), *Frontiers of commodity chain research* (pp. 190–206). Stanford: Stanford University Press.

Hatanaka, M., Bain, C., & Busch, L. (2005). Third-party certification in the global agrifood system. *Food Policy, 30*, 354–369.

Higgins, V., & Larner, W. (2010). Standards and standardization as a social scientific problem. In V. Higgins & W. Larner (Eds.), *Calculating the social: Standards and the reconfiguration of governing* (pp. 1–17). New York: Palgrave Macmillan.

Higgins, V., & Lawrence, G. (2005). Introduction: Globalization and agricultural governance. In V. Higgins & G. Lawrence (Eds.), *Agricultural governance: Globalization and the new politics of regulation* (pp. 1–15). London: Routledge.

International Trade Centre. (2013). GLOBALG.A.P. Standards map. Retrieved 17 Mar 2014. http://search.standardsmap.org/assets/media/GLOBALG.A.P./English/AtAGlance_EN.pdf

Klooster, D. (2011). The local instrumentality of global standards: How Mexican indigenous communities use FSC Certification to foster a furniture production network. In S. Ponte, P. Gibbon, & J. Vestergaard (Eds.), *Governing through standards* (pp. 266–288). New York: Palgrave MacMillan.

Konefal, J., & Hatanaka, M. (2011). Enacting third-party certification: A case study of science and politics in organic shrimp certification. *Journal of Rural Studies, 27*, 125–133.

Konefal, J., Bain, C., Mascarenhas, M., & Busch, L. (2007). Supermarkets and supply chains in North America. In D. Burch & G. Lawrence (Eds.), *Supermarkets and agri-food supply chains: Transformations in the production and consumption of foods* (pp. 268–291). Cheltenham: Edward Elgar.

Lawrence, G., & Burch, D. (2007). Understanding supermarkets and agri-food supply chains. In D. Burch & G. Lawrence (Eds.), *Supermarkets and agri-food supply chains: Transformations in the production and consumption of foods* (pp. 1–26). Cheltenham: Edward Elgar.

Levidow, L. (2013). EU criteria for sustainable biofuels: Accounting for carbon, depoliticising plunder. *Geoforum, 44*, 211–223.

Little, D. (2003). *The paradox of wealth and poverty*. Boulder: Westview Press.

O'Rourke, D. (2005). Market movements. Nongovernmental organization strategies to influence global production and consumption. *Journal of Industrial Ecology, 9*(1–2), 115–128.

Partzsch, L. (2011). The legitimacy of biofuel certification. *Agriculture and Human Values, 28*(3), 413–425.

Ponte, S. (2008). Greener than thou: The political economy of fish ecolabeling and its local manifestations in South Africa. *World Development, 36*(1), 159–175. doi:10.1016/j.worlddev.2007.02.014.

Ponte, S., & Cheyns, E. (2013). Voluntary standards, expert knowledge and the governance of sustainability networks. *Global Networks, 13*(4), 459–477.

Ponte, S., & Gibbon, P. (2005). Quality standards, conventions and the governance of global value chains. *Economy and Society, 34*(1), 1–31.

Ponte, S., Gibbon, P. & Verstergaard, J. 2011. Conclusion: The Current Status, Limits and Future of 'Governing through Standards'. In S. Ponte, P. Gibbon & J. Vestergaard (EDs.), *Governing through Standards* (pp. 289–304). New York: Palgrave MacMillan.

Prieto-Carrón, M., & Larner, W. (2010). Gendering codes of conduct: Chiquita bananas and Nicaraguan women workers. In V. Higgins & W. Larner (Eds.), *Calculating the social: Standards and the reconfiguration of governing* (pp. 38–55). New York: Palgrave Macmillan.

Ransom, E. (2007). The rise of agricultural animal welfare standards as understood through a neo-institutional lens. *International Journal of Food and Agriculture, 15*(3), 26–44.

Ruggie, J. G. (2003). Taking embedded liberalism global: The corporate connection. In D. Held & M. Koenig-Achibugi (Eds.), *Taming globalization: Frontiers of governance*. Cambridge, UK: Polity Press.

Schouten, G., & Glasbergen, P. (2011). Creating legitimacy in global private governance: The case of the roundtable on sustainable palm oil. *Ecological Economics, 70*(11), 1891–1899. doi:10.1016/j.ecolecon.2011.03.012.

Selfa, T., Bain, C., & Moreno, R. (forthcoming). Depoliticizing land and water "grabs" in Colombia? The limits of Bonsucro certification for enhancing sustainable biofuel practices. *Agriculture and Human Values*.

Silva-Castaneda, L. (2012). A forest of evidence: Third-party certification and multiple forms of proof – A case study of oil palm plantations in Indonesia. *Agriculture and Human Values, 29*(3), 361–370.

Smith, D., & Mahutga, M. (2009). Trading up the commodity chain? The impact of extractive and labor-intensive manufacturing trade on world-system inequalities. In J. Bair (Ed.), *Frontiers of commodity chain research* (pp. 63–82). Stanford: Stanford University Press.

Tallontire, A., & Vorley, B. (2005). *Achieving fairness in trading between supermarkets and their agrifood supply chains* (pp. 1–27). London: UK Food Group.

Tallontire, A., Opondo, M., Nelson, V., & Martin, A. (2011). Beyond the vertical? Using value chains and governance as a framework to analyse private standards initiatives in agri-food chains. *Agriculture and Human Values, 28*, 427–441.

Utting, P. (2005). Corporate responsibility and the movement of business. *Development in Practice, 15*(3 & 4), 375–388.

Vorley, B. (2007). Supermarkets and agri-food supply chains in Europe: Partnership and protest. In D. Burch & G. Lawrence (Eds.), *Supermarkets and agri-food supply chains: Transformations in the production and consumption of foods* (pp. 1–26). Cheltenham: Edward Elgar.

World Trade Organization. (2013). What is the World Trade Organization? Retrieved October 7, 2013, from http://www.wto.org/english/thewto_e/whatis_e/tif_e/fact1_e.htm

Food, Class Identity, and Gender

S. Margot Finn
University of Michigan, Ann Arbor, MI, USA

Synonyms

Inequality; Social class

Introduction

"Class" refers to hierarchical divisions in society based on wealth, income, prestige, and/or one's relationship to the means of economic production (i.e., factory owner or worker, landowner, or peasant). Traditional definitions of class are based primarily on material assets, wage labor, and occupational status; they rarely account for unpaid work or everyday practices like shopping, cooking, and eating. Newer "culturalist" or "pluralist" approaches define class as a socially constructed identity that may depend as much on lifestyle and taste as material assets and labor conditions. Feminist scholars also emphasize the intersections between class identity and other social identity categories like gender, race, ethnicity, sexuality, religion, nationality, age, and ability. Food plays a central role in the construction of and lived experience of class and gender. This entry explores some of the ethical questions that arise from the relationships between class, gender, and food in five realms: hunger and food access, eating disorders, diet and body size, labor, and cultural capital.

Hunger and Food Access

Class and gender are two of the primary factors that determine whether someone will be affected by hunger. According to the UN Food and Agriculture Organization, the world produces more than enough calories for the current population; nevertheless, approximately 870 million people chronically lack sufficient food for their daily energy requirements (FAO 2012). The overwhelming majority (852 million) live in the developing world and occupy the lowest social stratum, lacking the resources to produce enough food on their own or buy the food available in markets. Temporary food shortages caused by weather, conflict, and distribution problems also primarily affect the poor.

The UN estimates that 60 % of chronically hungry people are women or girls. Worldwide, women own fewer and less productive agricultural resources and have less purchasing power than men. In some countries, tradition dictates that women eat last, which means they eat less than men when food is scarce and eat a less varied diet with fewer nutrient-dense foods like meat and vegetables. Women are also more likely to go without food during temporary shortages while men and boys get what little food is available. For all of these reasons, women and girls are more likely than men and boys to suffer from problems associated with malnutrition, including diminished learning and work capacity, increased susceptibility to infection, and stunted growth.

Malnutrition also puts women at greater risk of death during pregnancy and childbirth (Committee on World Food Security 2011).

Chronic hunger primarily affects people in developing countries, but even in developed countries some people lack reliable access to sufficient food. In the USA, approximately 15 % of households were classified as food insecure in 2011, meaning they had difficulty providing enough food for all their members all the time, and 5.7 % were very food insecure, meaning food intake was reduced and meals were skipped due to a lack of resources. Rates of food insecurity are higher for households with children headed by a single woman (25.3 % food insecure; 11.5 % very food insecure) and women living alone (7.7 % food insecure; 7.9 % very food insecure) (ERS). As with chronic hunger, food insecurity usually occurs in the presence of available food that people simply cannot afford to purchase; however access to food may also be a factor. The term "food desert" was developed in the 1990s to refer to neighborhoods with few food markets and limited transportation options. Whether or not these neighborhoods truly lack adequate food is contested; however, there is broad agreement that disparities in the retail food environment of developed countries correspond to disparities in neighborhood income levels and that poorer people often have less access to some types of food, particularly fresh produce.

Eliminating hunger is widely recognized as an urgent humanitarian need and an issue of social justice. In addition to the suffering hunger causes directly, malnutrition also helps perpetuate poverty. Due to the disproportionate affect hunger has on women, alleviating hunger is also an issue of gender equality. The right to adequate food is enshrined in international human rights law, including Article 25 of the 1948 United Nations *Universal Declaration of Human Rights*, which declares every person's right to "a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical care." The USA has historically opposed formal recognition of the "right to food," and at the 2002 World Food Summit, representatives from the USA argued that the right to food should mean "an opportunity to secure food and not a guaranteed entitlement" (Butterly and Shepherd 2010).

Even among those who agree that the right to food should be a guaranteed entitlement, there is considerable debate over who is responsible for feeding the hungry, whether charity creates dependency instead of self-sufficiency, and how to handle situations where food aid might undermine national or cultural sovereignty. For example, the international community was reluctant to intervene in the rural famine in Ethiopia in 1973–1974 in part because the country's regent, Haile Selassie, said he did not want his country to look like "just another starving African nation" in need of large-scale emergency aid operations while they were hosting the tenth anniversary of the Organization of African Unity. Educating girls and women and offering women microloans to start small businesses have been shown to reduce malnutrition and improve their community's food security; however, targeting women often involves violating their societies' preferences. Selecting girls and women for special education and empowerment programs may put them at risk of retaliation.

There are also ethical questions raised by the use of food aid as a political instrument and the practice of attaching conditions to aid. The USA has been criticized for its decision to send food aid to the Eritrean separatists in Ethiopia in 1985, which was interpreted as an attempt to stoke the continuing civil war and topple the Soviet-allied Mengistu government. The World Food Programme struggled with the question of conditions in its efforts to address food shortages in Zimbabwe in the 2000s. President Robert Mugabe only wanted food aid distributed to those who supported his government, which was widely seen as the primary cause of the shortages. Some argue that attaching conditions to aid is inherently immoral, but without conditions, food aid may not reach those who need it most or may be used to prop up tyrannical governments (Butterly and Shepherd 2010).

Eating Disorders

Abnormal eating patterns involving restricted or excessive consumption are generally believed to be most prevalent in white middle- and upper-class women in North America and Western Europe; however, they also appear to be increasing around the world. The three most widely recognized and studied eating disorders are anorexia nervosa, bulimia, and binge eating disorder [BED]. Anorexia nervosa is usually characterized as the relentless pursuit of thinness through refusing or restricting food. Bulimia is characterized by episodes of binging, or eating large amounts of food, followed by purging, usually by inducing vomiting or using diuretics and laxatives. Binge eating disorder [BED] resembles bulimia, but typically without purging. Other eating disorders include purging disorder (bulimia without binging episodes), diabulimia or the manipulation of insulin by diabetics to bring down their weight, night eating syndrome, and orthorexia or an obsessive concern with food purity. Eating disorders are often accompanied by a fear of fat and body dysmorphic disorder, or a distorted self-image usually characterized by feeling fat despite appearing thin to others.

Eating disorders are both an immediate cause of suffering and can lead to other health problems, a diminished life, and sometimes death. Approximately 15 % of anorexics die from suicide or starvation. Like hunger, eating disorders make people more susceptible to other diseases and reduce their capacity to learn and work. Eating disorders are also associated with depression and substance abuse. There are ethical questions raised by some treatment and prevention strategies and the possibility that contemporary understandings of the disorders may exclude marginalized groups.

Most researchers believe that eating disorders are caused by an interaction between biological, psychological, social, and cultural factors. Joan Jacobs Brumberg argues that the emergence of anorexia in late nineteenth century England and America was facilitated by the fashion for fragility and sickness in bourgeois women, the association between eating (especially meat) and sexual desire, and tensions in the Victorian nuclear family particularly around the socialization of adolescent girls (Brumberg 1988). Contemporary eating disorders are often linked to the intensification of public concern about obesity since the 1980s and the aesthetic preference for thinness represented by cultural products like Barbie and the unrepresentative thinness of most women portrayed in mass media and fashion. The prevalence among white and Asian girls in the middle and upper classes may reflect the particular pressure many in that demographic feel to adhere to dominant beauty ideals.

However, the widespread association of eating disorders with wealthy, white adolescent females may also be both a result and cause of underdiagnosis in other groups. Men and boys might be less likely to seek treatment for symptoms associated with a feminized condition. Additionally, men and older women appear to be more likely to suffer from BED, which has only recently attracted the attention and concern of researchers and doctors. According to one survey of adults in the USA, 0.9 % of women and 0.3 % of men reported having anorexia at some time in their lives, 1.5 % of women and 0.5 % of men reported having bulimia, and 3.5 % of women and 2 % of men reported having BED (Hudson et al. 2006).

The focus on middle-class white adolescent girls' experience of eating disorders may also have shaped the way the disorders are defined and understood in ways that exclude the particularities of how they manifest in other populations. In Becky Wangsgaard Thompson's interviews with nonwhite, poor, and lesbian women with eating disorders, many of them described binging in order to achieve a numbed mental state similar to drunkenness or a drug high. Other interview subjects reported wanting to alter their bodies after an assault, either in an attempt to return to a childlike thinness they hoped would attract less unwanted sexual attention or to achieve a kind of sexual invisibility through fatness. Thompson argues that the dominant approach to eating disorders has underestimated how often they arise in response to racism, sexual abuse, poverty, sexism, emotional and physical abuse, heterosexism, and classism, all of which are more likely to

affect people outside the demographics traditionally seen as most at risk (Thompson 2002).

There is considerable debate and little consensus about what treatment strategies are most effective. Anorexic patients who reach a very low weight are traditionally hospitalized and sometimes fed via tube or IV against their wishes. In an alternative called the Maudsley approach, patients remain at home where their feeding is supervised by family members. Critics of the Maudsley approach claim that family members, especially the parents of adolescents, should remain removed from treatment to preserve the patients' privacy and autonomy (Brown 2006). Treatments are often expensive and many health insurance plans provide little or no coverage, effectively restricting access to the full range of possible treatments to the rich.

Some people with eating disorders argue that all forms of treatment are inappropriate violations of their autonomy. Participants in pro-ana communities, which often take the form of online message boards and groups on social networking sites, claim that they are not diseased and that their "symptoms" are accomplishments of self-control and central to their identity. Some medical associations and advocacy groups have asked that pro-ana sites be shut down because they encourage self-harm. Yahoo and Facebook will shut down groups identified as pro-ana. However, others argue that censoring the sites will not prevent anyone from developing an eating disorder and that pro-ana sites may actually help friends and family members identify loved ones suffering from disorders. Livejournal and MySpace will not shut down pro-ana groups, but have worked with advocacy groups to place advertisements for recovery groups and treatment services on the sites (BBC News 2008).

Scholars and activists who call for more representative portrayals of women in media and fashion often cite the prevention of eating disorders as one of their aims. In 2013, Israel passed a law that bans models with a BMI under 18.5 from catwalks and commercials and requires advertisers to include a notice on images that have been photoshopped. The legislation was partially inspired by the death of Israeli model Hila Elmaliah from anorexia in 2007. Critics of the law, like fashion publicist Kelly Cutrone, defend the use of extremely thin models on aesthetic grounds, claiming that clothes look better on thin people (Roff 2013). Even eating disorder specialists are skeptical about claims that eliminating very thin women from mass media will end, or even meaningfully reduce, the incidence of eating disorders. There are similar debates about claims that the increasing incidence of eating disorders is due to Western cultural influence, particularly exposure to Western media.

Diet and Body Size

Beliefs about body size and attempts to shape the body through diet vary widely around the world. The preference for thinness and practice of weight-loss dieting appear to increase along with affluence and Western influence; however, anthropologists estimate that 80 % of human societies on record have a preference for plumper women. Just as thinness and restrained eating are associated with wealth and virtue in most industrialized Western countries, fatness and a robust appetite are seen as beautiful and healthy and associated with a higher social status in others. In some societies, like the Tuareg and Azawagh of Niger, men are supposed to be thin but women cannot be "too fat" and families who can afford it engage in deliberate fattening rituals to prepare girls for marriage (Popenoe 2004). In some parts of Puerto Rico and Greece, a woman getting fatter after her marriage is seen as a positive sign of her husband's success in providing for the family (Massara 1997). Some subgroups within Western countries also hold a positive view of fatness; African-American women and Latinas in the USA are more likely than white women to associate fatness with strength and beauty.

Some people argue that body size preferences (or perhaps all beauty ideals) are inherently problematic because they create and reinforce unfair social hierarchies, promote unhealthy eating behaviors and body dissatisfaction, and are particularly burdensome for women. Susie Orbach's

influential 1978 book *Fat is a Feminist* issue argues that dieting and compulsive eating are both caused by gender oppression and constitute another form of oppression for women. Others argue that investing in beauty ideals is a meaningful form of cultural work related in complex ways to a society's values and that striving for thinness or fatness contributes to identity formation, well-being, and social cohesion. There is broad agreement that weight bias has a negative impact on the social, economic, psychological, and physical health of people who do not fit prevailing ideals and that weight bias affects women more than men and poorer women more than richer women.

In countries where thinness is preferred, fatness is often associated with lower class status and marginalized racial groups. Women are typically expected to adhere to a lower ideal weight and experience more harassment about their weight and diet than men. In the USA, fatter white women earn less than thinner white women with the same jobs and qualifications; there is no difference for women of color or men. Fat women in the USA are also more likely to be depressed and suicidal and less likely to find dating partners or marry (Oliver 2006). Doctors and psychologists have been shown to view fat patients as lazy, lacking in self-control, noncompliant, unintelligent, and dishonest, and they perceive women as fat at a lower BMI than men. Educators say fat students are untidy, more emotional, and less likely to succeed than thinner students and have lower expectations for them across a range of ability areas. These stereotypes may lead to a lower standard of care and poorer academic performance and educational achievement, and the effects are greater for women, people of color, and the poor (Friedman and Puhl 2012).

Labor

Women do a majority of home food preparation around the world and play a significant role in commercial agriculture, industrial food production, and restaurants. Growing, processing, and serving food can be a source of power and pleasure for women and is widely seen as a realm of women's expertise. However, bearing a disproportionate share of the burden of food labor can also be a form of gender oppression, and women who work in food industries are subject to greater wage exploitation and more physical and emotional abuse.

According to the FAO, women produce more than 50 % of the food grown worldwide. In developing countries, 79 % of women who work are primarily engaged in agriculture. Women farmers often face more challenges than men in getting access to desirable land, improved seeds, fertilizers, and equipment on average. The FAO estimates that women's yields are on average 20–30 % lower than men's (Committee on World Food Security 2011).

Women do 85–90 % of household food preparation in developing countries. In some developed countries, the share of home cooking done by men has been increasing for at least the last few decades, but women still do more of it. According to a 2012 time use study in the USA, women spend approximately three times as much time as men on food preparation and cleanup. Approximately 50 % of women spend at least some time cooking on an average day while fewer than 20 % of men do (Bureau of Labor Statistics 2013). Women also do a majority of the shopping for food and bear primary responsibility for the additional labor involved in feeding children, even when they work outside of the home.

Women employed on farms, in factories, and at restaurants are typically paid less than men in those industries and are at greater risk of rape and sexual harassment in the workplace. A 2010 survey of women farmworkers in California found that 80 % of respondents had experienced some form of sexual harassment at work. Twenty-four percent had experienced sexual coercion, which usually entails being offered quid pro quo like desirable jobs for sex (Morales Waugh 2010). In meatpacking and food processing, women tend to be assigned to jobs that pay less, are less likely to be promoted, and are subject to more sexual harassment and assault.

Women restaurant workers are more likely to work in tipped positions, which have a lower guaranteed minimum wage, and are less likely to be promoted or assigned to managerial roles. Only 11–18 % of chefs are women, and women chefs earn an average of $14,851 less than their male counterparts (Villaneueve and Curtis 2011). On average, women in the restaurant industry in the USA make about 79 % for every dollar earned by men, which is comparable to the national gender wage gap.

Cultural Capital

In addition to all the material ways food reflects and reproduces class hierarchies, food is also implicated in the hidden or "soft" forms of domination that operate at the level of aesthetic tastes, habits, and social dispositions. The term "cultural capital" comes from *Distinction*, Pierre Bourdieu's 1979 study of the preferences of different social classes in France. He argued that the upper class preserves its advantages in part by making "good taste" more difficult to acquire. In keeping with his theory, the kinds of culinary knowledge and eating practices constructed as aesthetically and morally superior (often characterized by words like elegant, polite, refined, or sophisticated) are generally those that only the wealthy can afford to cultivate. The foods and eating practices of the poor and working class tend to be characterized as coarse, rude, disgusting, or uncivilized. Tastes and habits form the basis for judgments about intelligence and moral character and sometimes determine access to exclusive spaces and opportunities.

The cultural capital associated with food may be particularly important to women because cooking, entertaining, and teaching children etiquette have all traditionally been feminized. In contemporary Western countries, most mass media in the "lifestyle programming" genre, which seeks to educate audiences about things like food and home decorating, is aimed at women. Media scholars Kathleen LeBesco and Dean Naccarato argue that the genre as a whole and star performers like Julia Child and Martha Stewart reinforce class by giving their largely female audience the illusion of mobility (LeBesco and Naccarato 2008).

Class-based and gendered attitudes towards food also shape social movements aimed at improving the food system. In the USA, the Pure Food and Home Economics movements of the late nineteenth and early twentieth centuries and the Slow Food and locavore movements of the late twentieth and early twenty-first centuries have been largely led by white, middle- and upper-class women. Particularly in the case of the Pure Food and Home Economics movements, women's participation has been attributed to the Cult of Domesticity and hailed as a kind of feminism. White, middle-class American women learned to work within and simultaneously expand the domestic sphere by pursing political change through their accepted roles as mothers, caretakers, and managers of the home (including, crucially, the kitchen).

However, women's empowerment through food activism may have come at the expense of other groups, particularly immigrants and the poor. Participants in these movements often espouse populist aims and sometimes claim to be specifically working on the behalf of immigrants or the poor, who are particularly vulnerable to the abuses of industrial food production – especially unsafe and unhealthy products and unsafe working conditions. However, by pathologizing the way immigrants and the poor eat, they also perpetuate prevailing cultural hierarchies. The Slow Food and locavore movements have been widely criticized for perceived elitism and advocating a narrow form of activism based on consumption that effectively excludes the poor and working class.

Summary

The primary ethical questions raised by the relationship between gender, class, and food concern the ways food can reflect and reinforce inequalities. Women and the poor in developing countries are more likely to experience chronic hunger; women and the poor in developed

countries are more likely to be food insecure. Women are more likely than men to develop eating disorders, which may be more common in the middle and upper classes or simply underdiagnosed in the working class and poor. In some cultures, fatness is seen as beautiful and women are encouraged (or forced) to eat a lot in order to become fat; in others, thinness is preferred and women are encouraged to restrict their consumption. Women do the majority of the domestic labor of growing and cooking food worldwide and face wage discrimination and sexual harassment when working in food industries. Eating, dieting, cooking, and working with food may be a source of pleasure and power for some women some of the time but can also be a source of oppression. Tastes and manners are used to distinguish people of different classes, and social movements led by middle- and upper-class women may perpetuate class hierarchies through the cultural politics of "good taste."

Cross-References

- ▶ Access to Land and the Right to Food
- ▶ Eating Disorders and Disturbed Eating
- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Ethics and Food Taste
- ▶ Food Deserts
- ▶ Restaurant Workers
- ▶ Right to Food in International Law

References

BBC News. (2008, February 24). Pro-anorexia site clampdown urged [Web]. Accessed 23 Aug 2013.

Brown, H. (2006, November 26). One spoonful at a time [Web]. *New York Times*. Accessed 23 Aug 2013.

Brumberg, J. J. (2000 [1988]). *Fasting girls: The history of anorexia nervosa*. New York: Vintage Books.

Bureau of Labor Statistics. (2013, June 20). *American Time Use Survey Table 1* [Web]. Accessed 21 Aug 2013.

Butterly, J. R., & Shepherd, J. (2010). *Hunger: The biology and politics of starvation*. Hanover: Dartmouth College Press.

Committee on World Food Security. (2011, October 17–22). *Policy roundtable: gender, food security, and nutrition* [Web]. Rome. Accessed 7 Aug 2013.

Economic Research Service. (2012, September). *Household food security in the United States in 2011* [Web]. Accessed 7 Aug 2013.

FAO. (2012). *The state of food insecurity in the world 2012* [Web]. Rome. Accessed 7 Aug 2013.

Friedman, R. R., & Puhl, R. M. (2012). *Weight bias: A social justice issue* [Web]. Yale Rudd Center for Food Policy and Obesity. Accessed 23 Aug 2013.

Hudson, J. I., et al. (2006). The prevalence and correlates of eating disorders in the national comorbidity survey replication. *Biological Psychiatry, 61*(3), 348–358.

LeBesco, K., & Naccarato, P. (2008). Julia Child, Martha Stewart, and the rise of culinary capital. In K. LeBesco & P. Naccarato (Eds.), *Edible ideologies*. Albany: State University of New York Press.

Massara, E. (1997). Que Gordita. In C. M. Counihan & P. Van Esterik (Eds.), *Food and culture: A reader* (pp. 251–271). New York: Routledge.

Oliver, J. E. (2006). *Fat politics: The real story behind America's obesity epidemic*. New York: Oxford University Press.

Popenoe, R. (2004). Feeding Desire: Fatness, Beauty, and Sexuality Among a Saharan People. New York, NY: Routledge.

Roff, C. (2013, April 30). Will banning underweight models prevent eating disorders? [Web]. *Yahoo!* Accessed 23 Aug 2013.

Thompson, B. W. (2002). 'A Way Outa No Way': Eating problems among African-American, Latina, and White Women. In C. M. Counihan (Ed.), *Food in the USA: A reader* (pp. 219–237). New York: Routledge.

Villaneueve, F., & Curtis, L. (2011). Chef salaries and hospitality industry salaries [Web]. Accessed 21 Aug 2013.

Waugh, I. M. (2010). Examining the sexual harassment experiences of Mexican immigrant farmworking women. *Violence Against Women, 16*(3), 237–261.

Food's Purposes

Adam Henschke

Centre for Applied Philosophy and Public Ethics, Charles Sturt University, Canberra, Australia

Synonyms

Food (definition); Food's ends; Understanding food

Introduction

What is food? Central to any discussion of philosophy of food is a description of what the term "food" can mean. One way to conceptualize food is by reference to its intended use, to look at the ends to which food is put. This is an explicitly teleological approach, by which a thing, in this case food, is made sensible by reference to the goal and outcome that a user has for the given thing. On the teleological account, an action becomes sensible by recognizing three things – the reasons that a person has for acting, their action, and the outcomes of that action (Henschke 2012, pp. 58–60). This entry makes sense of food by reference to the different outcomes that a person might have for food.

A specific case example of a specific food type, bread, is used through this entry. Six purposes for food are described: basic survival, quality of life, pleasure, personal relationships, cultural expression, and trade. Note that all six purposes understand food by reference to some form of consumption – that is, a commonality to all purposes of food is that it has been, is being, or will be consumed. Finally, while many of the purposes can be attributed to non-human consumption, this entry is focused on food as it relates specifically to humans.

Background

Bread is a common food for many people around the world. This might be as a packaged pre-sliced loaf purchased in a supermarket, as fresh-made accompaniment to a restaurant meal, or baked at home. The bread might be made from wheat flour or other grains, it might be leavened or unleavened, and freshly baked or days old. Bread will be used as an illustrative example for each food different purpose identified in this entry; however, many food types should and will fit to the different purposes.

Common to bread, and all other food types, is that people eat for reasons. Variability comes in with the reasons that a person might have for eating: the same piece of bread might be eaten to prevent starvation, to celebrate a particular cultural event, or to distract a person while working at their desk. The variability of purposes that a person might have for eating can mean that the bread, and food more generally, is valued differently. At a population level, these values can assist in determining what sorts of food get prioritized – The World Bank's *AgResults*: *Innovation in Research and Delivery* program, for example, funds agricultural research based on expected impacts on that a food product will have food security, food safety, and on the promotion of health and nutrition (The World Bank 2012).

On an individual level, the values ascribed to a certain food type are said to operate as heuristics in assisting food choices (Connors et al. 2001). Keeping to the individual, consider the difference between eating a piece of bread to prevent starvation or as part of a cultural ritual. If the bread is keeping a person from starving to death, its value is (at least) in individual survival, while if the bread is part of an elaborate cultural ritual, its value is (at least) in the symbolism and maintenance of practices of the given culture. Depending then on how one considers the different values, the bread can have different levels of importance. On occasions these values can conflict. Should a limited supply of bread be used to save a person from starvation or should it be used for a well-fed cultural group to maintain their cultural traditions? Recognizing the different purposes for food promotes a better understanding of food itself and may help understand and resolve value conflicts about food types and resources.

The six purposes identified in this entry are commonly found in discussions of food, though they may be implicit in how people understand food. In *Managing Values in Personal Food Systems*, for example, five key values of food have been identified: health, taste, social relationships, cost, and time (Connors et al. 2001). For this entry, *health* is broken into "minimum survival" and quality of life, *taste* is located under "pleasure," *social relationships* has been broken into personal relationships and cultural expression, and *cost* and *time* have

been located under "trade." As with much work in conceptual differentiation, the categories overlap, the boundaries between them are fuzzy, and others may carve up the terrain differently. The intention here is to capture and illuminate key purposes to which food is put.

Purpose 1: Minimum Needed for Survival

An immediate and obvious way to understand food is by reference to survival. That is, what is the minimum amount of food needed to prevent death and/or maintain a person's life? The United Nation's Food and Agriculture Organization (FAO) uses a series of indices to identify and rank hunger around the world. Central to the FAO's indices is the "human energy requirement" element. These are "estimated from measures of energy expenditure plus the additional energy needs for growth, pregnancy and lactation" (Joint FAO/WHO/UNU Expert Consultation 2004). The basic premise to the human energy requirement is that if a person expends more energy than they consume, after a given period time, they die. At an individual level, the energy requirement "is the amount of food energy needed to balance energy expenditure in order to maintain body size, body composition and a level of necessary and desirable physical activity consistent with long-term good health" (Joint FAO/WHO/UNU Expert Consultation 2004).

This human energy requirement is a coarse measure, and as Edoardo Masset describes, there are a series of ways to see how such indices are calculated and how they relate to combating extreme hunger (Masset 2011). Further, Scott Wisor has argued that when using things like indices of hunger measurement to allocate resources, these indices have important ethical assumptions and ramifications (Wisor 2012).

In the instance of food for survival, bread illustrates the concept by being eaten to prevent starvation. For whatever a given day, a person would need to eat bread with energy that provides energy that, at very least, is equivalent to the person's energy output/use. If their consumption of bread (as their only energy input) persistently sits below the level of energy output, then the bread is not meeting its purpose of sustaining the person's life.

Purpose 2: Quality of Life

The human energy requirement is one aspect of food, and while maintaining a particular energy balance may prevent a person from starving, energy alone is not sufficient to maintain and assure a quality of life – food is also consumed to supply macro- and micronutrients. Given the important causal role played by malnutrition in public health (Müller and Krawinkel 2005), understanding food by reference to hunger alleviation and minimum energy requirement alone captures only part of the importance of food for quality of life. Olaf Müller and Michael Krawinkel differentiate between protein-energy malnutrition and micronutrient deficiency (Müller and Krawinkel 2005), with protein-energy tying more closely to purpose 1, minimum food needed for survival.

Treating protein-energy deficiency "can benefit from preventive interventions ranging from income generation and nutritional education to maternal support, food supplementation and food prize subsidies" (Müller and Krawinkel 2005, p. 282). In contrast, "micronutrient deficiencies would best be addressed through food-based strategies such as dietary diversification through home gardens and small livestock" (Müller and Krawinkel 2005, p. 279). Energy input may be necessary for quality of life, but it is not sufficient – if food is considered in relation to quality of life, then the food consumed must also provide basic nutritional requirements.

To illustrate the importance of a distinction between basic energy input and nutrition, consider that there are now people who are obese but suffering from malnutrition (Kaidar-Person et al. 2008). Their basic calorific intake exceeds their energy output, they are not starving. In combination with other causal factors for obesity – see obesity-related entries in this encyclopedia – the quality of food that they are consuming is such that their nutritional needs are not being met. If one considers that food must meet basic nutritional requirements, then a diet that does not reach these requirements

could arguably be said not to be a diet rich in food. Michael Pollan, for instance, states that "most of what we consume today is, strictly speaking, no longer food at all" (Pollan 2008, p. 7).

To counteract nutrient deficiencies, some modern food development and production use particular methods to increase the micronutrients found in common food types. One method is biofortification, in which micronutrient deficiencies in things like vitamin A, iron, and zinc are enriched through selective plant breeding (Nestel et al. 2006). See the ► Functional Foods entry in this encyclopedia for more on this issue. Other methods include addition of micronutrients at the processing stage of commonly eaten products. For instance, low folate levels are associated with neural tube defects which are detrimental to fetal health. As such, many governments have instituted folate awareness campaigns, and some have actively sought to supplement processed breads and breakfast cereals with folate to increase fetal health (Buttriss 2005).

In the instance of food understood as quality of life, bread consumed for energy alone is not sufficient. The bread is eaten to provide nutrients above and beyond its energy provision. Some diets are high in energy but low in other nutrients – eating large amounts of bread alone is likely to reduce a person's basic health and may bring about a state of obesity. In order to prevent malnutrition, certain grains are designed through breeding or other technological interventions such that breads produced from them are high in micronutrients. Further, given the commonality of bread in many people's diets, adding nutritional supplements to bread can be a method to provide these missing nutrients to a large swathe of a given population. The addition of folate to bread, to prevent birth defects, is one such example.

Purpose 3: Pleasure

A further obvious reason for eating is pleasure. Food tastes good, and the feeling of satiation can also be a source of pleasure. The bases for such pleasures are broad and are likely to be somewhat idiosyncratic. Four ways to carve up the pleasures gained from eating are taste, satiation, neurological stimulation, and challenge.

The most obvious pleasure that comes from food is when it tastes good. For many people, in the developed world at least, concerns of survival and nutrition are secondary to the first question – does the food taste good? Certain food types and combinations likely trigger particular neurological stimulation, such that some foods will typically taste good to the average person. Taste, however, is more complex than simple stimulation/response; contextual factors play an important role in how food tastes. Brian Wansink details a series of different events and experiments where the color of food changed how it tasted to people and how the region that a wine was said to come from changed not only the taste of the wine, but also of the accompanying meal (Wansink 2006, pp. 120–122, 119–123).

A second pleasure that comes from food is satiation or the feeling of fullness that comes from a particular meal. While satiation may be considered a quantitative aspect of food, where the pleasure of taste is a qualitative measure, contextual factors are also in play. For instance, according to Wansink, "scientists don't know what makes us full. It seems to be a combination, among other things, of how much we chew, how much we taste, how much we swallow, how much we think about the food, and how long we have been eating" (Wansink 2006, p. 46). Further, Pollan describes the unit bias, whereby people register a feeling of fullness in part by reference to completion of a unit of food (2008, p. 183). On the unit bias, the way the food is packaged and presented will impact how satiated people feel upon eating a given amount of the food, a point supported by experiments done by Wansink (2006, pp. 16–19, 42–47).

A third aspect of pleasure comes from the neurostimulation produced by certain food types and combinations. David Kessler describes the role of sugar, fat, and salt in triggering predictable release of the pleasure-causing chemicals, the endorphins (2009, pp. 36–38), and their role in keeping the brain thinking about pleasurable foods through the release of dopamine (2009, pp. 41–45). Kessler's argument is that sugar, fat, and salt can trigger these neurochemicals independently and that when they are combined in

a specific food serving, the pleasure and reward produced by consumption is increased, prompting Kessler to argue that such oversaturation is a common causal element in overeating (2009, pp. 58–64).

The fourth aspect of pleasure comes from challenge. As Carolyn Korsmeyer puts it "[t]he remarkable thing is not just that we managed to eat, but that we managed and continue to take considerable *pleasure* in foods that present us with challenges to both our senses and sensibilities" (emphasis original, 2007, p. 145). She describes the challenge of eating spicy foods or even food so close to rotten or still served alive to as an almost disgusting challenge from which people derive a deep pleasure (Korsmeyer 2007). Pleasure derived from food is thus a complex set of pursuits, including simple taste, satiation, neurostimulation, and even disgust.

Bread here becomes something more than a simple delivery of energy or nutrients – the flavor of a fresh home-baked sourdough is quite different to a stale slice of industrially processed bread. Load the bread up with additional ingredients tomato, chili, mozzarella, and olives, and it becomes a pizza, consumed for pleasure, and quite distinct from any thoughts of survival or health.

Purpose 4: Personal Relationships

Different to the reasons discussed so far, this fourth reason touches upon food's role as a symbol. In particular, food is used as a symbol of the relations that exist between different people. "Eating together is a primary marker of kinship and belonging" (Higman 2012, p. 149). Meals taken at home are a paradigm example of this. Within the home, the preparation and consumption of meals has indicated status. In recent times in the developed world, the role of producing and feeding the family fell primarily on the women (Higman 2012, p. 145). Further, the exclusion of people from consumption with the dominant group signified and reified class distinctions to identify caste or house servants (Higman 2012, pp. 149–150).

In conjunction with cultural expression, food choices can also play a central role in individuation and self-identification. Think of the self-chosen status of vegetarians. Above and beyond maintaining a diet free of meat, publicly self-identifying as a vegetarian does more than simply hold to a set of moral values – for some, the public stance of vegetarianism is essential to creation and maintenance of a particular moral character. "[T]here is no *you* prior to your choices and actions, because your identity is in a quite literal way *constituted* by your choices and actions" (Emphases Original, Korsgaard 2009, p. 19). Food can indicate the existing status of relations between people and can also be a central element of self-creation.

Bread now takes on a roll whereby it may be made by a servant, to be eaten fresh by the master, and later consumed stale by other servants. The variability of service shows the existing power relations between people, even within one household. It can also symbolize a set of moral choices – a family sits down to eat a meal of roast chicken and fresh bread. One family member, a vegetarian, limits their consumption to bread alone, indicating a certain set of moral characteristics, individuating themselves from the rest of the family.

Purpose 5: Community

Extending from the idea of food as relational and individuating, consider food's role in marking out cultural identities. Two immediate forms spring to mind – food's role in religious communities and food's role in geographic communities. Paul Thompson is worth quoting at length here: "Connecting food with community is actually a commonplace. A community event without food is rare, and the bonding people experience when sharing food and drink underwrites a number of diverse human institutions. The family table, dinner and a movie, the church supper, the wedding banquet, and the business lunch are icons of sociability, each centering on a meal but implying distinct forms of common interaction and shared meaning among human beings" (2010, p. 145).

Like the vegetarian, consider first cultural prohibitions around certain food types, here called food taboos. Food taboos are said to play a major

role in the formation and maintenance of a community's identity. "Food taboos are not the only significant prohibitions raised up by ideology and identity-making, but they are probably the most persistent and widespread. . .This stems from the central role of food in defining and creating cultural and national identity, long after nutritional or medical justifications are abandoned or forgotten" (Higman 2012, p. 45). Adherents of Hindu, Islam, and Jewish religious faiths have particular prohibitions as central to their identity. Some of these taboos may consist in direct prohibitions, such as the sacredness of the cow in Hindu beliefs (Higman 2012, p. 46) or may involve particular necessary rituals, resulting in a food to be considered *halal* or *kosher* (Higman 2012, p. 45).

Of course, religious practices are complex and involve much more than prohibitions and rituals. Consider the eating of the communal bread as part of certain Christian rituals. Further, consider the role of certain feasts within religious practice (Thompson 2010, pp. 145–146). The consumption of certain foods at certain times can be central to a given cultural identity.

Food also comes in a range of geographically identifiable types. Walk through a "food district" in many cities and there will be a range of restaurants announcing their dishes by region: *Italian*, *Indian*, *Indonesian*, and *Iranian*. Definition of food by reference to a country does more than advertise the tastes offered by a particular restaurant. Such geographic identification can be shorthand for a patriotic diaspora, maintaining certain food practices away from the country of origin to help maintain a community. Like the vegetarian, such adherence to a geographic origin can express a willful identification with one's past. As Thompson puts it: "[F]ood can be a focal thing. . .when it becomes the centering orientation that holds a number of meaning-giving activities together, providing coherence and purpose to our lives" (2010, p. 136). Food, the particular ingredients used, the rituals associated with its production and consumption, give meaning to communities and can be key ingredients in reifying the existing community identity.

Bread can be, for some, the symbol for their faith. For others bread can be a link to a homeland, left behind and sometimes, never visited. Consider the Italian sandwich, the Panini, compared with the Indian paratha. Both are bread and may use similar ingredients. But despite the obvious differences in taste, they both serve an additional purpose symbolizing a people's cultural legacy, providing individuals with a link with a country of origin and permitting a living and healthy community, far away from this country of origin.

Purpose 6: Commerce and Trade

The final purpose for food sees its production and consumption in instrumental terms. That is, food is produced for consumption by others, such that those in the production chain function within a market economy. Barry Higman makes two complementary claims about food and trade – firstly that the trade in food was and still is dependent upon preservation and transport technologies. Secondly, it was trade in food, in particular exotic spices, that was a key driver for the development of early trade networks (2012, pp. 125–142). On Higman's account, the trade in food was central to much development of human history. Here, the concomitant development of technologies becomes central to understanding the trade in food and the social changes that occurred as a result – "Only with the development of efficient and reliable technologies of preservation did the long-distance movement of many commodities become viable, and only with the development of modern technologies of bulk transportation did it become profitable to move great quantities of basic foodstuffs around the world" (Higman 2012, p. 126).

On the food as trade model, the general numbers of producers can decline as farmers become more specialized, focusing on increasing outputs from the given land and inputs. "The ethical argument for such specialization is that when goods are produced at the least possible cost, they can be sold at the lowest price. This means that people who eat (all of us) spend less on food, freeing up more of their income for other things, and low-cost food is especially important for those who have the least income" (Thompson 2010, p. 31).

Such specialized practices can be environmentally harmful (Roberts 2008, pp. 208–236). Further, as Thompson notes, such specialization can come at a price to the agricultural communities themselves (Thompson 2010, pp. 33–41).

The importance of understanding food as trade is that this purpose can not only override the other purposes, but in some occasions, can actively undermine the other purposes. For instance, a snack food company may design a food product to be highly palatable, containing an ideal mixture of sugars, fats, and salts (Kessler 2009, pp. 12–17). The particular combination in this snack food increases the likelihood that consumers will eat this snack food, that is, will increase its trade. However, heavy consumption of this snack food might promote obesity and reduce basic nutrition. The snack food may also compete with existing cultural practices, such that the consumers lose connections to their traditional food types, and/or local food cultures may be outcompeted by the highly desirable snack food. Yet, presuming that obesity and/or the decline of local cultures are undesirable, seeing food only as trade overlooks these negative impacts.

Bread here fits the idea of food as trade in two ways. Firstly, that bread is produced for the purpose of selling. In this way, the bread is just a tradable item, equivalent to any other widget. Secondly, the practices in and around its production are mere instrumental practices designed to maximize tradable output: a plot of land is farmed to produce wheat for flour and is deemed productive when its output meets some desired level of profitability. Again, the growing of the wheat is secondary to profitability; the bread that is produced is valuable insofar as it makes a minimum level of return on investment.

Summary

This entry looks at the idea of making sense of "food" by reference to the purposes that people might have for that food. This entry follows the same generic food item, "bread," to show that while "bread" may remain bread, its meaning and value changes as the purposes for its consumption change. People may eat bread to survive, to have a minimum standard of living, to have pleasure, to develop and maintain personal relationships, as an indicator of some cultural importance, or as a tradable good. Implicit in this entry is that these different purposes can and do conflict. The recognition of the different purposes of food can help to identify and resolve some of these value conflicts.

Cross-References

- ▶ Eating and Nutrition
- ▶ Ethics and Food Taste
- ▶ Ethnicity, Ethnic Identity, and Food
- ▶ Functional Foods
- ▶ Gustatory Pleasure and Food
- ▶ Poverty and Basic Needs
- ▶ Race, Racial Identity, and Eating
- ▶ Taste, Distaste, and Food

References

Buttriss, J. (2005). Strategies designed to increase awareness about folates and health, and to increase folate intake: A review. *Trends in Food Science & Technology, 16*(6–7), 246–252. doi:10.1016/j.tifs.2005.03.012.

Connors, M., Bisogni, C. A., Sobal, J., & Devine, C. M. (2001). Managing values in personal food systems. *Appetite, 36*(3), 189–200. doi:10.1006/appe.2001.0400.

Henschke, A. (2012). Making sense of animal disenhancement. *NanoEthics, 6*(1), 55–64. doi:10.1007/s11569-012-0140-8.

Higman, B. W. (2012). *How food made history*. Malden: Wiley-Blackwell.

Joint FAO/WHO/UNU Expert Consultation. (2004). *Human energy requirements*. Rome: FAO, United Nations.

Kaidar-Person, O., Person, B., Szomstein, S., & Rosenthal, R. J. (2008). Nutritional deficiencies in morbidly obese patients: A new form of malnutrition? *Obesity Surgery, 18*(8), 1028–1034. doi:10.1007/s11695-007-9350-5.

Kessler, D. (2009). *The end of overeating*. New York: Rodale Books.

Korsgaard, C. M. (2009). *Self-constitution: Agency, identity, and integrity*. Oxford: Oxford University Press.

Korsmeyer, C. (2007). Delightful, delicious, disgusting. In F. Allhoff & D. Monroe (Eds.), *Food & philosophy: Eat, think and be merry*. Malden: Blackwell.
Masset, E. (2011). A review of hunger indices and methods to monitor country commitment to fighting hunger. *Food Policy, 36*(Supplement 1(0)), S102–S108. doi:10.1016/j.foodpol.2010.11.007.
Müller, O., & Krawinkel, M. (2005). Malnutrition and health in developing countries. *Canadian Medical Association Journal, 173*(3), 279–286. doi:10.1503/cmaj.050342.
Nestel, P., Bouis, H. E., Meenakshi, J. V., & Pfeiffer, W. (2006). Biofortification of staple food crops. *The Journal of Nutrition, 136*(4), 1064–1067.
Pollan, M. (2008). *In defence of food*. New York: Penguin.
Roberts, P. (2008). *The end of food: The coming crisis in the world food industry*. London: Bloomsbury.
The World Bank. (2012). *AgResults: Innovation in research and delivery*. Retrieved April 17, 2013, from http://web.worldbank.org/.org/WBSITE/EXTERNAL/EXTABOUTUS/ORGANIZATION/CFPEXT/0, contentMDK:23005969 pagePK:64060249 piPK:64060294 theSitePK:299948,00.html.
Thompson, P. (2010). *The agrarian vision: Sustainability and environmental ethics*. Lexington: Kentucky University Press.
Wansink, B. (2006). *Mindless eating: Why eat more than we think*. New York: Bantam Books.
Wisor, S. (2012). How should INGOs allocate resources? *Ethics and Global Politics, 5*(1), 27–48. doi:10.3402/egp.v5i1.8287.

Food-Body Relationship

Asli Duru
Ludwig Maximilian University of Muenchen, Ottawa, ON, Canada

Synonyms

Diet; Embodiment; Nutrition

Introduction

Food circulates materially (in the digestive system, supermarkets, dinner tables, school, hospital, prison cafeterias, etc.) and symbolically (in TV shows, religious rituals, feasts, etc.) to produce our bodies as socially, politically, and physically constituted transitional entities. Eating habits are key to the interrelated constitution and practice of ethnic, racial, gender, and political identities. Food is equally important in the production of the cultural and social codes and norms that affect our bodies and our experience of self as physical beings. Food consumption involves time- and place-specific arrangements, and the body as corporeal space is sexed, built, and (re)designed through every day and lifelong practices of food and eating. Our bodies are a product of simultaneously social and physical interactions with food which transform according to changes in the life course, exchange relations, and environmental and other factors. For example, the relationship between food and body relates to life course transitions since diet-related factors influence children's bodies differently than teenagers', adults', and older people's. More specifically, younger bodies are more exposed to disciplinary patterns of eating imposed by parents, state institutions (e.g., school programs, medical specialists), and the broader social conventions of the cultural (e.g., religious dietary observance within the society, commercials) and ecological environments in which they live. Thus, the habitual food environment to which a child is exposed is often the emotional and sensory basis of her personal food choices later in life. Eating disorders (over- or insufficient eating) which affect younger and older adults also have crucial ties to one's relation to food and bodily experience in the formative years of developing food habits during childhood.

Through food, individual bodies connect to multiple intersectional abstract categories including the self, masculinity/femininity, and broader structures such as the nation (Lien and Nerlich 2004). This entry touches upon these linkages and covers the relationship between food and the body under five subheadings followed by a conclusion: the first subsection overviews four transformative moments within the Western history which mark important shifts in ethical problematization of food and bodies. The focus is on Plato's writings in *the Laws* (1967 & 1968), medieval Christian monastic practices, postmedieval social transformations, and the modern scientific turn in nutrition science.

The second subsection introduces the concept of embodiment in order to address the so-called body-mind division within much of Western thought and to present the significance of mental/emotional perceptions and practices of self and body in interactions with food. The third subsection introduces gender as an organizing social category in configuring the food-body relationship. In the fourth subsection, the emphasis shifts to a broader range of social categories which operate and mark certain bodies as "distinct" along ethnic, cultural, medical, and class-based links to food regimen. The final subsection focuses on ritualistic and activist forms of self-starvation in order to exemplify the diversity of motives and patterns behind fasting as an exceptional bodily way of relating to ethical (non)eating. The conclusion recaps the arguments and themes introduced in the entry.

Bodies and Food Ethics in Western History

Several key shifts in Western history and thought inform our knowledge of the development of ethical concerns with food and eating habits. Based on three different contexts, the shifting notions of food ethics will be depicted by focusing on the problematization of its elements: means, objectives, and scale.

In ancient Greece, food ethics, or "dietetics" as Michel Foucault refers to it in *The Use of Pleasure* (1985), involves individuals as active observers of food intake and individual diet. In *Laws*, Plato (I967 & 1968) explicitly addresses diet as a constitutive regime "which [is] either good or bad for their bodies, and equally able to affect similar results in their souls" (5,747e). For Plato, ethics is the level of relating to oneself through certain techniques and priorities in order to achieve self-transformation. Ethical transformation of the self is both a contemplative and practical domain of strategic design to achieve virtue. For him, this knowledge is particularly important because it is transferable to politics. The body and its need to be nurtured is an important aspect of the ethical transformation of the self. The notion of the (ethical) self as something to be cultivated and maintained across all spheres of life including the everyday makes food important to Plato's idea of moderation to constitute the virtuous life through self-transformation. Since food is capable of nurturing and damaging both the souls and bodies of men (Foucault 1985), when it comes to feeding the body, moderation in the amount and type of foodstuffs is a virtue. Yet, what moderation entails and how it should be practiced are subject to individual interpretation. Put differently, moderation is a technique in which eating habits should be designed (reasoned) to constitute the ethical subject, and body is both the domain and the product of this effort to constitute the ethical self. As such, we can say that the Platonic notion of a proper diet is more focused on the process, that is, moderation, than the body that is its end result. Moderation involves reasoning as its method. Reasoning is used to judge what is available, edible, and good in nature in order to achieve and maintain a moderate diet and benefit from its advantages on the mind. For Plato, one is capable of fashioning eating habits in a virtuous way through reasoning, and the body is both the scale and the means to realize such ethical standards.

The ancient Greek notions of private/individual food and eating decisions radically differed from the institutional engagement of the medieval church in imposing a collective food morality on the masses. The medieval Christian obsession with defying the flesh and abstaining from its desires led to a major shift in everyday and ritualistic consumption of food. Monasticism – metaphorically and actually – affected associations of food as an instrument of self-discipline. In the ancient Greek constructions of the food-body relationship, food was a resource for survival and a means for self-transformation in order to participate in the production of virtuous (public) life. Medieval Christianity, in contrast, reinterpreted virtue through self-sacrifice and mortification. Self-transformation was only possible through the disregard of the mortal body and its needs and pleasures in order to free the soul from the burdens of the flesh. As such, unlike the ancient Greek notion of the body as a means of

cultivating the ethical self, Christian morality of the Middle Ages targeted bodily pleasures as a barrier to spiritual progress. The ecclesiastical emphasis on mortification and refrain from bodily desires reordered much of privately exercised routines of individual and social life. Like sexuality, food intake was among these previously private spheres of life. As such, Christian understandings of care for the self (soul) redefined the food regimen and manners of individuals and masses. The disciplining of individual bodies at the same time introduced new and collective food consumption patterns such as cycles of fasting and festivals.

In *The History of Manners*, German sociologist Norbert Elias (2000) explores how postmedieval European values regarding violence, sexual and bodily behaviors, table manners, and interpersonal communication gradually transformed into what we today broadly call etiquette or socially acceptable behavior in most Western societies. Elias relates these developments to increased feelings of shame and disgust, which increasingly standardized "self-restraint" as a norm within education and all other fields of societal interaction. According to Elias, it was during this "civilizing" movement that the importance of food in public life was back on the agenda. This was mainly because moderation and refinement were once again considered the means and objective for a virtuous life primarily among the societal elites but gradually through the masses. Along with other bodily functions, eating was problematized in order to civilize individual bodies through self-control and self-restraint in public exposure and social interactions. As such, development and refinement of table manners and changes in food preparation during postmedieval transformation incorporated food and eating practices as markers of social status and differentiation.

The modern scientific turn introduced the impacts of food intake and its influences on body weight, health, and social implications of bodily existence. As populations replaced masses as the targets of political authority (Foucault 1991), scientific approaches to agriculture and nutrition became increasingly more important in establishing political order and stability. Political and scientific concern with food availability and sufficiency in relation to population management influenced reconceptualization of food ethics at a collective rather than an individual level. Contemporary challenges, mainly about environmental degradation of agro-food resources and the inequalities in access to nutritious, culturally appropriate and affordable food, reflect the grounds on which individual and social dimensions of moral concern with food are reestablished and mutually inform each other.

Historical transformations in how food habits function in our conception of body and self are important in making sense of the current configurations of food-body relationship at the individual and social levels. In terms of the differentiation of its means, food ethics has moved away from reasoning and moderation towards monastic discipline and later towards discipline in the form of modern self-restrain. In terms of the objectives, for Plato, ethical problematization of food is a means to help cultivate the virtuous self through physical maintenance and training of the body together with the mind. On the other hand, the medieval obsession with bodily abstention and moralizing food and eating habits aimed at salvation by denying the flesh. Still disciplinary in nature, the objective of the postmedieval notion of food ethics was higher and universalized standards of civility and social behavior. Finally, in terms of the scale for conceptualizing and applying a food ethics, Plato's emphasis was on the individual who was supposed to apply reasoning and differentiate between the good and bad food for himself. On the contrary, both the medieval emphasis against pleasurable eating and the civility movement problematized food ethics for the masses, and they were both organized on a collective basis – through religious, educational, and other institutions such as the family.

Food and Embodiment

Body and mind are considered dichotomous categories within much of classical Western

philosophy. Embodiment is one way of challenging this dichotomy and conceptualizing ourselves as physical, bodily beings who exist, interact with, and make sense of other corporeal, ecological elements through sensory, mental, and emotional means.

Within the history of Western thought, it is conventionally the body that is subordinate to the mind. The body is mostly theorized as an instrument which is either defied or well kept for the proper functioning of the mind: its mental faculties and spiritual qualities. The Western neglect of the body as secondary to the mind also relates to the patriarchal associations of mental processes such as creativity, analytical reasoning, and philosophizing with superior notions of masculinity. Within the patriarchal traditions of Western thought, the body is associated with femininity because of its transitional, vulnerable nature, and dependence on mundane necessities such as the need to be fed. Unlike the analytical functioning and universal qualities of the rational mind, the physical dimension is superficial because bodies are prone to desire, are destined to change, and are therefore instable and unpredictable. Due to the subordinate role of body within this deep-rooted dichotomy, food per se has generally lacked an emphasis as a crucial domain of our perception and practice of selves.

Subjective dimensions in eating (sensory, emotional, memory) play a key role in defining the food-body relationship as a continuum of embodied practices and awareness. Bodies are exposed to various material and social elements, including food, in processes of socialization. The material and social conditions of access to and consumption of food constitute the embodied self. The totality of these processes translates into sensations of taste, pleasure, comfort, and/or discomfort at the individual level. Since eating is an embodied action, most interactions with food and eating are also mental processes and are linked to – often multiple – emotions. The most emphasized emotions tied to eating are guilt, comfort, and success, which are mostly explored in terms of excessive or under-eating habits. Yet, not only in relation to eating disorders, the sensory experience of anyone while eating or in a food environment is a cumulative product of pleasurable or discomforting memories of past experiences. The embodiment perspective suggests that the negative and positive attributes resulting from the physical performance of eating inform our experience and awareness of our selves, ideas on others, and how we make sense of the world in general.

Food is central to the corporeality of social life both for human and nonhuman animals (Shilling 2003; Turner 1996). Embodiment problematizes the role of the physical body in constructing the social categories resulting from corporeal actions. Nutritional, health-related, and/or mystical qualities of foodstuffs and eating habits are influential in characterizing power, beauty, and well-being as embodied processes carried out and maintained through food choice. From individual families to national/regional cuisines, food-related actions and meanings reproduce shared experiences and promote social and material interactions within a group. Although social associations of food are relational and vary over time and across cultures, food choice and diet are the primary markers of the uneven geographies of the corporeal scale. Bodies are politicized, criminalized, pathologized, and sexualized through practices such as dieting, fasting, and starvation. As embodied actions, bodily experiences of food are social processes in which the nutrients interact with conceptions of the self and the construction of intersectional identities. As such, embodiment addresses the equally physical and mental actualities of food such as cravings, hunger, and pleasure based on an integral understanding of the body-mind relationship (Hayes-Conroy and Hayes-Conroy 2008).

Food and Gendered Bodies

For most cultural and historical constructions of the food-body relationship, notions of food-related care and nurturing are associated with femininity and women. Nurturing and femininity are mutually constructed categories that operate

through embodied actions. Gendered subjects – both male and female – attribute meanings to and are defined by the everyday experiences of producing, processing, and presenting food since food is typically prepared by female (care) workers at home and outside the domestic realm. Reproductive actions such as meal planning, shopping, and cooking are strongly associated with femininity and the caregiver status of women within the patriarchal family structure.

Food is prepared in kitchens and shared in homes, both of which are intensely associated with gendered notions of feminine domesticity. In this sense, food is one of the many symbols and materials that lead to the patriarchal arrangement of gender and women's status and roles within the family and the society. Gendered experiences of eating, preparing, and sharing food are related to processes where individual bodies link to places and temporal cycles at diverse regional, national, and international scales. To illustrate, as unpaid and paid household providers; teachers; child-care, elderly-care, and patient-care workers; and mothers, women are responsible for dietary planning, food purchasing, and cooking of produce brought about by various agricultural policies, trade agreements, and cultivation methods. As care professionals, women all around the world work in fields and community gardens and regularly visit supermarkets, mega-markets, street markets, and local-organic farmers markets to negotiate the most affordable and quality foodstuffs they could provide for their dependants.

In addition to the everyday practicalities of food preparation and eating, preoccupations with body image also demonstrate the interrelations between food intake and gender. As both social process and embodied action, food interactions define the embodied constructions of feminine and masculine subjectivities. Feminine roles and experiences around the "lean body" discourse are connected to sexuality and the relationship between gendered partners. Despite the historical and cross-cultural variations in what constitutes the healthy body, food and eating habits play a crucial role in terms of the way bodies are sexualized.

Gender affects the symbolic realm and codes certain foodstuffs, body figures, practices, and spaces as masculine/feminine. Reference to the "gendered dimensions" of the food-body relationship is often understood as women's dissatisfaction with their body weight, image, etc. Yet, empirical studies have shown that restrictive eating practices and concerns for a slimmer body image affect females and males differently in reconfiguring eating habits. For example, vegetarianism is feminized while red meat is associated with aggression, strength, and masculine power. Also, weight loss through insufficient food intake and self-starvation is more common among adolescent females than males who instead opt for high-protein alternatives to replace existing food preferences in order to lose weight (Nowak 1998). Despite the rich multidisciplinary literature on feminization of distorted body image perception (i.e., anorexia nervosa), restrictive/excessive eating, and the preoccupation with a fat-free body image, gendered implications of food intake in the construction and experience of male bodies and masculinity at various stages of life remain a relatively less explored dimension of the food-body relationship.

Food and Distinct Bodies

Eating preferences are identifiers of multiple broader categories relating to superior-inferior, healthy-unhealthy, and responsible-indulgent lifestyles. In other words, perceptions of social distinction, acceptability, and cultural appropriateness significantly mark food practices. Food practices have historically been an important line of demarcation between the privileged and underprivileged across the geographies of center-periphery, rural–urban, and diverse bodies. Intensely since the mid-twentieth century, the processes of agro- and gastro-capitalism and the popular and medical discourses of food choice have promoted the global circulation of food values, types, and tastes. According to the Russian critic and theorist Mikhail Bakhtin (1984, p. 281), "by taking food into the body, we take

in the world" which includes all the power-imbued meanings, value associations, hierarchies, and practicalities that define our material lives and sense of self. These in turn greatly influence social patterns and experiences of distinction in relation to food and eating habits. Food consumption is an important domain of social and material interaction where social hierarchies and collective norms are produced, reproduced, and contested on an everyday basis and in contexts as diverse as festivity, drought, war, and other forms of political, social, and/or environmental crisis.

As an essential material commodity and a vital metabolic ingredient, food is consumed both literally and socially through embodied actions because of its associations with various forms of social power and status. Eating is a major identifier in the making of active/passive, obese, poor, ethnic, racial, working class, starving, ethical, ecological, and "beautiful" bodies. Individual food environments are also a means to establish the domain of "I" in relation to "others" in contexts of vegetarian, halal, organic, foodie, low fat, kosher, and foodscapes. For example, all of these influences, in turn, inform the ways individuals construct themselves as ethical, sinful, healthy, refined, and gendered subjects.

Ethical (Non)eating and Self-Starving Bodies

Embodied practices of food production, preparation, and eating are imbued by power and the inequalities surrounding broader social categories. Self-starvation refers to imposing self-inflicted limitations on food intake, effectively starving the body of the calories necessary to function properly. While this may be temporary and recurring, prolonged periods of starvation lead to severe organ damage and, eventually, death. Fasting, hunger strikes, and anorexia are different manifestations of self-starvation. They are also embodied expressions of self which target the body's dependency on food to survive. Nonself-inflicted starvation is often a corporeal manifestation of the broader social-environmental disparities, primarily, of poverty, famine, and war. Self-starvation, on the other hand, is intentional. It represents an embodied expression of the political and/or ethical disciplining of the body through its need to be nourished. The act also represents a different embodiment since the priority of the body in survival is superseded through an abstract, intuitive relationship with an external cause, ritual, etc. It is an intervention by the self to reorganize the priorities in the embodied experience of being alive. Self-starvation, thus, unfolds a process in which the body-mind integrity is reconfigured and the bodily need to nurture is contested on the way towards a morally defined self.

Fasting is voluntary refraining from eating for religious and ritualistic observances. Various configurations of the food-body relationship are at work in fasting practices. It is an embodied ritual whereby the self-starving subject denies the body its most basic need. The motives behind fasting differ historically and across cultures, religions, and rituals. Fasting may involve rewarding the soul and punishing the body, as well as regenerating and purifying both the body and soul. The ethical subject is active in disciplining the corporeal scale through food intake during fasting. Physical sensations arising from the imbalance between the body's need and the restricted food intake during periods of fasting are an embodied constitution of the subject as an ethical agent.

A hunger strike may be an individual or group act and refers to the voluntary refrain from food and/or fluids. The act may last for a predetermined period of time or as long as individual bodies resist the symptoms of starvation. The hunger strike is an embodied form of political resistance and may also be a means to support another form of struggle for a similar, often related, complementary political cause. Slow starvation during the hunger strike – the centrality of food in bordering life and mortality of the fasting body – reflects the vitality of struggle for the resisting self. The process also evokes a different relation between the bodily and private scales of eating and social understandings of political resistance.

Restrictive eating is another manifestation of self-starvation. Insufficient eating habits are intensely linked to control over one's body and increasingly shaped by the beliefs, statements, and practices surrounding the "healthy body." Dominant weight management discourses – particularly weight loss and fat management discourses – articulate body image as a massive public and individual health problem. A geographically informed approach to the lean and healthy body image debate presents waistline and BMI as indicators of the regional and gendered geographies of the self-starving body. Still, a link between weight management through restrictive eating and improving health is disputed.

Summary

This entry has examined the food-body relationship as anchored in the corporeality of food and eating habits. It has revisited instances and social categories where food is functional in the making of ethical, relational, gendered, sexed, and politicized bodies. It has emphasized that throughout history and across cultures of thought, food and eating practices have been an integral part of the moral concern around body and ethical constitution of self. Yet, it has also argued that these processes do not function in a single direction since subjective factors such as individual sense and emotions are also at work in negotiating, accepting, creating, and subscribing to the ethical considerations developing around food and eating habits.

Cross-References

- ▶ Christian Ethics and Vegetarianism
- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Fasting
- ▶ Food and Class
- ▶ Food and Place
- ▶ Food Boycotts

References

Bakhtin, M. (1984). *Rabelais and his world* (trans: Iswolsky, H). Bloomington: Indiana University Press.

Elias, N. (2000). *Volume I: The history of manners, in the civilizing process. Sociogenetic and psychogenetic investigations*. Oxford: Basil Blackwell.

Foucault, M. (1985). *The history of sexuality: Volume II. The use of pleasure*. New York: Vintage.

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 87–104). Hemel Hempstead: Harvester Wheatsheaf.

Hayes-Conroy, A., & Hayes-Conroy, J. (2008). Taking back taste: Feminism, food and visceral politics. *Gender, Place and Culture, 15*(5), 461–473.

Lien, M. E., & Nerlich, B. (Eds.). (2004). *The politics of food*. Oxford/Washington: Berg.

Lupton, D. (1996). *Food, the body and the self*. London: Sage.

Nowak, M. (1998). The weight-conscious adolescent: Body image, food intake, and weight-related behaviour. *Journal of Adolescent Health, 23*(1), 389–398.

Plato. (1967–1968). *Plato in twelve volumes*. Cambridge: Harvard University Press. Retrieved from http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg034.perseus-eng1:5.747

Shilling, C. (2003). *The body and social theory*. London: Sage.

Turner, B. (1996). *The body and society: Explorations in social theory*. London: Sage.

Foucault and Food

Chloe Taylor
Departments of Philosophy and Women's and Gender Studies, University of Alberta, Edmonton, AB, Canada

Interviewer: You do not fit the image of the sophisticated Frenchman who makes an art out of living well. Also, you are the only French person I know who has told me that he prefers American food.

*Michel Foucault: Yes. Sure. [*Laughter*] A good club sandwich with a coke. That's my pleasure. It's true. With ice cream. That's true.*

"The Minimalist Self" : 12.

Synonyms

Foucauldian food studies

Introduction

Michel Foucault's writings from the *History of Madness* to the first volume of *The History of Sexuality* focus on the historical era between the late seventeenth and early twentieth centuries and drew predominantly on French archives to analyze power relations in modern institutional settings. His best-known works, dating from his "genealogical period," remain within this time frame and can be characterized as political rather than ethical in nature. In the last two volumes of *The History of Sexuality*, published shortly before their author's death, Foucault undertook what he called "modifications" in his research plan (Foucault 1990, p. 3). Rather than focusing on modern Western Europe, Foucault's final books examine ancient Greek and Roman philosophical sources in order to develop a theory of ethics as aesthetics of existence. Rejecting a view of morality as a set of universal rules, Foucault suggested that the ancient Greco-Roman models of ethics as self-care offered an alternative to Judeo-Christian and Kantian styles of universalizing and nomological morality. Technologies of self-care are enabling ways of transforming ourselves and can be understood as aesthetic practices of freedom and as a means of undoing the work of normalization. Ethics, for Foucault, was about self-transformation, becoming other than what one was. In particular, ethical practices could be undertaken to reverse and replace the effects of discipline that Foucault had examined in his earlier works.

Although never his focus, Foucault occasionally mentions diet during his genealogical period as an example of how power is written on the body and of how bodies are normalized. The example of "dietetics" is also examined as an extended example of self-care in Foucault's discussion of ancient Greek ethics. These suggestive passages, along with the diverse and productive ways that Foucault's work has been taken up by scholars working in the field of Food Studies, provide valuable insights for thinking about the ethics and politics of eating. This entry provides an overview of what Foucault wrote on food and diet as well as the manners in which these writings have been taken up by contemporary Food Studies scholars.

Foucault on Food

The following two sections will provide an account of Foucault's occasional and fragmentary analyses of food and diet in his genealogical and ethical periods, respectively.

The Disciplining of Diet

In his 1971 article, "Nietzsche, Genealogy, History," Foucault describes genealogy as "an analysis of descent," and argues that "descent attaches itself to the body. It inscribes itself in the nervous system, in temperament, in the digestive apparatus; it appears in faulty respiration, in improper diets, in the debilitated and prostrate bodies of those whose ancestors committed errors" (pp. 82–83). Against the view that the body follows laws of instinct and physiology, Foucault insists in this entry that "The body is molded by a great many distinct regimes; it is broken down by the rhythms of work, rest, and holiday; it is poisoned by food or values, through eating habits or moral laws; it constructs resistances" (p. 87). "Effective history," he writes, "...shortens its vision to those things nearest to it – the body, the nervous system, nutrition, digestion..." (p. 89). Food, these citations suggest, is something that genealogy should attend to.

Although diet would never be a sustained theme in Foucault's own genealogies, there are indications of the normalization of alimentary choices in Foucault's lecture series at the Collège de France from 1973 to 1975 and 1974 to 1975, *Psychiatric Power* (2006) and *Abnormal* (2003). In *Abnormal*, Foucault argues that the monster was the genealogical predecessor of the abnormal individual targeted by modern psychiatry. According to Foucault, the paradigmatic monster during the Middle Ages was a fusion of man and beast. During the Renaissance it was the fusion of two humans in one body (the conjoined twin), followed by the fusion of man and woman (the hermaphrodite). By the time of the French

Revolution, however, Foucault argues that monstrosity transitioned from being about hybrid morphologies to violations of laws of consumption. The monster became a creature of aberrant appetites. This appetitive monster took two major forms: the sexual monster and the alimentary monster. These two forms of monstrous appetite were sometimes separated by class, with sex being the privileged vehicle for affluent monstrosity and food being the means of monstrosity for the starving classes. Thus, the sexual monster was captured by the figure of the incestuous aristocrat, while the alimentary monster was imagined as a cannibalistic peasant. Often the two forms of monstrosity fused in the social imaginary, as in the propaganda about Marie Antoinette, accused both of committing incest with her son and of having drunk blood from the skulls of Frenchmen. Foucault writes, "what constituted the point of formation of legal medicine, was... the existence of these monsters recognized as monsters precisely because they were both incestuous and cannibalistic, or because they transgressed the two great alimentary and sexual prohibitions" (pp. 101–102).

Despite this intriguing discussion of the alimentary monster, when Foucault traces his genealogy from monstrosity to abnormalcy, he considers only the sexually abnormal individual; the alimentarily abnormal individual remains unthematized. The reader is left with the questions: what became of the alimentary monster? Did the cannibal give birth to no "little abnormals" in the way that the sexual monster did? Can one trace a history of pathologized alimentary consumption, the way that Foucault traces a history of pathologized sexualities? In fact, reading Foucault's lectures from the previous year, *Psychiatric Power*, Foucault describes a case of a nineteenth-century individual singled out for psychiatric treatment based on his rejection of alimentary norms. The case involves a 30-year-old melancholic who spent his nights reading and refused to consume animal foods. Harangued by his housekeeper on the subject of his unwholesome lifestyle, he became paranoid that she would poison him (pp. 34–35). Part of his psychiatric cure was the prescription of a regime that precluded further relapses into folly. Since a rejection of animal foods is singled out as one of the symptoms of this man's mental illness, it is almost certain that the psychiatrically imposed regime entailed a return to eating meat, dairy, and eggs. However fragmentary, this case suggests that abnormal alimentary appetites, like abnormal sexual appetites, have been pathologized by psychiatry from its birth or that diet, like sex, is a target of disciplinary power.

Diet as Care of the Self

Relations with others, Foucault claims, are the domain of power, which he had explored throughout his genealogical period, whereas ethics is the domain of how subjects relate to themselves or how they transform themselves. To approach one's own life ethically is, for Foucault, to see one's existence as an aesthetic project. This notion of the self as a work of art, or as something that the subject makes, was, for Foucault, refreshingly opposed to the modern, social science or psychoanalytic notion of the self as something inherent, to be discovered or deciphered. In writings from his final or ethical period, Foucault includes diet among the techniques of the self through which one may cultivate an ethical relation to oneself. Thus, although diet may be a target of disciplinary power, or may be imposed on subjects from without according to unchosen norms, it may also be a way that subjects cultivate their lives aesthetically, transforming themselves in self-chosen ways.

In an interview from this period, Foucault contrasts the ancient Greek preoccupation with controlling diet to the modern obsession with sex. "[S]ex is boring," Foucault says and notes that the contrary view is a relatively recent one:

> [The Greeks] were not much interested in sex. [Sex] was not a great issue. Compare, for instance, what they say about the place of food and diet. I think it is very, very interesting to see the move, the very slow move, from the privileging of food which was overwhelming in Greece, to interest in sex. Food was still much more important during the early Christian days than sex. For instance, in the rules for monks, the problem was food, food, food. Then you can see a very slow shift during the Middle Ages when they were in a kind of

> equilibrium. . . and after the seventeenth century it was sex. (1983, p. 229).
>
> Foucault makes a similar point in *The Use of Pleasure*, when he notes of the ancient Greek texts that he is analyzing: "there is a limited space given to the problem of sexual relations compared with that according to exercises, and especially to food." (p. 114).

Although sex was of less interest than food for the ancient Greeks, eating and sex were considered similar kinds of activities and were approached in closely related ways. As Foucault writes, "This association between the ethics of sex and the ethics of the table was a constant factor in ancient culture. Once could find countless examples of it" (p. 50). To take but the two most prominent examples, Plato would liken eating and sex in so far as nature makes both acts intensely pleasurable – and thus liable to abuse – in order to ensure that animals engage in them (Foucault 1990, p. 49). Aristotle would argue that one could only be accused of abuse with respect to eating and sex as these are pleasures involving the sense of touch; in contrast, one would not be considered guilty of self-indulgence for delighting in aural or optic pleasures or for passing up sex and a meal to appreciate a sunset or a musical performance (p. 40). Sex and eating are thus alike in that they are corporeal pleasures that risk being overindulged, and this made them critical ethical matters for the ancients, since their ethical thought was largely preoccupied with the virtues of moderation and self-mastery. The intense pleasures of food and sex threatened these virtues, thus posing considerable dangers to the good life.

In the "Dietetics" section of *The Use of Pleasure*, Foucault analyzes a number of ancient Greek "regimens" that provided guidelines for navigating the dangers of food and sex. Foucault notes that a regimen was a "manual for reacting to situations in which one might find oneself, a treatise for adjusting one's behavior to fit the circumstances" (p. 106). Once again, food and sex are treated in identical manners in these regimens, along with exercise, baths, emetics, vomiting, and other bodily evacuations. Foucault notes that such regimens are not universal codes about how everyone should act. They remain contextual; while the regimens suggest increasing or decreasing the frequency of sex in certain seasons, or eating boiled versus roasted foods, they do not forbid or prescribe any particular foods or food combinations or any particular sex acts or sexual partners. They do not say that any kind of sexual relation or cuisine is abnormal, unnatural, immoral, or forbidden, and they do not specify what a "decreased" or "increased" amount of sex or eating means, as this would depend on the individual (his or her age, sex, health, and other activities). In these ways, the "dietetics" of the ancient Greeks were very different from the Christian codes of sexual morality that would follow, or, to take an alimentary example, from Kosher laws. What this suggests to Foucault is that subjects might approach sex – and by extension, food, drink, and other aspects of corporeal life – in a manner that allows them to manifest autonomy and to cultivate self-mastery rather than submission to disciplinary power. Moreover, these texts demonstrate that subjects might experience their sexual and alimentary lives in ways that are not structured by universalizing codes, prohibitions, prescriptions, or notions of normalcy.

When Foucault interprets these "dietetics" texts, and although he notes the relatively little space given to sex as opposed to food in them, it is the statements about sex that interest him. Thus, despite the space given to dietary regimes in his penultimate book, it seems that Foucault was interested in this example primarily because it was the context in which sex was written about in this era and because it demonstrated the contingency of our own interest in sex. As he writes, the example of the Greeks makes us ask of the contemporary era: "Why this ethical concern – which, at certain times, in certain societies and groups, appears more important than the moral attention that is focused on other, likewise essential areas of individual or collective life, such as alimentary behaviours or the fulfillment of civic duties?" (p. 10). It is thus significant to Foucault that food was once the focus of a complex set of restrictions and inspired a greater discursive interest than did sexual activity since he thinks that this is in marked contrast to the modern

West, in which sex rather than food became the privileged site of moral restriction, scientific inquiry, and individuating reflexivity. Readers are left with the question of whether Foucault is correct in this assertion or whether diet has not returned as a significant site of both the disciplining of individuals and ethical self-transformation. As shall be seen in the following sections, contemporary food scholars have cast these assumptions of Foucault's into doubt.

Foucauldian Food Studies

In the last dozen years, a burgeoning body of scholarship has emerged that draws on Foucault's works in order to critically examine nutritional and psychiatric scientific claims about diet and to develop Foucauldian approaches to dietary practices and food ethics. In the following two sections, a non-exhaustive overview of writings in these areas will be provided.

Power/Knowledge: The Nutritional and Psychiatric Sciences

In *Food, Morals and Meaning: The pleasure and anxiety of eating* (2000/2006), John Coveney provides a Foucauldian genealogy of nutritional science. Much as Foucault provided accounts of the emergence of human and medical sciences such as criminology, psychiatry, and psychoanalysis, so Coveney approaches nutritional science from a critical historical perspective. The sciences that Foucault examined began within but then expanded outside of disciplinary institutions of confinement; likewise, Coveney explains that studies of dietary requirements began within nineteenth-century workhouses and prisons, then emerged in anti-medical health movements such as the Whole Foods movement, and were finally incorporated into medical science and practice through the discoveries of calories and vitamins. Knowledge of nutritional requirements was important within disciplinary institutions in order to determine the minimum amount and quality of food that could be fed to inmates while still maintaining the institution as a deterrent; the food had to be worse in quality and quantity than what the majority of the poor ate outside of these institutions. Later, when it was concluded that inmates in workhouses were for the most part "deserving poor" and children, food quality and quantity were regulated less as a deterrent than to serve a rehabilitative function (p. 66).

Coveney demonstrates that the study and regulation of nutrition not only emerged within disciplinary institutions but are deeply embedded in biopolitics, which, as Foucault defines it, is the management of populations by the state and state institutions (Foucault 1978). To give but two examples of biopolitical investments in diet, nutrition became a political concern when state organizations considered how the poor could be made to eat in more cost-effective ways (p. 61) and when widespread malnutrition was associated with a dearth of recruits who met the physical stature requirements to serve in the Boer War (p. 78). While in several works (Foucault 1978, 2003, 2006), Foucault examines the manners in which disciplinary institutions interacted both antagonistically and collaboratively with the institution of the family, Coveney shows that biopolitical concerns for the health, able-bodiedness, and longevity of the population justified biopolitical and disciplinary incursions into the family in order to promote nutritional diets. Finally, just as Foucault shows that scientific or pseudoscientific knowledge has often been deployed for the purposes of moral or social hygiene, so Coveney examines the ways that nutritional science was, from the start, deeply entangled with morality: excessive, wasteful, unhealthy, sweet, rich, and fattening foods were considered "bad" (especially when fed to children) and "good" eating was associated with a thrifty, restrained, and wholesome diet. While Coveney considers the moral dimensions of eating in terms of such notions as waste, excess, and health, he neglects to consider the ways that nutritional science has been used to promote and to resist other ethical dimensions of eating; most notably, Coveney fails to consider moral concerns about nonhuman animals and the environment that arise when the biopolitical (nutritional, economic) advantages of eating

their flesh and secretions are under consideration. He does not explore the ways that scientific claims about nutrition have been deployed both by those who advocate for the eating of animals and by those who resist this diet.

In contrast to Coveney, Richie Nimmo has recently offered an extended Foucauldian analysis of the politics of nutritional science surrounding one particular food product – milk – that accounts for the ethics and politics of human relations with other animals. In *Milk, Modernity, and the Making of the Human: Purifying the Social* (Nimmo 2010), Nimmo provides a genealogy of milk. Genealogies, in Foucault's sense of the word, are histories that oppose teleological or universalizing accounts of an historical phenomenon. Friedrich Nietzsche's *Genealogy of Morals*, for instance, resists the view that morality has always been – and thus will always be – utilitarian. Foucault's *History of Madness* and *Discipline and Punish* resist the views that the prison and the asylum, though recent phenomena, are the ends of a history of progress with respect to madness and crime. In each case, whether considering morality, madness, or crime, genealogies make the currently dominant views of these phenomena seem contingent and strange. Nimmo accomplishes a similar defamiliarization with respect to milk.

Although milk is now widely believed to be a normal, pure, healthy, and clean drink and an essential part of a balanced human diet, consuming dairy products derived from other mammals is in fact strange. After all, mother cows produce milk for baby cows, and if adult animals, including humans, do not drink the breast milk of their own species, why would it be natural or normal for adult humans to drink the mother's milk of another species? Despite this fundamental oddness, drinking cow milk has come to seem like a natural thing for humans to do, and dairy is widely seen as an essential part of human nutrition or of the "food triangle." Nimmo's history shows how recent, contingent, and scientifically managed these intuitions are. Because milk spoils quickly and is easily contaminated, prior to the invention of railways and refrigeration, it was in fact very difficult for city dwellers to obtain milk that was not contaminated and spoiled. Because milk was closely associated with the nursing of infants, it was also seen as an infantile and feminine food, not a food for adults and especially not for men. Moreover, milk was (correctly) considered toxic, given that it carried tuberculosis from cows to humans. Health campaigns made matters worse for dairy farmers by advertising the fact that feeding cow milk to human infants was associated with high infant mortality rates, further entrenching the view that bovine milk was not meant for humans. Milk was also treated with suspicion as it was frequently watered down by farmers and merchants. Attempts to regulate the butterfat content of milk met with a natural resistance, since it treated milk like a commodity that farmers rather than cows produced, when in fact butterfat content varies widely even with the milk of a single cow, and prior to scientific interventions into dairy farming, farmers could do little to assure the fat content of the milk they sold. Nimmo thus shows that milk was an exceedingly difficult food to standardize, to make safe, and to convince the public to drink. Far from being a natural beverage, an extensive disciplining of cows and farmers as well as extensive propaganda was necessary before the consumption of milk could be normalized.

In "Abnormal Appetites: Foucault, Atwood, and the Normalization of an Animal-Based Diet" (Taylor 2012), I, like Nimmo, have engaged with modern medical discourses on diet while accounting for the moral stakes of these discourses for other animals. This article considers the ways that both psychiatric discourses on mental health and medical discourses on nutrition have promoted a meat, egg, and dairy-based diet in manners that pass off social norms as science. It suggests that eating animals has become a norm such that vegetarianism is perceived as "abnormal," and abnormality, as Foucault has shown (2003), has been associated by the psychiatric sciences with mental illness. This, in turn, makes vegetarianism an undesirable subject position to occupy. This argument is pursued through an analysis of literary representations of vegetarianism and psychiatric discourses on "Orthorexia Nervosa," a newly coined eating disorder characterized by "obsession" with "righteous" eating.

Alimentary Identities and the Ethics of Eating

In "Foucault Goes to Weightwatchers," Cressida Heyes agrees with earlier feminists that the practice of weight-loss dieting is well understood as an instance of disciplinary power or is a practice that women impose on themselves in their strivings to achieve a (hetero)normatively attractive and appropriately docile, feminine body. Heyes expands upon this argument, however, by observing the ways that dieting may not only be debilitating but may also increase skills and capacities, providing a sense of self-mastery and achievement for the dieter. Heyes thus insists that women do not diet simply because they suffer from false consciousness, as a Marxist analysis would have it, but because they find the self-development and skill-cultivation aspects of dieting enabling. Heyes also observes that weight-loss programs are clever at picking up on these attractive aspects of dieting, deploying a language not so much of self-discipline as of self-care. In this way, the marketing strategies of dieting organizations resonate as much with the texts that Foucault analyzed in the final period of his writing as with his genealogical studies.

Despite making these points, Heyes ultimately argues that women should be wary of how the discourse of caring for the self is being used in the diet industry in the service of what remain highly normalizing practices. Heyes thus suggests that women should find activities that fulfill the need for the skill-enhancing and self-transformative aspects of weight-loss dieting, even while rejecting weight-loss dieting itself. One way that former weight-loss dieters (including dieters with eating disorders) have done what Heyes suggests is by taking on a nonnormative diet such as veganism or raw foodism (see, for instance, Gena (2011)); in such a way, the dieter obtains the same sense of satisfaction from working on herself as she derived from weight-loss dieting, demonstrating self-mastery and developing new skills (such as new culinary skills), but her efforts are not doomed to failure – as is almost inevitably the case for weight-loss dieters (Heyes 2006, p. 145) – and are not "recycled back into disciplinary practices" (Heyes 2006, p. 138). On the contrary, the former weight-loss dieter who switches her alimentary regime to raw foodism or veganism cares for herself while defying social and alimentary norms such as speciesism.

Although, in her Foucault-inspired study of contemporary food culture, Elspeth Probyn has dismissed vegetarianism by saying it is a morality rather than an ethics in Foucault's sense of these terms (Probyn 2000), Joseph Tanke and I have both disagreed, demonstrating that vegetarianism can indeed be understood as ethical practices of self-care and moreover that morality and ethics need not be opposed for Foucault (Tanke 2007; Taylor 2010). Both authors note that vegetarians take on dietary regimes less to conform to universal moral codes than to become the kind of person they wish to be. Similarly, I have argued that resistance to vegetarianism is about aesthetics rather than a failure to be convinced by moral arguments. Vegetarianism – like other alimentary identities – is not something that one does, Tanke and I have argued, but is something that one is, or aspires to be, and that one makes of oneself through alimentary self-fashioning practices. While one can practice alimentary identities other than vegetarian ones, in "Foucault and the Ethics of Eating," I argue that Probyn's example of a carnivorous diet exemplifies what Foucault deems a "disgusting" ethics (Taylor 2010, p. 79); this is because, like the "virile" Greek ethics that depended on the submission of free women, boys, and slaves, eating animals fails to account for the pleasures of others.

Summary

This entry has examined a handful of statements that Foucault made about diet, as well as his suggestive discussion of alimentary dietetics. It has also presented some of the ways in which contemporary food scholars have taken up Foucault's work in order to discuss a range of alimentary phenomena, including discourses of the nutritional and psychiatric sciences, the practices of vegetarianism and veganism, and weight-loss dieting.

Cross-References

- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Food Security
- ▶ Food-Body Relationship
- ▶ Gustatory Pleasure and Food
- ▶ Meat: Ethical Considerations
- ▶ Punishment and Food
- ▶ Vegetarianism

References

Coveney, J. (2000/2006). *Food, morals, and meaning: The pleasure and anxiety of eating*. New York/London: Routledge.

Foucault, M. (1978). *The history of sexuality: Vol. 1. An introduction*. New York: Random House.

Foucault, M. (1983). On the genealogy of ethics: An overview of work in progress. In H. Dreyfus & P. Rabinow (Eds.), *Michel Foucault: Beyond structuralism and hermeneutics*. Chicago: University of Chicago Press.

Foucault, M. (1984). Nietzsche, genealogy, history. In R. Paul (Ed.), *The Foucault reader*. New York: Vintage.

Foucault, M. (1988). The minimal self. In L. D. Kritzman (Ed.), *Michel Foucault: Politics, philosophy, culture. Interviews and other writings: 1977–1984* (edited with an Introduction). New York/London: Routledge.

Foucault, M. (1990). *The use of pleasure: vol 2. The history of sexuality*. New York: Vintage.

Foucault, M. (2003). *Abnormal: Lectures at the Collège de France: 1974–1975*. New York: Picador.

Foucault, M. (2006). *Psychiatric power: Lectures at the Collège de France: 1973–1974*. New York: Picador.

Gena. (2011). *Green recovery: The plant-based road to healing from disordered eating*. http://www.choosingraw.com/green-recovery-the-plant-based-road-to-healing-from-disordered-eating/. Accessed 1 July 2012.

Heyes, C. (2006). Foucault goes to weightwatchers. *Hypatia: A Journal of Feminist Philosophy, 21*(2), 126–149.

Nimmo, R. (2010). *Milk, modernity, and the making of the human: Purifying the social*. New York/London: Routledge.

Probyn, E. (2000). *Carnal appetites: Food sex identities*. New York/London: Routledge.

Tanke, J. (2007). The care of self and environmental politics: Towards a foucaultian account of dietary practice. *Ethics & the Environment, 12*(1), 79–96.

Taylor, C. (2010). Foucault and the ethics of eating. *Foucault Studies, 9*, 71–88.

Taylor, C. (2012). Abnormal appetites: Foucault, Atwood, and the Normalization of an Animal-Based Diet. *Journal for Critical Animal Studies*, *10*(3) (in press).

Free Trade and Protectionism in Food and Agriculture

E. Wesley F. Peterson
Department of Agricultural Economics, University of Nebraska-Lincoln, Lincoln, NE, USA

Synonyms

Mercantilism; Open markets; Trade liberalization; Trade policies

Introduction

Debates between advocates of free trade and those who favor more protectionist policies seem particularly charged when the topic is international trade in food and agricultural products. World Trade Organization (WTO) discussions of the Doha Development Agenda (DDA) appear to be dead in the water largely as a result of differences over global rules to govern agricultural trade. The agricultural provisions of the North American Free Trade Agreement (NAFTA) caused a great deal of consternation in all three countries, and many of the most intractable trade disputes brought to the WTO concern food and agricultural issues (Hobbes 2014; Levidow 2014a, b). The controversies surrounding free trade and protectionism for agricultural goods are part of wider debates about the effects of trade on economic well-being and the best way to organize global economic relations. For some, international trade and globalization undermine the rights of workers, thwart efforts to protect the environment, and lower the prospects for economic growth and prosperity in low-income countries (see McArthur and Tucker 2010; Bybee 2008; Zepp-LaRouche 2008). From this perspective, it is not so much trade itself that is the problem but rather the negative impacts of trade that are seen as unethical. Most economists, on the other hand, believe that international trade is a positive-sum game (if it were not the case that

both parties benefit, they would have no incentive to trade) and that trade is essential for economic growth and development (see Shahbaz 2012; Arif and Ahmad 2012; Nannicini and Billmeier 2011; and Marelli and Signorelli 2011). From this perspective, free trade allows people to exercise basic freedoms and is therefore of direct ethical value. In addition, to the extent that trade contributes to greater well-being, it is also instrumentally valuable because of the consequences it generates.

Even for those who believe that an open world trade system is beneficial, however, disagreements about the details of such arrangements are common. When it comes to food and agricultural trade, the diverse points of view often lead to political polarization. The purpose of this entry is to investigate arguments about free trade and protectionism with special emphasis on ethical issues related to international trade in food and agricultural products. The discussion begins with a review of the eighteenth- and nineteenth-century debates about the English Corn Laws which featured many of the arguments still invoked in modern discussions of free trade and protectionism. In the following sections of the entry, an attempt is made to define both concepts more precisely and to introduce ethical arguments about free trade and protectionism in the food and agricultural sectors.

The English Corn Laws

One of the most famous debates about free trade and protectionism was occasioned by the British "Corn Laws" designed to regulate grain imports and exports. As far back as the 1600s, regulations on grain trade had been implemented in an effort to keep prices high enough to satisfy farmers but not so high as to cause extreme hardship for the poor (Schonhardt-Bailey 2006). Cain and Hopkins (1980) argue that through the eighteenth and early nineteenth centuries, agriculture was the dominant economic sector in England, and the landed gentry were successful in directing government intervention toward protection of their interests. At that time, England exported grain and the primary policy intervention was a type of export subsidy known as a "bounty." In *The Wealth of Nations*, Adam Smith included a "Digression Concerning the Corn Trade and Corn Laws" in a chapter on the negative effects of bounties and the benefits of free trade (Smith 1976/1776, vol. II, pp. 29–52). He argued that government interference with trade was the real cause of famines, food shortages, and high food prices. Grain was generally viewed as a "wage good" by the classical economists suggesting that the wages needed for workers to sustain themselves were largely determined by grain prices. Bounties and import duties, both of which raise domestic prices, thus tend to force employers to increase the nominal wage to maintain real subsistence wage levels in the manufacturing sector forcing them to charge higher prices for their output. For Smith, this made British manufacturing less competitive internationally.

By the beginning of the nineteenth century, England had become a net importer of grain, and grain prices were being driven down by cheap imports. In 1815, a new Corn Law was enacted limiting grain imports when prices in England fell below a certain level (Schonhardt-Bailey 2006). In his *Essay on the Principle of Population*, Thomas Malthus (2004/1798) had already expressed disagreement with Smith noting that if economic expansion took place only in the manufacturing sector while the agricultural sector continued to generate a fixed amount of output, food prices would increase and real wages would fall. For Malthus, the only way to raise standards of living was to invest in agriculture. In a short essay on the 1815 Corn Law, Malthus (1814) returned to these themes, taking issue with Smith's contention that while bounties or import duties might raise the nominal price of grain, its real price would be unchanged as a result of the effects of the grain price increase on wages and the subsequent impact of higher wages on the prices of all other goods. Because real prices are what drive producer decisions, Smith argued that the trade policies would have no effect on grain output. For Malthus, allowing

cheap imported grain would mean the decline of British agriculture and, because of the centrality of agriculture in the wealth of the nation, reduced economic growth and prosperity. Malthus recognized the disadvantages of import restrictions including inefficiencies in resource allocation, reduced international competitiveness, lowered population growth resulting from higher food prices, and the administrative costs of restrictive trade policies. He concluded, nevertheless, that the new Corn Law would benefit the English economy.

Malthus's position was not shared by other economists of the time, most notably David Ricardo who provided one of the first full developments of comparative advantage, a concept that plays a central role in economic arguments in favor of free trade (Blaug 1978). In the first half of the nineteenth century, British agriculture experienced increased competition from imported grain, and the landowners began to lose some of their political influence (Cain and Hopkins 1980). Schonhardt-Bailey (2006) traces the rise of the Anti-Corn Law League from its beginnings in 1836 to its eventual triumph in 1846, when the Corn Laws were repealed and free trade became the dominant ideology in England. The classical economists from Smith (1723–1790) to Karl Marx (1818–1883) saw economic output as the product of three factors of production, land, labor, and capital, each of which was associated with a particular social class, landlords, workers, and capitalists. In a sense, Malthus remained a defender of the landed aristocracy, while Smith and Ricardo pinned their hopes on the rising capitalist class and Marx, of course, thought of himself as the defender of the proletariat. The great debate over the Corn Laws in England pitted the interests of the landlords against those of the workers and capitalists, and whether one was a protectionist or an advocate of free trade depended, at least in part, on which social class one favored and which interests would be advanced or impaired by international trade. Political and economic interests continue to play a prominent role in trade policy debates.

Free Markets and Free Trade

Most economic activity takes place in domestic markets which bring together local suppliers and consumers to engage in what Adam Smith described as the natural propensity of human beings to "truck, barter, and exchange one thing for another" (1976/1776, vol. I, p. 17). International markets are an extension of domestic markets, and the idea of "free trade" is similarly an elaboration of the notion of "free markets." Most arguments in favor of free markets are based on the expected material benefits that arise from their greater efficiency compared to other economic arrangements (e.g., central planning) and the fact that the alternatives generally restrict individual rights and freedoms (Capaldi 2004). Buchanan (1988) reviews various ethical arguments in favor of free exchange and notes that these arguments are often intertwined with the efficiency claims. For example, it might be argued that the ethical dimensions of market systems derive from the fact that they allow individuals to freely express their preferences and to make use of their property as they wish (Gibbard 1985). Such arguments from individual freedom are tied to efficiency through the supposition that free individuals are capable of making choices that will lead to the best use of resources and the greatest economic benefit for themselves as well as for the society in general and that they will do so if given the chance. Sen (1985) agrees that markets may have practical value but finds suggestions that free exchange assures the exercise of individual rights problematic. After all, the extent of a poor person's rights in free markets is clearly less than that of another person with greater resources and markets are incapable of evening out such differences. If one believes that the rich person deserves her relatively greater opulence, it may be possible to see such market outcomes as justifiable. But, of course, many wealthy people owe their good fortunes to luck, coercion, dishonesty, or theft rather than hard work and talent, making it difficult to support the libertarian argument that whatever outcome is generated by the market is fair.

McClosky (2007), on the other hand, argues that markets promote individual virtues and a capitalist system based on free markets and private property not only makes everyone wealthier but also causes people to behave with greater virtue. McClosky is arguing against those who believe that there should be extensive market regulation, perhaps even the complete socialization or collectivization of markets, to prevent an unwelcome outcome such as highly unequal income distributions or environmental damage. It is important to recognize, however, that markets are never completely free of all regulation. In fact, an institutional framework that includes laws related to property rights, contracts, fraud, and so on is needed for markets to function at all (Acemoglu and Robinson 2012; Stiglitz 2013). Such laws can never be entirely neutral with respect to the particular individual interests that are favored making market institutions inherently political. Market anarchists believe that the political nature of governments' control of the creation and enforcement of legal institutions makes them oppressive and argue that the state should be replaced by voluntary interactions such as those in unregulated markets (Molinari Institute 2013). Most, however, appear to believe that some set of legal institutions is a necessary prerequisite for a well-ordered market economy (Olson 2000). Acemoglu and Robinson show that the types of political and economic institutions that are established in a country are major determinants of whether people in that country prosper. The importance of institutions, including those that regulate commercial activity, brings the concept of free markets into question. If some regulations are necessary for markets to function, is there a clear place to draw the line between free and regulated (or "socialized") markets?

The same question arises with respect to free trade. What kinds of institutions are compatible with free trade? For the Encyclopedia Britannica, free trade is synonymous with *laissez-faire*, an economic system that permits only limited government interference with markets (http://www.britannica.com/EBchecked/topic/218403/free-trade). Other sources suggest that free trade requires only the absence of some specific set of trade barriers usually identified as import tariffs and export subsidies leaving open a wide range of economic policies that might be ruled out in a pure *laissez-faire* system (http://www.merriam-webster.com/dictionary/free%20trade or http://glossary.econguru.com/economic-term/free+tradehttp://glossary.econguru.com/economic-term/free+trade). In general, these definitions all seem to point to import tariffs and export subsidies as the main protectionist policies that interfere with free trade although in some cases other types of government interference such as exchange rate manipulation or government procurement practices are also included (http://www.auburn.edu/~johnspm/gloss/free_trade). They are generally silent, however, on government actions that may indirectly influence international trade (e.g., publicly funded research, subsidies to domestic producers). They would also seem to allow trade barriers to protect against harmful goods such as import restrictions on livestock products originating in countries where foot-and-mouth disease has not been eradicated. Finally, they do not appear to rule out measures to prevent private sector participants from behaving in ways that introduce inefficiencies into the world market through the exercise of monopoly power, for example, or through practices that would be illegal in the countries in which they are based (e.g., bribery). It appears that free trade policies may allow for a wide range of government market interventions including some that may favor domestic over foreign producers.

Most advocates of free trade would not call for the complete elimination of all public policies that may affect trade but rather would stress the benefits of reducing conventional trade barriers, a process known as "trade liberalization." Palmeter (2005) reviews a number of ethical theories from utilitarianism to the non-consequentialist theories of Kant and Rawls finding that a liberal trade regime is compatible with all of these theoretical approaches. He notes that protectionism is likely to violate individual rights and harm the least well-off and points out that Kant saw trade as contributing to world peace (see also Moore 2003). Arguments against free trade often emphasize the unfairness to those who lose as

trade is liberalized. Beghin et al. estimated that elimination of the US sugar tariff in 1998 would have led to losses to cane and beet growers and sugar processors in the United States totaling about $1 billion compared with gains to US sugar consumers of $1.9 billion. An additional advantage of such a change – note that the tariff has not been eliminated – would have been an increase in the world sugar price of about 13 % to the benefit of sugar producers in low-income countries (Beghin et al. 2003).

Opponents of trade liberalization might argue that elimination of the tariff would be unfair because it would disrupt the lives of those who have devoted resources and effort to particular courses of action on the assumption that protection would remain in place (Palmeter 2005). In the sugar case, however, consumer gains would have been sufficiently large to compensate the growers and processors while still leaving consumers better off. Even if actual compensation is not made, one might question whether the *status quo ante* was fair in the first place because it generates benefits for some at the expense of others. Moreover, the policy does this in a way that is inefficient because total benefits are less than total costs. Providing an ethical justification for the US sugar policy would require an account of why the growers and processors deserve their gains and why it is fair for consumers to be required to pay for them. It might be possible to develop such an account, but the inconvenient fact that it would be cheaper to simply transfer a billion dollars to the growers and processors from general tax revenues rather than effecting this income transfer through the trade barrier would remain.

Palmeter (2005) points out that John Stuart Mill suggested compensating the landlords who lost from the repeal of the Corn Laws noting that even with compensation, there would be a net gain to England from the reform. It is almost always the case that trade liberalization leads to benefits that are greater than the costs so that those whose situation is made worse off could be compensated for their losses. Of course, compensation is not always offered to those who lose from trade policy changes, and the specific effects such changes may generate will depend on the particular measures that are put in place. For example, trade agreements such as NAFTA or the Uruguay Round agreement of the WTO often include provisions related to direct foreign investment, intellectual property, environmental concerns, and much more. Worries about such agreements may have less to do with tariffs and trade than they do with broader concerns about economic justice or environmental protection. In fact, opposition to the international economic organizations (WTO, International Monetary Fund, World Bank) often seems more an expression of uneasiness about capitalism and the undermining of national sovereignty than a worry about trade or international finance as such (Peterson 2014; Frank 2007). Proponents of free trade may also be using trade as a symbol to support their belief in the benefits of globalization. It sometimes seems that "free trade" has become a slogan that serves as shorthand for competing visions of the best way to regulate global interactions. Zepp-LaRouche (2008) speaks of the "...obvious bankruptcy of murderous free trade," while Bhagwati (2011) claims that free trade not only brings greater prosperity but greater equality and world peace as well.

Protectionism

In many respects, protectionism is a more precise concept than free trade. The Encyclopedia Britannica defines it as the use of trade barriers to shelter domestic industries from foreign competition (http://www.britannica.com/EBchecked/topic/479643/protectionism). As in the case of free trade, exactly what constitutes a trade barrier is subject to debate. For example, publicly funded agricultural research can lead to innovations that lower costs for domestic producers giving them a competitive advantage vis-à-vis foreign firms. For this to constitute protectionism, however, foreign and domestic firms must be treated differently, and this would not be the case if the cost-reducing innovations are made available to all. Prior to the rise of free trade in the eighteenth and

nineteenth centuries, the dominant economic policy in Europe, known as mercantilism, was highly protectionist. Mercantilist thinkers believed that the more gold a nation could accumulate, the wealthier and more powerful it would be. To increase the inflow of gold, mercantilists argued for increased exports and restrictions on imports. Imports of raw materials for use in manufacturing were permitted, but the overall goal was to use government policies to assure a trade surplus that would increase the nation's holdings of gold (Blaug 1978). As a general policy, mercantilism is obviously incoherent: it is impossible for all countries to have trade surpluses at the same time. Adam Smith and later economists did much to discredit this doctrine, but the view that exports are desirable because they earn money and create jobs while imports are undesirable because they cost money and displace workers lives on in many policy debates today (see Scott 2007).

At the same time, there is a kind of asymmetry in discussions of protectionism. The basic definition focuses only on protection of domestic firms and industries. Protecting the health of consumers, livestock, or ecosystems seems generally to be considered an appropriate use of government power, while protecting private industries is not. In its efforts to reduce protectionism, the WTO has become embroiled in a host of contentious issues related to ambiguities about the actual agents being protected by a particular policy. For example, as conventional tariff and nontariff trade barriers have been reduced, governments have increasingly turned to alternative measures such as technical standards that may have the same effect as the original trade barriers but that can be justified on the grounds of consumer or environmental protection. The European Union (EU) defends its ban on imports of livestock products from animals raised with hormone supplements as a consumer protection policy, while Canada and the United States have always maintained that the intent of this policy is to protect EU livestock producers from foreign competition (Hobbes 2014). The WTO Agriculture Agreement includes provisions for the reduction of agricultural subsidies that could lead to hardships for farmers in countries with agricultural sectors that are relatively uncompetitive internationally. Some of these countries (Japan, Korea, Switzerland, and Norway) note that farming generates external benefits (e.g., viable rural communities) for which farmers are not compensated arguing that domestic subsidies should be allowed under WTO rules to compensate farmers for these positive contributions (Adam 2014). Although policies of this nature would have the same effects as more conventional protectionism, they are thought to be justifiable not because they protect the domestic industry but because they represent legitimate compensation for services provided. It is notable that advocates of this position rarely draw attention to the negative impacts of farming (pesticide and fertilizer runoff, soil erosion and reduced biodiversity, for example) which may be of greater social value than the alleged positive contributions.

An early argument for protectionism embraced by Alexander Hamilton in the United States and Frederick List in Germany was that newly established industries, like children, needed protection until they are mature and able to compete with established industries overseas (Melitz 2005). Melitz shows that under fairly restrictive conditions, national welfare may be advanced by protecting infant industries but argues that only new industries with the clear potential to be able to achieve the needed efficiencies rapidly should be considered for this protection. In many cases, government protection has resulted in industries that remain inefficient unable ever to compete without the protective trade barriers. Many developing countries pursued industrialization strategies based on import substitution, a policy that restricts imports to allow a domestic industry to become established without being undermined by foreign competition. While these strategies did contribute to some industrialization in low-income countries, they have not proved to be effective strategies for industrialization, growth, and development because domestic markets are usually too small to support large-scale industries. The typical effect has been higher prices for consumers, lower quality consumer and intermediate goods,

industries dependent on government support for their continued existence, and severe balance-of-payments crises as resources are diverted from export industries in which the country has a comparative advantage to uncompetitive domestic firms.

A common rationale for protectionism is that it supports domestic employment. Shortly after the 1929 stock market crash, the US Congress raised tariffs in a misguided effort to preserve jobs. The Smoot-Hawley tariff of 1930 had little effect on employment as other countries retaliated by raising their trade barriers so that US imports and exports both fell (Irwin 2002). Despite much evidence to the contrary, many still believe that imports cost jobs and call for trade barriers to protect domestic employment, particularly in times of economic downturn. It turns out, however, that trade barriers can actually cost the economy jobs by raising the price of imported goods that are inputs for other industries. US sugar prices are usually higher than world prices as a result of the tariff, making US candy producers and other industries that use sugar as an input less competitive. Irwin (2002) cites the example of a candy company in Chicago that was forced to move its production facilities to Canada because of the high US sugar prices at the cost of 3,000 US jobs. There is virtually no evidence that protectionism can lead to a net increase in jobs or that it lowers unemployment rates.

In recent years, numerous individuals and groups have responded positively to calls to slow globalization often seen as a process that causes harm to the environment, workers' rights, economic growth and development in low-income countries, traditional food systems, and much else. As a central component of globalization, trade is often seen as particularly suspect because of its ties to commercial activities and global capitalism. Irwin (2002) suggests that the underlying concern of many of the groups opposing trade is actually their distaste for modern, industrial capitalism seen as driven by the profit motive rather than by more noble objectives such as environmental sustainability or poverty alleviation. As the world economy has become more turbulent, some economists have embraced criticisms of trade and globalization primarily because of the way they are being managed (Stiglitz 2013). Joseph Stiglitz, 2001 Nobel Laureate in Economic Sciences, and others have noted that the benefits of liberal trade are often not widely dispersed in countries with deficient economic and political institutions with the result that free trade may actually make the poor worse off. Stiglitz does not oppose international trade as such but rather sees the way global markets are managed by firms and governments working through international trade agreements as biased in favor of large corporations and wealthy people in high-income countries. This is not so much a call for protectionism as recognition that markets will always be regulated in some fashion and that the particular regulations chosen can be structured to favor certain groups at the expense of others. For Stiglitz, the way current global institutions are set up is wrong because they favor the wealthy while harming the poor. Some might argue for trade restrictions on the grounds that global institutions will always be established by those with economic and political power so that international trade cannot but be biased against those who lack the power to influence the rules of the game.

Summary

There is a long history of conflict between those who believe that free trade is essential not only for economic prosperity but also for the exercise of individual freedoms and those who see international trade as a threat to their personal economic interests or traditional ways of life. Those in the latter group often feel that measures to protect domestic industries from foreign competition are necessary to maintain employment and to prevent global interference with vibrant local communities. Protectionism is always about protecting particular groups from the consequences of international trade and, as with earlier debates about the British Corn Laws, whether one favors or rejects protectionism in a particular case depends on beliefs about how favored groups or

causes, including those concerned with such considerations as the environment or social justice, will be affected by trade. In general, protectionism is an inefficient way to direct economic or other types of benefits toward favored groups or causes because it generates broad social costs that are almost always greater than the value of the benefits diverted to the favored group or cause.

For others, the freedom to engage in economic activity is part of individual entitlements and protectionism violates this basic right. Beyond the importance of trade for individual freedoms, open markets tend to lead to beneficial consequences for economic growth and development, and these effects have given rise to calls for free trade. But the concept of free trade is ambiguous because markets are always regulated in some fashion. If they are not regulated by governments, they will be regulated by private firms or organized crime (see Olson 2000). Assuming that governments and international organizations establish the rules and regulations governing international markets, it may not always be entirely clear why some kinds of protectionist policies (e.g., protecting consumers from harmful or dangerous products) are deemed legitimate while others are not. The WTO and other international organizations often must confront such questions particularly when it is unclear whether a protectionist trade measure is aimed at preventing harm to consumers or the environment or, on the contrary, is really designed to shelter firms from foreign competition. Finally, the particular institutions chosen to govern global markets influence the distribution of economic costs and benefits among various agents. Some institutional arrangements may be deemed unethical because they violate common norms of distributive justice. In such cases, however, it could be argued that it is really the institutions that are unethical rather than international trade per se.

Cross-References

- ▶ Canada, US-EU Beef Hormone Dispute
- ▶ EU Regulatory Conflicts over GM Food
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Food and Agricultural Trade and National Sovereignty
- ▶ Multifunctionality of Agriculture and International Trade
- ▶ The 2003–2006 WTO GMO Dispute: Implications for the SPS Agreement
- ▶ WTO Dispute Settlement and Food and Agricultural Trade

References

Acemoglu, D., & Robinson, J. A. (2012). *Why nations fail: The origins of power, prosperity and poverty*. New York: Random House.

Adam, E. (2014). Multifunctionality of agriculture and international trade. In P. B. Thompson & D. Kaplan (Eds.), *Encyclopedia of food and agricultural ethics*. Heidelberg: Springer.

Arif, A., & Ahmad, H. (2012). Impact of trade openness on output growth: Cointegration and error correction model approach. *International Journal of Economics and Financial Issues, 2*(4), 379–385.

Beghin, J. C., El Costa, B., Cherlow, J. R., & Mohanty, S. (2003). The cost of the U.S. sugar program revisited. *Contemporary Economic Policy, 21*(1), 106–116.

Bhagwati, J. (2011). Why free trade matters. Project syndicate, June, 23. Available at: http://www.project-syndicate.org/commentary/why-free-trade-matters. Accessed 29 May 2013.

Blaug, M. (1978). *Economic theory in retrospect* (3rd ed.). New York: Cambridge University Press.

Buchanan, A. (1988). *Ethics, efficiency and the market*. Totowa: Rowman and Littlefield.

Bybee, R. (2008). Free trade fundamentalism. *Z magazine* (April). Available at: http://www.zcommunications.org/free-trade-fundumentalism-by-roger-bybee. Accessed 22 May 2013.

Cain, P. J., & Hopkins, A. G. (1980). The political economy of British expansion overseas, 1750–1914. *The Economic History Review, New Series, 33*(4), 463–490.

Capaldi, N. (2004). The ethical foundations of free market societies. *The Journal of Private Enterprise, 20*(1), 30–54.

Frank, J (2007). Free trade, ethics and information: Reconciling international trade with national ethical standards. In: O. Esen, & A. O. Binati (Eds.), *Proceedings of the international conference on globalization and its discontents* (pp. 53–63). Izmir University of Economics. Available at: http://econpapers.repec.org/bookchap/izmiuecor/2007.htm. Accessed 10 May 2013.

Gibbard, A. (1985). What's morally special about free exchange? In E. F. Paul, F. D. Miller, & J. Paul (Eds.), *Ethics and economics*. Oxford: Basil Blackwell.

Hobbes, J. E. (2014). Canada, US-EU beef hormone dispute. In P. B. Thompson & D. Kaplan (Eds.), *Encyclopedia of food and agricultural ethics*. Heidelberg: Springer.
Irwin, D. A. (2002). *Free trade under fire*. Princeton: Princeton University Press.
Levidow, L. (2014a). The 2003–06 WTO GMO dispute: Implications for the SPS agreement. In P. B. Thompson & D. Kaplan (Eds.), *Encyclopedia of food and agricultural ethics*. Heidelberg: Springer.
Levidow, L. (2014b). EU regulatory conflicts over GM food: Lessons for the future. In P. B. Thompson & D. Kaplan (Eds.), *Encyclopedia of food and agricultural ethics*. Heidelberg: Springer.
Malthus, T. R. (1814). Observations on the effects of the Corn Laws, and of a rise or fall in the price of corn on the agriculture and general wealth of the country. Available at: http://avalon.law.yale.edu/19th_century/cornlaws.asp. Accessed 20 May 2013.
Malthus, T. R. (2004/1798). *An essay on the principle of population*. Oxford, UK: Oxford University Press.
Marelli, E., & Signorelli, M. (2011). China and India: Openness, trade and effects on economic growth. *The European Journal of Comparative Economics, 8*(1), 129–154.
McArthur, T., & Tucker T. (2010). A year after implementation of Peru free trade agreement, U.S. and Peru left with broken promises and no new trade model. Public Citizen (Feb 1). Available at: www.citizen.org/documents/PeruFTA-OneYear.pdf
McClosky, D. N. (2007). *The bourgeois virtues: Ethics for an Age of commerce*. Chicago: University of Chicago Press.
Melitz, M. J. (2005). When and how should infant industries be protected? *Journal of International Economics, 66*, 177–196.
Molinari Institute. (2013). About market anarchism. Available at http://praxeology.net/anarcres.htm. Accessed 27 May 2013.
Moore, M. (2003). *A world without walls: Freedom, development, free trade and global governance*. Cambridge, UK: Cambridge University Press.
Nannicini, T., & Billmeier, A. (2011). Economies in transition: How important is trade openness for growth? *Oxford Bulletin of Economics and Statistics, 73*(3), 287–314.
Olson, M. (2000). *Power and prosperity: Outgrowing communist and capitalist dictatorships*. New York: Basic Books.
Palmeter, D. (2005). A note on the ethics of free trade. *World Trade Review, 4*(3), 449–467.
Peterson, F. (2014). Food and agricultural trade and national sovereignty. In P. B. Thompson & D. Kaplan (Eds.), *Encyclopedia of food and agricultural ethics*. Heidelberg: Springer.
Schonhardt-Bailey, C. (2006). *From the corn laws to free trade: Interests, ideas, and institutions in historical perspective*. Cambridge, MA: MIT Press.
Scott, R. E. (2007). *The Wal-Mart effect: Its Chinese imports have displaced nearly 200,000 jobs* (Issue Brief #235). Washington: Economic Policy Institute, June 26.
Sen, A. K. (1985). The moral standing of the market. In E. F. Paul, F. D. Miller, & J. Paul (Eds.), *Ethics and economics*. Oxford: Basil Blackwell.
Shahbaz, M. (2012). Does trade openness affect long-Run growth? Cointegration, causality and forecast error decomposition tests for Pakistan. *Economic Modeling, 29*(6), 2325–2339.
Smith, A. (1976/1776). *An inquiry into the nature and causes of the wealth of nations*. Chicago: University of Chicago Press.
Stiglitz, J. E. (2013). *The price of inequality: How today's divided society endangers our future*. New York: W. W. Norton and Company.
Zepp-LaRouche, H. (2008). *Instead of wars of starvation, let us double food production*! Executive Intelligence report. Washington, DC: Schiller Institute.

Functional Foods

Christy Spackman
Food Studies, Food Chemistry, Food Studies, New York University, New York, NY, USA

Synonyms

Enhanced foods; Fortified foods; Nutraceuticals

Introduction

In the most basic sense, all foods are functional. Specifically, all foods serve some function in the body: they provide energy, nutrients, micronutrients, water, or fiber necessary to maintain and promote life. However, *functional foods* are a subset of foods – one could also think of them as a category of foods – that are considered by many to have properties that make them especially potent in promoting maintenance of a healthful life. These foods are typically characterized by the addition or enhancement of a biologically active ingredient understood to promote health and often appear to dance between food and medicine.

A variety of political factors, social trends, and technological innovations have shaped the creation of the contemporary category of functional foods. This food category first originated in Japan during the mid-1980s as part of a state-sponsored research project that sought to analyze, characterize, and improve the nutritive properties of foods. That research resulted in a new, state-recognized, state-regulated, and state-defined food category. Unlike traditional foods, or even fortified foods, these new functional foods were created and engineered with the express aim of addressing specific health concerns.

In many ways it is easier to give examples of functional foods than to define them. One familiar example for much of the United States and Europe is margarines with added phytosterols (compounds isolated from plants). On-package copy and advertising inform consumers that consumption of this product can help lower cholesterol. This product's existence is made possible by the confluence of a variety of governmental regulations, technological innovations in biomedical and agricultural research, public and private institutions, and corporations. The joining together of these disparate groups highlights the variety of ethical concerns surrounding functional foods. This entry first briefly situates the development of the concept of functional foods, discussing the difference between historical understandings of foods as functional and the contemporary conception of functional foods. Next, this entry examines the variety of ethical concerns surrounding functional foods. These concerns include issues of:

- Production (How are these foods produced?)
- Regulation and communication (What impact does government regulation have?)
- Access (Who has access to these foods?)
- Efficacy (Do these foods work?)

Situating Functional Foods

Humans have long understood foods as promoting health or preventing illness. For example, Galen and his followers viewed foods as regulating the humors of the body, proscribing specific diets for specific personalities and ailments. Followers of Paracelsus believed that nature's bounty of plants, minerals, and animals contained hidden remedies for disease. Nineteenth- and twentieth-century discoveries of vitamins demonstrated that unseen components of foods could dramatically affect human health. Functional foods build on these ideas, with a centralizing belief that one can consume specific foods with specific components for specific ailments, as either curative or preventative.

However, unlike previous iterations of the food as medicine trope, functional foods are built on twentieth-century technological innovations in agriculture, biological medicine, food production technologies, and new forms of legal regulation. Functional foods make explicit an underlying change in the conception of food itself, from that of a whole to that of something built up of constituent parts (Mudry 2009; Scrinis 2008). For some, this marrying of the natural and technological into innovative food forms calls for additional scrutiny. How do we know that these foods will not harm us? How are these foods being produced, and at what costs? For others, the new regulatory frameworks that allow food corporations to take up the task of educating consumers about their bodies and health call for further examination. Are these regulations adequately protecting consumers, or are they promoting big business and quarterly profits without regard to consumer health? Finally, others question the ways that these health-promoting foods are available, noting the premium prices often attached to these foods. Are these foods recreating and expanding the health gaps between the haves and the have-nots?

Producing Functional Foods

Functional foods are founded on technological innovation. Without the analytical technologies of the engineering, chemical, and biological disciplines (e.g., physical chemistry, organic chemistry, cellular and molecular biology, clinical medicine, packaging technologies, food science), these foods cannot exist. These scientific approaches make possible the extraction and

analysis of plant and animal-based compounds. In general, compounds are analyzed for potential biological activity in the body, either by academic scientists working at universities under public or private funding or by in-house or external laboratories working for the pharmaceutical or food industries. Although taken alone these technologies exist in a sort of ethical nonplace (i.e., they are neither good nor bad), these technological innovations raise a variety of questions. For example, how is technological innovation applied to biological organisms? What role do genetic engineering and modification play in this creation of new foods? Who funds this innovation? Who ultimately profits from it?

From the functional food perspective, genetic engineering and modification can facilitate the production of biologically active compounds – molecules that "do stuff" in the body. Genetic engineering often seeks to either (1) increase (or decrease) naturally occurring compounds or (2) introduce new genes into already existing systems. These transformations carry a (perhaps undeserved) heavy burden of risk – what unintended consequences accompany introducing new genes into a species? In addition to the short-term benefits of increasing production of certain compounds, what other sorts of larger ecological risks may be present? These could include loss of native plant populations and increased risk for plant disease due to accidental activation or suppression of other genes. At the same time, genetic engineering offers a variety of potential benefits: decreased use of pesticides, new business opportunities, increased crop value, positive changes for human health, and beyond.

Not all functional ingredients come from genetically engineered sources. Many are naturally occurring – familiar examples include omega-3 fatty acids from fish oils, phytosterols found in soy, and flavanols found in grape skins. Naturally occurring functional ingredients are especially exciting in that they potentially open new supply chains that can transform rural economies. A notable recent example is the increasing interest in the beneficial ingredients found in the açaí fruit. The burgeoning popularity of açaí has transformed this previously "unknown" fruit: once gathered for a local population, the rise in popularity has pushed both the people who produce it and the fruit itself into worldwide market transactions and power flows. Yet as these local farmers see an increase in access to international markets, they are also faced with competition from outside investors. The example of açaí reminds us that many of the functional ingredients identified and promoted come from third-world countries or from at-risk sources, a haunting reminder of colonial extraction economies and the more recent biopiracy debates of the late 1980s and 1990s.

When asked to give examples of familiar functional foods, one likely responds with examples that are highly processed and intensively packaged. Processing can provide health benefits by making previously unavailable nutrients available. Yet it may also harm human health. Despite the considerable research into the nutritional effects of consuming certain "functional" ingredients, the reality is that we still poorly understand what a food molecule does within its larger native food matrix. The functional food paradigm of isolating compounds, reducing food down to its bare components, and remaking it into something that offers "more" can also remove beneficial micronutrients that exist in the native food. Thus, by isolating and extracting only the compounds identified as beneficial – a process which prioritizes only those compounds that can be "made visible" via measurement and testing – the current functional food production paradigm also risks the loss of other health-promoting compounds from diets that once focused on consuming whole foods.

Packaging allows producers and marketers to communicate the health benefits of functional foods to consumers. While protecting foods and prolonging shelf life, packages also threaten both human and ecological health. As recent studies of leaching of compounds from plastics previously considered "inert" demonstrate, packages themselves can affect human health in unwanted ways while also contributing to an ever-growing trash problem.

Regulating Functional Foods

For industrial producers, the ability to communicate health-related claims on packages and in advertisements to consumers is a key driver for making functional foods. Some states strictly monitor and limit food labeling and health claims, others allow a variety of claims; these regulations directly affect the market presence of functional foods. Changes to the regulatory framework around food labeling and health claims in the United States provide an especially potent illustration of how state regulation encourages or restricts functional foods.

A variety of laws influence the marketing of functional foods in the United States. The door to functional foods, as we know them, opened during the deregulatory Reagan era. In 1987 the Food and Drug Administration (FDA) began allowing companies to make health claims without first participating in premarket review (Heller 2005:171). The number of claims on food labels exploded. Understandably, this freedom to make health claims on food was a marketer's dream and a consumer advocate's nightmare. The October 9, 1989, *Business Weekly* cover summed up the era with the words "Can Corn Flakes Cure Cancer? Of course not. But health claims for foods are becoming ridiculous." By 1990, Congress responded to calls for reform from consumer advocates, industry players, and regulators by passing the Nutrition Labeling and Education Act (NLEA). The NLEA permits health claims as long as those claims "describe a relationship between a food substance and a disease" and carry the backing of "significant scientific agreement among qualified experts" regarding the validity of the claim (21 CFR §101.14). NLEA-approved claims require significant research time and money: for example, 43 human clinical trials examining the role of soy were included in the petition for the soy health claim (ADA 2009). Currently the FDA only approves 12 types of food claims. For example, the claim found on a 2009 Bolthouse Farms Heart Healthy Pear Merlot Apple Juice Blend label that "Barliv barley betafiber is a natural source of beta-glucan soluble fiber that helps support heart health with 3 g per day, when consumed as part of a low fat, low cholesterol diet. This bottle of juice contains 1.4 g of beta-glucan soluble fiber (0.75 g per 8 oz serving)" is NLEA approved under 21 CFR §101.81, Soluble Fiber from Certain Foods and Risk of Coronary Heart Disease.

Implementation of NLEA slowed the frenzied business of making health claims on food to an ordered trickle between 1990 and 1994, with many companies removing claims completely. However, in 1994, the US Congress passed the Dietary Supplement Health and Education Act (DSHEA). DSHEA threw open the door for functional foods by allowing structure/function claims. Unlike claims permitted by the NLEA, claims for dietary supplements do not require the difficult-to-achieve status of "Significant Scientific Agreement," nor do they require prereview by the FDA. Instead, dietary supplements are allowed to make descriptive claims about how a component of a food, or an ingredient added to a food, may affect the body's structure or functions as long as the claim does not link consumption of the food with treatment of disease. These "structure-function" claims allow significant latitude in packaging and media communication as long as the disclaimer "these claims have not been evaluated by the FDA" is on the package.

The 1997 Congressional approval of the Food and Drug Administration Modernization Act further muddied the regulatory picture. This act permits the usage of unreviewed health claims as long as such claims are based on the current views expressed by the National Institute of Health, Centers for Disease Control, or National Academy of Science. Five years later, in 2003, the FDA loosened regulations by allowing qualified health claims. Qualified health claims, like DSHEA claims, do not meet the requirement of significant scientific agreement. Examples of qualified claims include claims linking green tea and risk of cancer and linking omega-3 fatty acids with a reduced risk of coronary heart disease. Currently, functional foods, depending on the health claims made and ingredients used in their manufacture, fall into the following categories: foods, foods for special dietary use, foods that

make health claims, dietary supplements, drugs, and medical foods. Since 2003, this wide swath of regulatory niches allows US manufacturers significant wiggle room in how they both label and market their products.

In contrast, recent European Union regulatory shifts have made marketing of functional foods much more difficult. The European Commission estimates that approximately 44,000 claims were initially submitted in 2008 when the commission began reviewing claims. That list was condensed to 4,600, which the European Food Safety Authority, EFSA, extensively reviewed. On May 16, 2012, the EFSA announced approval of 222 claims and the requirement that all claims not under review or authorized by the new regulation be phased out by the end of 2012 (European Commission 2012). This list is much more expansive than the US list of qualified health claims; however, in requiring that all claims undergo review, the EU has created a significant dissuasion from spurious claims. Unfortunately, this legislation and the language around the process obfuscate the behind-the-scenes political negotiations and scientific uncertainties implicit in such legislative action, potentially leaving consumers with the impression that they no longer need to critically think about the claims on packaged foods in Europe (Nestle 2007).

The differences between the US and EU approaches to regulating functional foods highlight the role that marketing plays in making a food functional. A variety of critics of functional foods note that it is marketing that ultimately transforms foods into functional foods. They argue that without the communication between package designers, graphic artists, and advertising and marketing groups, functional foods cannot exist (c.f. Scrinis 2008). This view fails to account for the variety of definitions available for the term, excluding to some extent discussion of lay appropriation of the term "functional food" or the ideas implicit therein that appear in personalized approaches to conceiving of and understanding food. However, their critiques powerfully focus a critical gaze on the role that regulatory mechanisms play in containing communication about functional foods.

Despite the underlying foundational concept of functional foods as foods with purpose, definitions from both governing bodies and professional groups vary. For example, in 1999 a European Union Commission defined functional foods as foods that:

> . . . [are] demonstrated to affect beneficially one or more target functions in the body, beyond adequate nutritional effects, in a way that is relevant to either an improved state of health and well-being and/or reduction of risk of disease. Functional foods must remain foods and they must demonstrate their effects in amounts that can normally be expected to be consumed in the diet: they are not pills or capsules, but part of a normal food pattern. (European Commission 1999:S6).

Through this definition, EU regulators attempt to clearly mark the boundaries between foods and medicine. In contrast, the United States has no codified definition for functional foods. That work is currently left to professional groups. For example, the American Dietetic Association (ADA) argues that all foods are, on some level, functional, because all foods provide the body with necessary nutrients or other molecules that contribute to the body's ability to survive (2009). However, for the ADA, functional foods "move beyond necessity to provide additional health benefits that may reduce disease risk and/or promote optimal health. Functional foods include conventional foods, modified foods (i.e. fortified, enriched, or enhanced), medical food, and food for special dietary use" (2009). An expert panel organized by the Institute of Food Technologists (IFT), a US-based professional group with an international membership, defines functional food as:

> . . . foods and food components that provide a health benefit beyond basic nutrition (for the intended population). Examples may include conventional foods; fortified, enriched or enhanced foods; and dietary supplements. These substances provide essential nutrients often beyond quantities necessary for normal maintenance, growth, and development, and/or other biologically active components that impart health benefits or desirable physiological effects. (2005:6)

Although Japan has defined functional foods, use of the definition was eliminated in 1991 in favor of the Foods for Specified Health Uses

(FOSHU) system. The FOSHU system regulates functional foods separately from pharmaceuticals (Heasman and Mellentin 2001).

These definitions reveal a variety of tensions – the EU definition points to a need to define food itself, implicitly questioning when food ends and medicine begins. Both the ADA and IFT definitions allow conventional foods, such as fruits and vegetables, functional status yet point to a reductionist view of foods made up of essential nutrients that may be stripped from an original source (such as conventional foods) and added to other foods (such as fortified, enriched, or enhanced foods). It is precisely this reductionist approach to foods that allows functional foods to claim to go beyond adequate or basic nutrition and beyond necessity to a realm where food can do more than just nourish – it can potentially prevent or heal.

Unfortunately, the claims making central to marketing of functional foods creates a power imbalance between the producer/marketer and the consumer (Liakopoulos and Schroeder 2003). Lax regulatory regimes exacerbate this imbalance. No matter the regulatory climate, the burden of evaluating the truthfulness of claims ultimately falls to the consumer (Kaplan 2006). A difficult task under any circumstances, this burden of evaluation is rendered even more problematic by a general lack of scientific literacy among most populations, limited access to study results, and sensationalized media reports.

Accessing Functional Foods

Functional foods are, at least upon initial introduction to the market, primarily foods for health-conscious consumers with disposable income. This is reflected in the way these foods enter the market. Market entry for functional foods can be split into two routes of entry: that of a small entrepreneur doing product development and market introduction or that of a large food company introducing a functional food throughout its regional or national distribution chain. Given the cost of product development, many large food companies have chosen to either adopt a "wait, see, and buy (from another company)" approach or choose to develop functional foods based on already existing functional ingredients available from suppliers. Both approaches outsource responsibility for testing the efficacy of functional foods or ingredients, a step that ultimately protects producers more than consumers.

The first approach, that of the small entrepreneur, results in functional foods being primarily introduced in highly specialized stores that sell these products at premium prices. Many of the successful functional foods on the market are sold in single serving sizes (nutrition bars, beverages, yogurts) that are not conducive to feeding a larger group. There are exceptions: pastas with added omega-3 fatty acids, for example, are routinely sold in family-friendly package sizes. However, the emphasis on individualized consumption highlights contemporary concerns with the ways that governments have shifted responsibility for health care away from a larger social safety net and onto individual consumers (Holm 2003). Assuming these foods work as stated, those who have the consumer power to access this type of individualized health care will potentially live longer, more productive lives (Landecker 2011). In contrast, those without the financial resources to access functional foods will be left behind, further increasing the gap between the haves and have-nots (Schroeder 2007). This split between haves and have-nots is reflected in the notable lack of publications on functional foods outside of the major markets of Japan, the United States, and Europe. Despite the potential for both huge market growth and for significant consumer abuse, minimal academic attention has been paid to developing markets such as Latin and South America and Africa (for exceptions, see Hasler 2005). Further complicating the haves/have-nots equation, many of the "hottest" ingredients used to make functional foods come from third-world locales. As demand for these raw ingredients and supplies grows, local ability to access these health-promoting foods often diminishes.

On the other hand, transnational corporations have the power to positively affect the health of large swaths of the world's population through functional foods. For example, functional foods

targeted to third-world markets could deliver needed micronutrients or antiparasitic compounds to at-risk populations through already existing distribution chains of companies with a global presence. At the same time, the potential lack of regulation as these foods circulate throughout different regulatory regimes raises additional concerns about consumer protection.

Finally, much of the "pipeline" that leads to the creation of functional foods is supported by publically funded research. The knowledge gained from these studies is often transformed into patents for isolated ingredients or testing technologies that regularly make the jump into private corporate hands, leaving potential public users unable to access or use the knowledge their tax dollars helped fund. This distillation of public money into private profit is echoed in many debates about pharmaceuticals, hybrid seeds, and engineering technologies (Kloppenburg 1988).

Evaluating Efficacy

Do functional foods work the way they claim they do? This question underlies all the debates about functional foods, from the question of definitions to regulations to marketing. Evaluating the effectiveness of functional foods in affecting human health requires significant time, money, and access to study subjects willing to follow the strict diets necessary for attempting to evaluate any food. As many have pointed out, the clinical trial model, developed for testing pharmaceuticals, often obfuscates more than it enlightens when it comes to testing foods (c.f. Richardson 2012). Although specific functional ingredients can be tested outside of a food matrix, any results must be examined suspiciously given the possible interfering or synergistic nature of other foods consumed in a diet.

This inability to demonstrate effectiveness via the clinical model, especially when coupled with the short life span of many industrially produced foods (most new food products fail within the first year of introduction to market), creates an economic push for many functional food manufacturers to market their foods as dietary supplements. As discussed above, the intrinsic differences in review processes between foods and dietary supplements, especially in the United States, mean that the labels of foods marketed as dietary supplements do not undergo the same review by regulatory agencies that other foods do. Unfortunately, this creates additional opportunities for unscrupulous, unfair, or misleading marketing, a condition that is only exacerbated in countries with weak regulatory bodies (an area that could benefit from additional academic inquiry).

With few exceptions, most functional foods remain fairly understudied in the clinical setting. This raises the additional question of evaluating safety: are these foods safe for consumption? As with all foods, and especially with dietary supplements, one must ask to what extent manufacturers follow safe practices, especially in developing countries.

Summary

Functional foods offer the exciting possibility of promoting human health. Yet they simultaneously pose a threat to consumers through misleading marketing and inadequate regulatory protection. If efficacious, functional foods, through their premium price point and limited distribution, reinforce already existing social inequalities.

Cross-References

- ▶ Access to Land and the Right to Food
- ▶ Biotechnology and Food Policy, Governance
- ▶ Food and Class
- ▶ Food Labeling

References

American Dietetic Association. (2009). Position of the American Dietetic Association: functional foods. *Journal of the American Dietetic Association, 109*, 735–746.

European Commission. (2012). *Food: commission adopts landmark list of permitted health claims* [*Press release*].

Accessed May 1, 2014, http://europa.eu/rapid/press-release_IP-12-479_en.htm
Hasler, C. (2005). *Regulation of functional foods and nutraceuticals: a global perspective*. Hoboken: Wiley-Blackwell.
Heasman, M., & Mellentin, J. (2001). *The functional foods revolution: healthy people, healthy profits?* Sterling: Earthscan.
Holm, L. (2003). Food health policies and ethics: lay perspectives on functional foods. *Journal of Agricultural and Environmental Ethics, 16*, 531–544.
Institute of Food Technologists. (2005). *Functional foods: opportunities and challenges. Institute of Food Technologists expert report*. Chicago: Institute of Food Technologists.
Kaplan, D. M. (2006). What's wrong with functional foods? In F. Adams (Ed.), *Ethical issues in the life sciences*. Charlottesville: Philosophy Documentation Center.
Kloppenburg, J. (1988). *First the seed: the political economy of plant biotechnology, 1492–2000*. New York: Cambridge University Press.
Landecker, H. (2011). Food as exposure: nutritional epigenetics and the new metabolism. *Biosocieties, 6*, 167–194.
Liakopoulos, M., & Schroeder, D. (2003). Trust and functional foods. New products, Old issues. *Poiesis and Praxis: International Journal of Technology Assessment and Ethics of Science, 2*(1), 41–52.
Mudry, J. (2009). Measured Meals: Nutrition in America. Albany, NY: SUNY Press.
Nestle, M. (2002/2007). *Food politics: how the food industry influences nutrition and health*. Berkeley: University of California Press.
Richardson, D. P. (2012). Preparing dossiers: strength of the evidence and problems of proof. *The Proceedings of the Nutrition Society, 71*(1), 127–140.
Schroeder, D. (2007). Public health, ethics, and functional foods. *Journal of Agricultural and Environmental Ethics, 20*, 247–259.
Scrinis, G. (2008). Functional foods or functionally marketed foods? A critique of, and alternatives to, the category of functional foods. *Public Health Nutrition, 11*(5), 541–545.

Functional Foods as Commodities

Jessica Loyer
Food Studies, School of History and Politics, University of Adelaide, Adelaide, Australia

Synonyms

Designer foods; Nutraceuticals; Pharma foods; Techno-foods; Technological foods

Introduction

Though notoriously hard to define, this entry adopts an understanding of functional foods as food products marketed for their health benefits. This definition includes products as diverse as calcium-fortified orange juice, omega-3-enriched eggs, and cholesterol-reducing margarine. The concept of functional foods encompasses both the application of nutritional science and technology to the development of food products and ingredients designed to deliver certain health benefits and the unprecedented level of marketing of food, nutrition, and health required to promote the concept (Heasman and Mellentin 2001). It is closely tied to the ability of manufacturers to make direct or implied health claims on product labels and in advertisements, an area of global regulatory friction. Market actors, not public authorities, drive the development of such products. While functional food commodities may reflect public health priorities, they are not developed as part of public health policy (Holm 2003).

Conventional nutritional wisdom holds that there are no bad foods, only bad diets. A good diet includes variety, balance, and moderation and is one component of determining health on both an individual and population-wide basis. Functional foods challenge this understanding of the relationship between food, diet, and health. Further, functional food science blurs the boundary between drugs and food by proposing the use of technologically altered foods in disease treatment and prevention. Critics suggest that functional foods represent an understanding of the food supply as a commodity rather than a public health resource (Holm 2003). Such concerns illustrate that the regulation of how functional food products are developed, distributed, and marketed is a global public health issue.

This entry begins with a discussion about the contentious definitions of functional foods. It then traces the historical development of technological foods, from early fortification initiatives to the current market for nutritionally oriented products. Functional foods are situated within the social context of medicalization and individualization of public health and the political

context of deregulation regarding the use of health claim. Criticisms from both public health and ethical perspectives are discussed, and prospects for the future development and regulation of functional food products are evaluated.

Varying Definitions of Functional Foods

One of the problems in evaluating and regulating functional foods is a lack of agreement regarding their definition. The International Food Information Council, an industry-supported body, defines functional foods as "foods that provide health benefits beyond basic nutrition" (Katan and Roos 2004). Yet the idea of "beyond basic nutrition" is problematic, since all foods can be argued to demonstrate targeted biological action on some function of the body in addition to providing nutrients. Also, some organizations, such as the American Dietetic Association and Health Canada, include whole foods alongside fortified, enriched, and enhanced processed foods in their definitions of functional foods (ADA 2009; Health Canada 1998). This understanding serves to confuse things further, blurring the boundary between natural and processed foods from a nutritional standpoint and making the category of functional foods nearly impossible to measure.

A clearer definition of functional foods takes into account the reality of the marketplace, in which functional foods are viewed as commodities that are closely tied to the use of health claims. Katan and Roos define functional foods as follows: "A functional food is a branded food which claims explicitly or implicitly to improve health or well-being" (Katan and Roos 2004, p. 370). This definition is useful both in terms of measuring the monetary value of the functional food market and in establishing regulations regarding the use of health claims. However, the intimate link between functional food development and marketing, significant scientific activity examining the food-health-nutrition connection, and a profit-driven global food industry is difficult to encompass in a single definition of the term.

Scrinis has suggested that the term "functional foods" is contentious and misleading and that it be abandoned altogether. He argues that there are no clear criteria for distinguishing functional foods from other foods, as all foods impact the health of the body. Further, he argues that the application of the term to both conventional and modified foods encourages a reductionist view of food and nutrition, in which a food's value is determined by its nutrient content alone – a concept he refers to as "nutritionism." According to this paradigm, an orange and a soft drink with the same vitamin C content would be viewed as nutritionally equal. He therefore proposes three alternative terms: "functionally marketed foods," "nutritionally marketed foods," and "nutritionally engineered foods" (Scrinis 2008). Such categories would allow a more transparent discussion and evaluation of functional food products. This entry continues to use the term "functional foods" in accordance with the literature but limits its definition to those foods marketed using a health claim.

Historical Background: Diet, Disease, and Public Health

The concept of functional foods as those foods designed and marketed specifically for a particular health benefit was first developed in Japan in the 1980s, as the Japanese government sought to address rising healthcare costs for an aging population. Japan remains the only country to recognize functional foods as a distinct legal regulatory category, although in 1991 the term "functional foods" was replaced by "foods for specified health use" (FOSHU) (Heasman 2008). However, the public health climate of the United States throughout the latter half of the twentieth century provided a hospitable environment for the introduction of the concept. Using a definition of functional foods "by which ingredients with an additional health-value have been added to foods (and this is announced to the consumers)," the functional foods market in the United States is now the world's largest (Menrad 2003, p. 181). It is therefore worthwhile to

explore the historical development of technological foods in relation to public health in the United States.

Fortification as Public Health Policy

Functional foods as commodities have developed in a context in which fortification has long been accepted as a public health measure. From a purely technological perspective, functional foods are not that new. Fortification – the addition of vitamins or minerals to processed foods – has been used as a public health intervention since the early 1900s, when Europeans began adding iodine to table salt in order to prevent goiter. The introduction of iodized salt in the United States in 1924 effectively eliminated iodine deficiency as a public health concern and gained favor for further fortification measures. By the end of the 1950s, fortification of many commonly consumed staples was a common public health practice. S*tandards of identity* for enriched flour and other grains were established, ensuring that all such designated products were fortified with particular nutrients considered to be most lacking in the American diet. The Federal Department of Agriculture (FDA) backed these measures. They were considered good public health initiatives because they offered a way in which to improve nutrient intakes – especially among low-income populations in which deficiencies were most common – without the expense or effort of education campaigns or changing population-wide dietary habits (Nestle 2002).

With fortification firmly entrenched as public health policy, food manufacturing companies began to recognize the potential of voluntary fortification for increasing profits. Adding vitamins and minerals to processed foods cost very little, yet enabled retailers to sell fortified products at much higher prices than standard products. By 1984, 92 % of breakfast cereals were voluntarily fortified (Nestle 2002, p. 305). Nutrient deficiencies were no longer a widespread public health concern, but the increased incidence of chronic diseases including cancer and heart disease provided incentives for companies to fortify products with preventative nutrients such as antioxidants. Critics questioned whether improving the diets of Americans one nutrient at a time made good nutritional sense, but it did not matter: it made good business sense.

Throughout the 1980s and 1990s, the US government encouraged the food industry to develop products in line with particular public health goals. For example, the 1988 Surgeon General's Report on Nutrition and Health called upon manufacturers to create foods lower in fat and higher in fiber, while the 1990 Public Health Service's 10-year plan explicitly requested that food processors double the number of products lower in fat available on the market. In tandem with these requests, legislation was introduced that enabled manufacturers to make some claims regarding nutrient content, health benefits, and disease prevention on product labels. As such, companies rushed to develop products with the specific intent of marketing them for their health benefits.

The Healthy-Eating Revolution

Both the increase in nutritionally oriented food products and the active role of the government in encouraging their development are results of what Heasman and Mellentin (2001) call the "healthy-eating revolution." Starting in the 1950s, researchers began to draw a connection between overconsumption of certain nutrients and an increase in degenerative diseases. Scientific consensus regarding the unbalanced nature of the Western diet grew rapidly, and by the 1970s, the need for dietary reform in the developed world was widely accepted as a public health issue. Government intervention in the healthy-eating revolution largely took the form of the development and dissemination of dietary goals and guidelines. Although these have changed in both language and content since their introduction, the key principles advocating a diet of moderation remain the same. A healthy diet is defined as one that is high in fruits,

vegetables, and grains, that includes moderate amounts of fish, lean meat, and low-fat dairy products, and that is low in fats (particularly saturated fat), sugar, and salt. By the 1990s, the central ideas of the healthy-eating revolution were widely accepted by policy makers, nutritionists, and the public.

From a policy standpoint, these actions represented "a change in emphasis from micronutrient deficiency to one where food itself became associated with chronic disease" (Heasman and Mellentin 2001, p. 59). Such a shift implied dramatic economic implications to those sectors of the food and agriculture industry whose products were given the guilty verdict. To adhere to healthy diet recommendations, people would need to cut back on meat, eggs, dairy, and processed foods high in salt, sugar, and fat. The first response of certain segments of the food industry was to attempt to discredit the new nutritional paradigm, but as it became clear that the healthy-eating revolution was here to stay, companies developed new tactics. Still observable in the marketplace today, "the commercialization of the healthy-eating revolution is expressed in the thousands of fat-reduced, low-fat, fat-free, sugar-free, sugar-reduced and high-fibre product launches in the food and health marketplace since the 1980s" (Heaman and Mellentin 2001, p. 60).

While the healthy-eating revolution laid the groundwork for the rise of functional foods, the two movements differ significantly. The healthy-eating revolution was publically driven, "officially" promoted, and aimed to change diets through public policy, while the functional foods concept is industry driven, commercially promoted, and aims to change diets through marketing (Heasman and Mellentin 2001, p. 57). They also differ ideologically: instead of focusing on the whole diet and offering population-wide dietary goals, functional foods focus on single products or ingredients and promote individual outcomes. The tension between the two concepts is felt in resistance from public health authorities and consumer advocacy groups.

The Social Context: Conflicting Public Health Paradigms

Functional food commodities have gained momentum against a backdrop of particular underlying assumptions about the best way in which to deliver public health initiatives. Lawrence and Germov (1999) categorize public health interventions as falling under two distinct paradigms: the health promotion paradigm, which focuses on promoting the health of an entire population, and the medical paradigm, which focuses on reducing risks and treating illness in individuals. On a population-wide basis, health is a product of a combination of social, economic, and cultural determinants. Interventions intended to promote the health of a population as a whole must address these underlying circumstances in which health is created. Interventions designed to reduce disease in individuals aim to foster lifestyle changes, including dietary behaviors. Both paradigms can be useful in different scenarios and can be used together. However, in reality, the medical paradigm dominates in the delivery of healthcare. It is in this context that food has come to be "regarded as a commodity that may be modified to assist the dietary reform process" (Lawrence and Germov 1999, p. 57).

Also shaping public health education policy in the United States are the complementary ideologies of rational individualism and economic liberalism. Rational individualism assumes that when given proper information, the individual will make the best choice for her health, while economic liberalism assumes that the delivery of the health message is the only government requirement, leaving it to the individual to make lifestyle changes accordingly (Lawrence and Germov 1999). Further underpinning the health education approach is the belief that the consumer will respond to health education messages and make the best choice for her health – an assumption that neglects the myriad other factors that influence food and lifestyle behaviors. An alternative social viewpoint is that of collectivism, in which emphasis is placed on categories,

places, and social positions, rather than on individuals. This philosophy is more dominant in Europe and encourages the development of "upstream health promotion policies" rather than a "downstream curative focus" (McKinlay and Marceau 2000, pp. 26–27).

A risk of individualistic approaches to public health is the medicalization of the food supply, in which food is increasingly treated like a drug with specific properties for treating or preventing disease. Under such a scenario, illness becomes viewed as a matter of the individual making poor diet choices, ignoring the multifactorial personal and social circumstances that create or inhibit health. Lawrence and Germov are critical of this view, as it "represents a pathologised and reductionist approach to health promotion and food consumption" (1999, p. 60). McKinlay and Marceau (2000) are gentler in their critique, celebrating the past achievements of the medical/individualist paradigm in tackling infectious and chronic diseases while calling for new approaches to the public health challenges of the twenty-first century. They emphasize that a holistic, collectivist public health model that distances the field from the dominant medical paradigm is necessary to address the ecological scope of current and future public health challenges, including global environmental degradation and widening social inequalities.

The Political Context: Deregulation

Historically, legislation in most countries has prohibited the use of product health claims that seek to link a food with the treatment or prevention of a particular illness (Heasman 2008). However, hand in hand with the creation of new, health-oriented products came the desire for food companies to market them for their health benefits. The result has been partial and inconsistent deregulation surrounding the use of health claims, which varies considerably from country to country (Hasler 2008; Katan 2004).

The current regulatory situation in the United States has its origins in the Nutrition Labeling and Education Act (NLEA) of 1990 and the Dietary Supplement Health and Education Act (DSHEA) of 1994. Under these groundbreaking acts, food manufacturers were for the first time permitted to make a limited number of specific health claims, including structure/function claims linking a product to a particular biological action, on food labels for marketing purposes. The Consumer Health Information and Better Nutrition Initiative of 2003 further reduced the level of scientific evidence required for companies to make health claims on product labels (Nestle 2002). Although the FDA distinguishes between levels of scientific evidence by allowing different types of health claims on product labels, studies have shown that consumers have trouble differentiating between qualified and unqualified health claims (ADA 2009).

The regulatory context in Europe has been equally contested and even more fragmented. Throughout the past few decades, many countries developed their own regulatory frameworks for the use of voluntary health claims on functional foods. However, in 2007 the European Union Regulation No. 1924/2006 was passed, enacting EU-wide regulation of health claims permitted for functional foods and establishing a set of criteria for the scientific substantiation of health claims (Asp and Bryngelsson 2008). Similar legislation has been approved in Australia and New Zealand as of late 2012. Both of these regulatory schemes seem to establish much more rigorous standards for the approval of health claims on functional food products than those of the United States; however, it is too early to assess their impact.

The challenge for all regulatory bodies charged with evaluating functional foods and health claims is that they are being asked to develop legislation in advance of a significant body of evidence supporting such regulatory change. The reason for this is that the investment in research and development required to develop functional food products is substantially higher than that of their conventional counterparts. Many stakeholders are open about the fact that if regulations are not relaxed, much research and development of functional food products is unlikely to proceed (Heasman 2008).

From an industry perspective, the motivation to produce functional foods is largely a factor of decreasing profit margins in processed food markets and economic pressures of shareholder imperatives. The current global food system is characterized by a highly competitive marketplace in which product differentiation is often elusive. Additionally, investor excitement over technologically oriented market sectors has led to decreased investment in the slow-growing food industry. As pressure to create a strong return on investment mounts, functional food science presents an opportunity for companies to produce value-added products that are truly innovative. In support of this approach is the widely held food industry conception of "a new consumer relationship with health, and this includes attitudes to food" (Heasman and Mellentin 2001, p. 19). Factors leading food producers to adopt this view include an aging population increasingly susceptible to chronic disease, market research indicating increased consumer interest in personal preventative health measures, and the rising cost of healthcare.

Heasman and Mellentin (2001) characterize partial deregulation coupled with cautionary advice as a "wait-and-see approach" to functional foods public policy, which is "largely reactive and . . . could exaggerate confusion in the public mind" (p. 76). Alternate policy approaches include resistance to industry demand combined with tough regulations allowing only strongly scientifically substantiated health claims, or active embracing of the functional foods concept and encouragement of ethical functional food development.

Criticisms of Functional Foods

As a public health measure, the use of functional foods has been criticized because it does not address the social – including economic, cultural, educational, and environmental – causes of poor health. Health is not simply a product of diet but also consists of a social dimension through which people express themselves and connect with others. Therefore, a healthy society not only has access to a variety of affordable, nutritious foods, but such foods must also be culturally relevant (Sibbel 2007). Further, any attempt to encourage the consumption of functional foods must take into account that the nutritional rationality competes with a host of other rationalities – including economic, social, and symbolic – in informing people's daily food choices (Holm 2003).

Functional foods have also been criticized from the perspective of sustainability, in part because there is no effective way in which to measure their environmental impact. The World Health Organization has recognized that population-wide health interventions must be ecologically sound, as the sustainable preservation of environmental resources, including food, is a necessary condition for health (WHO 2009). Therefore, one measure of the effectiveness of functional foods must be an evaluation of the resources they consume relative to the benefits they offer as compared to other types of public health measures. Although no infrastructure exists through which to measure the total environmental impact of functional foods, it is worth noting that such products are often highly processed, packaged, and widely distributed and may not reflect seasonality (Sibbel 2007).

Another aspect of a sustainable food system is that it is participatory in nature. Consumers must be able to participate in a feedback loop with producers as new scientific information emerges and new products are developed. Due to the highly technological nature of functional food products, the opportunity for consumer participation is limited and may even alienate consumers (Sibbel 2007). Studies have demonstrated a high level of consumer distrust and skepticism regarding foods with health claims (Sibbel 2007; Williams and Ghosh 2008).

Functional foods may send a confusing nutritional message to consumers by focusing on single nutrients, rather than the whole diet, for health outcomes (Holm 2003; Nestle 2002; Schroeder 2007; Sibbel 2007). Studies have shown that lay conceptions of healthy eating rely heavily on the concept of food groups or food pyramids (Holm 2003). Health claims of functional foods may encourage consumers to focus on specific

products, single ingredients, and single outcomes, drawing attention away from food groups and holistic nutrition. Similarly, the blurring of traditional boundaries by functional foods that cross food groups – such as confectionary enhanced with calcium or soft drinks with added vitamins – may also distract consumers away from a food group orientation. Finally, "functional foods will introduce a detail oriented and fragmented way of communicating nutrition and healthy eating" (Holm 2003, p. 540). Such an approach may engender consumer confusion, distrust, and ambivalence, similar to the reaction to food safety concerns.

A further concern is that functional foods may not be accessible to those consumers who would be most likely to benefit from them. Consumer studies have shown that functional food products are mostly preferred by well-educated women aged 30–50 – a population group who are among the least likely to need functional foods. Those who may benefit the most from functional foods include children, nonaffluent elderly, and consumers in the developing world. Yet these populations are not the target market of functional food manufacturers, as they are not in a financial situation to afford them (Schroeder 2007).

Perhaps most significantly, functional foods as a whole have not been sufficiently proven to be either safe or effective (Ernst 2001; Lawrence and Rayner 1998; Schroeder 2007). It is, in fact, impossible to assess the safety and efficacy of functional foods holistically, as each product or ingredient is designed to target specific biological functions in a specific population group. Therefore, the primary concern in assessing the safety and efficacy of functional foods is to ensure that sufficient mechanisms are in place to evaluate new products before they enter the market.

Support for Functional Foods and Future Prospects

Behind the functional foods concept is a genuine attempt to improve human health through advancements in nutritional science and biotechnology. A number of research organizations, such as the Functional Foods for Health Program at the University of Illinois, are dedicated to the identification and development of disease-preventing and health-promoting food components and products, as well as to raising the profile of functional foods. An example of the application of such research is the addition of folate, a nutrient hard to obtain in the average diet but important to fetal development, to cereals and other food products. However, the successful integration of truly functional foods requires proactive policy regarding their regulation. Such policy should ensure that those functional foods meeting strict regulatory criteria are widely available, affordable, accessible to those whom they benefit, and acceptable in the minds of consumers (Heasman and Mellentin 2001).

Evidence regarding the impact of functional foods and health claims on public health is insufficient to recommend them on a large scale (Lawrence and Rayner 1998; Schroeder 2007). However, they may be useful in specific cases, for particular populations or individuals. In this sense it is useful to regard functional foods in the context in which they are developed – as part of an individualized, medicalized framework in which clinical trials conducted on individuals are the substantiating research methodology. As such, Lawrence and Rayner (1998) recommend a general prohibition on the use of health claims, with exemptions made on a case-by-case basis to allow food manufacturers to take advantage of emerging scientific data in order to develop products that may benefit certain individuals. Similarly, Katan and Roos (2004) advocate stricter regulations that prohibit the use of "soft claims" but allow the use of "hard claims" when there is sufficient agreement of scientific evidence. The intention of such recommendations is to prevent the widespread marketing of foods as medicines, but still enable innovative research and development.

Functional foods have been recognized as a growing market for food manufacturers. In order to substantiate health claims for innovative products, industry-funded research is likely to be biased toward investigating the bioactivity of single foods and their components. It is also likely

that the industry will promote health education messages regarding the benefits of single foods. In order to counterbalance these efforts, publically funded research into the relationship between health and the diet as a whole is recommended, as well as increased educational efforts to encourage balanced and varied diets (Holm 2003).

Heasman and Mellentin contend that in order for the functional foods concept to be effective, it must "produce both healthy people and healthy profits" (2001, p. 263). As such they propose a new business model which they term the "healthful company." Such a business is centered around the holistic health of the consumer, takes strong ethical and social responsibility, builds genuine relationships with consumers, is both product and service oriented, and is knowledge rich. Under this model, they suggest that the need to rely on regulated health claims becomes incidental, as the company will demonstrate its claim through its actions. They point to the long-term success of the Japanese probiotic dairy company Yakult as an example of a successful "healthful company."

Summary

The growth of functional foods over the past three decades is largely a result of an increasingly individualized view of public health, a political climate of market deregulation, and a focus on the role of individual nutrients, as opposed to the whole diet and other lifestyle factors, in health promotion and disease prevention. Though notoriously hard to define, functional foods are intimately tied to the ability of food manufacturing companies to make health claims about their products. Historically such claims have been prohibited in most countries, but increasing pressure from the food manufacturing industry has led to new legislation allowing some health claims. Such regulations, the types of claims they allow, the degree of scientific substantiation required, and their enforcement vary greatly from country to country.

In challenging conventional understandings of the role of the whole diet in nutrition and health, functional foods invite criticism from public health and nutrition scholars and officials. Further, the ethics of functional foods have been called into question from the perspectives of safety, efficacy, sustainability, and access. Recommendations for the future of functional foods call for tighter regulations and a higher level of scientific substantiation, as well as ethical business models focused on the holistic health of the consumer. Publically funded research initiatives to counterbalance the weight of industry studies are advised. However, with the influence and funding of the processed food industry behind them, functional foods marketed with health claims are likely to increase in prominence in the future.

Cross-References

- ▶ Biotechnology and Food Policy, Governance
- ▶ Functional Foods
- ▶ Functional Foods, Marketing of
- ▶ Medicalization of Eating and Feeding

References

ADA. (2009). Position of the American Dietetic Association: Functional foods. *Journal of the American Dietetic Association, 109*(4), 735–746.

Asp, N.-G., & Bryngelsson, S. (2008). Health claims in Europe: New legislation and PASSCLAIM for substantiation. *The Journal of Nutrition, 138*, 1210S–1215S.

Ernst, E. (2001). Functional foods, nutraceuticals, designer foods: Innocent fad or counterproductive marketing ploy? *European Journal of Clinical Pharmacology, 57*, 353–355.

Hasler, C. M. (Ed.). (2008). *Regulation of functional foods and nutraceuticals: A global perspective*. Hoboken: Wiley-Blackwell.

Health Canada. (1998). *Policy paper – Nutraceuticals/functional food and health claims on foods*. Health Canada Web site. http://www.hc-sc.gc.ca/fn-an/label-etiquet/claims-reclam/nutra-funct_foods-nutra-fonct_aliment-eng.php. Accessed 17 Dec 2012.

Heasman, M. (2008). The regulatory context for the use of health claims and the marketing of functional foods: Global principles. In C. M. Hasler (Ed.), *Regulation of functional foods and nutraceuticals: A global perspective*. Hoboken: Wiley-Blackwell.

Heasman, M., & Mellentin, J. (2001). *The functional foods revolution: Healthy people, healthy profits?* London: Earthscan.

Holm, L. (2003). Food health policies and ethics: Lay perspectives on functional foods. *Journal of Agricultural and Environmental Ethics, 16*, 531–544.
Katan, M. B. (2004). Health claims for functional foods: Regulations vary between countries and often permit vague claims. *British Medical Journal, 328*, 180–181.
Katan, M. B., & Roos, N. M. (2004). Promises and problems of functional foods. *Critical Reviews in Food Science and Nutrition, 44*(5), 369–377.
Lawrence, M., & Germov, J. (1999). Future food: The politics of functional foods and health claims. In J. Germov & L. Williams (Eds.), *A sociology of food and nutrition: The social appetite* (pp. 54–76). Victoria: Oxford University Press.
Lawrence, M., & Rayner, M. (1998). Functional foods and health claims: A public health policy perspective. *Public Health Nutrition, 1*(2), 75–82.
McKinlay, J., & Marceau, L. (2000). Public health matters: To boldly go. *American Journal of Public Health, 90*(1), 25–33.
Menrad, K. (2003). Market and marketing of functional food in Europe. *Journal of Food Engineering, 56*, 181–188.
Nestle, M. (2002). *Food politics: How the food industry influences nutrition and health*. Berkeley/Los Angeles: University of California Press.
Schroeder, D. (2007). Public health, ethics, and functional foods. *Journal of Agricultural and Environmental Ethics, 20*, 247–259.
Scrinis, G. (2008). Functional foods or functionally marketed foods? A critique of, and alternatives to, the category of 'functional foods'. *Public Health Nutrition, 11*(5), 541–545.
Sibbel, A. (2007). The sustainability of functional foods. *Social Science & Medicine, 64*, 554–561.
Williams, P., & Ghosh, D. (2008). Health claims and functional foods. *Nutrition and Dietetics, 65*(Suppl. 3), S89–S93.
World Health Organization. (2009). Milestones in Health Promotion: Statements from Global Conferences. WHO Press. http://www.who.int/healthpromotion/Milestones_Health_Promotion_05022010.pdf. Accessed 19 June 2014.

Functional Foods, Marketing of

Jessica Mudry
Department of Professional Communication, Ryerson University, Toronto, Canada

Synonyms

(Marketing of): Bioactive foods; Advertising of foods; Politics and history of nutrition; Scientizing food

Introduction

"Let's face it," says Marion Nestle, of the Department of Nutrition and Food Studies at New York University, "functional foods are about marketing, not health. Fruits and vegetables are already perfectly adequate to help prevent cancer and heart disease" (Brophy and Schardt 1999). Nestle's statement points, perhaps unconsciously, to the entrenched thinking of many scholars and scientists of nutrition that food is more than just nourishment and that it is an active agent in the body. More than simply "filling us up" or tasting good, the belief is that food contains "bioactive" compounds that are essential to health and well-being. Because nutrition policies encourage nations to pursue "health" through eating, food scientists, nutritionists, and biochemists continue their research into the function of particular nutrients in the body, the foods in which those active ingredients are located, and how best to isolate those compounds. It is this undertaking that grounds the emergence of "functional foods" as a consumer product category. The role of food as weapon for combating disease has prompted the category of "functional" food or beverage to be identified as one of the fastest growing market segments of the twenty-first century. Accordingly, food producers have seized on this trend to "functionalize" many processed, industrial food products like cereals, snack foods, and drinks through the addition of "magic bullet" ingredients believed to confer specific physiological benefits in the body. Cereals now lower cholesterol, yogurt improves brain function, and orange juice improves bone health. At the time of publication, the United States remains the largest market for functional foods; however, Asia-Pacific and developing nations are anticipated to be areas of tremendous future growth (Global Industry Analysts 2012). The purpose of this entry is to provide a brief historical context for the emergence of functional foods as a marketing category, identify the social and cultural conditions that have made functional foods possible, and outline the key industry players, political bodies, and policy measures that inform the marketing of functional foods.

Social and Cultural Conditions for Functionalized Food

Ancient, Classical, and Renaissance Legacies

> "Let food be thy medicine and thy medicine, food" – *Hippocrates*

As the quote by Hippocrates indicates, civilizations have been functionalizing foods for centuries (Medicinal Food). Lay knowledge and folk wisdom about what to eat to remedy illness, biliousness, or weakness circulated within traditional communities, as it continues to do today. Prescribing chicken soup for a cold is an example of a food whose perceived function is more of the product of history and culture than science and whose claims to make one healthier are neither officially tested nor regulated. Roman physician and surgeon Galen wrote treatises on humoral theory, food, and diet and included essays entitled "On Barley Soup" and three volumes of "On the Powers of Foods." In "On Barley Soup" Galen touted its purgative abilities, its ability to reduce fevers, and its power to convert "semi-putrid juices into good ones" (Grant 2000). Galen held that medical treatment through diet depended largely on the individual's humoral composition and that foods, while different than drugs, could be used medicinally. Some foods had "hot and harsh powers, such as garlic, leeks, and onions," and others, like wine, were cooling, and too much would cause "a cold disease." Much early food functionalization grouped foods by their capacities to heat and cool the body, and Traditional Chinese Medicine (TCM) and Ayurvedic medicine used yin and yang and doshas (body constitutions) to prescribe certain foods over others, prescribing the consumption of particular foods to alleviate particular health grievances in particular individuals or to promote ideal health in others. As such, early food functionalization was closely tied to culture, the healing arts, and religion. With the advent of the university, the professionalization of medicine and the rise of scientific research, the relationship between food and its effects on the eater, became more formalized.

Formalized Science and Functional Foods

Crucial to the emergence of the category of "functional food" was the rise of modern science and of the field of nutrition. As scholars began to investigate eating, food, and the body through the lens of formalized scientific knowledge, foods began to be understood by their constitutive chemicals, rather than by their essential qualitative natures (i.e., hot or cold, yin or yang) (► Functional Foods). With increasingly microscopic and atomic technologies, scientists isolated compounds they thought acted in the body and produced data and analyses of a food's composition. This shift began in the early modern period (ca. 1450–1750), during which time European intellectuals, inspired by classical Greek and Islamic mathematics and sciences, began to study nature as an objective, controllable entity. Early dietary studies were conducted to examine and establish the functions of foods even before scholars had identified the active, biological ingredients involved. The first example of an empirical approach to identifying specific food ingredients acting in the body was the studies of scurvy done in the 1600s and 1700s by English naval surgeons John Woodall and James Lind. In 1617 Woodall wrote "The Surgeon's Mate," in which he described the symptoms of scurvy and pointed to lemon juice as the cure. He then persuaded the East India Company to provide lemon juice to its sailors. In 1747, Lind conducted what is considered the first controlled experiment to establish the link between citrus fruits and a remedy for scurvy. He divided patients into six pairs, giving each group a different remedy. Only the ones receiving oranges and lemons recovered (Leger 2008). This discovery set a precedent for the scientific method being applied to identify the relationship between a particular food and the prevention of disease.

In the eighteenth century, Antoine Lavoisier's research into animal metabolism and respiration, published as *Memoires sur la chaleur* in 1783, formalized the "calorie" as a unit of food and energy and begat a model of the body that processed food in a mechanical way,

transforming food into energy. The application of the calorie to food was one of the earliest explicit and formal scientific assertions of a food's function. Food became a measurable unit of fuel. Building on Lavoisier's work on heat, metabolism, and calories, nineteenth-century German scientists Justus Liebig, Carl von Voit, and Max Rubner all worked to improve techniques of bomb and respiration calorimetry and proximate analysis to better isolate the molecular components of foods. This catabolism of food into discrete units of energy, fat, carbohydrates, and proteins, and the study of how these components acted in the body provided the foundation for the creation of the science of "nutrition" (Rossiter 1975; Cravens 1996).

By the early twentieth century, formalized science had become the authoritative forum for understanding food from its production to its ingestion in the human body. Science functionalized food through the identification of certain nutrients that contributed to, or helped prevent, disease. Clinical trials and controlled experiments generated data about food and eaters to enable medical practitioners to treat food prescriptively. In the North American context, historians of science point to the late 1800s as the beginning of the era that advanced the rise of science in American public life. Alongside the application of science to the workplace, public infrastructure, and social life, the formalization of both nutrition science and home economics curricula fostered the application of the methods of science to food and eating. The US Department of Agriculture was created in 1862 with the goal to "becom[e] a great science-producing agency of government" (Cochrane 1993). The USDA funded and supported universities, nutrition scientists, and home economists as well as developed standards for food producers, food quality inspectors, food industries, and farmers. The agency principles and funding structure facilitated the epistemological assumption that "knowing" food meant knowing how it acted in the body. As such, it provided a new framework for categorizing food. Food meant proteins, carbohydrates, and fats, and the way a food was understood to function in the body stemmed from this categorization.

Wilbur Atwater modeled the body after the closed thermodynamic system of physics, and his experiments promoted a practical economics of the body as fuel in, energy out. Atwater ran dietary studies with different populations of people and wrote that "by comparing the results of many such investigations it is possible to learn about how much of each of the nutrients of common foods is needed" (Atwater 1902). With the discovery of the water-soluble "vital amines" of B1, B2, B3, C, and D by Casimir Funk beginning in 1912 and fat-soluble vitamin A in 1913 by Elmer McCollum, food became functionalized in a new way. The discovery of vitamins showed that all calories, or even all fats, proteins, or carbohydrates, were not created equal. Vitamins and minerals introduced a qualitative measure for foods, and as the century saw more links between vitamins, minerals, and deficiency diseases, categorizing foods based on their function provided a more targeted way to avoid these diseases. By the mid-twentieth century, the prophylactic health benefits of many nutrients had been identified: Vitamin B1 combated beriberi; niacin, pellagra; vitamin D, rickets; vitamin A, night blindness; iron, anemia; and iodine, goiter.

This paradigm of academic scientific research was and remains a fundamental ontological linchpin in defining "good" food. Alongside laboratory research into the relationship between food and disease came dedicated research centers, government grants, more precise and specific research technologies, and journals and professional associations whose focus was on studying the link between food components and health. In 1928, the *Journal of Nutrition* was established alongside the American Society for Nutrition, and in 1941 the British Society for Nutrition. These publications and societies helped cement the professionalization of the field, and by extension, they created an academic and social space for functional foods to exist.

Concurrent with the rise of the formal sciences was the industrialization of food production and the concentration of ownership among food manufacturers. To address the changing demands of sellers in an industrialized marketplace, the formal discipline of "marketing" was born at the

turn of the twentieth century. The self-conscious practice was first integrated into university curricula at the University of California, Berkeley, and the University of Illinois in the late nineteenth century, although the field was arguably the product of international collaboration between American and Continental scholars (Bartels 1988). The establishment of professional organizations in food and nutrition therefore occurred contemporaneously with the establishment of professional marketing organizations such as the American Marketing Society (AMS) (precursor to the American Marketing Association (AMA)) in 1931. An era of modern food production and marketing was born.

The Rise of Food Marketing: Federal Food Guides and Advertising

Marketing is conducted not only by private corporations but also by different levels of government and a range of public and nongovernmental institutions. Governments market ideas using tools such as information campaigns, pamphlets, and guides in attempts to influence social behavior. As scientists at work in the field of nutrition arrived at more precise techniques for measuring foods and eaters, they were able to identify more elemental and molecular components of food. The isolation of active compounds in food created the space for a wider range of food components to become functioning agents in the body – not only macronutrients like carbohydrates and proteins but vitamins, minerals, and, more recently, fatty acids, amino acids, and phenols. National governments funded much of this research, and they set to publishing it in the form of food guides with the goal of improving public health. Thus, in the early part of the twentieth century, the formal food guide was born. Food guides reflected national government's attempt to educate the public to understand food as a vector for nutrients, whose function was to keep disease at bay. The first USDA food guide aimed at children and published in 1917 categorized food by its presumed biological function in the body. Milk was deemed particularly important. The USDA noted that although milk is a liquid, it contains, if the water were driven out of a quart, "half a cupful of the very best food substances, including butter fat, a kind of sugar not so sweet as granulated sugar known as "milk sugar," and also materials which are needed to make muscles, bones, teeth, and other parts of the body" (Hunt 1917). The goal of the food guide was to teach the public the proper way to eat, and while the notion of "proper" would change over time, the USDA was consistent in encouraging the consumption of certain foods over others (Nutritionism).

The first population-wide dietary guidelines came in 1917, encouraging Americans to select their meals based on a food's pragmatic value: fuel. While fuel was qualitatively judged, early on it remained the function of food. Cereals were considered good sources of fuel because they were inexpensive and preferred over fruits, vegetables, meats, and sugars, which were more expensive. In the 1920s the addition of iodide to salt served as one of the first functionalized food staples, as iodine had been identified to prevent goiter. Morton Salt advertisements warned of contracting goiter and that their iodized salt was recommended by "high health authorities" because iodide was "vital to the normal function of the health-governing thyroid in the neck" (► Company Identity in the Food Industry). In Britain and France, Nestle's "milk food" touted itself as "a perfect nutriment for infants, invalids, and children." Kellogg's Pep cereal was one of the earliest actual foods that were promoted as encouraging a specific physiological function; advertisements from the 1920s describe Pep as containing bran, which was "mildly laxative." Pep thus "helps stop constipation!" (Playtime pep, 1927).

In the period from the Great Depression to the rationing of World War II, the development of daily nutritional minimum requirements articulated by the League of Nations, the British Medical Association, and the US Department of Agriculture marked a shift in the functionalizing of food. As governments established nutrient minimums (recommended dietary allowances, or RDAs, were first established by the United

States in 1941), food constituents became explicitly prophylactic to a degree they had never been before. Federally mandated minimum regulations for nutrient intake provided authority for the food industry to market its products as essential tools for maintaining the well-being of the nation. The manufacturer of Kix cereal, General Mills, advertised from the 1940s that it "consulted leading nutrition authorities before making Corn Kix," and as such, it contained vitamin B, vitamin D, calcium, and phosphorous cartoon character. Brer Rabbit claimed that Brer Rabbit Molasses was "rich in iron" in an ad from 1941, and the US government endorsed "Vitamin Donuts" that were each fortified with "a minimum of 25 units of vitamin B1." Breakfast powders like Ovaltine, Horlicks (in the United Kingdom and Asia), and Milo (in Australia and Asia) were some of the first processed foods engineered specifically as vehicles for providing the body with the required daily vitamins and minerals.

These new fortified products did more than simply provide ingredients that had physiological benefits. Their secondary function was to reformulate the category of "food," through marketing. Advertisements for Ovaltine show that the function of "tasting good" to the body became supplanted by "doing good" to the body. These milk supplements were not "foods" in the traditional sense; they were foods because they encouraged the eater to think about eating as an activity designed to fulfill the recommended allowances. An Ovaltine print advertisement from 1944 equated a bounty of food, its vitamin content, with two glasses of Ovaltine that were its nutritional equivalent. Ovaltine provided as much vitamin G (now known as vitamin B2 or riboflavin) as ¾ lb of sirloin steak, more niacin than five slices of fortified bread, more vitamin B1 than 3 servings of oatmeal, and more vitamin D than 10 oz of butter.

As the century progressed, concerns about the deficiency diseases that the RDAs were meant to address gave way to the new threat of chronic diseases like obesity, diabetes, and heart disease. The scientific lens through which to understand eating and the human body, however, remained. A postwar shift in regulatory and marketing efforts reflected unprecedented affluence in industrial nations and its associated chronic conditions. As a result, the 1980 Dietary Guidelines for Americans reflected a greater emphasis on nutrient intake (a shift echoed at the international level), recommending an avoidance of excess fat, cholesterol, salt, and sugar.

What Is in a Name? Marketing in the Age of "Functional Foods"

While the idea of eating according to a food's function or in a healthfully prescriptive way has been around for centuries, the categorization of "functional foods" was formalized by Japan's Ministry of Health, Labour and Welfare beginning in 1991 with the appellation "Foods for Specified Health Use (FOSHU). The FOSHU designation was the result of a project developed in the mid-1980s by the Ministry of Education, Culture, Sports, Science and Technology that studied food's role in the maintenance of good health or prevention of disease, beyond that of maintaining basic nutrition. Japan's Ministry of Health, Labour and Welfare (MHLW) began regulating food label health claims as of 1991 under the Nutrition Improvement Law and Nutrition Improvement Law Enforcement Regulations (Fujimaki 1988; Arai et al. 2001).

In the United States, Canada, the United Kingdom, and Australia, there are no legal definitions of functional foods. Unofficial definitions of functional foods generally describe the foods as containing biologically active constituents that may or may not impart "physiological benefits and/or reduce the incidence of chronic diseases" (USDA, Health Canada, UK). The European Commission proposed in 2010 the following working definition for a "functional food": a food that "beneficially affects one or more target functions in the body" (European Commission 2010). As academics, policymakers, and industry attempt to agree upon a definition, more legislations attempt to draw the distinction between functional foods and nutraceuticals, the latter of which are simply isolated products from foods that are sold as medicine. Functional foods

are part of nutrition that professor of consumer behavior and nutritional science and former executive director of the USDA's Center for Nutrition Policy and Promotion Brian Wansink calls "consequence-related" (Wansink 2007). According to Wansink, functional foods will act in the body beyond their simple "attribute level" of calories, fat, proteins, and carbohydrates. Functional foods may be in their natural, unprocessed state – oats may be considered a functional food for its soluble fiber content that has been shown to reduce cholesterol – or they may be foods fortified to be functional through the addition of various nutrients. Fruit juices with added soluble fiber, granola bars with added probiotics, and peanut butter with omega-3 fatty acids are all cases of foods *becoming* "functional" through fortification. Omega-3 fatty acids do not naturally occur in peanut butter, and rolled oats and honey do not naturally contain probiotics.

In 1990, the US government passed the Nutrition Labeling and Education Act that required all packaged foods to be printed with a nutrition facts label (▶ Food and Health Policy). First introduced in October of 1989, this bill mandated that a rectangular information panel indicates the serving size and cholesterol, calorie, fat, sugar, protein, sodium, and carbohydrate content of the food in the package (▶ Food Labeling). The goal of this label was to "provide information regarding the nutritional value of. . .food that will assist consumers in maintaining healthy dietary practices" (NLEA 1990). The hope was that the nutrition facts label could act as a basis for the development of numeric standards to structure the food industry use of product health claims. The US Food and Drug Administration (FDA) has established regulations on the parameters for health claims associated with the specific, quantifiable chemical contents of a food. For example, the claim of "excellent source of" and "rich in" can only be applied to foods containing 20 % or more of the recommended daily intake of the particular nutrient in each federally mandated "serving size." The legislation makes no distinction between foods that have been artificially fortified and foods that contain the nutrient in their unaltered state. As such, both broccoli and artificially flavored and colored yogurt-covered fruit bites fortified with vitamins can be marketed as "a good source of calcium" and an "excellent source of vitamin C." In the United States, having a particular nutrient is one way a food can be marketed, but lacking a particular nutrient is another. The FDA mandates that food can be marketed as "light" or "lite," meaning that the package contains "a nutritionally altered product that contained one-third fewer calories or half the fat of the reference food. If the food derives 50 percent or more of its calories from fat, the reduction must be 50 percent of the fat" (Stehlin 1993).

Presently, public and private "functional foods" research centers and units specializing in the isolation of the active biological components of foods can be found in Europe, Asia, Australia, and the Americas. Among the larger centers are the US Department of Agriculture (USDA)'s Functional Foods Research Unit, the University of Manitoba's Richardson Centre for Functional Foods and Nutraceuticals, the New Zealand Institute for Plant and Food Research, and the Functional Food Centre at Oxford Brookes University. In 2008, the International Society for Nutraceuticals and Functional Foods met for the first time and founded the *Journal of Functional Foods*. As techniques become more specialized and scientists are able to isolate compounds with physiological benefits, the trend of fortifying foods with active ingredients that are not inherent will likely continue alongside robust advertising campaigns that tout a food's active ingredient. While federal regulations rule what kind of health claims can be made and published on food packaging, it is often the case that magazines, television health shows, celebrities, doctors, and private industry equivocate when discussing certain foods they deem to be functional. Claims made by celebrities or media may have just as much impact as federal regulations in associating a food with a functional benefit in the public imagination. The surety with which celebrity surgeon Dr. Mehmet Oz has in stating that "broccoli is simply the best medicine we have (▶ Eating and Nutrition). It gets toxins out of your liver like no other medicine or food on the planet" (Health 2013) does harken back to Hippocrates' quote.

And while whole foods like green tea, broccoli, red wine, or almonds may be peddled as magic bullets for heart disease, hypertension, stress reduction, or cancer prevention, grocery store aisles are also filled with items like vitamin- and antioxidant-filled waters; fruit drinks with added omega-3 fatty acids; chocolate syrups fortified with vitamins B, C, D, and E, calcium, and iron; and even pet foods with added docosahexaenoic (DHA) acid for animal brain function.

Summary

Functional foods are likely here to stay. The wealth of research linking diet to health and the imperative for food producers to deliver novelty and added value suggest that this is one concept with enormous marketing potential. From the earliest recorded controlled experiments linking citrus fruit to a remedy for scurvy through the repackaging of infant nourishment into mix-and-stir proprietary formulas to the recent boom in novel "uppers" like caffeine- and herbal-infused beverages, the science of well-being has had powerful institutional investors (military, government, private corporations). Swiss-based Nestlé, the largest processed food producer in the world, has recently declared its intention to invest $500 million in a new "Nestlé Health Science" division. In response to the question of why the company would invest in the nutrition business, president and CEO Luis Cantarell declared Nestlé's mission to deliver good nutrition, health, and wellness – not just food. In 2010, Cantarell explained to *The Globe and Mail*: "We believe there is a convergence between food and pharma... Our food and nutrition expertise can help create a new industry [where] nutrition plays a bigger role in helping people who live with difficult chronic medical conditions" (Blackwell 2010; Melnick 2010).

The notion that food functions in the body to promote or thwart health – the very basis for the field of nutrition – provides functional foods with both their compelling rationale and their potential for abuse by marketers. As food manufacturers leverage tremendous resources to finance or leverage research into the action of food constituents in the body, consumer literacy in the complexities of human metabolism does not necessarily keep pace. Nor do the nuances of ongoing scientific research necessarily filter through into the sound bites of Dr. Oz or the health claims made on labels of fortified yogurts, chocolate syrups, and dog foods. As the recent health controversy in the United States over deaths linked to Monster Energy Drinks attests, the marketing of functional foods is an important issue for public concern (▶ Functional Foods). Food industry observers project future functional foods market valuations into the hundreds of billions of dollars, annually. It may be that "functional foods" represent a sea change in food marketing – and, thus, of food consumption – a shift complicated by the term's lack of definitional certainty and uneven international regulation. It appears certain, at least, that scientific research and commercial investment into the functional nature of foods will continue into the foreseeable future.

Cross-References

- ▶ Company Identity in the Food Industry
- ▶ Eating and Nutrition
- ▶ Food and Health Policy
- ▶ Food Labeling
- ▶ Functional Foods

References

Arai et al. (2001). *A mainstay of functional food science in Japan - history, present status, and future outlook*. Bioscience Biotechnology Biochemistry 65, 1–13.

Atwater, W. (1902). *Principles of nutrition and nutritive value of food* (Farmer's Bulletin No. 142). Washington, DC: United States Department of Agriculture (USDA) Government Printing Office.

Bartels, R. (1988 [1976]). *The history of marketing thought*. Boston/London: Horizons House Publications.

Blackwell, R. (2011). "Luis Cantarell: Filling the gap between food and pharma" The Globe and Mail. 18 December. [on-line] Available at http://www.theglobeandmail.com/report-on-business/careers/careers-leadership/luis-cantarell-filling-the-gap-between-food-and-pharma/article1358053/

Brophy, B., & Schardt, D. (1999). *Functional foods*. Nutrition Action Healthletter, Center for Science in the Public Interest (CSPI) Washington, D.C.

Cochrane, W. (1993). *Development of American agriculture: A historical analysis* (2nd ed.). Minneapolis: University of Minnesota Press.

Cravens, H. (1996). The German-American science of racial nutrition. In H. Cravens, A. Marcus, & D. Katzman (Eds.), *Technical knowledge in American culture: Science, technology and medicine since the early 1800's*. Tuscaloosa: University of Alabama Press.

European Commission. (2010). *Functional foods*. Directorate-General for Research, Directorate E-Biotechnologies, Agriculture, Food, Unit E.3-Food, Well-being, Brussels, 24194 EN.

Fujimaki, M. (Ed.). (1988). Reports of "Systematic Analysis and Development of Food Functions," 1984–1986 Grant-in-Aid for Special Research Project, The Ministry of Education, Science, and Culture of Japan). Abstracts of papers (in English), Gakkai Shuppan Center, Tokyo.

Global Industry Analysts, Inc. (2012). Functional foods and drinks – Global strategic business report. Research and Markets. www.researchandmarkets.com/

Grant, M. (2000). *Galen on food and diet*. London/New York: Routledge.

Health (n.d.) "Dr. Oz's Favorite Healthy Foods" [on-line] Available from: http://www.health.com/health/gallery/0,20307333_3,00.html [June 15, 2013].

Hunt, C. (1917). *Food for young children* (Bulletin, Vol. 717). Washington, DC: United States Department of Agriculture (USDA) Government Printing Office.

Leger, D. (2008). Scurvy: Reemergence of nutritional deficiencies. *Canadian Family Physician, 54*, 1403–1406. Nutrition Labeling and Education Act of 1990. Pub L No. 101–535, 104 Stat 2353.

Melnick, M. (2010) "Food is the New Pharma" Time. 28 September. [on-line] Available at http://healthland.time.com/2010/09/28/food-is-the-new-pharma-nestle-aims-to-enter-the-functional-foods-market/

Playtime Pep That Never Lags (1927) in The Spokesman-Review 7 June 1927. [on-line] Available at http://news.google.com/newspapers?nid=1314&dat=19270607&id=FfFVAAAAIBAJ&sjid=AuIDAAAAIBAJ&pg=2229,1440196

Rossiter, M. (1975). *The emergence of agricultural science: Justus Liebig and the Americans, 1840–1880*. New Haven: Yale University Press.

Stehlin, D. (1993). A little 'lite' reading. In *FDA consumer, focus on food labeling*. Rockville: US Dept of Health and Human Service. DHHS Publication No. (FDA) 93-2262.

Wansink, B. (2007). *Marketing nutrition: Soy, functional foods, biotechnology and obesity*. Chicago: University of Illinois Press.