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East European Agriculture

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Synonyms

Agriculture in transition economies; Post-Soviet farm privatization; Post-Soviet farm restructuring

Introduction

The agriculture of Eastern Europe is very diverse in terms of agroclimatic and socioeconomic conditions, cultural heritage, and historical context. There is, however, one common and unique factor that brings this wide and diverse set of countries and agricultural settings into focus – the historical interface between their agricultural production systems and the Soviet sphere of influence between WWII and December 1991, when the USSR officially dissolved. Even though the longer history of this region includes many interactions among these countries, including wars, changing political regimes, and widely shifting borders, the focus of this entry is on the common socialist heritage and differing paths in the transition from the Soviet period to the present day. Specifically, we consider the issues, choices, and strategies associated with implementation of post-Soviet land reforms and transformation of collectivized and state-owned farms in these countries. As shown, the ethical issues such reforms created relate to the questions regarding the equitable distribution of resources. The discussion of land reform and farm restructuring includes such components as privatization and allocation strategies for the transferability of land and other farm assets. This entry also highlights future trends and unsolved problems in the region related to the structure of farming and performance of agricultural systems.

The countries included for consideration in this entry were either part of the Soviet Union or came under its influence following WWII (Fig. 1). The territory of former East Germany is not included, because it was unified with Germany in 1990. The specific countries consist of:

1. Western countries of the Commonwealth of Independent States (CIS): Belarus, Moldova, Russian Federation, and Ukraine
2. Western Balkans: Albania, Bosnia and Herzegovina, former Yugoslav Republic of Macedonia (FYROM), Republic of Kosovo (Kosovo under UNSCR 1244), Montenegro, and Serbia
3. New member states of the EU: Bulgaria, Croatia (as of July 1, 2013), Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia

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East European Agriculture, Fig. 1 Eastern European countries under the Soviet influence

Implications of the Common Soviet Heritage

The Soviet approach to agriculture, which was centered around collectivization of land and other farm assets, heavily influenced the structure of agriculture in the region for nearly 50 years. Despite this universal influence, East European countries differed in how they implemented collectivist principles. These differences were often the result of varying pre-Soviet agricultural structures, which also influenced and shaped the post-Soviet agricultural transitions. For example, among USSR countries, the three Baltic countries (Estonia, Latvia, Lithuania) had a growing private and individual farming sector during the interwar period and clear property rights that could be the basis for land restitution, while Ukraine had no such basis for post-Soviet farm restructuring. Among Central and East European countries, the Yugoslav Republic did not experience any significant farm collectivization and Poland collectivized but then rapidly decollectivized, whereas most other nations did experience enduring collectivization. Finally, Belarus is alone among all these countries in terms of preserving much of the farming structure of the Soviet period and seeing very little change in its political system as well. In this entry such differences among the countries in the region will be briefly discussed, and their role in shaping transition processes in agriculture will be explored.

At the core of the Soviet agricultural model was the forceful collectivization of the peasants' land and other farm assets that started in the early 1930s in the Northern Caucasus, Volga, and Siberian regions of Russia and Ukraine (Wegren 1998). By the early 1960s the collectivization was completed throughout most of Eastern

Europe, except for Poland and Yugoslavia, whose agriculture remained largely based on small-scale farming throughout the Soviet period. Nevertheless, these individual farming systems still operated under central (State Plan) control of the economy even in Poland and Yugoslavia, and the structure of farming was essentially frozen in place, while individual farms in nearby Western European countries were evolving in size and structure in response to changing policy and market conditions.

As a result of collectivization, a system of large farms was created. In the 1980s, an average farm in the USSR had over 4,000 ha of sown land, which was one to two magnitudes larger than the farms in the market economies with comparable agricultural resources (Lerman et al. 2004). Moscow saw industrialization and mechanization of agriculture as a major way of agricultural development of the Soviet nations. It was also easier for the state to control the production and distribution on fewer large farms rather than on numerous small ones, even though there still were more than 50,000 state and collective farms in 1988.

There were two types of large farms – state farms (*sovkhoz*) and collective farms (*kolkhoz*). In case of the state farms, land and all the production assets belonged to the state. Its employees were considered state employees who received monthly salaries and wages, similar to industrial enterprises. Collective farms, on the other hand, presupposed that, while the land was owned by the state, the productive assets were jointly owned by the members of the farm. The workers from the farm were compensated through the distribution of the farm earnings instead of state-issued salaries (Lerman et al. 2004). Starting in 1966, collective farm employees were to receive regular wages and became eligible for state-provided welfare benefits. In reality, much of their remuneration was in-kind rather than monetary in the 1960s and into the 1970s. Over time the differences between two types of farms were often indistinct as the government's social and agrarian policies increased collective farmers' incomes and improved the level of mechanization for these farms. If, for example, the earnings of a collective farm were insufficient to pay planned wage to its workers, the state would provide the missing funds from the budget. It was also common for especially successful collective farms to reregister as a state farm.

A common feature of most state and collective farms was that families of workers had personal plots (household plots or lichnoe podsobnoe khoziaistvo), on which families could grow vegetables, potatoes, or fruits and raise a few animals, primarily for their own use. They often relied heavily on inputs and machinery services of the main farm where they were employed. These subsidiary plots, as they were also sometimes called, became more important in the post-Soviet transition, because they were the first ones in line for privatization.

Another distinctive feature of the Soviet agricultural model was central control by the state of all aspects of farm production, wholesale prices, and retail prices of food. Both input supply channels and output markets, including food storage, processing, distribution, and sale, were controlled by the central authorities who also set the production targets. The state also had a monopoly over all agricultural finances, credit, and banking.

During the 1980s, agriculture constituted a significant share in the economies of the Eastern European countries. As is highlighted in Table 1, during this time, the agricultural sector on average accounted for almost one-fifth of the GDP in the Soviet bloc, with the largest share of agriculture value added being in Albania, Belarus, Moldova, Ukraine, and two Baltic countries (Estonia and Lithuania). Rural population on average accounted for 44 % of the population, while agricultural employment constituted 23 % of the total employment (compared to only 13 % in 2010).

Because the economies of Eastern European countries were heavily dependent on agriculture, agricultural reforms, especially privatization and farm restructuring, constituted some of the main components in the transition programs of the former socialist countries. Nevertheless, although the privatization of agricultural land and other farm assets and the restructuring of traditional collective and state farms were widespread, the methods adopted to implement these

East European Agriculture, Table 1 The agrarian profile of the Eastern European countries

Country	Share of rural population, %		Share of agricultural employment, %		Agricultural value added in GDP, %	
	1980–1989 average	2011 or the last available	1980–1989 average	2010 or the last available	1980–1989 average	2011 or the last available
Albania	65	46	56.1	44	33.2	21
Belarus	38	25	23.0	10	24.5	10
Bosnia and Herzegovina	63	51	10[a]	3	–	9
Bulgaria	36	26	17.0	7	11.8	6
Croatia	48	42	14[a]	15	15[a]	5
Czech Republic	35	27	12.3	3	6.6	2
Estonia	29	30	14.9	4	20.9	4
FYROM	45	41	19[a]	9	17[a]	11
Hungary	41	30	17.0	5	17.0	4
Latvia	30	32	16.1	9	18.0	4
Lithuania	35	33	23.4	9	25.8	4
Moldova	57	52	38.5	31	30.0	11
Montenegro	58	37	–	15	–	9
Poland	40	39	28.8	13	12.1	4
Romania	50	47	29.7	30	14.2	7
Russian Federation	28	26	15.0	10	14.8	4
Serbia	49[a]	43	–	24	–	34
Slovak Republic	46	45	13.0	3	6.9	4
Slovenia	51	50	–	9	–	2
Ukraine	35	31	34.8	16	21.7	10

Source: Compiled by the authors from World Bank database (2012), Lerman at al. (2004), Mizik (2009)
[a]1992 estimate

policies fell into different patterns. The land privatization was usually dominated by either restitution to former owners or by distribution to farm workers. The restructuring was focused either on creating family farms or on creating other forms of market-oriented organizations, such as cooperatives of owners of agricultural assets, joint-stock companies, limited-liability companies, or partnerships. Depending on the methods of privatization and government policies of restructuring, different farm structures emerged in different transition countries. Table 2 summarizes the major differences in land distribution and land markets functioning in the countries of interest.

After more than 20 years of transition, all of the countries that were under the Soviet influence, except Belarus, were successful in the transfer of the property rights on land and other farm assets to private owners. In Belarus private ownership of land was limited to personal plots only; most of the land resources in the country remain state owned. However, in a number of countries, there are still substantial restrictions to the land market functioning. In Ukraine, for example, a moratorium on purchase and sale of agricultural land has been repeatedly extended since 2002.

Post-USSR Patterns of Agricultural Transition

The countries in Eastern Europe can be divided into four broad categories, based on the type of land distribution and on resulting farm structure: (1) countries with land redistributed to the workers and predominantly corporate farming

East European Agriculture, Table 2 Differences in land reform implementation in the Eastern European countries

Country	Small farms dominated before the USSR	Land restitution to former owners	Land distribution to farm workers	Land market functioning as of 2005	Land market restrictions as of 2005
Albania	Yes	No	Yes	Yes	Moderate
Belarus	No	No	No	No	Substantial
Bosnia and Herzegovina	No	Yes	No	Yes	Moderate
Bulgaria	Yes	Yes	No	Yes	Minimal
Croatia	No	Yes	No	Yes	Minimal
Czech Republic	No	Yes	No	Yes	Minimal
Estonia	Yes	Yes	No	Yes	Minimal
FYROM	No	Yes	No	Yes	Moderate
Hungary	No	Yes	Yes	Yes	Minimal
Latvia	Yes	Yes	No	Yes	Minimal
Lithuania	Yes	Yes	No	Yes	Minimal
Moldova	No	No	Yes	Yes	Moderate
Montenegro	No	yes	No	Yes	Moderate
Poland	No	Yes	No	Yes	Minimal
Romania	No	Yes	Yes	Yes	Minimal
Russian Federation	No	No	Yes	Yes	Moderate
Serbia	Yes	Yes	No	Yes	Moderate
Slovak Republic	No	Yes	No	Yes	Minimal
Slovenia	No	Yes	No	Yes	Minimal
Ukraine	No	No	Yes	No	Substantial

Source: Compiled by the authors from Wegren (1998), Lerman et al. (2004), Mathijs and Swinnen (2000), and Gerber and Giovarelli (2005)

(Moldova, Russia, and Ukraine), (2) countries with land restituted to the former owners and predominantly corporate farming (Czech Republic and Slovak Republic), (3) countries with land restituted or compensated to the former owners and a mixed structure of individual and corporate farming (Estonia, Latvia, Lithuania, Albania, Bulgaria, Romania, Hungary), and (4) countries where individual farming was preserved during the socialist era, and, thus, no significant land distribution took place after 1990s (Poland, Croatia, Macedonia, Montenegro, Slovenia, Serbia, Bosnia and Herzegovina). Albania and Belarus constitute unique cases. After the collapse of the Soviet Union, collective farms in Albania were disbanded and land was distributed to the former workers, but unlike the case of Western CIS countries, small farms predominated in the farm structure of the country since then. In Belarus private ownership on the land was only extended to the personal (household) plots, while up to 90 % of agricultural land remained in the state and is operated by the large Soviet-style farms.

Land Distribution and Predominantly Corporate Farming (the Russian Federation, Ukraine, Moldova)

Before the creation of the Soviet Union, Western CIS countries did not have a widespread culture of family farms. Therefore, after the collapse of the USSR, the new governments of these countries followed the path of redistributing land to the workers of the state and collective farms rather than restituting it to the former owners. New landowners were first issued paper certificates of entitlement, which were later converted

into physical land plots if certain conditions were met, allowing owners to rent out, sell, or form individual farms. Land was not registered to "households" but to individuals, either as joint ownership or single owner.

Despite the distribution of land to individual farms, the transition to small-scale family agriculture in Russia, Ukraine, and Moldova has varied greatly and the majority of agricultural land is still controlled by large corporate farms. The structure and significance of such farms, however, differ by country. For example, Russia and Ukraine have become a home to mega-sized farms (often larger than 100,000 ha), called agriholdings, which are often vertically integrated with processors and/or exporters. The majority of agriholdings have been formed in the grain sector, while some of them function in the oilseed, sugar, and dairy sectors. Some farms have managed to attract financing through IPO and borrowing from private investors or European Bank for Reconstruction and Development.

There are several reasons for the existence of agriholdings. Among them are vast availability of relatively cheap fertile land, small-scale landowners with little bargaining power over rental terms, poorly functioning credit markets, sufficient level of infrastructure development, access to world markets, productive and relatively cheap labor, and increasing commodity prices as a promise of higher profits. However, the major reason for their emergence as a unique phenomenon to the post-USSR (rather than Western) countries is the underdeveloped institutional and legislative conditions of the transition economies that allow for large capital accumulation.

Existence of such gigantic farms has both its benefits and risks; as a result, agriholdings are currently in the center of policy debate both in Ukraine and Russia. The major benefit of agriholdings is that they attract a large amount of investment in the agribusiness sector both from domestic and international investors. Additionally, the economies of scale of agriholdings allow them to decrease the cost and increase the efficiency of production, while the extent of their integration allows for the fast and smooth product movement from a farm to an exporter or domestic user.

The main risk is the disconnect between agriholdings and the rural areas where they operate. First, they displace significant numbers of agricultural workers, which reduces employment and incomes in the rural areas. Also, the major headquarters of such holdings are usually located in the larger cities and not in the areas where the production takes place. Therefore, agriholdings pay taxes to the cities, which, in turn, decreases the stream of financing to the rural territories. This results in lower levels of financing of infrastructure and public goods provision in the rural areas of Russia and Ukraine. Another risk is the tendency of agriholdings to engage in monoculture practices that lead to deterioration of land quality and other environmental externalities.

Land Restitution and Predominantly Corporate Farming (the Czech Republic, Slovak Republic)

Prior to WWI, Czechoslovakian agriculture was characterized by large estates. Between 1918 and 1945 before the Communist party seized power in the country, some attempts of redistribution of land to the Czech and Slovak peasants took place. However, major redistribution happened during the Soviet era. Between 1945 and 1948, the pro-communist government instituted a three-stage land reform that resulted in 4.2 million ha of land (both agricultural and nonagricultural) being confiscated from large owners. The upper limit on the size plot was set at 50 ha. Once the land was redistributed among the peasants, the second (collectivization) stage of the reform began. It implemented several strategies to incentivize farmers to participate in cooperatives. For example, individual farmers were discriminated against when obtaining machinery for their farms. Sometimes the government officials would take a more direct approach by expropriating the land of the largest farmer in the village or forcing him/her to transfer land to the collective use. The major collectivization in Czechoslovakia happened during the 1950s (Swinnen and Rozelle 2006). By 1985, 63.5 % of the land in the republic was owned by the collective farms, 30.4 % by state farms, and the rest remained in private property.

Following the 1990s, new legal regulations with regard to land reform in the country were implemented in Czechoslovakia, which in 1993 split into the Czech Republic and Slovak Republic. According to the new legislation, landowners could claim back their land which had been taken away during socialism. At first, the land reform presupposed imposing a limit on the claims by the former owners to 150 ha of agricultural land and later 250 ha of land, but in 1992 such limits were abolished. This resulted in non-egalitarian distribution of land in private ownership. As an example, after the land reform, a small group of Czech farmers owned 55 % of the total privately owned farm land in the country (Swinnen and Rozelle 2006).

Land Restitution or Compensation to Former Owners and a Mixed Structure of Individual and Corporate Farming (Estonia, Latvia, Lithuania, Bulgaria, Romania, Hungary)

With regard to collectivization, Bulgaria was the first country to achieve full collectivization among the current EU new member states (NMS), which was not the case for Hungary or Romania. Even towards the end of the Soviet rule, both countries had a relatively large share of private agriculture, and their agricultural structure could be characterized as a symbiosis between small- and large-scale farms. The Baltic countries were part of the USSR and, therefore, fell under the collectivization orders from Moscow. By the end of 1950s, less than 10 % of the family farms escaped collectivization in the Baltics (Meyers and Kazlauskiene 1998). However, since family farming was predominant in the agricultural structure of the Baltic countries before the Soviet rule, the transition began with a priority to restore family-based agriculture through land restitution to the former owners.

After the fall of the communist regimes, the majority of agricultural land in the countries that are included in this category was redistributed to private farmers who used it to form family farms. However, there are still differences among these countries in terms of both collectivization processes and land reform implementation. For example, in Hungary, land was distributed both via compensation to former owners and land allocation to the workers of the state and collective farms. This was not the case for the Baltic countries, Romania, or Bulgaria, which only restituted collective land to former owners or descendants of the owners.

Preserved Individual Farms During Central Planning (Poland, Croatia, Macedonia, Montenegro, Slovenia, Serbia, Bosnia and Herzegovina)

Poland and the Socialist Federal Republic of Yugoslavia were two countries in which agriculture was never fully collectivized. For example, in both Poland and Slovenia, private agriculture accounted for 80 % of arable land as of 1975 (Mathijs 1997). However, central planning was still introduced into agricultural development of these countries via limitations imposed on the private property rights on agricultural land and on the functioning of input and output markets.

Since individual farms predominated during communist times, after the 1990s the privatization of agricultural land was not as much of an issue as it was in other former socialist countries. The main transition process consisted of restitution of previously nationalized land used by the state farms to the original owners or their legal descendants.

Albania (Land Distribution and Predominantly Individual Farming)

Before WWII, more than 60 % of land in Albania was cultivated by medium- and smallholdings. At the beginning of the communist era in the country, the expropriation was targeted towards large landowners or those owners who used hired labor. Such land was confiscated and transferred to landless Albanians or farmers who owned less than 5 ha of land. The expropriation stage of the reform was followed by a collectivization process. By the early 1960s, most of the family farms were part of either collective or state farms.

After the collapse of the communist regime in Albania, its government followed the path of the Western CIS countries with regard to land reform. Within a year and a half, all the land that belonged to the state and collective farms

was distributed among former workers of such farms, who in turn started family farms. As a result, 700,000 ha of arable land was distributed among 500,000 families, with an average plot size of about 1.5 ha per family.

Future Trends and Unsolved Problems

Currently, agriculture constitutes a much smaller share in the economies of the Eastern European region than it did during Soviet times. During the past 20 years, the agricultural index in the region that is calculated as a simple average of the share of rural population (percentage of total population), share of agricultural employment (percentage of total employment), and agricultural value added in GDP (percentage of total GDP) has decreased on average by 33 %. This is a natural path of transition for dynamic economies, but in this region it was accelerated by the removal of high levels of agricultural support after the collapse of the USSR. Nevertheless, agricultural issues are still at the center of policy debate across these countries.

The future trends in the agricultural development of the region could be centered around the stage of accession of the post-Soviet countries to the European Union. Here one can differentiate among those countries that are already members of the EU (new members states), those countries that are recognized as official candidates to the EU (Republic of Macedonia, Montenegro, and Serbia) or potential candidate countries (Albania, Bosnia and Herzegovina, and Republic of Kosovo), and those countries that are currently not on the enlargement agenda of the EU (Western CIS countries).

With regard to the agricultural reforms, the accession process to the EU is important for two reasons. First, in order to complete the official accession process, these countries have to implement laws and regulations in the *acquis communautaire*, which involves the adoption of the common policies and regulations of the Union, which, *inter alia*, improve functioning of the land markets. In this respect, new member states of the EU are in better shape than the countries in Western Balkans or Western CIS countries, since they have shown the most progress in the region with creating an efficient system of private property on land and land transferability. Second, accession to the EU significantly increased support for agricultural and rural development and also put pressure on farms and the whole marketing chain to be more competitive in agricultural markets. This assistance and market competition has improved the efficiency of agricultural markets.

Evidence (Table 2) shows that the NMS countries have the lowest level of land market restrictions, while Western CIS countries are still the most restricted ones in this regard. More specifically, according to the World Bank's land reform index of 2005, Western Balkan countries (except for Bosnia and Herzegovina) score on average at 7.2 out of 10. For the Western CIS countries, the average is equal to 4.9. These numbers refer not only to the state of land reform but also to policy environment, privatization processes, rural financial systems, and institutional framework (Mizik 2009).

Summary

This entry deals with the issues, choices, and strategies associated with the implementation of land reforms and transformation of collectivized and state-owned farms in the post-Soviet countries of Eastern Europe. The wide variety of paths that countries have taken in transition from state ownership and central planning to private ownership and market-driven processes do not reveal that one path is far better than another, but it generally shows that those countries that delayed and overly restricted adjustment processes are lagging behind those that made the transition earlier and faster.

Cross-References

- ▶ Access to Land and the Right to Food
- ▶ Agricultural Ethics
- ▶ Economy of Agriculture and Food
- ▶ Farms: Small Versus Large
- ▶ Land Acquisitions for Food and Fuel

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Eating and Nutrition

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Synonyms

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Introduction

Ample evidence exists on the negative influence on health of eating a diet high in energy, saturated fat, and salt and the onset of diabetes, cardiovascular, and malignant diseases (for an overview, see WHO 2004). The rising problem of obesity fuels the efforts of health promoters, policy makers, the food industry, and other experts concerned with nutrition communication to promote convenient healthful eating. Despite these efforts, promoting healthful eating remains a challenge (see ▶ Obesity and Consumer Choice).

At present, two contradictory trends emerge in nutrition promotion. On the one hand, decades of efforts have created awareness and understanding of eating for health, to eat a variety of food, more fruits, vegetables, and fish and avoid too much fatty and sugary food, calories, and salt, and have also created the intention to do so in practice. At the environmental level, great efforts have been put into "making the healthy choice the easy choice." On the other hand, studies show that, in the Netherlands as well as in other countries, most consumers eat less fruit and vegetables and more products high in energy, saturated fat, and sugar than recommended. This latter type of dietary intake is indicated as one of the main causes of the increasing prevalence of obesity and consequent rise in adult onset of diabetes, nowadays a major public health concern in the Netherlands, as well as globally.

Apparently, knowing what to eat for health is not put into practice by many people. New strategies, therefore, have to be considered to ensure that consumers direct their eating practices toward health.

This entry discusses firstly the current biomedical-oriented strategy of specifying nutritional recommendations on why, how, and what to eat to remain in good health (2). Then, the mismatches between this approach and the way people themselves deal with food and health in their everyday lives are presented (3) and discussed in relation to ethical considerations (4). The next section introduces the salutogenic perspective (5) and the evidence regarding its value for

application to the promotion of healthier eating practices (6). The last part of this entry discusses implications and examples of using this perspective for nutrition research and promotion (7) and conclusions (8).

Existing Efforts: Nutritional Specification

Nutritional research is increasingly capable of identifying the relation between specific nutrients and physical health. The insights are translated into guidelines for healthful eating and communicated to consumers through educational and marketing efforts. The rising problem of obesity fuels the efforts of health promoters, policy makers, the food industry, and other experts concerned with nutrition communication to facilitate convenient healthful eating.

The further specification of advice on why, what, and how to eat for physical health is fuelled by three developments. Firstly, behavioral research supports the idea that specific advice is more successful than general advice in motivating healthful eating because individuals view it as more personally relevant (Eyles and Mhurchu 2009). This so-called tailored advice provides individuals with highly specific information on individual health risks and benefits of their current eating habits and the desirable changes (see ▶ Food Risk Communication). In addition, rapid developments in interactive computer technology (ICT), especially the Internet, allow for the provision of tailored advice on a larger scale than possible through face-to-face consults (Broekhuizen et al. 2012). A third development is that of nutrigenomics research. This innovative discipline of nutritional research studies the interaction between food, genes, and health at the molecular level. A genetic test for vulnerability to diet-related disease, such as cardiovascular disease, could be added to a personal risk assessment, one that is currently comprised of indicators such as body mass index and blood cholesterol (German et al. 2005).

In addition to individually tailored advice, making healthy choices is facilitated by a growing variety of convenient, tasty, and healthful foods and meals available to consumers. These may facilitate uncomplicated healthful and pleasurable food choice. And, if needed, consumers can buy functional foods, in the form of health-claim-carrying products or natural foods that offer convenient, instant compensation for potential damage done to health (Bouwman et al. 2009; see ▶ Functional Foods).

Nutrition Research and Everyday Eating as a Social Practice

The key idea that drives a lot of nutrition research and promotion is that eating for attaining or maintaining good individual physical health is a central goal in life. This biomedical notion of health drives the search in nutritional studies for a better understanding of the risks and benefits of certain nutrients for physical health. It is related to that of "healthism," a concept introduced by Crawford (1980) to describe a new form of health consciousness that refers to a preoccupation with personal health as the primary focus for the achievement of health and well-being. Health behavior thereby became the paradigm for good living.

The studies based on this biomedical approach orient toward pathogenesis, the study of disease origins and causes. It starts by considering disease and infirmity and then works retrospectively to determine how individuals can avoid, manage, and/or eliminate that disease or infirmity. This risk-oriented, pathogenic view underlies the search in nutritional research and promotion for nutrients, foods, and meals that prevent, treat, or manage diet-related diseases.

A parallel can be drawn between nutritional research and behavioral food research, the research areas that provide the scientific basis for nutrition promotion strategies. Both areas study how interactions between humans and their social and cultural context impact physical health. The areas also share the difficulties involved in exploring contextual variables that often cannot be controlled in research studies (Fischer 2006). If humans are studied without

considering contextual influences, the validity of the research results for everyday life situations is limited. This applies to nutritional research, where issues about contextual influences are threefold: (1) limitations of studying single nutrients while people consume food products, (2) studying specific food products while people consume diets composed of many foods, and (3) studying diets without considering other lifestyle components. This perspective causes a gap between healthy eating guidelines (e.g., eat poly-unsaturated fats and avoid sugar) and concrete action rules for real-life eating practices.

The review of the literature on health behavior change and health communication on this aspect of Bouwman and van Woerkum (2012) indicates mismatches between the focus on physical health in nutrition promotion and consumers' own view.

Firstly, that healthful eating is not solely a matter of conscious personal choices for the benefit of maintaining or attaining physical health. Studies show that eating involves other functions such as taste, convenience, costs, moral concerns, and the maintenance of relationships (Sobal et al. 2006) that often take precedence over biomedical health. Scrinis (2008) argues that the narrow focus on physical health, so-called nutritionism, may have limited value in everyday life (see ▶ Medicalization of Eating and Feeding). The scant attention paid to the social and cultural circumstances in which attitudes or intentions are formed in the dominant, cognitive perspective on health behavior more generally is widely addressed in literature (Fischer 2006; Green 2006).

The second issue concerns the absence of the social dimension of eating in nutritional guidelines. Decisions and actions regarding food habits are embedded in a range of other social activities. Following nutritional guidelines in daily life is therefore not a matter of course (cf. van Woerkum and Bouwman 2012). Yet, nutritional guidelines are oriented toward the physical side of health and the concurrent denial of the social embeddedness of food and health behavior and thus seem to ignore that aspect. Food is often shared with others and provides opportunities for making social contacts. Within these social interactions, it may function as a marker of culture and as an expression of affection, attachment, or identity (see ▶ You are What You Eat). Apart from being a social activity in itself, eating behavior is also influenced by the broader social context. This social environment has been proven influential in stimulating or inhibiting consumers' capacity to eat more healthfully. A recent review of qualitative studies confirms that healthy eating reflects people's personal, social, and cultural experiences, as well as their environment (Bisogni et al. 2012).

A third issue concerns the increasing specificity, and thereby the complexity, of what to eat and what not to eat for the benefit of health. Healthful eating requires a well-organized life, but many consumers are unable to achieve this. Dealing with complexity seems to become more important than eating in accord with nutritional guidelines itself. This complexity is only partly taken care of by health promoters, policy makers, the food industry, and other experts in nutrition communication who facilitate convenient, healthful eating. For instance, a growing variety of convenient, tasty, and healthful foods and meals are available to consumers. These may facilitate uncomplicated healthful and pleasurable food choice. And, if needed, consumers can buy functional foods, in the form of health-claim-carrying products or natural foods that offer convenient, instant compensation for potential damage done to health. It may however lead to the idea that critical thinking by individuals on how to organize healthful eating in everyday life can be handed over to experts. As a consequence, consumers themselves may deal with healthful eating as uncomplicated and unproblematic, as not requiring thoughtful consideration, because someone else is already taking care of it (Bouwman et al. 2009).

Ethical Considerations

Besides questions regarding the everyday relevance and applicability of biomedical-informed nutrition promotion strategies, ethical issues arise as well. A first question is whether the

biomedical, pathogenic route toward specification sufficiently addresses autonomy and, hence, will indeed enable healthier eating practices. The second question relates to the increasing specificity and whether this route will exclude those who are in most need for support.

The first issue concerns the tension between the expert-driven nature of the current approach toward food and health and autonomy, the capacity to self-govern and self-control, and being able to act in an independent manner in relation to eating. Health promotion and, hence, nutrition promotion aim for the human rights value of enabling people to lead an autonomous, active, and productive life, a "good life" or quality of life (WHO 1986). Yet, the expert-driven nature of the current food arena reduces the need for self-governance and self-control and hence autonomy in relation to food choice. It can be questioned who is in the drivers' seat in the food-health arena, where complex nutritional information is simplified by experts and presented in claims, logos, and guidelines on health and sustainability. "You are what you are told to eat" seems to replace "You are what you eat," signaling distance between people and the way food is produced and "served" in television programs and advertisements and on the food itself.

The availability of specified nutrition advice may also induce societal attribution of extended individual responsibility for one's health (Korthals 2011). It is however questionable whether the singular focus on attaining biomedical health (Nutritionism) enables increased accountability (Nordström et al. 2013). Enabling the "good life" requires an integration of social and spiritual life ambitions and actions, especially in relation to food. Without consideration of these values, the biomedical route may compromise rather than support autonomy and healthier eating practices (see ▶ Medicalization of Eating and Feeding).

The second ethical issue concerns that provision of tailored advice on why, what, and how to eat for health presupposes a self-conscious consumer, willing and capable of finding, understanding, and applying the information. It requires a certain level of "nutritional intelligence." People who do not accomplish this level may ignore, discard, or misinterpret the information. Similar to other health-related issues, unhealthy eating and its consequences are more prevalent among groups with low socioeconomic status. Nutrition education has shown to be relatively ineffective among lower-income groups (Robertson et al. 2007). Further specification and hence complicating information may therefore not reduce yet increase societal inequalities.

The Salutogenic Perspective on Health

The above sketched issues which result from the dominant role of the biomedical route in nutrition promotion can be addressed by adding a complementary, context-sensitive route. Salutogenesis – a theoretical perspective on health – offers an excellent starting point. Antonovsky's salutogenic approach is centralized around the question "what creates health?" It targets the search for ways to create, enhance, and improve physical, mental, and social well-being. A key difference with the biomedical perspective is that it assumes health-related practices – such as eating for physical health – as a resource for living rather than a central goal of life (Antonovsky 1987). Healthful eating, together with other biological, material, and psychosocial resources, makes it easier for people to perceive their lives as consistent, structured, and understandable. These resources foster repeated life experiences which help to view the world as "making sense," cognitively, instrumentally, and emotionally. Antonovsky uses here the metaphor of "stimuli bombarding one from the inner and outer environments are perceived as information rather than noise."

Out of this way of thinking emerged the sense of coherence (SOC) construct. This orientation perceives the world, on a continuum, as comprehensible, manageable, and meaningful. The strength of one's SOC is a crucial factor in facilitating the movement toward health. Confronted with a stressor, a person with a strong SOC will

be motivated to cope (meaningfulness), believe that the challenge is understood (comprehensibility), and believe that resources to cope are available (manageability). Comprehensibility represents the cognitive component, manageability the instrumental or behavioral component, and meaningfulness the motivational component (Lindstrom and Eriksson 2006).

Life experiences that lead to a strong SOC allow one to reach out in any given situation and apply the resources appropriate to that stressor. Three kinds of life experiences shape the strength of one's SOC: consistency, underload-overload balance, and participation in socially valued decision making. The extent of such experiences is formed by one's position in the social structure and by one's culture – e.g., work and family life.

Salutogenesis and Healthy Eating

Antonovsky developed a scale to measure the strength of the SOC, called the Orientation to Life Questionnaire, which included the SOC-29 and a shorter form, the SOC-13 – comprising of 13 questions on meaningfulness, comprehensibility, and manageability. Since these SOC scales were originally devised by Antonovsky in the 1980s, they have been translated into at least 33 languages in 32 countries with at least 15 different modified versions of the questionnaire available. These scales measure the strength of the three traits which compromise the SOC: meaningfulness, comprehensibility, and manageability. These SOC scales have been found to be highly reliable, valid, and cross-culturally applicable instruments to gauge how people cope with stressful situations and as a result stay healthy (Eriksson and Lindström 2005).

In an extensive systematic review, Eriksson and Lindström (2006) found that a high SOC score was strongly associated with a better perceived physical and mental health and it has a main, moderating, and mediating role in the explanation of positive health. Several studies have also proposed that a strong SOC is associated with healthier eating patterns and lifestyle choices than those with a weaker SOC. Lindmark et al. (2005) found in a cross-sectional study of Swedish adults that both men and women with a high SOC score reported higher intake of healthier food choices such as vegetables and whole grains. They further found that those with lower SOC scores reported higher intakes of unhealthier food choices such as pizza, French fries, and hamburgers. Moreover, research from a population-based cohort study in the United Kingdom found that men and women with a strong SOC were less likely to smoke cigarettes; less likely to be physically inactive; reported higher intake of fruits, vegetables, and fiber; and had a 20 % reduced risk of all-cause mortality than those with a lower SOC, independent of social class and education level (Wainwright et al. 2007). Ray et al. (2009) further found that a strong parental SOC was associated with their children having more regular child eating patterns, lower intake of energy-dense foods, and higher intake of nutrient-rich foods. Their evidence further suggested that parent's SOC and children's intake of nutrient-rich foods were mediated by factors from the social and physical context such as providing access to fruits and vegetables at home, having better awareness of recommendations on healthy eating, acting as a role model for their child by eating fruits and vegetables, and eating regular meals together as a family.

Salutogenic research goes beyond only measuring SOC and its association with health and lifestyle behaviors. As Lindström and Eriksson described, salutogenesis is "much more than only the measurement of the Sense of Coherence, it is a much broader concept focusing on resources, competencies, abilities; assessed on different levels, the individual, the group, families and also societies, of which the concept of resilience is one of these assets to health that falls under the salutogenic umbrella" (Lindström and Eriksson 2010). Resilience can be described as a positive capacity to cope with stress and adversity. Qualities of resilience such as flexibility, resourcefulness, and coping with adversities are very similar

to GRRs which create the prerequisites for developing a strong SOC as described by Antonovsky. Further, resilience is just like salutogenesis in that it is not a trait, but rather a dynamic process that illustrates how the availability and use of resources can be used to promote well-being (salutogenic) or protect people from adversities (resilience) to set people on the continuum of positive health.

In the past, the concept of resilience had been mostly applied within only child development, mental health, and psychology; however in recent years the concept has been applied to a variety of topics. Australian researchers have begun to apply the concept to study the phenomenon of "obesity resilience" among populations with high levels of health disparities. This research has suggested that characteristics such as perceived social support from family and friends for healthy eating and physical activity, perceived self-control for healthy eating, self-efficacy for regulating eating and physical activity, social participation, and neighborhood access to healthy foods all explained variations in BMI in woman living in disadvantaged neighborhoods (Ball et al. 2012). Moreover, Williams et al. (2011) identified personal, social, and environmental factors that promote healthy eating and healthy weight among families from economically disadvantaged neighborhoods in Australia. These included parental control, moderation and support for healthy eating, parental role modeling, and limiting access to unhealthy foods. American researchers have also recently begun to examine the obesity resilience phenomenon. Lim et al. (2011) found that among families from deprived neighborhoods in urban Detroit, a higher parental capacity for resilience was associated with healthy weight maintenance and lower soft drink consumption in their 3–5-year-old children over a 4-year follow-up period.

In sum, the salutogenic research paradigm strives to ultimately answer the question "what creates health" rather than "what causes disease" and, hereby, complements the biomedical route in multiple ways. The salutogenic view toward health complements the biomedical route by adding the everyday life dimension where people strive not only to avoid disease yet also for quality – "goodness" – in life. People need to be aware of not only risks that keep them from achieving good health but also how they can use resources within and outside themselves to guide them successfully toward positive health. It includes all aspects of health, being in line with the way people themselves experience health: as resulting from an interplay between bodily, mental, social, and spiritual well-being. It is embedded in the social context; it studies the dynamics between people and environment and how health develops from this interaction – or not. It aims to identify the patterns and mechanisms underlying health processes, rather than factors bound to people, as is characteristic to biomedical-oriented research. Disjointedly studying and enacting upon people and context may be easier but does not do justice to reality. Society can be rich in resources; the outcome depends on how people make sense, interpret, and give meaning to these resources in relation to health.

Implications for Research and Practice

In summary, the evidence emerging from salutogenic research suggests that a higher SOC score is associated with better perceived physical and mental health and it has a main, moderating, and mediating role in positive health outcomes. Findings from the salutogenic literature suggest that those with a higher SOC make healthier food choices, eat less energy-dense foods, have healthier physical activity patterns, and tend not to be smokers. Such research has been important to gain initial insight into the resources that promote healthful eating and resilience to obesity at the individual, family, and community levels. However, we have only just begun to scratch the surface. In-depth qualitative research has yet to be applied to study the mechanisms and patterns behind the phenomenon of eating well. In future research, it will be important to examine how healthy eaters adapt and utilize resources in health-promoting ways despite such

overwhelming influences of the "obesogenic" environment. For instance, what types of life experiences with healthy eating and lifestyle have shaped the development of a high SOC and resilience to obesity?

The use of the salutogenic perspective has several implications for research. The target groups are those who do manage to sustain in their intentions to eat healthfully and find out why they are doing well. The questions should centralize around the life experiences that have led to their strong SOC, their ability to cope with a "challenging" environment in relation to eating for health. With respect to eating, one can think of how they deal with the abundance of food, "seductive" marketing efforts, pricing strategies, as well as negative social norms – e.g., the health freak image mentioned above. What are the knowledge, tools, or skills, on a biomedical (as provided by existing nutrition advice), practical, as well as social level, required to effectively deal with these challenges in everyday life?

Secondly, research should not be limited to topics directly related to the food chain process of buying, preparing, and consuming food. Peoples' other, interlinked ambitions and actions should be considered as well. The aim is to identify how eating for health is linked with other resources that contribute to health and well-being, for instance, experiencing nature, playing, or child rearing. In line with this, care farms, natural playgrounds, or city gardens may serve as excellent settings for promoting eating for health.

A third aspect is the question how the complexity that characterizes advice on why, how, and what to eat relates to the element of comprehensibility, the understanding of one's environment. We propose that nutrition promotion, besides considering the impact of (un)healthful food choice on personal health, also includes other levels (from local to global) and domains linked with food (e.g., animal welfare and natural resource management).

The complex nature of eating advice may also hinder the opportunity for positive life experiences required to establish a strong SOC. As mentioned above, these life experiences should be characterized by consistency, an underload-overload balance and participation in socially valued decision making. The fast changing insights on food-health relations may not provide for consistency. And the enormous attention paid to food-health may lead to an overload of information. The importance of the aspect of "participation" is widely recognized in health promotion and central to human rights. Yet, current nutrition promotion efforts insufficiently allow for active involvement of people themselves (Bouwman 2009). We therefore wish to emphasize the need for a change from expert-driven nutrition promotion toward a coevolutionary development process. In this process, people themselves are actively involved, issues and solutions can be exchanged between consumers and experts, and new ways to establish eating for health may be devised.

Summary

The biomedical specification route provides valuable insights on risk factors and strategies to avoid disease. Yet, its complex nature and distance to the everyday context of eating practices may limit the impact of nutrition promotion efforts and compromise the values of autonomy and health equity. Complementing this route with the salutogenic approach will be relevant for public health practice in developing interventions that enhance and develop personal, social, and environmental resources which foster healthy eating practices. Through coordinated action with relevant societal actors, findings could also be used to propose and develop "salutogenic" public health interventions which fit within current frameworks and policies. Furthermore, the research findings can help develop new tools for practitioners to assist people that are struggling with their weight in designing a "personalized health trajectory" that enables and empowers them to utilize personal, social, and physical resources for health. Most importantly, such action-oriented approaches form part of the

solution and help people in accomplishing lifestyle changes in the context of their everyday lives (van Woerkum and Bouwman 2012).

It can be expected that salutogenic research findings will be highly valuable not only for practitioners but also for policy makers and industry. The knowledge gained from salutogenic research can be used to design more holistic, context-sensitive, and solution-oriented obesity and lifestyle-related policies, as well as develop socially driven technologies and devices which emphasize enabling and facilitating resources within people's social and physical contexts as a means to promote health and prevent obesity. Health promotion has a long tradition of arranging enabling contexts to mobilize human and material resources to promote and protect health.

This does not require a complete paradigm shift to using only salutogenic methods, rather that there should be more of a balance between pathogenic and salutogenic methods in obesity research. Introducing more salutogenic approaches to obesity research can complement the existing knowledge by identifying the "determinants of success" in those coping well with the obesogenic environment and comparing these to the established "determinants of failure" in people who struggle with overweight and obesity due to unhealthful dietary and lifestyle practices. By widening the research perspective to encompass both approaches, one can better understand how the complex interplay between physical, mental, social, and contextual factors can support the maintenance of a healthy weight and promote well-being. This understanding can ultimately aid science and practice in creating supportive and enabling social and physical contexts which promote healthy eating, lifestyle practices, obesity prevention, and overall health.

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Eating Disorders

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Synonyms

Anorexia nervosa; Bulimia nervosa; Coercive measures in psychiatry; Competence to give informed consent (medicine); Decisional capacity; Deliberative ethics; DSM-5; Eating disturbances; Feeding disorders; MacCAT; Treatment in psychiatry

Introduction

Feeding and eating disorders were already described in ancient Greek times. However, it was only since the nineteenth century that they were labeled as medical condition. Diagnoses like *anorexia hysterica* and *anorexia nervosa* were used, referring to a psychiatric background. Nowadays, the two most commonly diagnosed eating disorders are anorexia nervosa and bulimia nervosa. Anorexia nervosa is less often diagnosed than bulimia nervosa but more known because of its acute risk of physical complications including death.

Next to anorexia nervosa and bulimia nervosa, the DSM-5 (APA 2013) classifies pica (persistent eating of nonnutrive, nonfood substances such as soil), rumination disorder (regurgitation of food, with rechewing, re-swallowing, or spitting out of the regurgitated substance), avoidant/restrictive food intake disorder (an eating or feeding disturbance as manifested by significant weight loss, nutritional deficiency, and so on), binge eating disorder, other specified feeding or eating disorders (including purging disorder and night eating syndrome), and unspecified feeding or eating disorder.

There is some debate whether (▶ Obesity (Also: Childhood Obesity and Responsibilities))

obesity (▶ Obesity and Consumer Choice) is an eating disorder in the psychiatric spectrum as well. It is not a disorder in the DSM-5 or ICD-10, but it is recognized as a condition with major psychological and even psychiatric aspects. Other conditions that are related to eating and food but do not meet criteria for eating disorders as listed in DSM-5 or OCD-10 are, for example, dependence of laxatives and emetophobia (phobia for vomiting).

Outline

This entry will focus on anorexia nervosa, since ethical issues are most dominant in this disorder. Anorexia nervosa patients typically refuse treatment (▶ Ethics of Dietitians). If physicians want to enforce treatment, they need to establish that the patient is incompetent. First, the characteristics of anorexia nervosa, including the way in which it influences the body image, and the state of the art in treatment are addressed. Next, the standard approach to incompetence is discussed, which focuses on cognitive abilities. Then, a critique on that approach is examined, in which the role of emotions is emphasized. After that, recent empirical ethical research is discussed, highlighting the importance of values in incompetence of anorexia patients. Finally, several ways of dealing with values in the context of the doctor-patient relationship are presented.

Anorexia Nervosa and the Image of the Body

The main characteristics of anorexia nervosa are the refusal to maintain body weight, intense fear of gaining weight (even though being underweight), and amenorrhea. Binge eating is often considered as a subtype of anorexia nervosa. Bulimia nervosa is characterized by excessive eating in discrete periods of time combined with a sense of lack of control and recurrent inappropriate compensatory behavior to prevent weight gain.

Anorexia nervosa is associated with personality traits and disorders, and the *anorexic personality* is described in literature (Tan 2006). This suggests a firm role of identity in the experiences of patients and perspectives on anorexia nervosa.

Anorexia nervosa is characterized by a disturbance in body, shape, or weight experience. Patients judge themselves to be fat and heavy, whereas in reality they are slim and have underweight. There are several hypotheses and models on the nature of anorexia nervosa. Neurobiological researchers emphasize the importance of feeling skinny (Kaye et al. 2013). Other researchers emphasize the role of body image disturbance, including low body esteem, associated attachment insecurity, and alexithymia in the etiology of anorexia nervosa (Keating et al. 2013).

State of the Art in Treatment of Eating Disorders

Eating disorders, and especially anorexia nervosa, are known for their great impact in the lives of both patient and family. Anorexia nervosa can be and often is life threatening. Constant starving can give major physical problems, such as hypothermia, dependent edema, hypotension, bradycardia, and lanugo next to various metabolic changes. Amenorrhea is also a frequent sign. Even when treated successfully, these complications can have lifelong consequences (Sadock 2007).

Patients, often (▶ Feeding Children) girls and young women (▶ Gender Norms and Food Behaviors), usually come to medical attention when the weight loss becomes apparent. Then, the first consideration of most physicians and psychiatrists is to restore the patients' nutritional state. Psychological and psychiatric treatment, including individual psychotherapy, family education and therapy, and sometimes psychotropic medication come after that (Sadock 2007).

However, most patients are not interested (▶ Medicalization of Eating and Feeding) in psychiatric treatment. A major textbook in the field of psychiatry suggests that compulsory treatment should be obtained only when the risk of death from the complications of malnutrition is likely. Guidelines and professional organizations also

follow this line. When coercion is used, it is often to treat the physical complications. Patients are then rehydrated and forced to gain some weight. But this only fights the complications of anorexia nervosa and not the psychiatric origin of the condition.

Competence: The Standard Approach

Coercion is not often used in the treatment of anorexia nervosa and seldom for the psychiatric part of the treatment. Most women with anorexia nervosa are considered to be competent to refuse psychiatric treatment. Formally, competence means that a patient meets the legal requirements for providing informed consent. Most definitions of competence refer to decisional capacity or decision-making capacity, which is often understood as a cognitive or neuropsychological function (Eating and Thinking). The MacCAT (Grisso and Appelbaum 1998), a major competence assessment tool, also has a cognitive focus. The MacCAT was developed in the last century by Appelbaum and Grisso based on four criteria: understanding, appreciation, reasoning, and expressing a choice (Grisso and Appelbaum 1998). Most international authors and researchers in the field of competence mention these criteria, some in slightly different terms or with proposals for amendments. The MacCAT is a translation of the four criteria in specific questions for patients (Grisso and Appelbaum 1998). The feasibility, reliability, and validity were described in their 1997 paper (Appelbaum et al. 1997). The conclusion is that in cases where competence is doubted, the MacCAT can help. A cutoff score is not defined. The MacCAT should always be combined with clinical judgment.

Research shows that MacCAT outcomes do not always overlap with clinical judgment alone. Patients with dementia are more often assessed as incompetent with the MacCAT then with clinical judgment alone (Vollmann et al. 2003). For patients with anorexia nervosa, it is the other way around: the MacCAT gives higher scores on their competence than clinicians do (Tan et al. 2003).

Experiences of Patients with Coercion

Tan et al. explored patients' experiences with coercion (Tan et al. 2010). They interviewed young women with anorexia nervosa about their opinions regarding forced treatment. Other research had already shown that women, when treated, can agree that coercion was needed. Tan et al. add three important new insights. First, none of the interviewees disapproved of the use of coercion in life-threatening situations, for both themselves and others. Second, the use of formal coercive measures was not regarded as essentially different from informal urging or pressure. In contrast, the way in which treatment (either coercion or pressure) was provided appeared crucial. In case of a good relationship with the health-care professionals and parents and an experience of support and respect, coercion was not labeled as negative but as good care. Third, the women did not think that competence was an important subject. Again, not incompetence was a central criterion for them but their relationship with professionals and parents.

Most research and media attention on the subject of coercive measures in psychiatry is critical. Although coercion is not always perceived by patients as negative, and sometimes regarded as necessary, the way in which coercion is applied is often seen as problematic. Coercion is at odds with an attitude of consideration and mutual trust. These values, which are important in psychiatric care, are emphasized in virtue ethics. From this perspective, virtues like compassion and empathy are essential in good care. They also fit in the tradition of care ethics, in which good care is defined as engagement and involvement and in which relations are regarded as crucial, because people are dependent upon others to shape their lives.

Appreciation

The criteria of the MacCAT are not easy to define. The most difficult is appreciation. Appelbaum and Grisso (Appelbaum et al. 1997) distinguish between appreciation of disorder

(the patient acknowledges that he or she manifests the disclosed disorder and all or most of the disclosed symptoms or does not agree but offers reasons that are not delusions and have some reasonable explanation) and appreciation of treatment (the patient acknowledges at least some potential for the treatment and some benefit, and the reason for refusal is not based on delusions or serious distortion of reality, or the patient does not believe that the treatment has the potential to produce some benefit, but offers reasons that are not delusional and have some reasonable explanation). Both elements have to be present. This notion of appreciation is still highly debated.

Some argue that appreciation should be replaced by acceptance of the need for care, because the latter term is more apt in capturing that aspect of insight by which a person with psychotic and manic disorders may be rendered incapable of giving informed consent (Staden 2003).

A systematic review of the literature on the subject (Ruissen et al. 2012) found a strong correlation between competence and insight, with overlap in psychotic disorders. Psychotic patients with poor insight are very likely to be incompetent, and psychotic patients with adequate insight are generally competent. In nonpsychotic disorders, however, another relationship emerges. Competence and insight do not completely overlap in these patients. Most incompetent patients in this group have poor insight, but nonpsychotic patients with adequate insight were incompetent in a substantial number of cases, including anorexia nervosa. In sum, anorexia nervosa patients with adequate insight can be incompetent.

An Alternative to the Standard Approach: Emotions

Critics of the approach of Appelbaum and Grisso question the central role of cognitive capacities. Charland underlines the role of emotions (Charland 1998, 2006). In important decisions in life, such as marriage, career, and parenthood, emotions play an important role. The same goes for decisions in health care. Emotions are related to personal identity and embody practical rationality; these issues should get more attention in competence assessment (Berghmans and Widdershoven 2003).

A Value Approach

As an alternative to a cognitive and an emotional approach, a third approach can be found in the literature: the values approach (Tan et al. 2003, 2006). The authors interviewed women with anorexia nervosa and their mothers about competence to make treatment decisions. The women proved to be able to discuss their reasons and choices for dieting. They knew the main aspects and details about treatment and acknowledged the consequences of their behavior, even recognizing the possibility of severe physical complications and death.

The authors furthermore showed that for patients the value of "being thin" was most important in their lives, more important than friends, school, hobbies, and family. Some patients felt that anorexia was part of their identity. This suggests a fundamental shift in values due to the disease. The authors introduced the notion of "pathological values": non-authentic values, changed or induced by a psychiatric disorder with an addictive character (Tan et al. 2003, 2006, 2010).

The authors conclude that these patients are not compromised in their cognitive abilities, but they do have a distorted value pattern. When using standard cognitive criteria, the women can be considered competent to refuse treatment. They acknowledge their symptoms, disorder, and the benefits of treatment. Yet, they refuse treatment anyway. The authors conclude that cognitive criteria are not enough for this group of psychiatric patients, as the competence of these patients is not compromised because of cognitive problems but because of a shift in values (Tan et al. 2006). Other authors follow this line (Charland 2006; Vollmann et al. 2003).

Dealing with Values in the Physician-Patient Relationship

When values are seen as an important aspect of competence and certain values are regarded as being influenced by the disease and therefore not authentic, the question can be raised whether these values should be simply discarded or can be addressed in another way. Should patient values in such cases be regarded as irrelevant, or might it be possible to deal with problematic values in a different way? Here, the work of Emmanuel en Emmanuel (Emanuel and Emanuel 1992) on models of the physician-patient relationship can be helpful. Next to following patient values in the standard informed consent approach (the informative model), or leaving them aside and act in the best interest of the patient (the paternalist model), physicians can deal with patient values by helping patients to clarify their values (the interpretive model) or challenging them to reconsider their values (the deliberative model).

The interpretive model assumes that patients' values are important, but not always clear. The physician should clarify ambivalences and support patients to find out which values are most important for them. When a refusal is based on short-term values (e.g., avoiding a feeling of control loss), while long-term values (e.g., health) are not met, a doctor can help to appreciate these values together with the patient. This model will, however, not be very useful in patients with eating disorders. Patients with eating disorders often do not need a doctor to clarify their values. The anorexia patient who refuses treatment and states that being thin is the most important value in her life has evidently made up her mind already.

In the deliberative model, the physician not only supports the patient in expressing and interpreting his or her values but also stimulates the patient to critically consider these values. The model implies that values are not static but dynamic and can change over time and influenced by changing circumstances. It does intend not only to make explicit the values at stake but also to develop them. This implies that the patient with anorexia nervosa is challenged to reconsider the value of being thin and to come and see that other values are also important in life. A physician who, in line with the deliberative model, challenges the patient's values should be aware of his own values and take care not to impose them on the patient. He should also be aware that trying to change the patient's views may involve moral dilemmas. Is pressure justified, or should the physician refrain from such means? Moral case deliberation can help professionals to reflect on dilemmas (Weidema et al. 2013). By investigating one's own values, understanding the perspectives of others, and exchanging views in dialogue, participants in moral case deliberation can learn how to deal with moral dilemmas and further develop moral competence. Deliberation between professionals can thus create conditions for applying the deliberative model of the physician-patient relationship in a responsible way.

Regardless which perspective on competence one endorses, it is important to try and strengthen the patient's competence as far as possible. When this is not possible, coercion can be necessary to reinforce autonomy in the long run (Tan et al. 2010), as a last resort. It may not always be possible to prevent switching to the paternalistic model. The moral justification of coercion, however, will be stronger if attempts have been made to address the patient in line with the deliberative model and foster reflection on values and moral learning.

Summary

This entry deals with ethical issues in dealing with eating disorders, especially anorexia nervosa as the most well-known example. If physicians want to enforce treatment, they need to establish that the patient is incompetent. First the characteristics of anorexia nervosa are presented, including changes in body experience and image, and its treatment. After that, the standard approach to incompetence is explained, which focuses on cognitive abilities; we specifically

pay attention to the aspect of appreciation. Next, a critique on that approach is examined, in which the role of emotions is emphasized. Then, recent empirical ethical research is discussed, highlighting the importance of values in incompetence of anorexia patients. Finally, several ways of dealing with values in the context of the doctor-patient relationship are highlighted, including the contribution of moral case deliberation

Cross-References

- ▶ Ethics of Dietitians
- ▶ Feeding Children
- ▶ Gender Norms and Food Behavior
- ▶ Medicalization of Eating and Feeding
- ▶ Obesity and Consumer Choice

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Eating Disorders and Disturbed Eating

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Synonyms

Alimentary disturbances; Anorexia nervosa (AN); Binge-eating disorder (BED); Bulimia nervosa (BN); Compulsive eating; Eating disorders not otherwise specified (EDNOS); Purging

Introduction

Eating disorders are broadly defined as pathological or disturbed practices associated with food intake, weight management, and body image that

can cause significant psychological and physical harm. The American Psychiatric Association identifies four central categories of eating disorders – anorexia nervosa (AN), bulimia nervosa (BN), binge-eating disorder (BED), and eating disorders not otherwise specified (EDNOS) – while acknowledging symptom overlap across these categories (APA 2000). It is estimated that several million individuals (approximately 90 % female and 10 % male when eating disorders are considered as a whole) are suffering from one of these disorders at any given time across the world (with the preponderance of cases occurring in the West). These disorders have proven particularly difficult to treat given the complex interrelations among individual, family, and social contributing factors.

The major ethical dilemmas concerning eating disorders arise out of disputes as to the ontological (i.e., how to understand) and practical (i.e., how to treat) character of these illnesses. Considerable disagreement exists among treatment providers, caretakers, and scholars as to the origins and nature of eating disorders, as well as to the best treatment practices. As for the ontological character, there is disagreement as to the identification of these eating practices as pathological or disordered; whether the concept of addiction is useful or accurate in describing eating disorders; and to the degree of relatedness across the four categories as well as the emphasis placed upon AN at the expense of BN, BED, and EDNOS.

As for the practical character of eating disorders, there is disagreement about the importance of respecting a sufferer's stated desires (e.g., should a refusal of treatment be considered autonomous and/or competent), about the efficacy and value of force-feeding, and about whether and how treatment should incorporate analyses of various social oppressions. These ontological and practical matters are intertwined given that the understanding of eating disorders informs treatment practices and that treatment practices produce (or reproduce) particular understandings of these illnesses. The aim of distinguishing between the ontological-ethical link and the practical-ethical link, then, is to enhance clarity rather than to isolate these matters.

Understanding Eating Disorders

One of the central ethical issues concerning eating disorders is how to understand these illnesses, which have been variously identified as communicative practices, pathological or addictive behaviors, and indicators of broad social problems (Malson and Burns 2009). Judgments about the origins and meanings of eating disorders are ethical in nature because they shape treatment practices and attitudes toward sufferers and affect broader social views on food, weight, and bodies (Bordo 2004; Burns 2004).

Some have argued that eating disorders are communicative in nature – that the practices and harms associated with these illnesses are nonverbal messages in need of transcription (Bordo 2004; Burns 2004; Giordano 2007; Warin 2010). From this perspective, a main task of treatment providers is to understand the complex individual, familial, and social communications at work in eating disordered behavior. Often, though not necessarily, at odds with this view is the characterization of eating disorders as pathological.

The characterization of AN, BN, BED, and EDNOS as pathological behaviors, a characterization seemingly foundational to the very concept of eating disorders, has produced significant disagreement in the literature. The general argument in support of this characterization is that these practices are significantly distinct from average eating and food behaviors, that they produce psychological and physical harms that require medical attention, and that they can lead to death. The argument against this view emphasizes the negative outcomes associated with treatments based upon the pathological characterization. For example, researchers have demonstrated that the characterization of these practices as pathological produces a treatment context within which sufferers are disregarded, inhibiting the alleviation or transformation of their behaviors (Gremillion 2003; Warin 2010).

These disputes extend beyond semantic concerns; each side believes that the pathological characterization is a crucial factor in the establishment of treatment practices. Those in favor of

the characterization tend toward the belief that treatment should renormalize patients' eating practices while those against tend toward the belief that treatment should open up new possibilities for life satisfaction.

There is also disagreement as to whether eating disorders are addictions. Some theorists have drawn comparisons between substance abuse and eating disorders, suggesting that 12-step programs can provide important support for those hoping to recover from their eating disorders. Others have challenged the accuracy and efficacy of identifying eating disorders as addictions, arguing that this label covers over important communicative aspects of disturbed eating practices, therefore inhibiting transformative treatment (Giordano 2003).

Another disagreement pertains to the separation of these disturbances into the four categories discussed above. Even as the American Psychiatric Association, Academy for Eating Disorders, and the National Institute of Mental Health acknowledge significant overlap and movement between the categories of AN, BN, BED, and EDNOS, it is commonplace for these disorders to be discussed in the literature as disparate, if not discrete, illnesses (Stewart 2012). Beyond questions of the accuracy of isolating these interrelated eating practices are the ethical implications that arise when AN, BN, BED, and EDNOS are distinguished in this way. Scholars critical of these distinctions have argued that they produce a hierarchy wherein AN is taken to be the purist and most serious of the eating disorders by both eating disordered individuals and treatment providers (Burns 2004; Malson and Burns 2009).

The tendency to separate and rank eating disorders also arises in treatment responses, e.g., researchers have noted the frequency with which treatment providers prefer and cater to the needs of the non-purging anorexic while characterizing sufferers of BN, BED, and EDNOS as having less self-control and as being more troublesome in treatment (Burns 2004). In addition, theorists who focus upon anorexia have been challenged for confusing that which is particular to AN with eating disorders in general (e.g., for employing the language of "anorexia" and "eating disorders" interchangeably even when their remarks pertain exclusively to AN) and for misrepresenting the fact that AN is the least common of all the eating disorders (Malson and Burns 2009). Given this, contemporary theorists have argued in favor of deconstructing the conceptualization of, particularly, AN and BN as distinct disorders, preferring an account that attends to their interrelations (Burns 2004; Stewart 2012).

Force-Feeding and Anorexia Nervosa

Critics of the separation and ranking of eating disorders have noted that the emphasis on non-bingeing AN also manifests in the medical ethics literature on these illnesses. For example, the central ethical question taken up by theorists of medical ethics in regard to eating disorders is whether it is morally acceptable or justified to employ a nasogastric tube to feed an anorexic against her wishes (Draper 2000; Giordano 2003; Giordano 2007). However, while the question of whether to force-feed is most relevant for sufferers of AN, it is additionally relevant for cases of BED, BN, and EDNOS given the frequency with which questions about compulsory treatment (other than force-feeding) arise with these patients (Draper 2000).

Compulsory treatment most typically aims at increasing a patient's weight, with measures including increased supervision (e.g., to prevent purging and exercising, to enforce bed rest, to ensure food consumption) or the introduction of a nasogastric feeding device (Tan et al. 2007). In the medical ethics literature, it is generally accepted that compulsory treatment can be justified only in the absence of a competent refusal. According to this standard, a patient's decision to refuse life-saving treatment is arguably competent even when it is at odds with a rational or reasonable decision (Draper 2000; Tan et al. 2007).

In terms of the eating disordered population, several factors complicate the determination of a patient's competency to refuse treatment (Draper 2000). For example, many eating disordered patients are minors whose parents are given

the authority to make treatment decisions for them; eating disorders are considered mental illnesses, thus limiting patients' abilities to successfully argue their competency (at least in certain localities); doctors have been able to successfully argue that extremely low body weights significantly compromise patients' abilities to make competent decisions; and treatment providers have argued successfully in court that the idée fixe of eating disorders (i.e., the fear of fat) is at odds with any competent refusal of life-saving treatment (Draper 2000; Giordano 2003).

On the one hand, many proponents of force-feeding and other compulsory treatments argue that both autonomy and competency are utterly at odds with a diagnosis of anorexia. The basic position is that one has been taken over by her eating disorder and is, therefore, neither autonomous nor competent to make decisions regarding her food intake. Proponents of compulsory treatment argue that AN significantly inhibits an individual's ability to link up her refusal to eat and her fear of weight gain with the likelihood of her death, that it inhibits her capacity to be rational about her ability to recover, and that there are pathological values at work in AN that undermine her competency (Tan et al. 2007).

On the other hand, opponents of force-feeding highlight the lack of efficacy of such treatments (e.g., that long-term recovery rates for individuals who are force fed are worse than those who were not) and point out that there is a small, but significant number of cases in which an individual with AN is legally and ethically competent to determine that her quality of life is so poor as to be no longer worth living (Draper 2000). From this position, the force-feeding of an anorexic patient is at odds with generally accepted ethical principles such as autonomy and competency, meaning that even if a patient will die without a nasogastric tube, his or her wishes should be respected.

This argument against force-feeding has been met with a great deal of resistance, particularly because of the fact that AN is not considered to be a terminal or untreatable illness. Proponents of compulsory treatment have argued that it is unacceptable to allow a patient to die from an illness that, though difficult to treat, need not result in her death (Giordano 2003). Other researchers have criticized the very use of the frame of competency in eating disorder cases, noting that it fails to take into account the significant differences between these illnesses and the typical cases in which this frame is used. This position most frequently entails the argument that the particularities of eating disorders (e.g., the negative effects these illnesses have on thought processes) require treatment providers to consider the best interests of the patient and the welfare of the family when making treatment decisions (Giordano 2003).

Feminist Responses to Eating Disorders

Given that the preponderance of eating disorder patients are female as well as that gendered norms concerning food intake, weight, and appearance are central factors in eating disordered practices, feminist theorists have consistently argued that these illnesses are associated with Western femininity. Since the 1970s, feminist theorists have challenged mainstream responses to eating disorders – i.e., those employed in large-scale treatment centers, hospitals, psychiatric wards, and psychological practices. This scholarship connects social and political analysis with ethical theory expanding the interpretive frame and practical considerations found in the medical ethics literature. Feminist theorists have variously addressed the social norms and institutions that contribute to the development of eating disorders, the manners in which treatment practices reproduce these same norms and institutions, the lack of consideration of what eating disordered patients have to say about their illnesses, the tendency of treatment providers to blame mothers for eating disorders, and the role of the media in the illnesses (Bordo 2004; Malson and Burns 2009).

More generally, it has been noted that this scholarship emphasizes the historical quality of eating disorders – that these are modern illnesses linked up with global development, an increasing technological presence (particularly in relation to media), and changing expectations concerning

women's social roles and femininity (Bordo 2004; Giordano 2007). These considerations expand upon the medical ethics literature in that they incorporate social analyses into the understanding of eating disorders and demonstrate their relationship to gender oppression (LaVaque-Manty 2001). From this perspective, eating disorders are understood to arise out of a complex interaction of individual psychological and physiological factors with oppressive social norms governing femininity, food, weight, and sexuality. Such considerations produce ethical accounts wherein a significant aim of treatment practices is to open up space to undermine and transform the effects of these negative social norms such that patients can be more free to construct a life beyond their eating disorder.

The cultural approach to eating disorders challenges the tendency of treatment providers to identify individual and family psychopathologies as the causal factors in these illnesses (Malson 1998; Bordo 2004). For example, Susan Bordo, one of the most well-known feminist scholars on eating disorders, argues that these illnesses represent what is wrong with society: they are, as she remarks, the crystallization of a pathological culture (Bordo 2004). In this view, eating disorders are the extreme result of problematic and contradictory norms surrounding gender that affect all Western women's attitudes on food, eating, and body image. Her theoretical approach, which has been both widely adopted and criticized, seeks to disrupt the view that it is the eating disordered patient who is pathological, to demonstrate that cultural dynamics are the primary producers of these disorders, and to demonstrate that eating disorders are an extreme form of otherwise common Western female eating and food practices.

Similarly to Bordo's claim that eating disorders are on a continuum with other contemporary feminine eating practices, researchers have argued that these illnesses communicate something about Western culture and norms of femininity more generally (Malson 1998). According to this view, it is more valuable to analyze and deconstruct the social norms that constitute Western views on femininity and weight rather than to search for individual pathological explanations for eating disorders. For example, one of the central techniques employed by theorists of the cultural approach entails media analysis, which aims to uncover the pressure Western women feel to be thin, pure, and free of fat and to connect this pressure to the increasing rates of eating disorders.

Proponents of this view suggest that cultural analysis is necessary for an accurate understanding of these illnesses. For example, some scholars have argued that practices common in mainstream treatment facilities reproduce naturalized accounts of fitness, good mothering, and health, covering over the contentious histories of these ideals of well-being and, moreover, re-instilling these ideals into the patient, family, and staff as if they were eternal. The focus on individuals and families fails, according to this view, to interrogate cultural norms shaping women's attitudes and practices surrounding food, weight, bodies, and individuality itself. Alternatively, these theorists argue for treatment practices that uncover and challenge gender oppression, while opening up space for the individual to develop new relations to her body, food, and eating such that she can disrupt the effects of these norms.

Although feminists on average have regarded the cultural approach to eating disorders as an improvement over mainstream treatment responses to these illnesses, there are disagreements as to the value of this approach for helping patients recover. For example, critics of the cultural approach note that while this view helps to identify the role of oppressive norms surrounding bodies, weight, and food intake (especially as they construct Western femininity), it fails to address the actual transformation of eating disordered practices. Among critics of the cultural approach, one set of theorists have argued that there needs to be greater consideration of the embodied or experiential nature of eating disorders in order to improve treatment outcomes (Malson and Burns 2009). These theorists claim that the proponents of the cultural approach fail to disrupt the individual/social divide they identify in mainstream analysis of eating disorders and merely shift from pathologizing individuals to

pathologizing culture. They challenge that there are serious ethical implications for ignoring what sufferers have to say about their conditions (i.e., that eating disorders have something important to say about both the world and the individual). At issue here, then, is the degree to which sufferers' experiences provide necessary information as to how to best treat eating disorders.

Accordingly, critics of the cultural approach have argued that analyses of cultural contributing factors need to be paired with analysis of the bodily components of eating disorders. For example, Burns asks us to consider the value of understanding eating disorders as habitual practices – as bodily activities in the world shaped by (but not determined by) the cultural scripts that serve as the object of analysis for the cultural model (Malson and Burns 2009). Where the cultural approach focuses upon broad social norms and media images, researchers who take up a more embodied and experiential view on eating disorders consider the ways in which individuals create meaning through their eating practices.

In a related view, scholars working in fields such as anthropology, sociology, and philosophy have adopted a feminist phenomenological approach to understanding and treating eating disorders (Warin 2010). Phenomenological description and analysis is said to open up space for considering the highly particular communications that constitute eating disorders within a broader social analysis of the meanings of femininity, weight, and food. The phenomenological approach entails detailed interviews of individuals with eating disorders and fieldwork at treatment centers with an aim of uncovering the hidden messages at work in both eating disordered practices and treatment modalities. These techniques create an opportunity for thinking about eating disordered behavior as a way of being in the world, where the individual's behavior is a unique yet meaningful response to her social possibilities.

Proponents of the phenomenological approach to eating disorders argue that they can help to establish or reestablish a patient's desire for the future by locating the transformative possibilities entailed in eating disordered behavior (i.e., by hearing what these practices have to say about the patient's world). The ethical quality of the phenomenological approach is found in its techniques that function to disrupt and transform disturbed eating practices without insisting upon a pathological reading of these same practices.

Despite the differences between the cultural and phenomenological approaches, both aim at expanding mainstream responses to eating disorders by incorporating an understanding of the interrelations between these illnesses and norms of Western femininity. However, it has been argued that theorists from both camps fail to interrogate these norms deeply enough (Malson and Burns 2009). As well, it has been argued that feminist theorists (as well as more mainstream treatment providers) unintentionally reproduce problematic norms about weight, bodies, and femininity in their work on eating disorders (Witt 1994). For example, scholars have argued that there are significant misconceptions about eating disorders in terms of who suffers from these illnesses as well as why individuals take up eating disordered practices (Witt 1994; Burns 2004; Saukko 2008; Warin 2010).

Misconceptions About Sufferers

Early scholarship on eating disorders tended to argue that sufferers were almost exclusively white women from well-to-do families who suffered from anorexia (Witt 1994; Gremillion 2003; Bordo 2004; Burns 2004). As research progressed, it became clear that there was much more diversity in the population of eating disordered patients – e.g., sufferers come from a variety of racial, ethnic, and socioeconomic backgrounds, at least 10 % of this population is male, and anorexia is actually the least common eating disorder. The ethical implications of these misconceptions are that they produce treatment practices that are ineffective in managing or transforming eating disordered practices for large numbers of patients (Burns 2004; Malson and Burns 2009).

For example, scholars have argued that racist and classist assumptions produced both

misconceptions about who suffers from eating disorders and harmful treatment contexts for individuals who did not fit within these misconceptions (Witt 1994; Gremillion 2003). Particularly, it has been argued that women of color face significant hurdles in receiving effective treatment given faulty beliefs that communities of color are immune to societal pressures to be thin, lack of research into differences in access to and trust in mental health providers across communities, and prejudices among providers who perceive treatment resistance as fruitful in white patients and disruptive in patients of color (Witt 1994; Gremillion 2003; Bordo 2004). As well, Gremillion has shown that women of color in treatment facilities are frequently silenced, prevented from resisting treatment modalities, and threatened with a variety of punishments if they fail to comply with expectations (Gremillion 2003).

Another misconception about sufferers that has received attention in the ethical literature pertains to the role of thinness in eating disorders. While the majority of research on these illnesses emphasizes the fear of fat (e.g., getting fat, eating fat, feeling fat) and the desire to be thinner, certain scholars have begun to challenge the accuracy and effectiveness of identifying thinness as the core aim or meaning of disturbed eating practices (Burns 2004; Saukko 2008; Warin 2010). The argument is that a focus on the fear of fat and the desire to be thin inhibits a broader (and arguably more accurate) understanding of the eating disorders. For example, empirical data demonstrates that most bulimics are of average weight, the umbrella term of eating disorders includes binge eaters who do not purge, and a sizable portion of individuals with eating disorders shift back and forth among the four categories of AN, BN, BED, and EDNOS (Burns 2004; Malson and Burns 2009; Stewart 2012).

Critics of this view argue that it fails to interrogate the fear of fat in order to uncover its meanings and motivations so that the reasons that sufferers focus upon thinness (when they do) go unremarked (Burns 2004; Warin 2010). Additionally, these critics claim that the focus on thinness in the literature tends to characterize eating disordered patients as extremely pathological in relation to "normal" women (given that most Western women are exposed to the same pressures to be thin). For example, Saukko argues that the claim that anorexia is about thinness casts the anorexic as a cultural dupe who is not strong enough to resist social pressure to be thin (Saukko 2008).

Others have challenged that the obsession with the "spectacle of thinness" (e.g., the use of imagery of highly emaciated women to engage and horrify the audience) manifests and reproduces the fear of fat it is meant to describe (Warin 2010). The focus on thinness has also been challenged given cultural associations of well-off white women with anorexia and women of color and economically disadvantaged women with BN and BED (Burns 2004). As well, Burns notes that the moral repugnance at overweight and obese bodies and the moral concern for underweight and anorexic bodies at the center of the spectacle of thinness reproduce oppressive norms on weight and food intake (Burns 2004).

In response to the criticism that eating disorders research is troubled by these various misconceptions, treatment providers and scholars have expanded their research in order to adequately consider the ways in which one's location in various social categories (including eating disorder categories) shapes the experience of these illnesses (Malson and Burns 2009).

Summary

In summary, there is significant disagreement among treatment providers, medical ethicists, and feminist scholars about how to understand and treat eating disorders. These disagreements are unsurprising given the number of individuals suffering from eating disorders, the severity of associated psychological and physical health problems, and the difficulties encountered in their treatment. The long-term ethical implications of these disagreements are as yet unclear – it may well prove to be the case that a variety of distinct understandings and treatment practices are necessary for the effective treatment of eating disorders.

Cross-References

- ▶ Alimentary Delinquency
- ▶ Food Addiction
- ▶ Food-Body Relationship
- ▶ Medicalization of Eating and Feeding
- ▶ Race, Racial Identity, and Eating

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Eating Etiquette

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Synonyms

Civility; Courtesy; Customs; Decorum; Deportment; Good behavior; Manners; Politeness; Politesse; Propriety; Social graces

Introduction

Dining etiquette is an elastic term whose definition varies drastically across space and time. There has never been, nor could there be, a universal and precise code of manners, and eating behaviors have developed over time according to codes of conduct and idealized styles of comportment within and across cultures. The act of dining occupies a somewhat ambiguous position in the realm of human behavior: eating is a fundamentally corporal activity, and of the several fundamental bodily functions, it is the only one that is carried out primarily in the company of others, including strangers. Due to its status as both an unavoidably carnal and deeply social activity, dining has developed complex codes of etiquette that attempt to convert the nutritional act of eating into an expression of social status and cultural facility.

Table manners are key indicators of cultural identity. Travelers to foreign countries often find themselves adrift among new foods, new cutlery, and new ways of eating. Even the etiquette rituals associated with dining that occur away from the table differ from community to community. In Korea, for example, it is impolite not to refuse a dinner invitation at least several times before attending, while in America a refusal is taken at face value (Kim 1986). Due to perceived notions of tact, British diners refrain from commenting on their food, while for the same reason, Japanese banqueters make a point of vocalizing their praise

of the food at the table to signify appreciation (Visser 1991). The perpetual specificity in eating behavior leads to strong divisions between cultural groups. "Social norms such as table manners are rules and standards imposed by members of a social group," write anthropologists Joly et al. (2008). Manners constitute an unspoken social code at the table, and those whose comportments do not fit the circumstances will find themselves excluded from the in-group at the table.

Eating behavior is contingent upon any number of circumstantial factors: location, company, time of day, occasion, and type of foods eaten, to name a few. This entry will trace the evolution of table manners in the western world in chronological order by focusing on several influential people and publications that helped shape current fashion. The ultimate goal of manners is to ritualize or otherwise mediate the process of consumption. An established eating ritual prevents the unexpected, identifies the diner, and provides a model of conventional behavior. During the course of history, humans have regarded etiquette variously as indicative of morals, social behavior, or class background. The ethics of etiquette center on matters of self-governance: Is it possible to bring the natural function of eating under control to make it acceptable to others? If there is no attempt to observe the ritual of manners, then is does that insult those who witness it or those who have chosen to abandon etiquette? Ethics are defined as a group of moral principles that govern the behavior of an individual or group. When dining etiquette is breached, those principles are challenged.

Antiquity

Table manners almost certainly have existed since the first humans gathered together to eat. After making a kill, hunters would have needed to decide how to divide the animal and perhaps even who would get to enjoy the honor of the best portions. The earliest written records describing banquet rituals date back to the third millennium in Sumer and the second millennium in Syria and Mesopotamia (Flandrin 1999). In the Old Kingdom of ancient Egypt, circa 2500 B.C.E., manuals detailed instructions how to sit, what utensils to use, and how to set the table. Many of these rituals were rooted in religion, and the combination of food and prayer engendered customs that mediated the gap between the physical and the spiritual, many of which persist today.

Diners can display a lack of manners and, therefore, culture; or diners can display too much culture, becoming mannered – embodying culture to such an extent that they become overcivilized. In the classical world, manners and politesse were etymologically connected. The term "polite" shares a root with the Greek *polis*, or city. In Latin, the word *civis*, which underlies civil and citizen, is defined as a dweller in cities. With cities came civilization: the pressures of proximal living in an urban environment create the proliferation of food choices. No longer is the domestic table the only source of food. When meals are taken outside the private sphere, manners govern the change from a private feeding process to a socially acceptable act.

Medieval Through Early Modern

During the Middle Ages, dining implements evolved slowly. The most famous example of this can be found in the history of the fork, which existed as a bi-pronged instrument used to hold meat in place while it was cut. In the eleventh century, a Greek princess in Venice was lambasted by Italian clerics for her use of the fork, which they claimed was entirely too fussy and sensual, proving inappropriate for a woman of her status. Most Europeans held food in place with their hands while cutting and brought food to their mouths by spearing it on the tip of the knife. Soup spoons were flat and circular until the fourteenth century when they grew concave and oval, while plates were more often trenchers (from the French *trancher*, to slice), pieces of flat bread or wood that protected the table from sauces and knife marks (Elias 1978).

A German lyric poet named Tannhäuser wrote the *Hofzucht*, a book of etiquette rules, in the mid-thirteenth century. Included in this treatise

are many explicit instructions regarding the dinner table, many of which may seem unnecessary to modern diners. The *Hofzucht* specifies that gnawed bones should not be returned to the communal dish, that one should wash one's hands before eating, and that one should always eat with the outside hand to avoid elbow jostling. Even the highest nobles ate with their hands through the sixteenth century, meaning that the prescribed conduct for finger etiquette was equally as strict as it would be later for the fork. During the 1200s, the Italian Bonvicino da Riva wrote *Fifty Courtesies of the Table*, which instructed readers not to finger the rim of the communal glass, nor to spit on the table – only expectoration under the table or against a wall was acceptable.

The Renaissance is notable for both its surge of writers interested in civility and its relative openness about bodily functions. In 1530, the Dutch humanist Erasmus published *De Civilitate Morum Puerilium*, commonly translated as "On Civility in Boys." Considered to be one of the most influential Western treatises on manners for children, Erasmus' work instructs the sons of noblemen on how to live a moral life (Leece 2011). Notable here is the link Erasmus traces between manners and morality: issues of ethical conduct extend to issues of social conduct in his treatise. Erasmus advises not to dip fingers in the broth and not to offer half-eaten food to a neighbor, and he warns that if there is a piece of food that cannot be swallowed, one should turn around discreetly and throw it somewhere. To act badly at the table reveals a lack of discipline and respect. However, Erasmus's code of conduct is not so strict that he privileges conduct over health. He writes, "Fools who value civility more than health repress natural sounds" (Erasmus 1961). *De Civilitate* was translated over 20 times and became popular not only with the noble class, but with a much larger audience: the upwardly mobile merchant class that was rapidly gaining power and wealth during the early Renaissance.

In 1558, Giovanni della Casa wrote *Galateo: Or, a Treatise on Politeness and Delicacy of Manners*. Giovanni writes that spitting and coughing in company, "as some hearty fellows are apt to do," is extremely indecent (Casa 1774). The *Galateo* also instructs people not to gape while at the table, sniff the dishes, nor offer anybody food that has already been bitten into. Notable is the change in behavior: for thirteenth century da Riva, spitting on the table is to be avoided; for della Casa some three centuries later, spitting anywhere in public is entirely prohibited. In another three centuries during the high Victorian period, spitting at the table was so uncouth it was not even mentioned as a potential faux pas. Other manners exhibit the same progression: what is censored in one century is forbidden in the next, and unmentionable by the "civilizing process" of several hundred years.

Seventeenth to Eighteenth Century

Despite Erasmus' notion that a man's character is revealed by his habits, it took nearly 100 years for manners to become a central part of how men were judged. Not until the seventeenth century did manners become the focal point of identification, when an increasingly stratified society sought to bring all human behavior under social control (Elias 1978). However, while this code of social protocol expanded in significance, it lost the moral aspect that Erasmus had considered the root of all conduct. With the centralization of royal courts in France, England, and Spain came the intensification of haute cuisine and the obsession with how to eat: the fork, which Queen Elizabeth I and her court eschewed, had numerous incarnations in the Jacobean court.

And significantly, during the seventeenth century, Europe received an influx of new foods from the Americas, Africa, and the Far East. Partaking of tea, tobacco, and coffee became a social activity, and coffeehouses proliferated as public spaces for discussion and digestion. Pamphlets were published, such as *The Rules and Orders of the Coffee-House*, published in 1674, illustrating codes of conduct for proper behavior. The coffeehouse was a space where men of a certain social standing could congregate, and so rules developed, creating hierarchies in seating placement and serving order.

Nineteenth Century

During the nineteenth century, the code of manners in the West reached an apex of complexity. The circulation of newspapers in the eighteenth century led to a rise in published manuals of all sorts in the nineteenth century, and etiquette guides proved particularly popular. The cookbooks and dining guides of the previous centuries, from Gervase Markham's *The English Huswife* (1615) to Elizabeth Raffald's *The Experienced English Housekeeper* (1769), assumed that their audience was, indeed, experienced. Cooking directions instruct the housewife who is familiar with the farm: "When you have killed and drawn your ducks," begins a late eighteenth-century recipe for roast duck (Raffald 1775). Behavior at the table was similarly assumed, and the occasional manners guide published in this period more often lists behaviors to avoid than rituals to follow. A new, well-educated middle class was forming, and the increasingly literate population could now learn how the elite behaved. There was no overruling opinion on conduct, however, and many dining practices remained regional.

During the nineteenth century, cookbooks became much more prescriptive. The average housewife was assumed not to know what to serve for dinner or even how to serve it. *Mrs. Beeton's Book of Household Management*, first published in 1861 by Mr. Beeton's publishing firm, consisted of over 1,000 pages and proved to be very influential in Great Britain, selling over two million copies in its first 7 years. Written for middle-class housewives, *Mrs. Beeton's* presupposes the presence of multiple servants at dinner and outlines the rules for a very formal and ritualized dinner. The butler, for example, brings in the first dish to dinner, removes the covers of the dishes, and handles wine throughout the meal, while the footman's duty is to assist him. Five to six plates per diner are used during dinner, and silverware is to be switched out after each course. Each cover is to be set:

> . . .a knife on the right side of each plate, a fork on the left, and a carving-knife and fork at the top and bottom of the table, outside the others, with the rests opposite to them, and a gravy-spoon beside the knife. The fish-slice should be at the top, where the lady of the house, with the assistance of the gentleman next to her, divides the fish, and the soup-ladle at the bottom: it is sometimes usual to add a dessert-knife and fork; at the same time, on the right side also of each plate, put a wine-glass for as many kinds of wine as it is intended to hand round, and a finger-glass or glass-cooler about four inches from the edge. (BEETON 1994).

While these handbooks portrayed a lifestyle of unattainable wealth for its middle-class audience, Victorian readers internalized the ideal of incredible self-control and restraint at the table. Victorians experienced what Natalie Kapetanios Meir calls "a heightened regulation of individual behavior," resulting in a suppression of all unbecoming bodily whims (Meir 2005). Despite these rules and regulations, manners were meant to be an extension of natural behavior: facile in expression and effortless in execution. As the etiquette of the time dictated such artifice in disguise of artlessness, the consequences of failing to follow etiquette rituals had ethical implications. Manners were crucial to social interaction, and a false step or flagrant disregard of the social code meant that the erring party was challenging the moral principles that governed the social collective.

With the rise in the importance of dining etiquette came an incredible diversification of dining utensils. Each implement became customized for a particular food: there was the silver fish fork, the elongated lemon fork, the bacon fork, the toast fork, the sardine fork, the joint fork, the baked potato fork, and the spork-like ice cream fork (Harlowe-Powell Auction Gallery). Similarly, each dish received a custom-made receptacle: gone was the bread trencher that was tossed or eaten after each meal. Instead, Victorian households accumulated bread plates, salad plates, soup bowls, and variously shaped wine glasses in place of the communal tankard. Adding to the confusion was a new trend of dining known as *service à la russe*, where dishes were brought in a succession of courses to the sideboard, where they were portioned and served hot. This trend, adopted in Paris in the 1830s and spread elsewhere, replaced the old European model called

service à la française, where multiple plates were brought out at once to crowd the table and provide an image of plenty. In addition to, or perhaps because of, an increasingly diversified table, the Victorians created a code of manners so elaborate that a person's class, age, and nationality could be determined by the way he took tea.

Twentieth Century

The Victorian style of dining fell out of fashion as the pace of modern life quickened and an elaborate table and service began to seem cluttered and affected. Manner books, however, continued to exert influence over the dining public. Emily Post published her tome titled *Etiquette in Society, in Business, in Politics, and at Home* in 1922, which quickly became a best seller. The differences between Mrs. Beeton's and Emily Post's instructions reflect the changes in mannered society within the span of 60 years. The two books overlap in scope: while *Mrs. Beeton's Book of Household Management* provides nearly a thousand recipes, instructions for servants, and models of comportment, Emily Post's *Etiquette* focuses almost exclusively on behavior. The cook and head servants are expected to devise the menu so that the lady of the house need not bother with actual methods of cooking. While Post's intricate hierarchy of manners may strike modern readers as distinctly Victorian, Post directly addresses and updates the outmoded fashions Beeton champions.

By the early 1900s, the dinner table had lost its large and elaborate centerpieces. The prevailing style now involved a pristine white tablecloth, polished silver, simple fresh flowers, and candles for pleasant lighting. Yet, while Emily Post criticized the Victorian penchant for accumulation, her fork recommendations are even more precise than those from Mrs. Beeton:

> Then on the left of each plate, handle towards the edge of the table, and prongs up, is put the salad fork, the meat fork is put next, and then the fish fork. The salad fork, which will usually be the third used, is thus laid nearest to the plate. If there is an entrée, the fork for this course is left to be brought in later. On the right side of the plate, and nearest to it, is put the steel meat knife, then the silver fish knife, the edge of each toward the plate. Then the soup spoon and the oyster fork or grape fruit spoon. Additional forks and knives are put on the table during dinner. (POST 1922)

Post describes a method of eating she calls zigzag dining, in which food is cut with the fork in the left hand and the knife in the right, but the fork is switched to the right hand to bring food to the mouth. This style of dining originated in Paris during the eighteenth century, but eventually went out of fashion in Europe (Elias 1978). Why Americans continue to zigzag even today is unclear: possibly because the fork itself had caught on late in America and diners were not comfortable using the left hand to bring food to the mouth. Or, it is possible that the Parisian trend was greeted in eighteenth-century America with such enthusiasm that the zigzag way of eating became solidly entrenched in culture.

The nineteenth-century French practice of dining in quick courses *à la russe* gained popularity in Europe and America, but ensuring that the entire table was served simultaneously required many servants. Emily Post writes that during "Russian" service, plates are to be cleared when an individual is finished to minimize the number of dirty dishes on the table at any time. Service *à la russe* prevented dishes from cooling and congealing at the table, which was quite unavoidable during a banquet-style *service à la française*. In *Etiquette*, Post adds a recommendation that butlers place a folded napkin between the palm and the plate if a dish is too hot to handle because the convergence of an entrenched silverware habit and service *à la russe* allowed food to be kept at higher temperatures when served (Post 1922). Hot food gradually became desired and expected, as heat represented freshness and exhibited the kitchen's skill in timing.

With a more efficient table service than the Victorians, formal dining in the twentieth century remained a highly ritualized performance, often lasting hours. *Etiquette* contains entries instructing how to sit gracefully, how to enter a drawing room, and how to divide one's

attentions at a dinner party. A hostess was expected to "turn the table" after the second course, meaning that she turn and begin a conversation with the man on her left. At that moment, all guests were expected to end their conversations and begin anew with the guest to the left. Such strict rules for entertainment seem essentially Victorian; clearly, ideals of social self-regulation carried through the turn of the century. Not surprisingly, Post likens hosting a dinner party to swimming three miles out to sea – not for the inexperienced hostess.

Contemporary Manners

Emily Post died in 1960, at a time when America was undergoing a cultural revolution. Championing equal rights among races, classes, and genders, the Civil Rights movement attacked many preexisting standards of etiquette as snobbish, exclusionist, and unnatural. In reaction to the proper behavior of the previous generation, Americans developed new ways of speaking, dressing, and behaving. The hippie movement rejected the accumulation of material possessions and focused on naturalistic eating. Women were moving into the professional workplace, and Emily Post's labor-intensive dinner party became representative of the sexist, binding expectations of an unenlightened society. Packaged foods presented efficient alternatives to cooking from scratch, and efficiency in the kitchen became more important than perhaps even the final result.

During the second half of the twentieth century, the exploration of ethnic foods and foreign ways of eating came into vogue. Members of the upwardly mobile classes learned how to eat with chopsticks or even with their hands, as various cuisines from around the world were "discovered." European mannerisms were rejected as old-fashioned, and fully American methods of consumption (e.g., burgers, fries, and pizza eaten out of hand) were embraced as patriotic and unencumbered of pretension.

In response to this challenge to "civilized manners," many critics bemoaned the modern American's lack of tact; a code of enforced casualness creates the opportunity for rude and crude behavior, and lax table manners invite relapses into "barbarianism." Judith Martin, known as Miss Manners, began an advice column in 1978 that gives wry advice to inquiring readers. The premise of her column is anachronistic: etiquette counsel for a modern and unmannered audience, but Martin's ironic voice and authoritative good taste made her column indispensable. Published in over 200 newspapers worldwide, her column uses a question and answer format where readers could write in and ask questions ranging from wedding and funeral behavior to how to raise children. Compared with her predecessors, Miss Manners is notable for her sarcastic writing style, which through its formality and third person narrative pokes fun at being proper while at the same time extolling good etiquette as necessary for civilized behavior. While manners are proper, they are not viewed with the same moral weight as they were in the fifteenth and nineteenth centuries. Instead, manners in the twenty-first century indicate less the ethical standards of a person and more about his or her class and nationality. The way someone behaves at the table indicates upbringing, not the moral state of the soul.

The state of manners in the twenty-first century is far less complex than it was even 100 years ago; nevertheless, in this digital age of universal exposure, new codes of conduct are abundant. During Medieval and Renaissance court banquets, the diners sat only on one side of the table, both to watch the entertainment and to be watched as entertainment (Elias 1978). In restaurants and households in the twenty-first century, we labor to create the illusion of privacy, but social media have prevented most gatherings from being truly private. There are codes of conduct about the use of smart phones at the table, but as with any new element, these codes are variable and constantly in flux. Screens at the table and around the table have modified eating habits, and diners must now navigate between the virtual and the actual.

The proliferation and popularity of diverse ethnic cuisines has vastly improved the palate of the average American, and facility in several

cultural modes of eating is now expected. Diners who claim to be cultured are expected to manipulate chopsticks with ease, to know how to roll a taco, and to apply *injera* to a dish with only the right hand. It is true that enforced casualness in dining can lead to rude behavior, but with each development in restaurant form and function, a new type of etiquette develops.

Some mannerisms, such as the American zigzag switch of the fork, are declining in popularity. Other traditions, such as formal dinner invitations, are seeing revitalized practice in an online format. With the "foodie" movement in the early 2000s, dinner parties are once again becoming increasingly elaborate, sans their former elaborate behavioral customs. Modern Americans in particular are very attentive to food authenticity and temperature (water must be iced, dishes should be still sizzling), but formal gatherings lack the structured behavior that characterized Victorian and early twentieth-century parties.

Summary

This entry traces some of the ways in which dining etiquette has evolved in the west from antiquity to the modern era. As dining etiquette evolves, it is instructive to watch how certain behaviors are tolerated, restricted, banned, and finally considered unthinkable. In addition, within the past century many preexisting rituals such as the butler announcing guests or the hostess turning the table have entirely disappeared. It remains to be seen how manners will develop to appropriately encompass the ever-quickening pace of living and eating. Already, unspoken codes of conduct have sprung up around eating on the go: eating in some forms of public transportation (e.g., busses) is frowned upon in many cities and outlawed in others, while coffee is assumed to be "to go" unless specified otherwise. Some restaurants of high repute have banned food photography claiming it ruins the dining atmosphere, while others rely on crowd-sourced reviews for publicity. While it is difficult to predict the future of manners, it is certain that several hundred years from now, table manners in the twenty-first century will be used as both a positive and negative example of the beauties and idiosyncrasies of our era.

Cross-References

- ▶ Culinary Cosmopolitanism
- ▶ Food and Class
- ▶ Food Rituals

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Eating Invasive Species

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Synonyms

Gastronomical management; Invasive species management; Invasivorism; The invasivore movement

Introduction

While species have historically been introduced to new areas of the world in order to be used as food sources, many species are now being viewed as food sources subsequent to having been seen as invasive to an ecosystem. One management strategy is to encourage people to eat them. There are, however, also a number of economic, health, and legal concerns associated with eating invasive species.

Overview of Invasive Species Management

There are a number of conceptual issues regarding the criteria for determining invasiveness and nativity, as well as for ascribing terms such as "invasive," "exotic," "native," and "nonnative" to members of particular species. Although agreement over definitions for these terms is not settled, invasive species are generally taken to be nonnative species that have detrimental effects on ecosystems and/or economies (Marks and Natural Resources Conservation Service 2006). There is continued debate over whether native species can become invasive if they exhibit certain destructive tendencies, as well as questions regarding how long a species must be in a certain location before it should be considered native, and even the adequacy of labels such as "invasive" (Tuminello).

In 2000, it was estimated that the United States alone spends about $137 billion in annual costs due to damages from and control of invasive species. Invasive species are estimated to cause about $400 billion in annual damages worldwide (Pimentel et al. 2000; Kirby 2003). While the introduction of nonnative species (which can subsequently become invasive) can occur due to "natural" means, human activity (largely due to travel and mobility) is the major cause of such introductions (Cox 1999). A variety of control methods are used as forms of invasive species management with the major categories consisting of chemical application, mechanical (or physical) removal, and biological control, which relies on the natural predators of invasives (Simberloff 2001).

Introduction of Nonnative Species as Food Sources

Human consumption of nonnative species has a very long history. Many of the historical introductions of both plant and animal species have been tied to their use as sources of food. In fact, 98 % of the US food system is constituted by nonnative species, such as corn, wheat, rice, cattle, and poultry (Pimentel et al. 2000). The introduction of mammal species to provide food for humans in Europe has been important since at least the eighteenth century (arguably earlier) surpassed only by the introduction of mammals for game purposes beginning in the late nineteenth century (Kraus 2003). Many fish species have been moved from the East Coast of the United States to become well established as food sources on the West Coast. Asian snakeheads (*Channa marulius* and *C. argus*) have recently been introduced as a food source in South Florida without authorization (Fuller 2003).

However, while there have been isolated examples in the past of the encouragement of eating invasive species as a control method (e.g., the consumption of nutria (*Myocastor coypus*) in Louisiana), the idea of eating invasive species as a way to significantly affect their populations has just begun to gain prominence as a management strategy in the last few years (Nuñez et al. 2012).

Eating Invasive Species as a Management Strategy: The Invasivore Movement

The consumption of invasive species as a management strategy is correlated with the recent emergence of the "invasivore" movement. This practice has caught on and been championed by a wide demographic including consumers, professional chefs, invasion biologists, and environmental organizations.

The Role of the Culinary Arts in the Invasivore Movement

Chef Philippe Parola was one of the first professional cooks to promote the preparation of invasive species as part of the culinary arts, marketing and developing recipes for nutria and Asian carp (*Hypophthalmichthys molitrix* and *H. nobilis*), a group of fish species which are taking over waterways and affecting native populations in the United States (Parola 2011). Chef Bun Lai of the restaurant Miya's Sushi in New Haven, Connecticut, has recently gained notoriety for his use of (as well as his personal escapades foraging for) invasive seafood species in close proximity to his restaurant. He wrote an article in a special food-related issue of the magazine *Scientific American* describing recipes which include European green crabs (*Carcinus maenas*), European flat oysters (*Ostrea edulis*), and lionfish (*Pterois volitans*), a popular invasivore staple (Lai 2013).

Websites and Organizations Promoting the Invasivore Movement

The Institute for Applied Ecology, a nonprofit organization promoting conservation and habitat restoration, launched the *Eradication by Mastication* outreach, which consists of an annual "Invasive Species Cook-off" fundraiser, workshops such as the "Diggin' It: Coastal Invasive Clam Dig and Workshop," the cookbook *The Joy of Cooking Invasives*, and links to news articles and other websites focusing on eating invasive species and the invasivore movement (Eradication by Mastication n.d.). Websites such as *Eat the Invaders* and *Invasivore.org* contain a variety of resources for those wishing to do their part for the environment by eating invasive species, including lists of invasive species, hints and tips on foraging for and preparation of particular species, historical and biological information on invasive species, lists of books on the subject, and species-specific recipes such as "Dandelion and Burdock Beer," "Blackened Snakehead with Piña Colada Salsa and Strawberries," "Frog Leg Piccata," and "Kudzu Blossom Sorbet" (Eat the Invaders n.d.; Invasivore.org n.d.).

Books Related to the Consumption of Invasive Species

A number of books feature information on eating invasive species. Euell Gibbons' 1962 classic *Stalking the Wild Asparagus* includes information on foraging, hunting, and cooking wild foods, including many invasive species (Gibbons 1962). Some cookbooks which focus on specific invasive species have been released recently, such as Tricia Ferguson and Lad Akins' *Lionfish Cookbook*, of which sale proceeds go towards supporting conservation and lionfish research efforts of the organization *REEF* (Ferguson and Akins 2010). Hunting guide and writer Jackson Landers' 2012 book *Eating Aliens* details Landers' adventures hunting and eating invasive animal species, with chapters focusing on individual species such as feral pigs, Asian carp, nutria, and snakeheads (Landers 2012).

Concerns Over Eating Invasive Species

Although eating invasive species as a management strategy can educate the public, assist in early detection and rapid response efforts, and boost local economies, there are potential dangers in creating markets for invasive species as food sources. If members of invasive

species become valuable commodities, then they may end up being protected rather than eradicated (Nuñez et al. 2012). People may also respond negatively to the loss of jobs or income due to elimination of invasive species if they begin to value their current welfare more than they deplore a negative ecological effect of the invasive species (Nuñez et al. 2012). Similar circumstances have already occurred, for example, regarding the economic importance of invasive woody plant species in the US horticulture industry and the importance of brown trout (*Salmo trutta*) in the New Zealand fishing industry (USDA 2010; Veitch and Clout 2001).

Promoting the Spread of Invasive Species

Another problem with eating invasives is that the importance of invasive species as economic resources may lead to their spreading and introduction into other places. Spreading of invasive species may occur by people imitating successful business models outside of areas where a given species originally became invasive and may also occur when viable parts of invasive plants are harvested, through unintentional dispersal of seeds, bulbs, etc. (Nuñez et al. 2012).

Cultural Attachment to Invasive Species

Cultural attachment to invasive species is another potential way in which using them as food sources can become an obstacle to the management of their populations. If the consumption of an invasive species becomes an important part of a given culture's identity, members of that culture will likely be more reluctant to want to eradicate it. For example, wild boars (*Sus scrofa*) in Hawaii and wild horses (*Equus caballus*) in America have become integral cultural icons. Once a species gains cultural value, it can be protected and treasured by the locals even if it is nonnative and invasive (Nuñez et al. 2012).

Potential for Negligible Effects on Invasive Species Populations

Eating invasive species as a management strategy works as a supplement to the physical or mechanical removal of invasive species and, like all other management strategies, it must be employed in the right way in order to be successful. The successful control of invasive species populations depends not only on success rate in terms of sheer numbers of population members which are culled but also on other factors such as "harvesting" at the proper life stage to cause population declines. The harvesting of invasive species for food does not necessarily guarantee success. For instance, it may not be practical for people harvesting invasive species for restaurants and local consumers to go to remote areas or places with low population densities, even if harvesting in these areas is important for ecological purposes (Nuñez et al. 2012).

Lack of Consumer Interest in Eating Certain Foods

Even if eating invasive species appears to be a viable management strategy in ecological terms, another issue is that people may have an aversion to, or may simply lack interest in eating, particular species. For example, the common carp (*Cyprinus carpio*) was introduced to American rivers by the government as a "miracle food" for the country, but never achieved popularity (Landers 2012). Recent studies, however, show a considerable market potential for Asian carp meat in the United States, which indicates that the negative public view of carp is reversing (Varble and Secchi 2013).

In an interview on the Leonard Lopate Show on the radio station WNYC in New York, Chef Bun Lai remarks that sea squirts (members of the subphylum *Tunicata*), while "beloved in Korea," would probably not become an "overnight hit" in the United States and that he himself had to try them a number of times before beginning to enjoy them (Lai et al. 2013).

Research has been conducted recently on food neophobia, or a person's willingness (or lack thereof) to try new foods. At least one study has indicated that food neophobia is correlated with a person's willingness to pay to try new foods (Sanjuan-Lopez et al. 2011). Given the exotic nature of many invasive species, many people may be unwilling to try and/or buy them as food sources.

Health Risks Associated with Certain Invasive Species

Some invasive species are associated with potential health risks, which may act as another obstacle for the invasivore movement. Giant African land snails (*Achatina fulica*), an invasive species in South Florida, may carry meningitis and other diseases, parasites, and toxins, including commercial pesticides (Sargalski 2013). Burmese pythons (*Python bivittatus*), which are invasive in the Florida Everglades, have been found to contain very high levels of mercury (Kessler 2010). The USDA points out that wild pigs are susceptible to swine brucellosis, pseudorabies, classical swine fever, and African swine fever (USDA 2005). In March 2013, the FDA warned that lionfish may contain ciguatoxins, which can lead to ciguatera fish poisoning (CFP), for which there is no known cure (News Desk 2013).

Legal Restrictions Regarding the Marketing and Sale of Invasive Species for Human Consumption

There are also a number of legal restrictions regarding the consumption and sale of invasive species. Agencies such as the USDA sometimes prevent hunting on lands that are being used for research, even if the area is public. In addition, besides fish, wild game is required to be killed in FDA-approved slaughterhouses before they can become commercially available to the public. This has posed major problems, for instance, regarding the marketing and sale of nutria meat, severely disrupting Philippe Parola's plans to market the food in America and worldwide (Landers 2012).

Summary

This entry provides an overview of the nature and effects of invasive species and the role of the invasivore movement in the encouragement of eating invasive species as a way of reducing and/or eliminating invasive species populations. A number of websites, organizations, and books exist which promote invasivorism. At the same time, there are a number of concerns which have been expressed regarding the eating of invasive species, and these range from concerns over the success of the management strategy, as well as economic, health, and legal issues.

Cross-References

▶ Food Risks

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Eating, Feeding and the Human Life Cycle

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Synonyms

Biocultural; Growth and development; Life stage

Introduction

Humans, like all biological species, have their own pattern of ontogeny, that is, the process of growth and development originating with conception and ending with death. This pattern involves biological, behavioral, mental, and emotional development and maturation and has been divided into stages: the three trimesters of prenatal life, the neonatal period, infancy, childhood, juvenile, adolescence, adulthood, elderhood, and senescence (Bogin 2001, Chap. 3). Each stage has its own particular nutritional requirements and culturally based understandings of appropriate eating practices. This entry reviews the ethical issues arising from eating and feeding practices in the aforementioned life stages, albeit combining the discussion for some of these stages.

Birth and Infancy

The neonatal period, the first 28 days of life after birth, is characterized by rapid growth and

adjustment to life outside the womb, such as temperature fluctuations. The primary factor leading to neonatal death, particularly prior to neonatal biomedical care, is inadequate growth and development. The sensitivity of this period is widely recognized across cultures and illustrated by the institution of a 4–6 week postnatal rest period. Such a rest period allows the mother and infant to rest, bond, and establish breastfeeding. Visitations are typically kept to a minimum; thus, this postnatal rest period can also serve to limit exposure to pathogens or other causes of illness, such as the evil eye. During this period, the mother is given foods culturally understood to foster breast milk production and recovery from birth (more on feeding the mother in the adulthood section). The feasibility of the postnatal rest period is influenced by family structure (e.g., presence of kin to care for the mother and newborn as well as the rest of the household), socioeconomic status, and political-economic policies (e.g., availability of paid or even unpaid maternal leave).

One issue where Western biomedical/nutritional knowledge has diverged with traditional newborn feeding practices in many cultures globally is the practice of not breastfeeding the neonate until approximately 3 days after birth, when the milk has come in. The golden-hued liquid, colostrum, first produced is considered a critical source of nutrients and antibodies fashioned in an easily digestible form in contemporary biomedical contexts. However, in places where colostrum is avoided, other liquids may be fed to the newborn, such as water sweetened with honey or sugar. Various reasons have been reported for this, including the colostrum is impure and perceived as "pus-like" or as diluted milk and in turn can cause indigestion or other health problems in the infant. However, from a biomedical perspective, colostrum avoidance is problematic, for not only are the antibodies and nutrients not transmitted, but the water or the tools used to feed the neonate, such as a rag or sponge with which drops of the sweetened water are squeezed into the newborn's mouth, may transmit pathogens. Furthermore, the newborn's suckling reflex is undermined when breastfeeding is not initiated shortly after birth, and this can lead to ongoing challenges in breastfeeding (note that this is echoed in hospital deliveries, when the newborn is separated from the mother). Various biomedically informed education efforts around the world have been effective in reducing colostrum avoidance, but people may still feed the neonate sweetened water when doing so has strong culturally symbolic meanings, such as blessings for a long, happy life. For example, infants may be breast-fed before the milk is let down but in conjunction with sweetened water. This indicates the importance of symbolic, cultural meanings of a feeding practice.

Infancy is defined as beginning at the second month of life and ending at weaning, typically the first three years of life (Bogin 2001, pp. 77–81). Infant feeding practices and debates have centered on breast versus bottle/formula, social support for breastfeeding, length of time for exclusive breastfeeding and introduction of solid foods, and age of weaning. How breastfeeding is practiced is not uniform across individuals or cultures. On-demand breastfeeding, where the infant feeds whenever and for however long she or he desires, requires specific maternal/family behaviors, including co-sleeping, carrying or keeping the infant close-by, clothing that allows for ease of breastfeeding while conforming to local modesty mores, and social/family support for breastfeeding. Feeding on a schedule, oftentimes dictated by other demands on the mother's time, can accommodate a wider variety of behaviors and practices, including sleeping arrangements.

"Breast is best" is a refrain common in contemporary public discourse, as the biological and behavioral benefits of breastfeeding, for both infant and mother, have been recognized and promulgated by various health organizations and breastfeeding advocates. There has been a longstanding polarization between breastfeeding advocates and infant formula manufacturers, dating back to the first half of the twentieth century. From this period, infant formula became increasingly socially accepted and practiced, with a concurrent decline in the support and practice of breastfeeding. Feeding one's infant with breast milk or infant formula was classed, as higher

social status women, who had the means to purchase formula, bottles, etc., shifted to formula feeding first. Choosing to breast-feed in this environment was difficult, and those women came together to form support groups like the La Leche League. Because of the social prestige and assumed technological benefits associated with formula, women of lower social status throughout the world began to shift to formula feeding. However, to cope with the costs associated with formula feeding, these women came up with a variety of strategies to provide the benefits of formula feeding, such as diluting the formula. Furthermore, the water used was too often unsanitary and, combined with the lack of antibodies provided in breast milk, resulted in greater chances of illness in infants. As recognition of these problems increased globally, various groups agitated against formula feeding and culminated in the globally publicized anti-Nestle campaigns and resultant trial in the early 1970s. Consumer boycotts and education campaigns have increased since then, resulting in a shift in infant feeding practices, where more women of higher social strata now breast-feed (Van Esterik 1995). Efforts to foster breastfeeding continue by providing lactation specialists and support both in hospital and at home and limiting exposure to formula in hospitals, through efforts like the Baby-Friendly Hospital Initiative of 1991 (WHO and UNICEF 2009).

Current biomedical recommendations promote exclusive breastfeeding for 6 months and continuation of breastfeeding for 2 years or beyond. For women to follow these recommendations, the sociocultural contexts in which they live must provide a milieu that is supportive of those recommendations. Not only is familial/social support for the mother necessary, but so are workplace environments and political-economic policies that can accommodate mothers who breast-feed their infants. For example, in a global survey of 188 countries, approximately 96 % provided paid maternal leave, while over half offered 14 or more paid weeks. Furthermore, 75 % of the countries surveyed ($N = 181$ with data) protected women's right to breast-feed at work. Recent information indicates the majority of countries guarantee paid breastfeeding breaks (Heymann 2012, Chap. 5; Heymann et al. 2013). Thus, countries that do not provide legislation and policies that support paid maternal leave and breastfeeding create an inequitable infant feeding environment so that only mothers who have the economic means to take maternal leave can afford to initiate and exclusively breast-feed for 6 months, if they choose to breast-feed. It must be remembered that not all women can or want to breast-feed, for a variety of reasons, and the acceptability of these choices has altered across time and space. The infant feeding practices a woman utilizes not only are reflective of her choices, knowledge, and preferences but are shaped by her sociocultural and political-economic contexts. More work is needed on how women integrate multiple infant feeding practices across cultures and in different social milieus.

The politics of weaning is intertwined with the political-economic context of breastfeeding, for many mothers will cease breastfeeding at the end of the maternal leave. Ethnographic evidence suggests that the typical age of weaning for most of human history was approximately 2–3 years, coincident with the emergence of a child's deciduous dentition. Yet it is clear that there is a wide variation in age of weaning, both between and within cultural groups. Contemporary lack of social support for breastfeeding for toddlers in the United States does not mean that it does not happen; "secretive nursing" of older children occurs, where women do not reveal this practice even to their health practitioners (Dettwyler 1995).

Childhood and Juvenile

Weaning marks the transition to childhood, from approximately 3 years until the age of seven, and is characterized by particular feeding needs based on biology. First, deciduous dentition combined with a relatively small digestive system means that a child ought to be fed foods that are easily chewed and digested and low in volume. Second, because of the relatively large brain of a child and

the associated high metabolic costs, foods need to be nutrient-dense. Third, children's cognitive and motor skills are not adequate for them to acquire and prepare foods, and so they remain dependent on older individuals (Bogin 2001, pp. 81–84). The juvenile period, from the age of seven until puberty, is marked by the ability to process an adult-type diet (coincident with the eruption of the adult dentition, beginning with the permanent molar) and a decrease in the high nutrient needs associated with brain growth, as growth, in terms of weight, is completed. Development in motor and cognitive skills has advanced so that a juvenile is able to rely less on older individuals and to feed themselves (Bogin 2001, pp. 83–87). Yet socially, a juvenile remains dependent on others. For the remainder of this section, the term children will be used.

There are a number of ethical issues related to feeding children; here, the preferential feeding of children is based on gender. The most common gendered preferential feeding practices are those favoring sons while neglecting daughters. Girls may be weaned earlier and receive less food and/or poorer-quality foods (or not be offered "special" foods or treats). Son preference has been described in a variety of societies, but it is important to recognize the variation within and between cultural groups. For example, in a study in rural Mexico, dietary quality was equitable among children, whereas girls consumed less; however, the researchers noted that girls were less active (fitting gender norms on girls' ideal behavior – quiet and demure), as determined in playground observations, and so required fewer calories (Backstrand et al. 1997). In contrast, in rural Bangladesh, girls are weaned earlier and receive a third less rice than their brothers (Ahmed and Zeitlin 1994). A variety of studies undertaken in South Asia have documented that son preference and daughter neglect feeding practices are regionally distributed and have changed over time. Furthermore, family composition is associated with daughter neglect feeding practices; birth order and the gender of older siblings affect this practice, for daughters *are* desired. Thus, a firstborn daughter has a much lower risk of neglect with respect to feeding practices. It should also be noted that although the focus here has been on gendered feeding practices of children, health-care allocation is another important factor shaping gendered childhood differentials in morbidity and mortality.

Adolescence

Adolescence initiates with puberty, ending with cessation of growth. There are changes not only in body size but also in body shape; typically this pattern is gendered, as boys have a relative increase in muscle mass, while girls show a relative increase in body fat (Bogin 2001, pp. 87–93). These physical changes in combination with societal norms of desirable, gendered bodies can create particular eating issues. For example, in some cultural groups, a large body size in women is viewed as desirable, and so girls' eating practices will be controlled in order to attain that desired body size. This involves eating even when the girl does not wish to, being fed specific foods that are culturally understood to foster increased size, as well as limiting physical movements. It is not an easy process; girls may cry and resist, and older women recognize this as "work" – it takes great effort to attain the ideal (Popenoe 2004).

In contrast, in North America, the opposite ideal, of a skinny body, has long been the norm for girls and women (Grogan 2008). Dissatisfaction with one's own body, particularly weight, manifests in adolescence – studies report that 66 % of adolescent girls are dissatisfied with their body weight and over half are dissatisfied with the shape of their bodies, particularly the size of their thighs, buttocks, and hips (e.g., Moore 1993). This dissatisfaction manifests in disordered eating practices, including dieting, fasting, purging, etc. Yet the causal relationship between media portrayals, body dissatisfaction, and disordered eating is not clear (Levine and Murnen 2009). This is an important issue to continue to investigate, not only in North America but also globally, as Hollywood and other forms of Western media are consumed in diverse

cultural settings (e.g., Shroff and Thompson 2004), in conjunction with global concerns around obesity. Furthermore, the unique experiences of boys need continued investigation, for body dissatisfaction has been noted, in particular in relation to perceived low muscle mass/size, as the hyper-muscular, lean male body has increasingly been idealized (Botta 2003; Moore 1993). Disordered eating practices can result – although with a different objective – to increase muscle mass and muscle visibility. Because adolescents continue to grow and develop, disordered eating practices can have lifelong consequences.

Adulthood

Adulthood is more difficult to define, in that the end comes with the end of childbearing years – menopause – for women, but more challenging to define in men (Bogin 2001). This definition focuses on fertility and reproduction, and in keeping with this definition, issues arising with pregnancy are focused upon here. This discussion will also be linked with the prenatal life stage, for oftentimes discourses on women's diet during pregnancy are centered on how her eating habits shape the biology and welfare of the fetus.

How much women eat while pregnant is culturally mediated, for although there are some increases in nutrient/caloric requirements, these are not very large. Biomedical discourse, in the context of the "obesity epidemic," emphasizes that little weight gain is necessary for a healthy baby and gaining too much weight may lead to birth complications and health problems for the infant and mother. Research suggests that if the mother's diet is low in energy, protein, and micronutrients, then her child has an increased risk of obesity in adulthood, and their daughters are more vulnerable than their sons (Yang and Huffman 2013). Pregnancy weight gain guidelines are linked with body mass index, where weight is understood in relation to height; note that not gaining enough weight if the mother is underweight at the start of the pregnancy is also a health risk. But separate from biomedical guidelines are traditional guidelines, such as "eating for two" or limiting food consumption so that the fetus has room to grow (e.g., Nichter and Nichter 1983). Thus, regardless of women's body size prior to pregnancy, if she and her family believe that she must limit or increase her intake to ensure a healthy baby, then biomedical advice may be ignored.

Food taboos shape pregnant women's food practices across time and space, from avoidance of alcohol and caffeine in North America to "hot" foods across cultures with humoral medical systems. These taboos are framed as practices necessary to protect the health of the fetus. For example, consumption of "hot" foods is a cause of miscarriage. Typically, these food taboos do not restrict carbohydrate dietary staples, but rather restrict protein sources such as meat or eggs and/or some fruits and vegetables. Consequently, dietary quality may be affected. In some cases, taboos may so restrict eating practices that women's nutritional health may be affected, especially if combined with pregnancy sickness.

Also shaping adult eating practices are gendered understandings of body and food. Men, across historical and cultural contexts that emphasize their economic role in the family, may be understood to require more, and heartier, food compared to adult women. Such beliefs shape not only what people eat but how men and women socialize over food: women may wait to eat until men have had their fill or purposely snack prior to a meal in order to not eat heartily in front of their male date (e.g., Counihan 1992).

Elderhood and Senescence

The biological experience of elderhood and senescence is challenging to describe, for it is a highly idiosyncratic process. It is a process of decline, but molecular or other physical changes seen in one individual are not necessarily evident in another (Bogin 2001, pp. 95–97). One common experience in old age is a decline in abilities to taste and smell, which can lead to a decreased

variation in diet and, in turn, a decline in nutrient intake. Loneliness and culinary knowledge can also shape eating behaviors during old age, and this is gendered, with older men exhibiting poorer diets. Furthermore, consequences of early life eating behaviors, such as dieting in adolescence, may affect experiences of aging and wellness.

Cultural gender norms continue to influence older women's eating practices, with some women striving for a youthful, thin body, which in turn can lead to disordered eating (or continued patterns of disordered eating from earlier life stages). However, with aging, a greater acceptance of various, particularly larger, body types has been noted, especially when weight gain is viewed as an inevitable experience of aging. Such a belief could be freeing, as women no longer worried about the thin ideal and dieting; thus aging can be freeing. Less is known about older men's body image and associated eating behaviors, although it is suggested that men as a group continue to suffer less body dissatisfaction and an opposite pressure – to maintain muscle mass (Peat et al. 2008). Further research is also needed on potential cohort's variable eating practices and experiences.

Summary

Eating behaviors and feeding practices across the human lifespan are the result of biological requirements and cultural customs. Ethical issues arise within all life stages, and gender identity and cultural norms are an important factor in shaping eating and feeding practices. Although discussed here with respect to each life stage, it is important to recognize the lifelong and potential intergenerational effects of food practices. A girl child who is neglected from birth, who may be fed less frequently, weaned early, and given less food or poorer-quality food compared to her brothers or elder siblings, will suffer in terms of her growth and development, and this can have lifelong consequences. Furthermore, evidence is accruing that the experiences of the mother may have biological consequences for not only her children but also her grandchildren. Simultaneously, there must be awareness of the social, cultural, and environmental contexts that shape feeding practices of mothers and do not place sole responsibility on mothers for the eating behaviors of their children.

Cross-References

- ▶ Eating Disorders
- ▶ Infant Feeding
- ▶ Obesity and Responsibility

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Eating, Feeding, and Disability

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Synonyms

Functional limitation; Handicap; Impairment; Medical model; Social model

Introduction

This entry addresses "disability," both as a medical condition and as a social construction. In addressing disability as a medical phenomenon, the following topics are covered: malnutrition; obesity; GMOs, environmental toxins, and impairment; disability as an input; and food security and an underreporting of disability. The second section focuses on disability as a social construction and addresses the following topics: food choice, independence, and autonomy (including feeding tubes, assisted eating, and food choice); power and abuse; and food acquisition and access (including mobility impairment, identity, and inclusion). As the topic of disability is relatively understudied within food scholarship, the summary emphasizes directions for future research.

Definitions

Traditional notions of disability frame it as a medical phenomenon located in an individual's body, and measures often define it by assessing functional ability, including level of severity. A common definition considers disability as something that "limits one or more major life activities" (e.g., Wendell 1996), including "being regarded as having" an impairment (e.g., the Americans with Disabilities Act ADA 1990). Being able to acquire food, cook, and eat all constitute major life activities.

Disability Studies scholarship, however, recognizes that a person's ability to function can vary, depending on the type of environment one is in.

For example, wheelchair users are far less disabled in environments that do not rely on stairs, but that are instead built with ramps and wide doorways. Similarly, an individual with a severe facial disfigurement is disabled when a restaurant's maitre d' tells her that there are no tables available, even though she does not have any impairments that would limit her ability to eat. Accordingly, disability is not a fixed state, located in individual bodies, but rather a social process, including the experience of discrimination (see Oliver 1990). Although there is some debate over definitions, generally speaking, "impairment" is used to refer to a bodily condition or disease, whereas "disability" describes the experience of a body in a particular physical, social, or cultural environment. This is referred to as a "social model" of disability.

A "social model" of disability distinguishes itself from the traditional "medical model" perspective by emphasizing the cultural variance in

people's lived experience of their bodies: what is considered disability varies from culture to culture and therefore is a social construction. This distinction is important in order to understand completely ways in which disability intersects with food and eating.

Person-First Language

It is current convention in American texts to use "person-first" language in referring to disability (e.g., "people with disabilities," as opposed to "disabled people"). While "people-first" language emerged as a way to assert one's humanity, by emphasizing the person as opposed to the condition, some scholars have critiqued this convention (see Titchkosky 2007). According to a social model, people do not "have" disabilities; they have impairments. They are disabled by environments. In Europe and elsewhere, the people-first convention is reversed. It is felt that "people with disabilities" locates the problem of disability within the individual rather than the social milieu, and therefore, "disabled people" more accurately describes the phenomenon of disablement as a process. Consequently, this entry avoids person-first language.

Disability as a Medical Phenomenon

Malnutrition

Disability is traditionally understood as a medical condition or negative health outcome (see above). Thus, "disability" appears in food studies and agricultural ethics primarily as a measure of malnutrition or undernutrition. The World Health Organization (WHO) defines "nutrition disorders" as "caused by an insufficient intake of food or of certain nutrients, by an inability of the body to absorb and use nutrients, or by overconsumption of certain foods" (www.who.int/topics/nutrition_disorders/en/).

Nutrition disorders are particularly serious in children, since they interfere with healthy growth and development and can predispose people to many secondary health problems, such as infections and chronic diseases, thus reducing life expectancy, quality of life, and levels of productivity (see also "▶ Food and Life Chances"). Malnutrition affects significant numbers of people worldwide, in both developing and developed countries (www.worldhunger.org). People facing food shortages have a greater risk of contracting disease that can lead to disability or death. Accordingly, "disability" is caused by malnutrition (from poverty, war, drought, etc.). (See also "▶ Food and Health Policy"; "▶ War and Food.")

Obesity

Concerns with growing rates of obesity worldwide, and the secondary health consequences that result, also address disability as a medical condition. According to the WHO definition above, obesity is an outcome from the "overconsumption of certain foods" and thus frames obesity as a form of disability.

For most of human history, obesity and excess weight were a problem only among wealthier classes and in wealthier nations; more recently, rates of obesity have been rising dramatically in low- and middle-income countries, particularly in urban settings. The WHO estimates that obesity has more than doubled worldwide since 1980 (www.who.int/mediacentre/factsheets/fs311/en/index.html). The growth in obesity rates has been associated with changes in dietary and physical activity patterns linked to globalization. Importantly, environmental and social changes associated with development and the lack of accompanying policies to counter these changes in and across various sectors (such as health, agriculture, transportation, urban planning, food processing, distribution, marketing, and education) have had a disproportionate impact on poor people worldwide, including many disabled people.

Disabled people, compared to their nondisabled counterparts, are more likely to be sedentary and overweight and to experience the negative health consequences associated with those conditions (Kirchner et al. 2008). Note the secondary, negative health outcomes are a function of being sedentary and overweight and not a function of one's initial impairment. Almost all people, even those with severe motor

impairments, are capable of some physical activity, albeit with adaptive equipment or utilizing alternative strategies. However, disabled people generally receive little training from rehabilitation systems about how to exercise or how to cook and eat healthy food. (See also "▶ Cooking Tools and Techniques: Ethical Issues".) As a consequence, many disabled people eat a "diet of convenience," including "fast food" and preprepared, heavily processed foods. In addition to the advantages these foods confer for low-income populations generally (i.e., cost), they have added benefits to disabled people (e.g., with a "drive thru," people with motor impairments do not need to navigate inaccessible interiors; consistent menus are easy to remember for people with cognitive impairments; people with visual impairments do not have to hope for a braille menu or rely on others to read the print version to them; etc.).

In conclusion, both these realms of "nutrition disorders" contain implicit ethical dimensions: because malnutrition and obesity are not equitably distributed in the population, they reflect larger concerns over issues of social justice and class inequality. (See also "▶ Food and Class.")

Genetic Modification, Environmental Toxins, and the Creation of Impairment

Although scientific studies are not conclusive, there is concern from an ethical standpoint about the use of genetically modified organisms (GMOs) in the food supply, particularly since labeling is not required in many countries, including the USA. (See also "▶ GMO Food Labeling.") Of major concern are the long-term health consequences that may result from the use of GMOs, as these have not been studied sufficiently prior to their release into food systems, and most of the research conducted on their health effects has been conducted by the industry itself. There is similar concern over increased environmental toxins, in part because the use of GMOs often requires extensive use of pesticides, herbicides, and fungicides, all of which add to the cumulative levels of exposure that people encounter. (See also "▶ Herbicide-Resistant Crops"; "▶ Food Risks.") These products leach into groundwater and soil, thereby affecting a wider population, including people who never eat GMO products and farmers who inhale the pesticides directly. In other words, food systems may be creating illness and/or impairment, and doing so in ways that do not allow consumers to "opt out." Pesticide exposure has been shown to generate impairment, from neurological problems to missing limbs to gastrointestinal and immune system disorders. It is unclear yet whether the use of GMOs (and/or the use of GMOs in conjunction with secondary products like increased herbicides) will also create additional impairment.

Disability as a *Cause,* Not an Outcome

In both cases of "nutritional disorders" mentioned above, malnutrition and obesity, the result is a negative health outcome, or "disability."

However, it is also true that people are poor and malnourished, because they are disabled. Processes of disablement – the treatment of people who are or presumed to be impaired – including stigma, discrimination, and low expectations can cause economic inequality, poverty, and poor nutrition, among other outcomes. Although it is presumed that material hardship and low income result from disabled people's functional limitations that prevent their full participation in productive economic activity (see Hiranandani 2009), the truth is that the link between poverty and disability is more complex and multidirectional. (See also "▶ Food and Class.")

Revisiting the functional definition above, the assumption is that disabled people are inherently unable to work, that being unable to work is what defines someone as disabled. For example, in order to qualify for "disability benefits" in the USA, an individual has to be certified as unable to work. Yet, in reality, many disabled people can and do work. And many more could, if barriers to employment – such as discriminatory hiring practices, attitudinal barriers, caps on earnings in order to maintain benefits (including much needed health insurance), limited and poor quality education, training, and "rehabilitation" services – were removed. This is an ethical issue as disabled people around the globe are more likely to be poor than are their nondisabled

counterparts. They are also more likely to be unemployed and, when they are employed, to earn less than nondisabled people.

In addition, there are many other types of impairments besides "nutritional disorders" that can cause food insecurity and limit access to and acquisition of sufficient, desired foods. For example, having motor impairments may limit people from accessing emergency food aid or make getting to the grocery cumbersome, if not impossible, in certain environments. (See also "▶ Food Assistance and International Trade"; "▶ Grocery Store Design.") These are discussed in greater detail below.

Food Security and an Underreporting of Disability

(See also "▶ Food Security.")

The presence and impact of disability – even from a "medical model" – is insufficiently examined within studies of food security, despite the evidence that people with a wide range of impairments have added difficulty obtaining sufficient food on a daily basis and in emergency contexts. A collection of essays in *Human Organization*, for example, highlighted the difficulty disabled people have in both natural and man-made disasters, as conventional disaster planning and response – including access to food aid – tended to perpetuate existing social inequalities (Fjord et al. 2009; Merten and Haller 2009; Gwatirisa and Manderson 2009). (See also "▶ Food Assistance and International Trade.") Similarly, recent work by Groce (2012) indicates that there is not usually an equitable "trickle-down" effect of food distribution to disabled people within communities, nor within the household. From an ethical standpoint, this raises serious concern: disabled people are one of the most marginalized populations facing food insecurity, and yet awareness of this is hardly recognized by scholars and activists seeking to redress hunger and unequal access to food.

There are multiple reasons for this. For one, "disability" is not on the intellectual radar of many food scholars; it has yet to be fully recognized as a demographic characteristic on par with race, class, and gender. For another, prevalence estimates of the presence of "disability" (or more accurately, impairment) are underreported. Questions about it do not appear on many standard instruments used by food scholars, nor within more open-ended, flexible surveys and during interviews. While scholars do not necessarily look for "disability," people also do not always report it in ways that researchers expect. For example, people may not have a disabled identity or consider themselves disabled, even if they experience so-called functional limitations. Disability is a heavily stigmatized status that people may not want to personally acknowledge or claim that they have. Furthermore, what is considered "disability" varies from culture to culture (see Ingstad and Whyte 1995), including between the culture of the researcher and local participants.

Nonetheless, ethnographic data has begun to document the presence of impairment and ways in which it limits food acquisition and eating. For example, people report "having bad knees," "occasional headaches," a "bad back," or "fatigue" that limits their ability to shop and/or carry home groceries, particularly if they rely on public transit (Webber et al. 2007; Gerber 2012). In a study among low-income households, Webber et al. (2007) found the prevalence of disability surprisingly high and that the trade-offs people made (e.g., convenience of a local grocery, good wheelchair access, best prices) intersected with impairment far more than previously supposed. Their research indicated that even people without a disabled identity, people who do not think of themselves as disabled and who therefore might not respond affirmatively on a standard instrument of food security, frequently had their bodies impact their ability to shop, make purchasing decisions, and carry home groceries. This was true, even when the primary shopper in the household was not impaired: having a disabled family member impacted household food security, as it created constraints on both time and budget. Disabled people are also often limited in their choice of foods. For example, many older adults, people with visual impairments, people with cognitive impairments or brain injury, among others, may have difficulty reading or understanding package labels.

(See also "▶ Food Labeling.") And any individual, regardless of impairment type, that is reliant on others to shop for them, even when providing a clear list and instructions, is essentially subjected to the whimsy and interpretation of others. If disability is seen as an *input* (rather than an outcome) that limits food acquisition, studies might examine it more. Similarly, understanding "disability" as more than a medical condition – as a social construction, rather than a medical or biological fact – might also increase the presence of it in food studies.

In conclusion, issues of food security are also disability issues, and scholarship should reflect that fact. (See also "▶ Food Security.") Because of the association of disability and poverty and the association of hunger, obesity, and food insecurity to poverty, any project that examines food deserts or the obesity epidemic is, by definition, examining a disability issue. Moreover, these issues disproportionately impact disabled people. Compared to the nondisabled population, disabled people are more likely to be overweight, sedentary, and experience the health consequences that result. In other words, food security is a disability issue: the effect of globalization on food access is felt particularly hard by disenfranchised populations, which – by definition – include many disabled people.

Disability as a Social Construction

Food Choice, Independence, and Autonomy

(See also "▶ Taste, Distaste, and Food.")

Access to food, control over food choice, and eating for disabled people are often balanced with a need for assistance. Nonetheless, or perhaps because of this, food and eating serve as important and symbolically laden sites through which people contest their identity and/or mark their independence. In western cultures, being able to feed oneself symbolizes independence and acts as a marker of adulthood. Difficulty achieving social adulthood for disabled people accentuates the stigmatizing aspects of disability. Research reiterates the point that food practices not only reflect cultural assumptions but define and maintain them. (See also "▶ Ethnicity, Ethnic Identity, and Food"; "▶ Race, Racial Identity, and Eating.") Disability Studies scholarship has identified the continued infantilization of disabled people (Longmore 2003), and one way this is done is through control over food and eating.

Feeding Tubes/Gastrointestinal Tubes (G-Tubes)

(See also "▶ Medicalization of Eating and Feeding.")

The case of Terri Schiavo, a Florida woman in a "persistive vegetative state," received nationwide attention and prompted a nationwide ethics debate in the USA over the right to die. In "Death with Dignity" Acts and in other forms of assisted suicide, the assumption is that withholding food, or withdrawing feeding tubes, is an acceptable form of euthanasia, although this has been contested by many disability rights advocates, including the group Not Dead Yet (www.notdeadyet.org), which considers euthanasia as a deadly form of discrimination against elderly, ill, and disabled people.

G-tubes also highlight the very cultural nature of eating practices and why some are seen as acceptable and others not. Some cultures eat with their hands, others with knives and forks. The fact that in western cultures eating with a straw in the mouth is seen as "yum" while a straw in the belly is seen as "ick" is an example of cultural relativism.

Assisted Eating

Similarly, context matters in the case of assisted eating for people with motor impairments. (Note: people with motor impairments is a broad category, including people with full paralysis or quadriplegia, lack of limbs or digits, multiple sclerosis, etc.). Interdependency is culturally acceptable for children, because children in western cultures are expected to be dependent and, therefore, need help eating. Adults routinely feed babies as an act of love. But cultural expectations for adults are different: being an "adult" in American culture, for example, means being independent, including providing for and feeding oneself. Using a personal care attendant (PCA) to help

with meals is stigmatized, to the point that it might prevent people from participating in public and private events that involve food and from receiving the benefits of sociality that come from breaking bread together (see, e.g., Lance 2007). But this is not a "given" or necessary function of one's impairment, as much as it is a reflection of one's culture. For example, in Ethiopia, adults routinely feed one another as a display of friendship and as a common practice that reinforces the intimacy of social relations. Even in the USA, feeding one another can both generate and reflect intimacy, such as between romantic couples. However, for disabled people, needing help eating does not generate a positive form of interdependence, but rather invokes the cultural notion of "eating as independence" so pervasive in American culture and thereby reinforces their disabled status.

Food Choice

The idea that there are certain foods that are "kids' foods" and other foods that are reserved for, or preferred by, adults is not found in every culture. However, in cultures where this distinction exists, this symbolism is another way that disabled people can claim an adult status or, conversely, be treated as children. As noted above, disabled people are considered dependent, a quality often associated with children, and often treated as perpetual children, or childlike, even once they reach biological ages associated with adulthood. As an example, many adults – with various types of impairments, from blindness to post-polio syndrome – report being offered sweets, a gesture normally reserved for young children (Finger 2007, Gerber personal communication) and a gesture that reinforces the notion of disabled people as dependent(s). Similar examples exist of disabled people wanting or being offered all the accoutrements of a child's birthday party, including party hats and frosted cupcakes, even when all other adults present are served different types of desserts (Davies 2007). (See also "▶ Taste, Distaste, and Food.") Likewise, controlling access to candy and other snacks particularly during adolescence and for "transition-aged" youth can become an area of conflict between young disabled people and their parents or caregivers. Having culturally and age-appropriate foods matters because they shape boundaries of inclusion and exclusion. Given the importance of sociality that occurs around eating, issues of food choice are not inconsequential. Likewise, being able to choose what one wants to eat, when, and with whom is an important aspect of independence and one's self-identity.

The issue of food "choice" intersects with impairment in other ways. For example, some food "choices" are not really choices at all, but a necessary accommodation to a particular and/or non-visible impairment. People with diabetes, depression, irritable bowel disorder, chronic fatigue syndrome, multiple chemical sensitivities, celiac disease, and food allergies, among other conditions (see also "▶ Food Allergies: Ethical Issues"). may have dietary restrictions that appear as "choices," but which dramatically impact one's health and well-being. To frame food decisions as "lifestyle choices" belittles the reality that many disabled people face. It also raises questions about how dietary preferences are accommodated or, rather, which ones are and which ones are not, in both public venues and private dining settings. Ethically, it further raises issues about inclusion of disabled people in the sociality of eating. That is, eating practices and limited food choice can be forms of "culinary exclusion" that prevent disabled people from reaching adulthood status, participating in social events, or acquiring full cultural citizenship.

Power and Abuse

(See also "▶ Punishment and Food.")

Since access to food, control over food choice, and help eating is balanced with a need for assistance for many disabled people, it is often, unfortunately, also a site of abuse. Control over food is a form of power that, in the extreme, serves as a way to oppress people and, in less extreme forms, perpetuates the infantilization of disabled people. Although prevalence data is rare, there is evidence suggesting that both forced feeding of and the withholding of food to disabled people occur with regularity. It has been most well

documented among institutional care settings but is beginning to be recorded among group home and assisted living facilities as well (e.g., Moyer 2007; Taylor and Bogdan 1998). It certainly also occurs among personal relationships, with feeding by both paid and unpaid caregivers. Both first-person and ethnographic accounts have highlighted the range this abuse takes: from withholding "specialty items" brought by family members to using food as leverage to "correct" behavior issues, to locking refrigerators and kitchens "after hours," and to outright theft, starvation, and more. It is particularly disturbing from an ethical standpoint that so much of the systematic "food abuse" occurs to people who are the least powerful to do something about it, such as people with cognitive impairments living in institutional settings. The examples provided are reminders that it is not only people with motor impairments who need assistance eating and who are subject to food abuse. Nor is this issue exclusive to disabled people, as older adults in institutional care and living at home have reported being denied sufficient food.

Control over food is a form of power and an important and under-recognized site of disability abuse.

However, food has also served as a site of resistance, such as hunger strikes and food riots. (Note: hunger strikes can also create impairment.) (See also "▶ Fasting"; "▶ Food Riots, Historical Perspectives.")

Food Acquisition and Access

"Access" means different things to the disability community than it does to food scholars. Most obviously, it has come to be synonymous with physical accessibility for disabled people (e.g., Is there a ramp? Will items in the market be placed low enough on shelves to be reachable? Are the aisles wide enough to accommodate the use of a powerchair and service dog?) (See also "▶ Grocery Store Design.") The goal is to provide universal access: building physical environments that permit the most access to the most people, following principles of universal design. This would apply to the acquisition of food in markets, the ability to dine in restaurants, and the "visitability" of private homes. "Accessible design" and "aging in place" guidelines have architectural specs that include lower kitchen counters to accommodate wheelchair height. A broader understanding of physical access might also include alterations to lighting for people who are lip reading or using sign language and to noise levels for people who rely primarily on auditory cues. Accessible design guidelines, however, have been less commonly applied to the domain of social participation. Buffets, for example, are notoriously difficult to navigate, especially for people who use support canes and crutches and for people who are visually impaired.

The section on food security above highlights some of the issues that disabled people face in acquiring food. Like many people with limited means, disabled people often rely on public transit to navigate their local food environment, although they do so with added complexity, such as using a long cane or guide dog in addition to their groceries. Moreover, much public transit is only somewhat "accessible." Truly accessible transit remains a huge problem for mobility-impaired persons. Having fresh produce on market shelves is not considered "available" from the consumers' point of view of their local food environment, if they cannot get to it.

Mobility Versus Motor Impairments

The WHO's International Classification of Functioning, Disability, and Health, or ICF, (www.who.int/classifications/icf/en/) distinguishes between "impairments" (characteristics of body structure and/or functioning) and "activities" (social behaviors). Accordingly, "mobility" means relating to physical activity and social participation, whereas "motor impairment" refers to bodily movement. However, contemporary culture conflates "motor" with "mobility" to the extent that, in common parlance, these terms are used somewhat interchangeably. Yet they mean very different things. For example, people with motor impairments may need assistance eating (see above). But many more people have mobility impairments and not just wheelchair users. For example, people with cognitive

impairments, brain injury, or dementia may have difficulty following directions or forget how to get where they are going. People with communication, language, or speech impairments may have trouble asking for directions, if they become lost. People with psychiatric impairments may find leaving the house incredibly difficult, if not impossible. The field of blindness has an entire profession (i.e., Orientation and Mobility) to teach people with visual impairment how to get from Point A to Point B. In fact, all but the seasoned pedestrian may have mobility limitations when navigating dense streetscapes with heavy traffic and no sidewalks. In terms of food acquisition, it is important to distinguish between motor and mobility impairments, as both the problems and solutions may differ. Likewise, food scholarship needs to recognize that "access" has to include more than just physical access for wheelchair users. (See also "▶ Food and Place.")

Identity

"Access" also means many other kinds of access beyond the physical, built environment. It also means access to the full range of institutions, roles, and identities available in a given society, or what anthropologists consider cultural citizenship. And theories of identity are tied to theories of consumption, perhaps nowhere more clearly than regarding food and eating. (See also "▶ You Are What You Eat.") Food has become a new marker of class status (i.e., what one can afford to eat and where is understood as a reflection of one's taste and character). (See also "▶ Taste, Distaste, and Food"; "▶ Food and Class.") Likewise, as food has become central to consumer-based experiences in popular culture, it also generates new, elite identities, where taste becomes laden with moral superiority (e.g., vegans, "foodies"). (See also "▶ Virtue Theory, Food, and Agriculture.") There is a form of moral value that comes with being able to claim these identities that is out of reach to many disabled people. These elite identities are another form of culinary exclusion (i.e., who can afford to buy local, organic, and fair trade) that reinforces the social position of disabled people. (See also "▶ Fair Trade in Food and Agricultural Products"; "▶ Public Institutional Foodservice.")

Note: there are members of the disability community who are vegans for political (as opposed to health) reasons, as they make the connection between the treatment of animals and the treatment of disabled people (e.g., Taylor 2011). The parallel is not based on being treated poorly, as animals, nor from being "trapped" in a disabled body, like animals in a cage, but centers on a critique of an oppressive, capitalist values system that designates certain bodies as normal (and hence capable of labor), others as broken, and some as acceptable sources of food. (See also "▶ Animal Welfare: A Critical Examination of the Concept"; "▶ Meat: Ethical Considerations.")

Inclusion and Exclusion

A broader definition of access raises the questions about who does not have, metaphorically and literally, a seat at the table. For example, people might not be deaf enough to need a hearing aid or have learned to sign, but nor do they hear well enough to participate actively in a dinner table conversation. This would include many people who have difficulty hearing because of room acoustics or age-related hearing loss. Similarly, people who are not blind enough to carry a white cane or use a guide dog may still have difficulty recognizing colleagues at a restaurant or social event. Likewise, people who "express themselves in non-normative ways," such as those with speech impairments, those on the autism spectrum who may not follow sarcasm, and those with psychiatric impairment (sometimes considered "eccentric," "weird," or "a little off"), are often not invited to the table. These are examples where discourse serves as an ideological barrier to inclusion and sociality.

Culturally acceptable boundaries around inclusion and exclusion regarding food increasingly define who and what is considered disabled.

Thinking through the notion of "access" complicates the understanding of "food-related" impairments. Moreover, thinking about disability from a social model perspective shifts the focus of the "problem" from the person to the environment.

Summary

Societies around the globe structure inclusion/exclusion, citizenship, and personhood through rules about food and eating, and scholarship should examine ways in which local and global food systems and their politics and proscriptions highlight the very cultural nature of "disability." There is theory both within and beyond Disability Studies that emphasizes interdependence over independence (see, e.g., Heldke 2009). Likewise, Hiranandani (2009) ties disabled people's well-being to the larger food sovereignty movement, arguing that only by working together and improving circumstances for the most disenfranchised sectors (i.e., disabled people) can all people's well-being be improved. Other research, such as that by UK's Leonard Cheshire Disability and Inclusive Development Centre, is beginning to explore agriculture as a component of livelihoods for disabled people in urban slums and rural settings and the constraints and barriers they face (see http://www.ucl.ac.uk/lc-ccr/ccdrp/projects/riu). This is important research that will also measure the effect of home gardens on disabled people's nutritional status and the availability of food in their households. Beyond these few works and the others discussed above, there is little scholarship on disability – especially the social model of disability – within food studies. Therefore, this summary focuses on directions for future research.

There needs to be work that defines the scope of the field. Statistical data about the global population of persons affected by both disability and food insecurity is needed as is work that highlights the affect of a global, transnational economy on food security and disability. More cross-cultural research would be incredibly helpful.

Given the cultural and biological importance of food – which includes nearly every social encounter from the business lunch to networking opportunities and to ritualized and religious events – people are financially and socially disadvantaged by an inability to "break bread" together. Future research should measure the financial and social loss that results, as well as the impact of this discrimination in different settings, according to a variety of demographic variables across disability, such as gender, ethnicity, and obviously, class. It should also explore the political conditions that structure these situations.

Scholars might be interested in further considering the impact that a food-centric perspective can have on topics important to Disability Studies, such as:

- The politics of end-of-life care, G-tubes, and food refusal
- The construction of unpaid, nurturing work surrounding assisted eating and food preparation as "care"
- How impairments alter social and cultural aspects of "etiquette" about eating
- Implications of disability-related dietary restrictions on social acceptance
- Expanding food choice for people living in group homes and institutions
- Ways visitability, access, and independent living are altered by a concentration on food

At the same time, food studies scholarship can also benefit by expanding research to include a disability perspective on a number of mainstream issues. For example:

- How global, capitalist approaches to food production, distribution, packaging, and cooking shape "bodies" around the world, including the construction of disabled bodies. How are ideas of "naturalness" transferred from ideas about food to ideas about bodies (or vice versa) and what are the implications for disability?
- How social mores and stigmas around eating etiquette affect who is considered disabled around the globe. How are relationships, expectations, and choices around food contested and negotiated by disabled people?
- Ways in which the "gentrification of taste" affects certain segments of the population, such as people with severe allergies; people who use gastrointestinal tubes to eat; people who receive "disability benefits" and therefore have limited income; and others.
- Cultural analyses that focus on the artifacts of "foodie culture" and its targeted audience, to examine among other things whether these

products are limited to certain types of bodies, are accessible to all bodies, or create new forms of disablement.

- Are community-supported agricultures groups (CSAs) and other local forms of food sovereignty accessible to and inclusive of disabled people? How can food systems be made more accessible to people with all kinds of impairments? (See also "▶ Community-Supported Agriculture.")

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Ecofeminist Food Ethics

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Synonyms

Animal liberation; Biotechnology; Ecological feminism; Global agricultural development; Human edibility

Introduction

Ecofeminism rose to prominence in the 1980s as an intersectional offshoot of academic feminism

and the social justice and environmental movements of the 1960s and 1970s. It is notoriously resistant to succinct definition. Variously called "ecofeminist philosophy," "ecological feminism," "feminist environmentalism," and "critical feminist eco-socialist analysis," ecofeminism is not a monolithic discipline but an assemblage of manifold feminist approaches to diverse ecological problems (Gaard 2011, p. 38). There are at least as many perspectives within ecofeminism as there are within feminism, and not all texts justifiably described as ecofeminist are so labeled by their authors. In most cases, the common thread is the assumption that there is an isomorphic relationship between the conceptual structures underlying the domination of women and the domination of nature. In her classic essay "The Power and Promise of Ecofeminism," Karen Warren argues that these structures are supported by the "logic of domination," a mechanism that, on the basis of patriarchal and dualistic "value-hierarchical thinking," authorizes and maintains the subordination of the hierarchically inferior by the hierarchically superior (e.g., masculine/feminine, human/nature); while the attribution of inferiority is often but not necessarily objectionable in itself, the logic of domination is problematic because it assumes this attribution to be a sufficient premise for subordination (Warren 1990, p. 128). Thus, in ecofeminism there is a critical emphasis not only upon specific cases of oppression but also upon the structure of oppression itself. This emphasis gives rise to a frequently foregrounded "opposition to all forms of oppression"; integrated within its analyses there is often critique of other forms of injustice, e.g., speciesism, colonialism, ethnocentrism, racism, classism, and heterosexism (Plumwood 2000, p. 287). (For a historical overview of ecofeminism, see Cuomo 1996; Gaard 2011).

Some contend that in the last decade, ecofeminism has become somewhat passé in the wake of accusations of essentialism from other feminists (Gaard 2011, pp. 26–7). However, as ecofeminist Greta Gaard argues, these accusations myopically focus on those early forms of cultural ecofeminism that propose an uncritical binary value reversal of feminine goddess spirituality over patriarchy, thus unfairly neglecting "ecofeminism's diversity of argument and standpoint" (Gaard 2011, p. 31). In addition to its ongoing relevance to the still deepening ecological crisis, ecofeminism is particularly important in the context of increasing feminist interest in animals and food, each topics of recent or upcoming special issues of leading feminist journals *Hypatia* (27.3 "Animal Others," 2012) and the *International Journal of Feminist Approaches to Bioethics* (8.2 "Just Food," 2014).

This necessarily selective essay aims to illustrate the vast stylistic and thematic diversity of ecofeminist approaches to food ethics. There follows a discussion of three important approaches: (I) Vandana Shiva's postdevelopment ecofeminist critique of global industrial agriculture and biotechnology; (II) vegetarian ecofeminism's critical perspectives on mainstream animal liberation, culminating here in Val Plumwood's synthesis of key internal debates; and (III) Eva-Maria Simms's recent phenomenological analysis of the edibility of the maternal body – a new area in ecofeminist thinking about food – and its implications for our orientation to the environmental impact of food choices.

Ecofeminism and Global Agricultural and Biotechnological Development

Vandana Shiva's ecofeminism is a multidisciplinary, activism-oriented theory engaged at the level of the global politics and economics of industrial agricultural development. Her approach grows from her lifelong connection to nature and to food production in Northern India. Raised in the Himalayan foothills by a farmer mother and conservationist father, she involved herself as a young student in the 1970s with the women of the Chipko movement, the original tree huggers. While subsequently earning degrees in physics and in the philosophy of physics, she became concerned about the health and environmental effects of nuclear radiation and other technologies. This concern led her to launch in 1982 the Research Foundation for Science, Technology, and Ecology, which seeks to put research at

the service of grassroots movements. One of her major projects with the foundation was to establish, in 1991, the organic farming organization Navdanya ("Nine Seeds") in order to promote food security in India and, more specifically, to set up local seed banks across the country as a way to safeguard the diversity of India's biological and cultural resources against corporate encroachment.

Throughout her prolific written work, which integrates this rich background of life experience, Shiva proposes a multi-systems critique of global agricultural and biotechnological development in India and the Global South. Informed by geology, sociology, plant physiology, and economics (among other disciplines), and deploying ecofeminism's sensitivity to the interconnections among forms of oppression, she argues that such development creates, in the same gesture, the material oppression of nature and humans, especially woman. In her critical analysis, problems of food security, environmental degradation, agricultural labor autonomy, and economic and cultural colonization are understood as intertwined phenomena.

Development as Maldevelopment and Gender-Based Ideology

At the core of Shiva's classic text *Staying Alive* (1989) is the claim that the purportedly postcolonial Western "development" paradigm is in fact a further advancement of colonialism. Development, she says, is really "maldevelopment": in creating wealth for the developers, it creates poverty for the developed (Shiva 1989, p. 5). The hidden costs of such development are borne primarily by nature and by women, who are, as Shiva points out, the primary food producers in a clear statistical majority of cases in the rural Global South. Distinguishing "culturally perceived poverty" from "real material poverty," Shiva argues that what developmentalism perceives as poverty is in fact subsistence living, a practice in which (typically) women have traditionally "partnered" with nature's productivity to provide food in a way that "ensures the sustainability of sustenance" (Shiva 1989, pp. 9, 45). The aim of subsistence living is not surplus but just enough for healthy living. Falsely identifying this "just enough" as poverty in need of rescue, and replacing traditional methods with those of large-scale, profit-driven agriculture, development creates "real material poverty." Land and water resources are diverted from sustenance needs and channeled into the production of cash crops and other market commodities. Where a harmonious relationship between nature and food producers once yielded adequate sustenance for survival, there came famine, divestment of traditional land-use rights and economic autonomy, rural impoverishment, massive debt to colonial lenders, damned rivers, and soil erosion.

Of particular concern to Shiva is developmentalism's denigration of the traditional empirical knowledge of woman farmers, whose sustainable methods are sensitive to nature's cycles and interconnectedness. Developmentalism imports a "gender-based ideology," she says, that relies upon a "fragmented, reductionist, dualist perspective" (Shiva 1989, pp. xv, 5). This perspective "violates the integrity and harmony of [humans] in nature and the harmony between men and women" by categorizing nature and women as passive, compartmentalizable resources (Shiva 1989, p. 5). Shiva writes:

> The forest is separated from the river, the field is separated from the forest, the animals are separated from the crops. Each is then separately developed, and the delicate balance which ensures sustainability and equity is destroyed. The visibility of dramatic breaks and ruptures is posited as 'progress'. Marginalized women are either dispensed with or colonized. Needs go unfulfilled, nature is crippled. (Shiva 1989, p. 45)

Colonization of Seed

For Shiva, the compartmentalizing tactics and renewed colonialism of developmentalism reach a peak in the commodification and colonization of seed itself, "the first link in the food chain" (Shiva 1989, p. 115). Here, developmentalism strikes the heart of nature and human life. The so-called Green Revolution, claimed by its proponents to have flourished in Punjab's agricultural economy and subsequently elsewhere in the Global South, was supposed to have made great

advances in food security for the ever-increasing population thanks to Norman Borlaug's Nobel Prize-winning hybridized, high-yielding "miracle" seeds (Shiva 1989, p. 115). However, in *Staying Alive* and *The Violence of the Green Revolution* (1991), Shiva initiates a lifelong critique of this biotechnological innovation and the multinational corporate tactics by which it was deployed, such as privatizing seed through intellectual property rights. "The social and political planning that went into the Green Revolution aimed at engineering not just seeds but social relations as well," she says (Shiva 1991, p. 16). Whereas the peasant women of India had "over millennia" safeguarded "the self-reproducing character and genetic diversity of seeds," the incursion of patented, nonrenewable seeds transformed sustainable local farms into foreign-controlled factory fields for monoculture crops. This event exacerbated the economic subservience of less wealthy nations, both to Western corporate "innovators" and to the World Bank loans that subsidized seed distribution (Shiva 2009, pp. 24, 21, 22). If peasant farmers now must purchase new supplies of the nonrenewable hybrid seeds each year, then the miracle of "miracle seeds" is really a "commercial miracle" that draws the Global South deep into the Western agribusiness market (Shiva 1989, p. 116). Thus, as seed is divested of its natural fertility, women farmers are divested of their traditional role as stewards of biodiversity and sustainability. Moreover, the toxic pesticides and fertilizers required by hybrid seeds devastate native plants and desiccate soils.

Prakriti: The Feminine Principle

Thus, for Shiva, the operative assumption behind the tactics of agricultural and biotechnological "maldevelopment" is that nature and women are unproductive, that "'production' takes place only when mediated by technologies for commodity production, even when such technologies destroy life" (Shiva 1989, p. 3). As a solution, she proposes the recovery of Prakriti, the "feminine principle" of the "ancient [Hindu] worldview," which recognizes nature and women as the "creators and sustainers of life" (Shiva 1989, pp. xv, 5). As distinct from the alleged Western categorization of femininity and nature as passive, Prakriti is a creative "living force that supports life," the very source of the biodiversity and self-renewability that Borlaug's hybrid seeds deny (Shiva 1989, p. xv). Participation in Prakriti, which ultimately "transcends gender," is equally open to men, but when "productive" man is "alienated" from Prakriti's original productivity, the primal activity of life is reduced to hypermasculine "domination" of man over nature and women (Shiva 1989, pp. xv, 5). For Shiva, maldevelopment is one symptom of such a reduction. Taking inspiration from the Chipko women, she locates in Prakriti an alternate "concept of economics as production of sustenance and needs satisfaction" that challenges the "Western concept of economics as production of profits and capital accumulation" (Shiva 1989, p. xv). Exposing "what patriarchy sees as productive work" to be highly *destructive*, Prakriti shows life itself to be the source of productivity (Shiva 1989, p. 8). From the Prakriti perspective, nature does not oppose economics, but *is* economics at its origin.

Shiva's use of Prakriti has been criticized as expressing a naïve or essentialist interpretation of the feminine and, in its application to the experiential knowledge of peasant women, as promoting an uncritical standpoint epistemology. However, as Shiva's critic Ariel Salleh points out, Prakriti retains some strategic value if taken as an "oppositional term in a process of ideological deconstruction" grounded not in speculation about essences but in commonly shared experiences (Salleh 1991, p. 212). In this light, one may see Prakriti as a challenge to developmentalism's "Cartesian split between human labor and nature" that arises from within the perspective of Indian women farmers' traditional "partnership" with nature (Salleh 1991, p. 214).

Vegetarian Ecofeminism and Animal Liberation

Whereas Shiva's postdevelopment ecofeminism offers multidisciplinary analyses of the

interconnected oppression of nature and women in the Global South, the area of ecofeminism referred to as "vegetarian ecofeminism" or "animal ecofeminism" engages specific philosophical problems of animal liberation originally raised in the context of applied ethics and largely ignored by early ecofeminists. According to Gaard, the "fundamental insight" of vegetarian ecofeminism is that speciesism – the arbitrary preference of one's own species over another in a manner analogous to sexism or racism – is a "form of oppression that is interconnected with and reinforcing of other oppressive structures" (Gaard 2000, p. 206). To exclude species oppression from ecofeminist theory is both to risk incomplete analysis and to contravene ecofeminism's "activist and philosophical foundations" (Gaard 2002, p. 130). Thus, despite opposition from other feminists (e.g., George 1994; Stange 1997), vegetarian ecofeminists use ecofeminist rubrics to address problems of animal liberation such as industrial animal food production, hunting, social conceptions of meat, and the reconciliation of vegetarianism with questions of social and environmental justice. The contributions of three important vegetarian ecofeminists, Carol Adams, Lori Gruen, and Val Plumwood, are discussed below.

Bringing Animals into Ecofeminism

The radical-cultural feminist Carol Adams was among the first feminist writers to bring together animal liberation and ecofeminism (also see Kheel 1991). Known for *The Sexual Politics of Meat* (1990), which aims to highlight the twin cultural phenomena of the sexualization of meat consumption and the animalization of women, Adams advances ecofeminist arguments for vegetarianism and veganism in "Ecofeminism and the Eating of Animals" (1991) and again in "Why Feminist-Vegan Now?" (2010). Identifying a blatant disregard for animal welfare among early ecofeminists, whose attention lay primarily with the earth and its ecosystems, Adams locates several perspectives *within* ecofeminism that imply vegetarianism and ultimately, for Adams, a strict universal veganism (Adams 1991, pp. 125, 141). Four are discussed here.

Corporeally Imaginative Identification

Recognizing the links between the domination of women and nature, and heeding Warren's ecofeminist call to critique the underlying hierarchical "logic of domination," Adams proposes a "radical feminist epistemology" that produces an imaginative "identification" with the bodies of animals as victims of exploitation (Adams 1991, p. 128). Feminists recognize and identify with the painful experience of being objectified and instrumentalized as women – as "pieces of meat," for example. For Adams, such recognition undercuts the human/animal hierarchy and establishes compelling sympathies toward animals as living sentient beings. Such sympathies preclude any need to "accede rights" to animals and render abhorrent the idea of instrumentalizing animals for food (Adams 1991, p. 129).

Reintegration of the Ecological Consequences of Meat-Eating

Adams argues that if ecofeminists oppose the domination of the earth, then they must also oppose meat production, which has measurable and well-known consequences for the health of the natural environment (e.g., the high demand on water and energy in raising and distributing livestock; large-scale topsoil erosion caused by grazing). The frequent conceptual isolation of meat-eating from its detrimental consequences, says Adams, results from two of the reductive, patriarchal dualisms that ecofeminism contests, namely, consumption/production and production/maintenance (Adams 1991, p. 130). The dismantling of these dualisms belongs already to the ecofeminist mandate. Ecofeminism thus implies that the consumption of meat as a product and economic "good" should not be viewed as separate from or more highly valued than the conditions of its production (which entail suffering and death for animals and frequently poor conditions for workers, who are often women) or the ongoing maintenance required to sustain the land that supports the meat industry.

Social Construction of Bodies

It might be objected that the basic ecofeminist (and environmentalist) premise that humans are natural

beings implies that our meat-eating is "naturally" justifiable. Adams counters that, insofar as it is a critique of the structures of oppression, ecofeminism is positioned to support vegetarianism by means of a critical examination of the modes of subjugation involved in the social construction of meaning. She points out that our everyday language obscures and therefore perpetuates hierarchical and oppressive ideologies of both women and animals. As the term "battered women" reflects and sustains an "ontologization" of women's bodies as sexually consumable, so the term "meat" reflects and sustains and an ontologization of animal bodies as edible (Adams 1991, p. 136). In this way, women and animals are positioned as objects, thus concealing the subject and perpetrator of violence and rendering the "being" of women and animals as what Adams calls an "absent referent." The violence inflicted upon women and animals is tacitly interpreted as something that is part of their nature. "Live animals are the absent referents in the concept of meat. The absent referent permits us to forget about the animal as an independent entity, . . . to resist efforts to make animals present, . . . to allow for the moral abandonment of a being" (Adams 2010, p. 304). To the extent that ecofeminism is attentive to the oppressive hierarchies obscured by language, it is in a position to resist the sociolinguistic construction of animals as meat and humans as carnivores.

Critique of Autonomy

In response to the potential objection that an ecofeminist call for vegetarianism would violate a person's autonomy in choosing what to eat, Adams suggests that the ecofeminist eschewal of the reductive individualism of rights-based thinking invites us to think of ourselves in relationship to animals – by, for example, identifying with and thus engendering solidarity with animals. For Adams, to eat animals is to instrumentalize them and to thus affirm and propagate the dualistic ideology of domination that ecofeminism aims to eradicate. The more appropriate kind of autonomy is achieved, she suggests, by "acting independently of such ideology" (Adams 1991, p. 140).

The Ecofeminist Critique of Mainstream Animal Liberation Theory

While Carol Adams has offered a critical reappraisal of ecofeminism in order to include animal liberation within its agenda, other vegetarian ecofeminists have critiqued and offered corrections to the influential animal liberation theories of Peter Singer and Tom Regan, each of which prescribes vegetarianism or substantial limitations on meat-eating (see Gruen 1993; Kheel 1996; Plumwood 1991; Luke 1995; see also Donovan 1990). In "Dismantling Oppression: An Analysis of the Connection Between Women and Animals," ecofeminist Lori Gruen takes Singer and Regan to task for their exclusive emphasis on reason and individualism in moral deliberation. Briefly stated, Singer's utilitarian defense of nonhuman animals argues that since *any* sentient being can suffer and thus has "interests," in moral deliberations these interests must be given "equal consideration" (Singer 1975, p. 8). Proceeding otherwise would perpetrate speciesism. Regan's rights-based deontological approach, by contrast, takes self-consciousness as the criterion of moral consideration. All "subjects-of-a-life," or self-conscious beings, possess inherent value, which admits no comparison and is therefore always possessed equally (Regan 1985, p. 23). Thus, even if, like human infants or people with a serious developmental disability, their moral agency is absent or lacking, all self-conscious animals (adult mammals, at least) are entitled to be treated equally as moral patients on the basis of their inherent value, which ought to be protected by a right.

Although Gruen generally supports the goals of animal liberation theory, she detects in both Singer and Regan a dubious privileging of reason over emotion: "reason – not emotion – compels us to recognize the equivalent value of certain animals," says Regan, and "the application of these [utilitarian] principles [to animals] is demanded by reason, not emotion," says Singer (Regan 1985, p. 24; Singer 1975, pp. ix–x). For Gruen, this position is problematic for two interrelated reasons. (1) The reason/emotion dichotomy is a "normative dualism that gives rise to the logic of domination" and thus permits "the

continued conceptualization of hierarchies in which a theoretically privileged group or way of thinking is superior" – in this case, reason (Gruen 1993, pp. 79–80). The obvious problem here, Gruen says, is that "by establishing superiority in theory the groundwork is laid for oppression of the inferior in practice" (Gruen 1993, p. 80). Thus, the rights and utilitarian principles invoked by Regan and Singer serve as little more than checks on an already hierarchical system that values humans over animals and reason over emotion; nature's interconnectedness goes unacknowledged and the place of animals must be annexed by argument. (2) In its focus on reason, claims Gruen, traditional animal liberation theory is a methodologically incomplete theory. Ecofeminism, by contrast, "recognizes sympathy and compassion as fundamental features of any inclusive, libratory theory" (Gruen 1993, p. 80). Not only are these emotions strategically necessary for "undoing oppression in both theory and practice," but moral deliberation about animals requires "the emotional force of kinship" – something that arises, Gruen suggests, from within the ecofeminist experience of the earth as a nonhierarchical community. To the extent that the theories of Singer and Regan remain abstract, they perpetuate "our removal from the animals themselves" and fail to motivate attitude change (Gruen 1993, p. 79).

Plumwood's Integrated and Contextual Moral Vegetarianism

In her approach to questions of vegetarianism and veganism, Australian environmental activist and feminist philosopher Val Plumwood (1939–2008) seeks to reconcile the often conflicting perspectives of animal liberation theory, holistic ecological theory, feminism, and social justice with a particular sensitivity to problems of ecological alienation, anthropocentrism, ethnocentrism, and activist strategy. In her classic text *Feminism and the Mastery of Nature* (1993), Plumwood argues for a version of the ecofeminist thesis articulated by Warren. She identifies a fundamental reason/nature dualism underlying a basic "master model" that both (1) interlinks the oppression of whatever groups this dualism allows to be constructed as inferior – animals, women, and indigenous people, for example – and (2) denies "dependency and community" in our relations with others and with nature (Plumwood 1993, pp. 23, 194).

The Critique of Moral Extensionism

It is from this critical perspective that Plumwood, like Gruen, faults conventional vegetarian and animal liberation theories. She shares Gruen's concern about the emphasis on "separation and autonomy" in rights-based theories such as Regan's and the corresponding exclusion of "less dualistic moral concepts" (e.g., "respect, sympathy, care, concern, compassion, gratitude, friendship, and responsibility") (Plumwood 1991, p. 8). But Plumwood also develops a critique of moral extensionism as such, the status quo practice in academic environmental ethics in which traditional ethical theories are applied or "extended" to accommodate nonhuman beings and entities. Such a practice, she says, is an "approach of minimal departure from the rationalist foundation of liberal humanism" Plumwood 2000, p. 286). In its focus on regulating the acceptance of nonhuman animals into the sphere of moral consideration, typically "entirely on the basis of their similarity to the human," moral extensionism neither considers the viability of anthropocentric ethics and epistemology for nonhuman moral patients nor asks whether there might be modes of attention and responsibility that are preempted by the exclusionism that remains in any extensionist project (Plumwood 1998, p. 407). Any redrawing of the human/nature or human/animal boundaries implicitly reaffirms these boundaries, which ultimately serve to guard what Plumwood calls the "hyperseparation" from nature that authorizes attitudes of human superiority (Plumwood 1998, p. 406).

Humans as Food

In her famous essay "Being Prey," which viscerally contradicts the "hyperseparation" latent in moral extensionism, Plumwood describes and interprets her near-death encounter with a predatory crocodile in Australia's Kakadu National Park in 1985. Her account offers

a surprising and profoundly sensitive expression of the sort of sympathy, kinship, and imagination she, Gruen, Adams, and other ecofeminist philosophers wish to introduce into vegetarian and animal liberation theory. Plumwood's recollection of this horrific episode, in which the crocodile tore into the flesh of her legs and torso as it dragged her into a "death roll," resonated for her on a critical register. As the predator had serrated her body, so her reflection on this experience "ripped apart" her "subject-centered," "from the inside" view of the world – the same view that underlies the project of moral extensionism. Revealing a decentered view "from the outside," this was an experience of *being* food, of *being* edible (Plumwood 1996, pp. 42, 35). Plumwood describes its potential for moral conversion thus:

> I glimpsed beyond my own realm a shockingly indifferent world of necessity in which I had no more significance than any other edible being. The thought, *This can't be happening to me, I'm a human being, not meat, I don't deserve this fate!* was one component of my terminal incredulity. (Plumwood 1996, p. 42)

In a subsequent version of the same essay, she writes,

> It was a shocking reduction, from a complex human being to a mere piece of meat. Reflection has persuaded me that not just humans but any creature can make the same claim to be more than just food. We are edible, but we are also much more than edible. Respectful, ecological eating must recognize both of these things. (Plumwood 2002)

The status quo subject-centered concept of human identity dualistically positions humans as external and hierarchically superior to the food chain, "not as part of the feast in a chain of reciprocity but as external manipulators and masters of it" (Plumwood 2002). For Plumwood, this dualism enables the radical discontinuity between "the outrage we experience at the idea of a human being eaten" and our quotidian experience of eating animals (Plumwood 2002). "We may daily consume other animals by the billions, but we ourselves cannot be food for worms and certainly not meat for crocodiles" (Plumwood 1996, p. 42). On the other side of this "dualistic vision of human mastery of the planet" in which we humans are predators but never prey, the crocodile is demonized as a vile beast or, in the "masculinist" interpretation that appeared in Australian tabloids, as a monstrous male rival attacking a helpless woman awaiting rescue from the male hero (Plumwood 1996, pp. 42, 40). (*Crocodile Dundee* was filmed in Kakadu shortly after Plumwood's encounter).

Violently refuting this dualism, Plumwood's story of crocodile predation on a human portrays a transformation of incredulity into edibility. Such transformation constitutes the basis of an imaginative ethical sympathy: like the crocodile, the human, too, experiences itself both as an animal who eats and as an edible animal with a claim to be more than edible. Plumwood's remarkable experience, which her story allows others to repeat imaginatively, invites a non-subject-centered view of self – a view of the self "from the outside" (Plumwood 1996, p. 35). For Plumwood, this view provides a glimpse of ourselves in our "ecological identity," as "part of the food chain, eater as well as eaten" (Plumwood 1996, p. 43). In this way, it opens onto a vegetarian ethic that, in contrast to the minimum change, aloofness and closure implied in subject-based moral extensionism, is rooted in radical sympathy and a felt sense of the continuity of life (Plumwood 1996, p. 44).

The Critique of Adams's "Ontological Vegetarianism"

Having come to see animals as "more than just food," Plumwood condemns "the reduction of animal lives in factory farming systems that treat them as living meat" (Plumwood 2002). However, she proposes no sweeping condemnation of predation or meat-eating such as we find in both mainstream animal liberation theory and in Adams's ecofeminist vegetarianism. In place of what she calls Adams's "ontological vegetarianism" or "ontological veganism". Plumwood thus advocates a *contextual* moral vegetarianism. While Adams and Plumwood agree that animals deserve moral consideration, Adams's ontological veganism adds the premise that "nothing morally considerable should ever be ontologized as edible or as available for use" (Plumwood 2000, p. 287).

Plumwood objects to this universalist premise because it supports Adams's characterization of vegetarianism and veganism as a "politics of personal virtue and self-denial" implicitly modelled on sexual abstinence (due in part to Adams's "genderized" account of meat-eating as a mode of masculine sexual aggression) (Plumwood 2000, p. 291). Plumwood sees this characterization as problematic for several reasons. (a) It fosters "highly polarized," "over-individualized," and "vanguardist" interpretations of vegetarianism as "moral purity" that "hinder the spread of vegetarian orientations" and "impede useful intermediate positions"; (b) distracts from the global, neoliberal "economic rationality" at the root of the systematic "atrocities daily committed against animals, especially in the factory farming framework"; and (c) remains insensitive to crucial differences in scale of animal suffering between factory farming and individual and cultural practices such as hunting (Plumwood 2000, p. 291). The neglect of these broader circumstances is further supported, says Plumwood, by Adams's "cultural feminist proclivity to privilege explanations focused on men and masculinity," as well as by her portrayal of her assessment as culturally universal, that is, as "an account of inevitable and timeless ethical features of human predation" rather than as "a culturally specific account of present commodity practices of animal food in certain rationalist-reductionist cultures which often model rational control and enslavement in genderized terms" (Plumwood 2000, pp. 288, 295). In Adams's "genderizing and demonizing" of meat-eating, hunting, and other "predator identities," Plumwood detects a neglect of our ecological embeddedness in the food chain, an ethnocentric dismissal of indigenous food practices, and an "uncritical reversal of western gender ideals" in which "factors other than [contemporary western] masculinity" are largely excluded from the critique of animal domination (Plumwood 2000, pp. 288, 289).

What Plumwood ultimately finds most objectionable in Adams's universalist ontological vegetarianism is its core claim that moral considerability and edibility are mutually exclusive, which implies that to choose to use animals for food in any way is to deny that they deserve moral consideration. From Plumwood's perspective, this stark dichotomy enables alienated, reductionist attitudes about (a) animal food, (b) food generally, and (c) human ecological embodiment.

(a) What Adams calls "meat" is a "culturally specific reductionist and commodity category" that deserves to be critiqued and resisted, but, due to her commitment to the edibility/moral considerability dichotomy, Adams crucially fails to acknowledge this cultural specificity (Plumwood 2000, p. 296). As a result, the animal consumption practices of a specific abusive culture "come to appear as inevitable aspects of animal food and human predation and consumption – which of course they are not" (Plumwood 2000, p. 296). In other words, since Adams recognizes no possibilities for animal food other than "meat," she draws a "false contrast" between vegetarianism/veganism and cultural practices of animal reduction and domination, between "no use at all and ruthless use" (Plumwood 2000, p. 298).

(b) In light of Adams's edibility/moral considerability dichotomy, the status of being food comes to appear as necessarily and universally a debased one, so that food exists in a lower, premoral order and bears no ethical relevance (outside of the initial dualistic decision to exclude it from the order of the morally considerable). However, as Plumwood points out, this idea that "only those beneath ethical consideration can be food" is a significant "reason why factory farming is able to treat those whom we position as food as beyond and outside ethics" (Plumwood 2000, p. 296). Adams's strategy is at cross purposes.

(c) Conversely, the edibility/moral considerability dichotomy excludes humans from edibility. That is, so long as we conceive of ourselves as morally considerable (as we inevitably do), we deny our edibility, our ecologically embodied participation in the food chain, in the continuity and "exchange of life" in which all embodied beings are food for some other being (Plumwood 2000, p. 299). Such an exclusion

inadvertently reinstates the same dualistic separation of humans from nature and animals that is allegedly at the root of the food practices Adams critiques.

By contrast, applying the ecofeminist critique of dualism to food itself, Plumwood's contextual moral vegetarianism contests the alleged mutual exclusivity of moral considerability and edibility. While Plumwood maintains that "no being, human or nonhuman, should be ontologized reductively as meat," she argues that "we must all, humans included, be ontologized ecologically" as food (Plumwood 2000, p. 298). This ecological necessity grounds the human practice she calls "sacred eating," acknowledging the wisdom in indigenous approaches to food. In sacred eating, we humans are called to gain our food – even plant food – "in such a way as to acknowledge our kinship with those whom we make our food, which does not forget the more-than-food that every one of us is, and which positions us reciprocally as food for others" (Plumwood 2000, p. 303). In this way, Plumwood locates in sacred eating a reconciliation of edibility and moral considerability.

Summary of Vegetarian Ecofeminism Discussion

Three significant contributions of vegetarian ecofeminism have been discussed: Adams's argument that the early ecofeminist focus on the earth conceals and neglects ecofeminism's theoretical resources for vegetarianism and veganism; Gruen's and Plumwood's critiques of the unduly masculine and anthropocentric perspective of mainstream animal liberation theory; and Plumwood's attempt to rectify the alleged failure of both animal liberation theory and vegetarian ecofeminism to integrate concerns about animal welfare with competing concerns about, for example, ecosystem health, the place of humans in the food chain, and the food practices of indigenous peoples. As we have seen, moreover, Adams, Gruen, and Plumwood each advocate for an approach to animal liberation that, like the feminist ethics of care, renews the role of experience, relationality, and sympathy in our approach to moral questions.

Ecofeminism and the Maternal Body

Like Plumwood, Eva-Maria Simms locates great potential for moral imagination within the experience of human edibility. Unlike Plumwood, Simms focuses on a phenomenon that often escapes our notice due not to its rarity but to its ubiquity: matrotopy, the nourishing of the developing fetus and infant via the placenta and breast milk. In her essay "Eating One's Mother: Female Embodiment in a Toxic World" (2009), which takes its theoretical cues both from the phenomenological analyses of intercorporeality proposed by the French phenomenologist Maurice Merleau-Ponty (1908–1961) and Belgian feminist philosopher Luce Irigaray and from a diverse array of recent research in ecology, toxicology, endocrinology, and pediatrics, Simms does not explicitly assimilate her project to ecofeminist goals. However, beginning with the feminist concern that the "androcentric history of philosophy" neglects "female experience" and privileges "independence" and "self-enclosure" in its conceptualizations of self and world (as the Cartesian worldview typifies), Simms's intersectional project introduces the insights of feminist phenomenology of the maternal body into the question of the human relationship to the natural environment (Simms 2009, pp. 267, 276).

Specifically, Simms uses the image of the placenta – the only mammalian organ composed of cells from two organisms – to reposition the human body as both food and ecosystem and to then realign our responsibilities to each other and to the environment regarding the toxins we allow into our bodies. Her project is thus clearly ecofeminist in the traditional sense: granting the essential and inevitable role of metaphor in "creating new ways of thinking," and foregrounding the role of a specifically feminine metaphor in moral imagination, it proposes a critical intervention in the conceptualization of our relation to the natural environment in which the "androcentric" schemata of separation and individuality are countered and corrected by notions of continuity and integration (Simms 2009, p. 267). Yet Simms also expands the ecofeminist project by reflecting the primary concept of ecology – the ecosystem – back

upon the human: as the placental relationship is a metaphor for our relationship to the environment, so the ecosystem is a metaphor for the womb itself.

For Simms, the critical value of matrotopy has two sources: (a) it undermines conventional ideas about the human place in the food chain, and (b) it provides an ethically compelling figure for the thorough ecological integration of the human body.

(a) Recalling an old yellowing poster of the food chain whose arrows all "pointed at a muscular male silhouette at the top," Simms claims that such an image "creates the illusion of a closed system that ends at the apex with the super predator who consumes the distillate of all below" (Simms 2009, pp. 264, 273). The reality, Simms points out, is that "man's" infants are above him on the food chain, for infants' food is produced by the female human body. The matrotopic relationship, says Simms, thus unseats the human as "the self-owned and self-contained apex of creation" (Simms 2009, p. 264). The female body is "open," "a conduit for the next generation, a passage for others that stretches through time. There is no hierarchical top of the food chain: woman herself becomes food for her young. She is a link and an integrated element in the chain of those who eat and are eaten" (Simms 2009, p. 264).

(b) In undermining the hierarchical nature of the food chain, the maternal body not only deposes the general figure of "man" from the top of the food chain but also serves for Simms as an image for the ecological openness of the human body itself. First of all, claims Simms, the maternal body is ecologically open in a biological sense because it is both immediate environment for another body and a conduit for food from the broader environment: "the fetal ecosystem is nested in the ecosystem of the mother's body, which is nested in the larger ecosystem of the earth" (Simms 2009, p. 273). Thus, as the nutrients the mother consumes in food, water and air are passed along to the infant, whatever toxins are present in this elemental nourishment are similarly passed along (and in fact are *concentrated* by means of a process ecologists call "biomagnification") (Simms 2009, p. 266). The extent of the integration of the bodies of mother and fetus is reflected in the placenta, which is a *shared* organ (and not, as physicians believed until the 1960s, an impermeable barrier protecting the fetus from harmful substances). For Simms, the recognition of this corporeal continuity gives rise to a "placental ethics" that does not "stop at the boundary of our skins" (Simms 2009, p. 265). What this means, first of all, is that out of care for their developing babies mothers have a vested interest in avoiding (and perhaps campaigning against) the increasing prevalence of environmental toxins in food, water, and air. On this basis, Simms's placental ethics provides a rather obvious anthropocentric rationale for the detoxification of our environments and food systems.

And yet, perhaps more importantly, such a placental ethics also provides an analogy through which the human corporeal identity may be ecologized and integrated into the food chain. As the mother's body is continuous with the infant via the placenta, so the human body is a "pass through" to its surrounding environment:

> The substances that we take into our bodies do not stay there. The antibiotic I take for my sinus infection does not end existing as soon as it enters my stomach, even though we prescribe it as if it does. Through digestion, elimination, and our own death we return elements back into the natural environment which are then taken up by other living beings. What is true for mackerel and smelt is also true for us: we are part of the food chain. The ethical call that issues from this insight is the demand to move beyond individualism toward an ecological responsibility for the whole field of being and begin to understand ourselves and act as an integrated part. (Simms 2009, p. 274)

For Simms, the figure of the maternal body reminds us that the human body is not a black box; as mother and fetus are entwined in the placenta, so "the structures of the body are entwined with the structures of nature through air and food" (Simms 2009, p. 276). This analogy therefore suggests a maternal ethics of care for

the natural environment in which the natural and corporeally interconnected care the mother feels for her child becomes interposed in the broader relationship between humans and their environment. As the mother endeavors to become safely edible for her incubating child, so we, too, are asked to become food safe. In short, Simms proposes that the boundaries of the lived human body become relationally and affectively reoriented – maternalized – in order that, in considering the food and drugs we permit into our bodies, it becomes no longer possible to proceed with ecological indifference.

Summary

This entry has traversed a diverse selection of ecofeminist approaches to diverse questions in food ethics. It has also demonstrated unifying threads. In each case discussed, we have seen an emphasis on the interconnections among forms of oppression, a commitment to multidisciplinary methods, and an attentiveness to the critical potential of feminist viewpoints. From the perspective of postdevelopment critique, Shiva diagnoses the socio-ecological problems of global food production in terms of developmentalism's underlying gender-based ideology and elevates the empirical, labor-based knowledge of rural women farmers as a critical counterexample. From the perspective of the ethics of animal liberation, vegetarian ecofeminists address the question of using animals for food by critically engaging ecofeminist insights to broaden and rework the methodologies and conclusions of mainstream animal liberation theories. Val Plumwood attempts to surmount the weaknesses of animal liberation theory and strict vegetarian/vegan ecofeminism by integrating considerations of indigenous food practice and the ecology of the food chain. Finally, from the perspective of phenomenological feminism, Simms locates the edibility of the maternal body as an imaginative resource for reintegrating the human in the food chain and, on this basis, radically expanding our ethical relation to the environmental consequences of our food choices.

Cross-References

- ▶ Agricultural Ethics
- ▶ Biodiversity and Global Development
- ▶ Environmental Ethics
- ▶ Environmental Justice and Food
- ▶ Industrialized Slaughter and Animal Welfare
- ▶ Intellectual Property Rights and Trade in the Food and Agricultural Sectors
- ▶ Peter Singer and Food
- ▶ Saving Seeds
- ▶ Vegetarianism

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Economy of Agriculture and Food

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Synonyms

Food regimes; Global food economy; Globalization of agriculture and food; Political economy of agriculture and food

Introduction

Food systems – the web of relations through which human beings organize food provisioning and consumption – are the foundation of all societies. For most of human history, food systems were organized on a local or regional scale and were deeply embedded in the ecologies and cultures of particular times and places. Today, however, nearly all food systems are integrated, albeit to different degrees, into the international circuits of production and distribution of the capitalist global food economy. Although societies have engaged in long-distance food trade for millennia, the scale, scope, and logic of organization of today's global food economy differ radically from historical patterns. In the global food economy, food producers and consumers are more geographically and socially distant than ever before, new technologies are revolutionizing food production, and the spread of tastes and cuisines is changing diets at an unprecedented rate. While many people rely on the abundance of relatively cheap industrial food produced by the global food system, many others are excluded from the bounty. Millions of people participate in the global food economy as food producers but under radically different conditions based on their place in the "food chains" organized by agri-food companies.

This entry examines how the emergence of a global food economy has given rise to ethical controversies such as hunger- and diet-related diseases, animal cruelty, ecological crisis, and the plight of small farmers. The first section provides some background to the political economy of agri-food systems. Next, the entry outlines the emergence and consolidation of the global food economy and the social and ecological dislocations it has wrought. The final section considers some of the countermovements that articulate an alternative set of social, ecological, and ethical ideals to those of the global food economy.

The Political Economy of Agriculture and Food

Political economy is a social science tradition that analyses the economic realm, in the broadest sense, as a field of social relations of power. Unlike neoclassical economics, political economy does not take for granted that markets and

other economic processes operate according to their own logic. Rather, these processes are shaped by social actors with competing interests, resources, and interpretations of reality. The outcomes of these struggles have consequences for the distribution of resources, the nature and direction of development processes, and the organization and character of other social institutions. There is a normative dimension to most political economy perspectives, which consists of the assumption – sometimes implicit – that social justice demands a broadly democratic control of economic institutions and an equitable distribution of resources.

The political economy of agriculture and food perspective emerged from a critical reappraisal of rural sociology in the late 1970s. At this moment, many scholars considered traditional rural sociology, which tended to focus on the community dynamics of rural life, to be inadequate for making sense of rapid changes occurring in the agriculture sector. In response, a new wave of scholars developed a more critically oriented perspective called "the new political economy of agriculture" (Friedland et al. 1991), which focused on the role of agriculture in capitalist development, the class location of family farmers, the rise of agribusiness, and the fate of family farmers in advanced capitalist economies. Scholars would later broaden this approach by adopting a food systems perspective, which incorporates patterns of food distribution and consumption into the analysis, and by applying it to an international, and eventually global, scale. In general terms, the political economy of agriculture and food perspective sees agri-food system dynamics emerging from the interplay of state structures and policy, markets, and the organized actions of social actors such as farmers, corporations, and consumers.

Just as no society can exist without meeting the food needs of most of its members, the agri-food sector has been central to the development and reproduction of capitalist societies. In capitalist societies, in which food is progressively commodified over time, the food question is largely a function of the purchasing power of social classes in relation to food prices. Likewise, in a capitalist economy, prices and markets play an important role in shaping agricultural production among commercial farmers. Agriculture has played a somewhat paradoxical role in capitalist development. On the one hand, capitalist development is associated with the declining importance of agriculture in relation to manufacturing and other economic sectors. On the other hand, the industrialization of agriculture and the rise of a capitalist food industry have made the agri-food sector into big business. Agriculture represents about 6 % of global GDP, and worldwide food sales were estimated at $US eight trillion in 2008 (Clapp 2012, p. 7). Today, agri-food corporations have enormous influence over some food markets and have exerted considerable political influence as well.

State regulation of the food supply goes back centuries, with the British Assize of bread of the thirteenth century, which regulated bread price, weight, and quality, being an early example. In capitalist societies, states have used agriculture and food policy to regulate markets, often in response to the political pressure of class interests such as farmers, working-class consumers, or agribusiness. Farm policies have tended to address some of the distinctive features of agricultural markets: a very large number of sellers (farmers) compared to buyers (food processors), price volatility, the perishable nature of food commodities, the seasonal variability in supplies of some commodities, and the non-elasticity of food demand (i.e., the fact that, past a certain threshold, demand for food does not increase with rising income). Governments have used price supports and farm subsidies, for instance, to meet farm income and rural development objectives or state-mandated marketing bodies to even out the imbalance in market power between farmers and agribusiness. Governments have also regulated key aspects of the food supply, including food prices, safety, quality, and nutrition, with food security being one of the overriding objectives. Over the last few decades, the regulation of agri-food markets and food supplies has become increasingly internationalized with the emergence of institutions such as the United Nations' Food and Agriculture

Organization, the World Trade Organization (see below), and Codex Alimentarius, a regulatory body charged with establishing international food safety and quality standards.

The accelerating globalization of agri-food sectors has led scholars to recast the political economy framework in global terms. Broadly speaking, the global political economy of agriculture and food poses questions such as the following: How can persistent hunger in a world of plenty be explained? What is to be the fate of global farming classes, especially small peasant farmers in the global South and small and medium family farms in the global North? What role are global corporations playing in the integration, harmonization, and commodification of food systems? How is the global food economy to be regulated? An emerging political economy of *food crisis* has begun to grapple with the recent, deep-seated convulsions of the global food economy, which include price spikes, rising hunger, the climate crisis, and ecological degradation (Magdoff and Tokar 2010). These issues are examined in more detail below. The next section traces the origins and evolution of the global food economy.

The Global Food Economy

Today's global food economy has its earliest roots in the wave of European colonialism that began in the fifteenth century. As part of the colonizing process, European powers appropriated indigenous land and labor for the production of food and fiber. Vast swaths of the colonized world were converted to plantation agriculture producing valuable commodities such as coffee, cotton, tea, sugar, rubber, and spices. This disrupted and disorganized the indigenous social systems, including food provisioning, and radically changed the ecology of the colonized places (Weis 2007). The colonial-era trade created an international division of labor in which colonized zones specialized in raw agricultural products and European states in manufacturing. Over the long term, this specialization created, in some parts of the global South, a dependence on a narrow range of agricultural commodities for export earnings.

A world market in food *staples* did not emerge until the latter half of the nineteenth century. This only occurred with the massive increase in the international wheat trade resulting from the opening of new farming frontiers in settler-states such as Canada, the USA, Australia, and Argentina. As part of a push for national development, settler-states dramatically expanded their production of wheat, beef, and other food staples for export. In turn, the industrializing states of Europe, led by the UK, turned increasingly to cheap imports of food staples to feed a burgeoning working class. This new international division of labor formed the basis of the first capitalist "food regime" (Friedmann and McMichael 1989), a coordinated set of relations organizing food production, distribution, and consumption on a world scale. During the first food regime, the international food trade was organized mostly on the basis of free trade, a key part of the UK's strategy for economic and political dominance. In the settler-states, family farms, based on household labor and land ownership, became the dominant form of agricultural production, and farm households became an important political and economic class. The earliest agribusiness companies, consisting of grain trading firms, farm machinery manufacturers, and early food processing businesses, also emerged at this time.

The chaos of the two World Wars and the Great Depression disrupted and ultimately unraveled the first food regime as wartime food crises and the collapse of agricultural markets caused increasing conflicts among farmers, governments, and consumer classes.

Only with the stabilization of the international system and the world economy after World War II did a new food regime emerge. During the second food regime, states would play a much more direct role in regulating domestic food and farm sectors as well as the international agricultural trade. Governments of industrialized states introduced wide-ranging farm supports that sought to stabilize farm incomes and promoted the further industrialization of agriculture. These policies tended to create large, chronic surpluses

of major food commodities, which in turn became a serious economic and political problem. Taking the lead from the USA, the dominant economic and political state of the era, governments dealt with surpluses by pushing their exports into new markets, often through food aid programs, and by encouraging the rapid development of intensive livestock and food processing industries. These industries, referred to by Friedmann (1994) as the "livestock complex" and the "durable foods complex," transformed grain into meat and processed foods, both of which became hallmarks of postwar diets. Large multinational corporations consolidated their power over several aspects of the agri-food sector, including grain trading, food processing, and farm chemicals, sometimes creating vertically and horizontally integrated conglomerates (e.g., Cargill and ADM).

Meanwhile, the end of World War II led to a rapid wave of decolonization in the global South. The newly independent states of the Third World pursued economic development based on a Western model of industrialization. As a result, many Third World states accepted food aid (cheap, but not free, shipments of grain from the USA and other states) as a basis for subsidizing working-class wages and stimulating industrialization. The second food regime therefore produced new international flows of food, with many parts of the Third World continuing to provide international markets with tropical commodities, but industrialized states increasing their exports of grain and meat products into the global South.

These patterns were fairly stable until the oil and food shocks of the early 1970s, which disrupted the global capitalist economy. In 1972–1973, food prices spiked, partly because of a massive sale of US grain to the USSR, which marked a reversal of the long-standing American trade embargo with the communist world. The end of this embargo temporarily erased grain surpluses, which led farmers in the industrialized world to expand production, at the urging of governments. However, by the late 1970s, a return to surpluses combined with the European Economic Community's entry into the world market as a major exporter in its own right caused increasing market volatility. As competition over market share intensified, the dominant exporters, the USA and the EU, expanded their export subsidies and other forms of agricultural support. This depressed world prices, causing hardship for industrialized farmers in countries such as Canada, Australia, and Argentina. Meanwhile, the conditions of the 1970s sowed the seeds of a crisis for many Third World states. Rising oil prices and a recession among the industrialized states caused the price of imports to rise just as export opportunities declined. Earnings from the export of tropical agricultural commodities plummeted as the terms of trade for Third World states worsened. Many of these borrowed heavily in order to keep up with development goals and to finance imports. Higher grain prices during the mid-1970s caused wealthy countries to scale back their food aid programs, leaving former aid recipients dependent on imports of now commercially priced grains from the North. By the 1980s, rapidly rising interest rates, caused by the USA's tightening of the money supply, triggered a severe debt crisis for many Third World states. The turmoil of the 1970s and 1980s undermined many of the assumptions and practices that had stabilized the second food regime.

In the search for a solution to these problems, powerful states, led by the USA, and multilateral lending institutions adopted a neoliberal philosophy that called for freer trade and less government involvement in agriculture. On the one hand, freer trade was intended to curb the spiraling subsidy war among major exporters and to expand international trade opportunities. On the other hand, reducing government support for agriculture was meant to allow "market forces," including international competition, to allocate resources in the farming sector, even if this undermined the viability of family farming. In the global South, debt crises led many states to seek emergency bailouts from the International Monetary Fund and World Bank, who made the loans conditional on the adoption of "structural adjustment plans" inspired by neoliberal

economics. Structural adjustment policies encouraged governments to increase agricultural exports, reduce import restrictions, and cut funding to rural development and farm support programs. These reforms reoriented the farming sectors of many countries – shifting away from self-sufficiency and towards agro-exports – and further integrated the global South into the global food economy. From the 1980s onwards, many countries scaled up their production of counterseasonal fresh fruits and vegetables, meat, seafood, and animal feed for the global market. This reorientation often came at the expense of smaller-scale peasant farmers, who found it increasingly impossible to compete with the flood of cheap imports from abroad.

The neoliberal restructuring of agriculture was institutionalized in the Agreement on Agriculture (AoA), a subagreement of the World Trade Organization, signed in 1995. This agreement sought to liberalize agricultural trade by harmonizing food standards, reducing trade barriers, and tackling export subsidies. Wealthy agro-exporting countries, supported by an influential agribusiness lobby, sought better access to new markets in the global South as well as an end to the destructive USA–EU subsidy war. Meanwhile, many countries in the global South hoped that the AoA would level the playing field by reigning in rich-country subsidies and providing better access to markets in the global North. Far from resolving the imbalances of the global food system, however, the AoA has, according to its critics, accentuated and legitimized them (Pritchard 2009). For one, the USA and EU have made little progress in reducing their overall agricultural spending, to the frustration of competing agro-exporters. Furthermore, countries of the global South have been locked into a new trading regime that exposes them to the cheap exports of wealthy countries with little benefit in terms of improved market access. By the early 2000s, these issues became a stumbling block in the attempt to reach a new WTO deal, as a coalition of global South countries broke off the negotiations over the lack of progress on rich-country subsidies. The talks have been moribund since 2008, though the 1995 AoA provisions remain in effect.

In the neoliberal era, agri-food corporations have extended and consolidated their influence over the global food economy. In a process facilitated by the liberalization of agri-food sectors, agribusiness firms have established sprawling international empires able to source raw materials cheaply, exploit differential labor regimes, and target lucrative markets with an eye to maximizing profits. Agri-food companies have likewise developed increasing influence over the regulation of food quality, with private standards replacing or being superimposed upon weakened public standards (Friedmann 2005). These private standards may appeal to wealthy consumers as assurances that foods are "safe," "green," or "fair." Poorer consumers, however, must make do with the standardized, highly processed, and sometimes risky food products of the global food system.

Although the neoliberal period has led to an unprecedented integration of the global food economy, it has also produced growing conflicts. On the one hand, different social actors, regions, and agri-food sectors are integrated unevenly into the system, creating different sets of winners and losers. On the other hand, the dominance of neoliberal philosophy has sparked a debate over the principles and values that should guide societies' relationships to food and agriculture. Neoliberalism tends to value entrepreneurship, individual liberty, and economic efficiency over solidarity, cooperation, and social justice. Applied to agriculture and food sectors, these values have translated into a sense that neoliberal reforms are a painful but necessary process for achieving a greater long-term good, the efficient allocation of resources. Critics of neoliberal philosophy contend that the most efficient allocation of resources is not necessarily, or even most often, the most just and that markets, trade, and other economic processes should serve society, not the other way around.

These conflicting realities and worldviews have led to a series of instabilities and contradictions in the global food economy.

Crisis and Contradiction in the Global Food Economy

The food crisis of 2007–2008 shone a spotlight on the weaknesses of the global food economy. Many agri-food scholars point out, however, that the contradictions of the system run deeper, since many present-day crises are the expression of long-running tendencies. Perhaps the most visible failing of the global food system is persistent – indeed, worsening – hunger and malnutrition. In the wake of the food crisis, the FAO estimated that over one billion people went hungry in 2009, an increase of approximately 150 million from preceding years. Yet, even before the price spikes, rates of undernourishment remained stubbornly high, particularly for sub-Saharan Africa and South Asia. With rapid price increases such as those in 2007–2008 and 2011, vulnerable households are pushed over the edge into food insecurity. The causes behind recent food crises include both latent problems, such as the decades-long marginalization of small-scale farmers and rural people, who are the most vulnerable to hunger, and more recent phenomena, such as the biofuels boom, which shifts resources away from food production, rising global demand for meat, failed crops, a weakening US dollar, and growing financial speculation in food commodities. While food crisis conditions have led to increasing investment in agriculture, which many have welcomed, some new forms of investment have been highly controversial. Wealthy governments, sovereign wealth funds, and private investors have, since the mid-2000s, begun to acquire large swaths of productive farmland in developing countries, especially Africa, in what some have called a "global land grab." The concern is that these outside investors will, in pursuing their own ends, dispossess and disenfranchise vulnerable smallholders. Another controversial trend is increasing food system financialization (Clapp 2012), the process whereby financial interests have come to exert increasing influence over agri-food markets and prices through speculative investment. Here the concern is that speculation could exacerbate food price volatility at the expense of poor, food-insecure households.

At the other end of the spectrum, industrialized states and, to an increasing extent, middle income and developing countries are facing growing rates of diabetes, obesity, and heart diseases. While the causes of these diseases are complex, the overconsumption of some foods, particularly meat, highly processed foods, and fast foods, is a major contributor. Diet-related diseases such as these pose a significant public health problem and place a strain on health-care resources. Yet, addressing the problem is difficult given that food choices are made in a food environment saturated with advertisements for foods high in fat and empty calories. This global juxtaposition of the "stuffed and starved" is a symptom of a food system that is gravely out of balance (Patel 2007).

The plight of the world's farmers is another of the global food economy's most pressing crises. In the global North, three decades of neoliberal reforms have accelerated the decline of small- and medium-sized family farms. The remaining farms are highly productive, highly capitalized, and very large, yet many farm operations cannot survive without substantial support from off-farm income and/or government programs. Likewise, these farms are increasingly likely to be integrated into corporate food chains through contracting arrangements wherein farmers have only limited negotiating power. In the global South, chronic underspending on rural development and agriculture, the corrosive effect of cheap imports, the overreliance on some export commodities, and the dominance of corporate agro-exports have left smallholder farmers in ever more precarious conditions. Indeed, tens of millions of small farmers have, in recent decades, abandoned the countryside for the city, contributing to the "planet of slums" phenomenon (Davis 2006). Even if cities offer better opportunities for some, the scale and speed at which this rural–urban migration is occurring mean that many migrants become a part of the "surplus population" for which there are no (or only poor) jobs, insecure housing, and few if any

basic amenities. Those small-scale farmers that stay on the land have shown great resilience but continue to face hunger – many poor households are still net buyers of food – poor access to markets, low productivity, and worsening environmental conditions.

The ecological cost of industrial food production is another highly contentious issue. As Weis (2010) has argued, the productivity of the industrial food system is underwritten by a series of "biophysical overrides" that boost yields but externalize environmental costs. The common denominator for each of these overrides – artificial fertilizers, chemical pesticides, and cheap fuel for machinery – is fossil fuels. The ecological harm wrought by the extraction and burning of fossil fuels is unaccounted for in the cheap price of fuel and other petroleum inputs, which masks the true cost of industrial food. In addition, a highly integrated global food economy depends on cheap fuel to transport food from farm to plate, often across thousands of miles. The global agrifood sector is therefore a major contributor to greenhouse gas emissions and climate instability. This is ironic since the agricultural sector stands to be among the most negatively affected by climate shocks such as drought, flood, and extreme heat. The spread of industrial agriculture is also associated with biodiversity loss, the toxic effects of pesticides on nontarget species, and damage to waterways from the overaccumulation of artificial nutrients.

Finally, the spread of industrial livestock operations and meat-centered diets raises animal welfare and social justice issues in the global food system. Weis (2007) has documented the rapid rise of the global livestock sector, citing an estimated fivefold increase in global meat production from 1950 to the early 2000s. The global farm animal population puts a huge strain on resources – referred to as the "ecological hoofprint" – including land, water, and waste-absorption capacity. Given the inefficient rate at which grain and water are converted into food nutrients in meat, the rising global appetite for meat tends only to exacerbate the inequalities between the world's poorest and more affluent consumers. Moreover, industrial methods tend to maximize animal turnover through speedup and other technologies, exacting a heavy toll on animal well-being.

Countermovements and Alternatives

A wide range of social actors, including farmers, NGOs, academics, food system activists, and environmentalists, working within and across their various networks, have challenged the dominant relations of the global food system. Three broad sets of alternative approaches, each grounded in an ethical critique of the status quo, are highlighted here. First, social actors have created alternative food networks (AFNs) that circumvent the regular channels of production, distribution, and consumption of the global food system. At local and regional scales, AFNs include farmers' markets and community-supported agriculture schemes, where consumers invest in a local farm in order to share in the risks and rewards of food production. These types of AFNs reconnect farmer and consumer and return a larger share of the food dollar to farmers. At an international scale, fair trade schemes for commodities such as coffee, tea, sugar, chocolate, and flowers provide a guaranteed price to smallholder farmers, ensure decent labor conditions, and often include environmental provisions. By purchasing fair trade-certified products, consumers engage in a form of ethical consumption where social and ecological values are added to other considerations such as price and quality.

Second, recent food crises have led to a call among some multilateral bodies, NGOs, activists, and academics for a new commitment to farmer-led rural development. The idea here is that investing in the livelihoods of poor farmers is the best way to tackle the food, farming, and climate crises. Since hunger and poverty disproportionately affect farmers and rural populations, raising the incomes of small-scale farmers must be a priority. This can best be achieved, according to this view, by providing farmers with the knowledge and tools to make the best possible use of their existing resources, including

land, water, and agro-biodiversity. Indeed, low-input, resource-conserving methods – referred to as agroecology – have been shown to significantly raise yields and, by extension, the incomes and food security of poor households. The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), a major UN-sponsored study, favored pro-poor, agroecological strategies over continued agro-industrialization as a means of meeting the challenges of global food security, poverty alleviation, and climate stabilization.

Third, social movements of various stripes have rallied behind food sovereignty, a far-reaching vision for putting human rights at the center of the food system. The idea of food sovereignty was first articulated by Via Campesina, an international peasants' movement. Above all, food sovereignty asserts the right of peoples to democratic control over food and farming. In practice, food sovereignty requires that agri-food systems provide a decent living for farmers, ensure that the food needs of all members of the society are met, and create the conditions for long-term sustainability. The food sovereignty movement sees the neoliberal framework of liberalization, commodification, and corporate dominance as illegitimate and seeks to replace it with decentralized, democratically governed food systems. Food sovereignty is in large measure compatible with the other alternatives outlined above but goes beyond them by proposing a paradigmatic change that integrates ecological, social, and political goals.

Summary

Over 150 years of global capitalist development, an increasingly integrated global food system has tied distant producers, consumers, and ecosystems into new relations. The consolidation of the corporate-dominated global food system since the 1980s has led to a series of ruptures, dislocations, and conflicts that have raised pressing social, ecological, and political questions. The trajectory of the global food system will be influenced by the competing interests and strategies of dominant social actors, including states and agri-food corporations committed to the status quo, and coalitions of civil society challengers committed to deep-seated change.

Cross-References

- ▶ Animal Welfare: A Critical Examination of the Concept
- ▶ Biofuels: Ethical Aspects
- ▶ Community-Supported Agriculture
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Land Acquisitions for Food and Fuel
- ▶ Meat: Ethical Considerations
- ▶ Private Food Governance
- ▶ Trade and Development in the Food and Agricultural Sectors

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Ecosystems, Food, Agriculture, and Ethics

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Rural, Urban, and Wild

Aristotle said that humans are by nature "political animals" (Greek *polis*, town, Aristotle, *Politics*, 1, 2). We live in towns; we are civilized. But by nature too, we are residents on landscapes, placed in a more comprehensive community of life and life support. The rural environment is more central, more basic than the urban or wild environments. Humans may believe they have a right to a healthy and productive environment, providing needed commodities – soil, food, water, timber, and natural resources. Still, an encounter with all three dimensions – urban, rural, and wild – protects a comprehensive experience of human identity. Nature is *resources*, but in a deeper perspective, nature is the *source* that produces life, the ecosystemic life-support system.

Culture remains tethered to the biosystem. Culture depends on airflow, water cycles, sunshine, nitrogen fixation, decomposition bacteria, fungi, the ozone layer, food chains, insect pollination, soils, earthworms, climates, oceans, and genetic materials. An ecology still lies in the background of culture. In any future that we can presently envision, some sort of comprehensive or inclusive environmental fitness is required. Nature is not gone. Nor are we post-natural; rather, nature is forever lingering around. Humans and this planet have entwined destinies.

Such more comprehensive fitness is more than just a reliable supply of wheat from the breadbasket plains. People have a sense of place. Americans sing, with goose bumps, of "mountain majesties above fruited plains." All peoples need a sense of "my country," of their social communities in place on a sustaining landscape they possess in care and in love. The English love their countrysides. The promised land has been central in Hebrew faith. Both involve a rural land tended with care and, more inclusively, an embodied sense of residence on a landscape.

Caring for landscapes goes back to Adam and Eve, to baseline human agricultural experience. The first couple was set in Eden "to till it and keep it" (Genesis 2.15). "Be fruitful and multiply, and fill the earth and subdue it; and have dominion . . ." (Genesis 1.27–28). Even hunter-gatherers attempted some landscape tending, such as setting wildfires to increase grass and attract game. With the coming of agriculture, humans found tilling the good earth a toilsome blessing, reflected in the Genesis fall: "In the sweat of your face you shall eat bread" (Genesis 3.19). In the struggle for food and health, we want a naturally healthy body, but we do not want naturally healthy wild ecosystems and nothing more. We transform them agriculturally; we are stewards who garden the Earth. We "produce" food and fiber. Still, some dimensions of health pervade both wild and agricultural nature – the need for air, water, fertile and nontoxic soil, sunshine, suitable climate, and a land with promise that can be tended as a promised land.

This ancient pursuit continues. How ought humans to reside on landscapes on which they must earn a living? Some prominent figures in thinking philosophically and ecologically about agriculture are as follows: Paul Thompson (Thompson 1995, 2010); Wes Jackson, founder and president of The Land Institute in Salina, Kansas (Jackson 1994, 2010); Fred Kirschenmann, North Dakota organic farmer and also at the Leopold Center for Sustainable Development, Iowa State University (Kirschenmann 2010); and Wendell Berry (2002).

Ecosystem Services

Natural systems have provided the wider envelope in which human agriculture (and culture) functions. "Ecosystem agriculturalists will take advantage of huge chunks of what works . . . the natural integrities of ecosystems worked out over the millennia" (Jackson 1985, p. 145). This surrounding milieu provides what are now called

"ecosystem services," contributions of natural processes without which no agriculture (or culture) can flourish, but which do not classically enter into the accounting of economists. These include primary photosynthetic productivity, nutrient dispersal and cycling, pollination, food, fuel, cleansing air and water, soil renewal, and living space that is habitable and pleasant. Wild pollinators, for example, provide free pollination; in some areas honeybee colonies must be supplied to replace lost wild pollinators, at a cost of billions of dollars. Analysts who examine this may call their discipline ecological economics and distinguish it from environmental economics, which is classical economics applied to natural systems thought of as market resources. Ecological economists are holists who think more ecologically than environmental economists.

Robert Costanza led an effort to value such ecosystem services. He came up with a value of about $33 trillion, in a range of $16 trillion to $54 trillion (Costanza et al. 1997; Pimm 1997). The global GDP in 1997, the year of the study, was $27 trillion. So natural ecosystem services may exceed the entire output of the global human economy. As might be expected, the study was criticized, although critics agreed that "externalities" (as classical economists call them) – benefits from Mother Nature that belong to no one in particular and so are enjoyed for free by all – are huge. These common benefits do indeed force us to rethink what we ought to do in terms of our treatment of nature. This may also be called "translational ecology."

Ecological economists find that this goal of forever giving people more and more, however humane, drives an escalating degradation of the natural environment, undermines ecosystem services, makes it harder to grow enough food for people, reduces biodiversity, and makes the rich richer and the poor poorer. Such a humane economy is inseparably entwined with biological processes, a bioeconomics (Costanza et al. 1997; Spash 1999; Kolstad 2000; Daly and Farley 2004; Common and Stagl 2005; Millennium Ecosystem Assessment 2005).

Ecological economics thinks of the flow of energy and materials that enter and exit the economy as a kind of metabolism, digesting life nutrients, but needing environmental sources and sinks, analogous to organisms in their environment. They may worry about pushing crop yields and losing the natural fertility of the soil and replacing this with synthetic agricultural fertilizers in increasing amounts, even if this increases yields in the short term. Or they may worry about what high pesticide use is doing to the rivers and groundwater. Carrying capacity ought to govern resource use, rather than maximum exploitation. Environmental integrity and quality is as central as are production, growth, and profit.

A massive *Millennium Ecosystem Assessment*, sponsored by the United Nations, involving over 1,300 experts from almost 100 nations, begins: "At the heart of this assessment is a stark warning. Human activity is putting such strain on the natural functions of Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted" (Millennium Ecosystem Assessment 2005, p. 5). The principal authors conclude:

> We lack a robust theoretical basis for linking ecological diversity to ecosystem dynamics and, in turn, to ecosystem services underlying human well-being. . . . The most catastrophic changes in ecosystem services identified in the MA (*Millennium Assessment*) involved nonlinear or abrupt shifts. We lack the ability to predict thresholds for such changes, whether or not such a change may be reversible, and how individuals and societies will respond. . . . Relations between ecosystem services and human well-being are poorly understood. (Carpenter et al. 2006)

In a review of biodiversity in ecosystem functioning, the authors conclude: "Maintaining a high proportion of biological diversity leads to efficient and stable levels of ecosystem functioning. . . . Protecting biodiversity is a goal of fundamental importance and can support efforts to safeguard the intrinsic capacity of ecosystems for self-renewal, adaptive dynamics, and supporting humanity now and for generations to come" (Naeem et al. 2012, pp. 1405–1406).

Some critics reply that, moving into the Anthropocene epoch, humans are creating novel ecosystems, new combinations of species under new biotic and abiotic conditions. More than

80 % of all people live in densely populated rural, village, and urban landscapes, what may be called "anthropogenic biomes" (Ellis and Ramankutty 2008). These critics further argue that adaptive ecosystem management approaches must explicitly acknowledge the current status and predict the future conditions of these systems. Old styles of management, which focused on removing undesirable species or conditions from ecosystems to return them to a prior condition, are no longer sufficient. We need to consider, and experiment with, novel outcomes or trajectories, rather than simply take preventative or therapeutic measures (Seastedt et al. 2008).

But ecological economists are doubtful about all this scaled-up, clever management of rural and wild lands. We have too much experience already with unexpected outcomes (e.g., kudzu, CO2 in the atmosphere). Maybe even in the Anthropocene, we need to keep (as Wes Jackson says) "huge chunks" of what has worked well for millennia.

Farming, Food, Human, and Ecological Health

People work to domesticate their landscapes. They have grazed and plowed fields, cleared forests, planted crops, domesticated animals, and built roads, canals, and dams. Imperial China built irrigation canals and deforested mountains. The great Southeast Asian rivers were lined with rice paddies, and their well-watered deltas have proved superb locations for the cultivation of wet rice, the staple food of much of the population. Nepalis terraced their hillsides for more, drier rice. The Hebrews, in Biblical times, terraced theirs to grow wheat. Americans had their manifest destiny to conquer their continent, planting where they could and making the rest range for their cattle. Their wheat is not native to their landscape; in fact Americans eat almost nothing that was native to North America. Soviet socialism pressed a vast plan to reinvent nature, transforming it into the obedient servant of human society. People try to get the most they can out of their agriculture.

"Domesticated nature in its simplest form means nature exploited and controlled" (Kareiva et al. 2007). Humans reshape their environments, rather than being themselves morphologically and genetically reshaped to fit their changing environments. So entering an Anthropocene epoch is just continuing what we have always been doing.

Yes, but the recent century has dramatically escalated the classical transformations. Human-dominated ecosystems now cover more of Earth's land surface than do wild ecosystems (Foley et al. 2005). Nature now bears the marks of human influence more widely than ever before. Humans now consume 30–40 % of all terrestrial net primary production (Vitousek et al. 1986; Imhoff et al. 2004). Humans produce more reactive nitrogen than all other terrestrial processes combined (Galloway 2004). Human agriculture, construction, and mining move more earth than do the natural processes of rock uplift and erosion (Wilkinson and McElroy 2007). These human activities alter the composition of the atmosphere, the soil, levels of biodiversity, and energy flows within food webs enough to threaten important ecosystem services. Most of life for most people takes place on landscapes that are a hybrid tapestry of nature and culture and rural, agricultural, pastoral landscapes. Humans have a huge "ecological footprint."

According to a widely held account (descending from the philosopher John Locke), value arises when nature is mixed with human "labor" or "industry," with the human labor adding most of the value. A person finds little food or shelter hiking through a forest; a farmer cuts down the trees, builds a house with the wood, and plants a vegetable garden, which must be tended or else there will be mostly weeds. Where a natural "source" can be "redirected" into channels of human interest and preference, nature is redone, "resourced," and made over into an artifact that we can use. Nature is "transformed" into a more desirable humanized form. If you prefer a biological word, human values and natural values are "symbiotic." If nature means absolutely pristine nature, totally unaffected by human activities, past or present,

there is relatively little remaining on Earth. If culture means totally denatured, reconstructed, and civilized with no dependence on natural systems, there is none of that on Earth either. What is all over the landscapes is nature linked with human identity.

So are we to celebrate this escalation of human agricultural powers? Or should we be concerned about it? Have we passed our landscape-carrying capacity? Fewer farmers feed more people. In the United States in 1850, less than 20 % of Americans lived in towns and cities. Today more than 80 % are urban, and the prosperity in cities is made possible by increasingly productive mechanized agriculture on the farms, as we next see. This urbanization has also decoupled increasing numbers of humans from any direct experience of agriculture. A typical reply will be that all this is a good thing, provided only that the agriculture is sustainable, provides the population with healthy food, and continues on healthy ecosystems. One way to keep people in touch with their ecosystems is to eat local and eat organic food.

Ecosystem *health* is a somewhat metaphorical term, extrapolated from health as found in individual organisms, but it is a term to which people relate easily. Everybody wants to be healthy and to live in healthy places. "An ecological system is healthy and free from 'distress syndrome' if it is stable and sustainable—that is, if it is active and maintains its organization and autonomy over time and is resilient to stress" (Costanza et al. 1992, p. 9; Mistretta 2002). Biological *integrity* has as a baseline index the ecosystem that was originally there before human changes, the natural history, while biological *health* may – but need not always – require all the species that were originally there. There may be culturally introduced replacements. If there is health, these replacements will thereafter function with minimal management intervention. Generally, environmentalists dislike moving to a bioengineered agriculture that involves a constantly doctored landscape (removing toxics from streams, bringing in bees to fertilize the crops).

The 1998–1999 Malaysian Nipah virus epidemic emerged when pigs (raised for international trade) were crammed together in pens located in or near orchards. The orchards attracted fruit bats whose normal habitats had been disrupted by deforestation; their droppings contained the as yet unknown paramyxovirus and infected the pigs. The overcrowding led to explosive transmission rates and to infections in pig handlers. So a virus that was once not disruptively epidemic became so because of human disruptions of natural habitats of bats and overcrowding of pigs, driven by global commercial interests. The Malaysian government culled over one million pigs (Morens et al. 2004; Dobson 2005). Globalism sets up atypical ecological conditions favorable for invasives and pathogens. The result is human disease but the inclusive framework is agricultural and social upset of natural ecologies.

One of the classical proverbs of ecologists is that everything is connected to everything else. This proverb is proving true with links between ecological and human health, links that tie local to global events, in wild nature, agriculture, and culture. The larger framework requires thinking holistically "based on the understanding that there is only one world—and only one health" (Karesh and Cook 2005, p. 50; Rolston 2005). "Health effects ripple throughout the web of life. Health connects all species" (Tabor 2002, p. 9). Human health requires thinking in ecological contexts, increasingly in more global ones.

Industrial Agriculture

Yes, classically ecosystems did provide the wider envelope in which human systems of agriculture have functioned. But in the Anthropocene age, we have moved past that. Now and henceforth, the principal way to think of agricultural lands is as capital. Economists may speak of "capitalizing nature." Land and resources are "natural capital." We have "factory" or "corporate" farming. Farmers ought to be "industrious." Traditional agriculture was powered by muscle and blood, humans and horses, and perhaps some water power for irrigation or grinding grains. Commercial agriculture is powered by engines and gears, tractors, combines, and harvesters, in turn powered

by fossil energy. Farming is technoscientific, with innovations in agricultural machinery, massive irrigation dams, and genetic technology, producing high-yield varieties, large-scale production, huge fields, massive harvests, patent protection, and global trade. Land is part of the machinery. There are confined animal operations (CAFOs); animals are fed enriched food, growth hormones, and antibiotics to assure maximum productivity in terms of size, taste, and sales. Traditional fertilizer was manure; now the increase comes from synthetic nitrogen and other fertilizers.

There are positive results for those in developed countries: cheaper and more plentiful food in nearby supermarkets and myriads of workers employed in the distribution system, from growers to harvesters to processors to sellers. Those in developing countries are better fed (at least they can be; many are obese). Agricultural production is over ten times what it was a century back, although the number of farmers has dropped dramatically. Now, we can support escalating populations with escalating appetites in consumption. In the 1930s, 24 % of the American population worked in agriculture compared to 1.5 % in 2002; in 1940, each farm worker supplied 11 consumers, whereas in 2002, each worker supplied 90 consumers (Scully 2002, p. 29). The hope is to transfer such productivity to developing nations and feed the starving world, a "Green Revolution."

But there is bad with the good. Often there are serious environmental and social costs (Gardner 2002). There is global warming from heavy use of fossil fuels. The large scale of disturbed soil for planting monocultures invites invasives, weedy plants, and exotic insects, microbes, and fungi, which must be controlled. There are increased heath risks from pesticides and other agricultural chemicals, both to wildlife and to humans. Many agriculturally used chemicals have long lifetimes; they spill over and migrate from the sites where they are applied; they build up in food chains. We woke up to this with discoveries about the unintended consequences of the pesticide DDT, Rachel Carson's "Silent Spring." In places, human breast milk has become contaminated at levels that exceed those permitted in dairy milk sold in stores. Many pesticides seem to be endocrine disrupters, disturbing reproduction. Pollution that leaks into groundwater is often impossible to remove. Pollution released into the air moves around the globe. One problem here is that agricultural uses (in contrast with industrial plants) are nonpoint sources. It is hard for regulators to pinpoint who is responsible exactly when, where, and how much. Nitrogen in fertilizer on farms in the Midwest has been traced to fish kills in the Gulf of Mexico.

The victims who live downwater or downwind never gave any free, informed consent and usually have no means of proving their damages or asserting their rights. The ill-health effects of pollution often show up first in women, especially pregnant women, and in children. The ill effects may never show up in most of the population, only in a segment of the population that is more susceptible (perhaps the senior citizens). With the long-lived pollutants, the benefits (agribusiness profits, cheap food) may be enjoyed at present, but the suffering (toxic groundwater carcinogens) is borne by future generations. The toxic effects of many of these pollutants can be much longer-lived than the human institutions set up to deal with them.

Longstanding public policies governing chemical design, production, and use need deep restructuring in the light of new science on the health and environmental effects of anthropogenic chemicals. The prevailing view is that we have to maximize yields, at risk of degrading ecosystems. Better to think more holistically. More organic farming can produce enough, healthier foods; it can even outperform chemically dependent farms in periods of drought and climatic stress (Seaman 2011). Such reforms are essential to safeguard ecosystem integrity, human health, and economic sustainability. The U.S. Congress has passed numerous laws to address these issues – notably the 1976 Toxic Substances Control Act, the 1977 Clean Water Act, the 1977 Clean Air Act, and the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, with its Superfund). But these issues escalate when one moves from the traditional family farm to

industrial agriculture. Corporate agriculture, with its focus on increased production, sales, and profits, is not inclined to consider the externalities, the wider and long-term consequences of its operations. The family farm could still be contained in an ecosystemic envelope; industrial farming pushes that envelope toward ecosystemic collapse.

Agriculture in Developing Nations

The Millennium Ecosystem Assessment found that "the poor are most dependent on ecosystem services and vulnerable to their degradation" (Carpenter et al. 2006). In Nepal, one of the poorest nations on Earth, there are melting glaciers in the Himalayas, resulting in glacial lake outburst floods, destroying homes and crops. At the same time monsoon rainfall is increasingly erratic, often delayed past the season for planting rice, and producing landslides that destroy agricultural terraces. This is widely ascribed to global warming, the effects felt in a nation that contributes virtually nothing to CO2 emissions. So far as this is true, the industrial nations are depriving poorer nations of their ecosystem services, vital to their agriculture.

The "Green Revolution" produced some positive results but came nowhere near solving the problem of feeding the world, and it is increasingly harder to bolster crop yields. Corporate agriculture, especially when faced with overproduction in developed countries, has turned to developing nations. But productivity improvements are hard to transmit there (Wilkinson 2009). This can be deliberate; high-yield varieties may be engineered so that farmers must purchase new seed each year. It can be more social or political. Often there are patent disputes or water relocations. Developing states may enter into agreements with large food corporations to grow food and may displace local farmers. There is often dispute over regulation and local corruption. Corporations may seek control over large amounts of land ("land grabbing").

Foreign businesses entering local agricultural systems can upset them as often as improve them, since they are there to make a profit, perhaps to grow crops for export (palm oil, coffee, tea, soy, shrimp). Many agricultural systems may have worked for centuries, but with recent population explosions and resulting land degradation, those in developing nations increasingly need fertilizers to boost yields – synthetic fertilizers if they can get them – but such fertilizer will be proportionately much more expensive in developing nations. African soils are often not especially fertile, and farmers there must pay two to four times the average world price for fertilizers (FAO 2008): prices are not competitive; fertilizer traders charge what they can get; and transportation is inefficient and expensive (sometimes carried on the backs of donkeys or women).

Industrial agriculture, critics often say, needs to be replaced by sustainable agriculture, and again, there are opportunities and challenges.

Sustainability: Local and Global

One powerful movement has been the turn to sustainable development, growing out of the United Nations Conference on Environment and Development in 1992. But there are two ways of thinking about sustainability. First, the economy can be prioritized: this is the usual case. Anything can be done to the environment, so long as the continuing development of the economy is not jeopardized. If economics is the driver, we will seek maximum harvests, a bioindustrial model, pushing for bigger and more efficient agriculture, so long as this is sustainable. What we must push for, according to the Royal Society of London, the world's oldest scientific society, is "sustainable intensification" of reaping the benefits of exploiting the Earth (Royal Society 2009).

In a second way of thinking, the environment is prioritized. A "sustainable biosphere" model demands a baseline quality of environment. The economy must be worked out within such a policy for environmental quality objectives (clean air, water, stable agricultural soils, attractive residential landscapes, forests, mountains, rivers, rural lands, parks, wildlands, wildlife, renewable resources). Ecosystem services have

to be sustained. The economy must be kept within an environmental orbit. One ought to conserve the ground matrix of life. Development is desired, but even more, society must learn to live within the carrying capacity of its landscapes. The model is land as community.

The Ecological Society of America advocates research and policy that will result in a "sustainable biosphere." "Achieving a sustainable biosphere is the single most important task facing humankind today" (Risser et al. 1991). Any sustainable economic development ethic needs to be brought under a sustainable ecosystems ethic. Development concerns need to focus on natural support systems as much as they do people's needs. "Sustainable" is an economic but also an environmental term. The fundamental flaw in "sustainable development" is that it typically sees the Earth only as resource.

Philosophers may enter the dialogue to claim that sustainability of any kind needs also to be fair and just. There is nothing in either ecology or economics per se that gives either any authority or skills at making these further social decisions. Perhaps ecologists can at least make the claim that any fair and just society, over time, requires a local, regional, and planetary sustainability. The ultimate unit of moral concern is the ultimate unit of survival, and that is the biosphere on this wonderland Earth.

Summary

Food and agriculture when linked together with ecosystems raise ethical issues, in addition to technological and scientific concerns. This requires considering rural, urban, and wild landscapes; ecosystem services; human and ecological health; industrial agriculture; agriculture in developing nations; and local and global sustainability.

Cross-References

- ▶ Africa, Food, and Agriculture
- ▶ Agricultural Ethics
- ▶ Community-Supported Agriculture
- ▶ Corporate Farms
- ▶ Environmental Ethics
- ▶ Human Ecology and Food
- ▶ Trade Policies and Organic Food

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Ecotopia

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Synonyms

Ecological utopia; Environmental utopia; Ideal ecological state

Introduction

Ecotopia, a novel written 1975 by Ernest Callenbach (1929–2012), describes an ideal ecologically oriented sustainable society (an ecological eutopia). The book discusses a wide variety of environmental topics of ethical relevance, including issues pertaining to organic food, healthy eating, organic agriculture, and sustainable forestry. The novel illustrates how these issues can be addressed ideally and practically. Sometimes the term ecotopia is also used loosely to refer to real existing ecological communities or blueprints of such communities. This entry, however, is focusing on the novel *Ecotopia* and its description of an ideal ecological state by the same name. The entry briefly situates the novel as a utopian text that is relevant in the context of the discourse on ecologically ideal living, and then it deals with two philosophical presuppositions of the fictitious state "Ecotopia," sustainability and holistic well-being, before focusing on agricultural and food issues, respectively.

The novel *Ecotopia* is not a negative utopia (Dystopia) such as the dystopias *Brave New World* by Aldous Huxley (1932) and *Nineteen*

Eighty-Four by George Orwell (1948). On the one hand, the utopian connotation of Callenbach's novel title, *Ecotopia,* points to a place (Greek: topos) that does not (Greek negation: "u-") exist (yet) but also to a place which is good (Greek: "eu"). Hence, in many ways *Ecotopia* is an "eu-topia" as, for example, Aldous Huxley's *Island* (1962). Some ecological paradigms of the fictitious state "Ecotopia" can be traced back to ancient Greek philosophy. Plato's dialogue *Nomoi* (2008) implies an ideal sustainable and stable state in terms of politics, society, population, households, and environment, while the Ancient Stoic philosophy valued the ideal of living according to (or in harmony with) nature.

The detailed and practical ecological solutions in Ecotopia include, but are not limited to, all possible types of waste management encompassing recycling programs, plant-derived biodegradable durable plastics, renewable energy, car and airplane free transportation, a wide variety of public transport opportunities (high and simple tech, such as free public bicycles), organic farming, renaturation, and reforestation. In Ecotopia ecologically compatible high technology exists besides postmaterial(istic) lifestyles and attitudes of its citizens. Environmental paradigms of ethical relevance include a holistic concept of well-being, intra- and intergenerational justice, sustainability, steady-state economy, prices of goods that reflect the real costs (speak the "ecological truth"), anti-consumerism, slowly declining population, and strict environmental laws. The ecocentric worldview, with a romantic undertone regarding "mother" nature, gives preference to the quality of life and holistic well-being, but not to the economic paradigm of growth (Meinhold 2011).

Ethical-Philosophical Presuppositions

Ecocentric Worldview

Two pertinent ethical-philosophical presuppositions which guide both food production and food consumption in Ecotopia are based on an ecocentric worldview in general and more specifically a holistic and sustainable perspective on well-being in particular. In accordance with Ecological Economics' or Deep Ecology's view of the world, in Ecotopia humans and their economies are taken as subentities or subsystems of the ecosystem (mother nature). This argument is ontologically and logically consistent, since human economies take place within the context of ecological systems. The ecosystem is a *conditio sine qua non* for human economies, but the economy cannot exist sustainably without the sustainable support of the ecosystem (e.g., the sustainable supply of natural resources). Critics have referred to such ecocentric perspectives as ecofascism, especially if the ecosystem is always and without exception taking precedence over any other subentity or subsystem (cf. Callicott 2005). Ecotopians utilize natural resources by at the same time minimizing its impact on nature. But Ecotopians' hunting and eating game, for example, is an indication that the ecosystem in Ecotopia is not always and not without exception taking precedence over human wants and needs.

Holistic Well-Being and Sustainability

In a time of accelerating and intensifying globalization, depletion of nonrenewable natural resources and growing disparity of incomes standard economics' paradigm of growth are even more subject to critical scrutiny. Most economists concerned with sustainability and well-being accept that sustainability of nature, society, and economy is not achievable via economic growth alone. Callenbach's Ecotopia developed a contrasting worldview in which economy's, society's, and nature's sustainability is a consequence of a "steady-state" economy in which economic growth is not an important indicator for measuring economic progress or society's well-being (Thailand's King Bhumibol Adulyadej proposed a similar concept of sustainability, the Philosophy of Sufficiency Economy, in which economic growth plays a less important part, while the Buddhist value of moderation is considered a key for the improvement of general well-being).

In Ecotopia the quality of life or holistic well-being of humans and the ecosystem is considered key indicators of a philosophy of a good life in

general and a sound economy in particular. This paradigm of holistic well-being is similar to since 1972 ongoing attempts in Bhutan which established gross national happiness (GNH), instead of gross national product (GNP), as major indicator of a society's well-being.

Low Consumption and Justice

This relativization of economic-monetary values and the accentuation of holistic well-being are also manifested in prices of goods and services that reflect the real costs. An ethically just price for goods and services includes, for example, costs that reflect and thus monetarize environmental and health impacts. The price of fabric, for example, is comparatively expensive due to its high production costs, which "internalize" (monetarize) health and environmental implications (e.g., external effects such as air, water, or soil pollution). Another indication of the relativization of economic-monetary values is an anti-consumerist attitude, which manifests for example in low consumption lifestyles and in the popularity of easily maintainable and repairable products that have a long lifespan.

Well-being in Ecotopia is considered to be of importance for all currently living humans (intragenerational or intragenerational justice) but beyond that also for future generations (intergenerational or intergenerational justice). The latter is manifested in Ecotopians concern for nonrenewable and renewable resources (e.g., the sustainable forestry and the narrowly regulated and closely monitored harvesting of timber, which has been the paragon for sustainability ever since).

Agriculture

Ecotopian farming regulations permit neither nonorganic fertilizers nor herbicides/insecticides. Fields and forests planted in organic, sustainable, polyculture supply natural, plant-derived renewable, raw materials for building, clothes, and other goods. Organic and sustainable farming also includes waste recycling that is not only practiced on farms but in all sectors. Farms as well as corporations are co-owned in such a way that all workers are at the same time owners of the business. Forestry regulations based on intergenerational justice demand personal commitment of potential buyers of large amounts of timber who have to work in the forest (e.g., planting new trees) for a certain time that is equivalent to the amount of wood they want to purchase, thereby promoting awareness for sustainability. Prices of all goods, raw materials, and energy reflect the real costs or the ecological footprint. Technically this means that ecological costs (externalities) are monetarized (internalized). This is the reason why prices of fabrics such as cotton and wool are comparably high whereas synthetics are not permitted. Leather and fur are preferred raw materials for clothes and bags instead of fabrics, because of their durability (sustainability) and due to their natural origin. Leather, fur, and fabrics are frequently reused and recycled. Environmental pollution is strictly enforced and punished with severe jail sentences. Farming and production, including energy production, are decentralized. Education fosters environmental awareness by theoretical lessons in biology, environmental philosophy, excursions, and practical garden work.

Food

In Callenbach's ideal ecological state, the ethics of food and its consumption reflect the conception of an antithesis to today's still prevalent American mainstream diet which is seen as ethically inappropriate due to its health risks and because of its environmental externalities. Ecotopian food is (technically) organic, healthy, less processed, and without refined sugar. Besides organic fruit and vegetables from farms and gardens, so-called "core stores" supply healthy but cheaply produced food items such as dried, frozen, and otherwise preserved food, for example, bread, beans, rice, and other staples. If packed, the packaging is biodegradable and recyclable or consists of standardized reusable

containers all of which eliminate or at least minimize external effects on environment and consumers. The food ethical antithesis to mainstream nutrition in western and western-oriented cultures consists also in partially environmental law backup bans on items such as convenience food, sodas, sweetened foods, chewing gum, and microwave ovens. Wine, cafe, tee, marihuana, and cigarettes are not banned, because fun and pleasure (in accordance with nature) are considered as essential for an ethics of holistic well-being or a good life. The consumption of meat and fish is held as ethically appropriate. Hunted game is believed to have "spiritual" powers, and farming of animals must be according to (what technically can be described as) species-appropriate husbandry.

Summary

With the title for the novel Ernest Callenbach coined a name for the sub-genre dedicated to ecological utopias in which *Ecotopia*, with its idealistic impetus and its practical relevance, is the major landmark. Thus, the term Ecotopia today stands for both, as concept in the discourse on environmentally ethical or ecologically ideal living (e.g., Anderson 2010; de Geus 1999) and for practical endeavors and projects creating ecological optimal and environmentally ethical communities and cities. The novel *Ecotopia* situates organic healthy food and organic sustainable agriculture as integral components in the context of an ideal ecologically envisioned good life and holistic well-being.

Cross-References

- ▶ Biodiversity
- ▶ Community-Supported Agriculture
- ▶ Corporate Farms
- ▶ Economy of Agriculture and Food
- ▶ Environmental Ethics
- ▶ Free Trade and Protectionism in Food and Agriculture

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Egg Production: Ethical Issues

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Synonyms

Animal ethics; Animal rights; Animal welfare; Environmental impacts; Food quality; Food safety; Human health; Industrial agriculture; Intensive farming

Introduction

Like any human food of animal origin, eggs raise ethical issues with respect to safety and quality for human consumption, environmental impact, and duties regarding the animals themselves and with respect to a cluster of social issues associated with the economic structure of the egg industry. Eggs do have a number of singular features,

however. On the one hand, egg production does not strictly require the death of an animal, and eggs are consumed by many people who adopt vegetarian diets for ethical reasons. On the other hand, industrial egg production in the so-called battery cages (discussed below) has been an especially visible target for activists promoting more humane care for farmed animals. Ethical critiques of egg production are also plagued by significant gaps in lay knowledge – the fact that eggs and chicken meat are as distinct from one another in terms of ethical issues as they are from pork or milk production being a leading case in point. This article begins with an overview of the methods being employed in contemporary egg production and moves on to consider first the animal welfare issues, second the human health and environmental issues, and finally social issues associated with the production of eggs.

Contemporary Egg Production

Eggs have almost certainly been consumed by human beings since prehistoric times. Eggs became a household product in conjunction with keeping various bird species in captive or semi-captive conditions for a variety of nonfood-related purposes. Eggs from several bird species have become elements in human diets, but chickens dominate on a worldwide basis. Chickens have been kept in close proximity to human habitations for the purpose of harvesting eggs for centuries, usually in flocks of 10 to 50 birds, though it has not been unusual for householders to keep a single animal for this purpose. As the modern food system evolved over the nineteenth century, eggs became available from butchers, grocers, and other market vendors, giving rise to commercial production of eggs on farms. Prior to the twentieth century, this production was an auxiliary activity of farm households, with chickens typically kept near the kitchen and fed on scraps. It was not until the 1930s that a commercial industry of farms specializing in production of eggs for urban markets began to evolve (Oesterle 1995).

The first generation of egg farms for large-scale commercial production utilized large open areas with feeding and water stations distributed around the area. Producers developed "deep litter" flooring systems that captured urine and manure. Eggs were gathered by hand. These systems began to be replaced by barns where hens were kept in cages suspended above the floor. These cages were designed with wire flooring that allowed eggs to roll out into a trough, significantly reducing the cost of hand collection of eggs. Eventually, cages were augmented with automated systems for delivery of feed and water, for collection of eggs, and for removal of wastes. These automated systems were most efficiently used when cages are lined up in long rows (or batteries), generally hung from the ceiling of the barn in 3–5 tiers. This became known as the "battery cage" system for egg production. Equipment manufacturers developed many variations of the battery cage, with cages ranging from cubes of roughly 14″ or 36 cm on each side to rectangles that could be several multiples of 14″, 36 cm dimension on the side where automatic feeders and egg collection machinery were operating. The battery cage became the most widely used practice in industrialized food economies by the 1970s (Stadelman 1995). As discussed below, it has been a frequent target of criticism on ethical grounds.

Equipment for automating egg collection and feed delivery in floor-based systems has allowed this system to coexist with the battery cage. As a market for "non-cage" or "cage-free" eggs began to emerge in the 1990s, floor-based systems were the main alternative to battery cages. By 2010, several alternative systems had been developed. The aviary system looks a bit like battery cages without doors, but it permits birds free movement within the house. Since birds overwhelmingly prefer to nest and lay eggs in the cage-like niches, the aviary is able to utilize automated egg collection that is very similar to that of battery cages. A third alternative is the "furnished cage" or "colony housing system." Here birds are kept in cages that are much larger than a battery cage – as much as 10′ or 3 m in length and 6′ or 2.5 m in width. These cages are equipped with nesting boxes, perches, and scratch areas that are intended to afford the

opportunity for performing a number of species-typical behaviors believed to be significant for hen welfare (Mench et al. 2011).

Commercial production of eggs in concentrated animal feeding operations (CAFOs) utilizes all of these systems, typically in ventilated and temperature-controlled (but windowless) industrial buildings of immense size. A commercial egg production facility in any industrialized country will generally operate several of these buildings, which will house between 300,000 and one million birds each. Buildings are generally clustered near a centralized facility for washing and processing eggs and preparing them for sale. Eggs are processed either for sale in the shell (shell eggs) or as liquid or powder (breakers). Other food industry firms (such as bakeries) and institutional kitchens (such as hospitals or hotels) are the primary market for liquid and powdered eggs. As markets have become more specialized, producers have followed suit: most egg farms are geared exclusively to either shell egg or breaker markets (Stadelman 1995). This point becomes ethically significant because farms producing for institutional markets have proven to be far less sensitive to consumer preferences for animal welfare or other ethically significant traits.

Hens for egg production become available through a supply chain that begins with a breeding company that develops a particular strain of bird through genetic selection. Breeding companies have started to use genomics and marker-assisted breeding, but genetic engineering has not had commercial application in the egg industry. Breeding companies may operate their own hatcheries or may license independent owners to produce their strains. Hatcheries maintain a breeding stock of hens and roosters: their product is chicks intended for egg production (Stadelman 1995). (Hatcheries may also produce chicks for meat production, but broiler production is increasingly becoming a wholly vertically controlled process.) In 2013, researchers announced a test capable of discriminating the sex of a chicken embryo (Golovan et al. 2013). Male chicks have no value in the egg industry and are destroyed in macerators within minutes of being born. If embryonic sexing can be made practical for use in commercial hatcheries, it will end the ethically problematic practice of destroying 50 % of the chicks and will save the costs associated with this waste of life.

The methods just described are responsible for an overwhelming majority of the egg production in the industrialized world – perhaps 98 % or 99 % of all eggs consumed. Eggs continue to be produced in traditional "backyard" settings reminiscent of the preindustrial era. In less developed economies, such production may be consolidated for retail sale much as it was done in the United States, Europe, and other industrialized economies prior to World War II. However, the use of industrial methods described above is growing rapidly in the industrializing world and especially in Asia. There are also egg farmers producing free-range and organic eggs in floor-based or aviary systems on a drastically reduced scale, in flocks ranging from 200 to 10,000 birds. Organic egg production prohibits the use of battery cages and requires both outdoor access and the use of organically produced feed. This segment of the market is growing rapidly in the United States and Europe, but most organic production does not impose limits on scale. Thus, most organic production is done by firms that operate floor or aviary systems at industrial scale, and most of these producers also operate barns producing for the conventional caged layer market. Caged production is under a phaseout in the European Union and should have ended entirely by 2013 according to directives enacted in the early years of the twenty-first century. Reports indicate that compliance with these directives is uneven, however (Mench et al. 2008; Millman et al. 2010).

Health and Environmental Issues

Keeping poultry of any kind can be a contributing cause to unwanted health and environmental impacts. The ethics of egg production must therefore consider why these impacts are taken to be harmful and what measures should be taken to mitigate harm or forestall the occurrence of harm, on the one hand, and the extent to which

unwanted impacts can be viewed as costs that are offset by the compensating benefits of egg production, on the other. After many years of uncertainty over the impact of eating eggs on human health, mainly associated with dietary consumption of cholesterol, the current scientific consensus alleviates that concern (Fernandez and Calle 2010). Unwanted human health impacts include food safety, occupational health and safety, and the role that keeping poultry plays in the transmission and control of communicable disease. Environmental impacts include pollution from manure and any other harmful outputs of the egg production process and the secondary environmental impact of producing and consuming inputs to egg production such as feed, fuel, and water.

Food Safety: Raw eggs are an especially good medium for growth of microorganisms, but the egg's shell is also a very effective barrier against the initial contamination of this medium. There are thus good reasons to be attentive to egg safety and reasons to expect that an intact shell egg will be an unlikely threat. Removing and destroying broken eggs becomes the primary means for limiting health risks from eggs. Developing control mechanisms within egg production systems that limit damage to eggs and that identify and eliminate eggs with cracked or damaged shells is the key means for doing so. Commercial producers, processors, and retailers have significant economic incentives for maintaining these control mechanisms, and there has been virtually nothing written on this activity that takes an explicitly ethical standpoint in respect to them. Advocates of industrialized egg production assert that mechanization of the process along with the inventory control that mechanization facilitates yields a food safety advantage for industrialized egg production when compared with traditional methods. This assertion has also received relatively little consideration from an ethics perspective.

In statistically rare cases, freshly laid eggs can be contaminated by Salmonella apart from any defect in the integrity of the shell. The occurrence is rare enough that definitive research on the phenomena has proven elusive. Data from the US industry shows a greater statistical occurrence of this phenomenon in non-cage production systems, especially those in which hens are free to roam about on the floor. Data from the European industry has shown just the opposite result. Some investigators have speculated that this difference may arise from the fact that the non-cage production facilities from which data has been collected in the United States tend to be relatively old, while those in Europe are new, many having been placed into production only 1 or 2 years before data was collected. However, others cite the European data as evidence for the inherent superiority of non-cage systems and tend to ignore conflicting data from the United States (Holt et al. 2011). This is, as yet, an issue that could be a topic for future investigation from an ethics or philosophy of science perspective.

Occupational Safety and Other Health Impacts: One US egg producer who was at the center of a controversy over Salmonella-contaminated eggs in 2011 had also been cited for numerous workplace violations. Yet, there is very little to no work on the extent to which egg production can be associated with health or safety impacts for the human beings who are employed in egg production facilities, and any connection between worker health and safety and the methods or corporate culture of egg production is, at the time of writing, purely speculative. Animal production of all kinds has been subjected to ethical criticism for excessive use of antibiotics, and some critics have included egg production. However, there are no economic advantages to be obtained from feeding subtherapeutic doses of antibiotics to laying hens, and egg producers assert that antibiotics are not administered to hens in industrial egg production.

There are also human health issues associated with the role that agricultural animals may play in zoönosis, in this case the crossover between avian and human infectious diseases. Avian influenza (or "bird flu") would be an example that is familiar to most people. Some speculated that keeping a large number of birds closely confined in an enclosed space provides an ideal opportunity for new infectious diseases to evolve and to cross the

species barrier to human workers who are in contact with them (Hinchliffe and Bingham 2008; Nickelsburg 2013). Others have argued that infectious diseases are much more likely to evolve in non-domesticated species and that contact between chickens and other species of wild birds is a much more likely source of zoönotic disease (Otte et al. 2007). Since great care is taken to protect laying hens kept in industrial facilities from contact with wild bird species, advocates of this perspective believe that traditional production methods, as well as backyard chickens and organic egg production where birds have outdoor access, are much more conducive to zoönosis. What may be of most interest from an ethics perspective is the way that debates over zoönotic disease and egg safety tend to be cited as evidence that bears on the scale and organization of egg production. Animal welfare or socioeconomic considerations may be ethically more fundamental to the reasoning process of individuals who take sides in these health-related debates.

Pollution and Environmental Impact: CAFOs are point sources for air, water, and soil pollutants associated with manures and other animal waste matter. Egg production in CAFOs has incorporated numerous devices to monitor and regulate ammonia levels both within and near buildings. After a decade or more of difficulties in capturing nitrogen from manure, current systems are very effective in capturing, drying, and reusing manure to fertilize soil. As compared to beef, milk, and pork CAFOs, poultry CAFOs and especially caged layer systems with automated manure collection have transformed animal wastes from being pollutants into being a coproduct with significant economic value. Ironically, it is the more traditional non-cage facilities for egg production that are now more strongly associated with animal waste management issues (Xin et al. 2011).

A life cycle approach to evaluating the environmental impact would also include feed and fuel utilization as well as the environmental impact from manufacturing, operating, and disposing of buildings and machinery. As of this writing, life cycle analyses are only now beginning to appear for all phases of egg production. In a further irony from the perspective of those who oppose CAFOs and industrial egg production, the efficiency of feed utilization in these facilities may prove to be the dominant factor in assessing the more comprehensive environmental costs of consuming eggs in the human diet. Facilities that use feed efficiently require less land and less carbon fuel to produce and transport the grain fed to laying hens. Non-cage systems currently tend to be less efficient both due to loss from the machinery for distributing food to birds and because the systems allow hens to engage in behavior that wastes feed. The efficiency of many traditional systems is lower still for purchased feed, though allowing hens to consume kitchen scraps and to graze on yard grasses may compensate for these inefficiencies (Mench et al. 2011). As with human health impacts (and distinct from environmental issues associated with other animal food commodities), the ethical significance of environmental impacts of egg production may reside in the way that they do or do not augment or offset more fundamental debates over animal welfare and socioeconomic impact.

Hen Welfare

The welfare of hens in egg CAFOs is a signature issue in food ethics. The crowded condition of hens in caged layer systems is one of the most frequently cited problems in ethically oriented critiques of industrial food production. Efforts to address this situation are usually addressed within the framework specified by two of the Brambell Commission's "Five Freedoms": hens should be "free from discomfort" and "free to express normal behavior," (Farm Animal Welfare Council 2009). The lack of space allocated in egg production facilities should not be source of pain or discomfort and should be sufficient to allow for expression of behaviors typical for mature, egg-laying hens. The ethical mandate for limiting pain can be specifically derived from Peter Singer's earliest advocacy on behalf of animals, while the need to express a species-typical behavior might have been grounded in

Bernard Rollin's idea of *telos* – a set of genetically based needs and drives that provide the basis for respecting animal rights (Rollin 1981, 1995).

As a practical matter, there have been two responses to crowding. One is to utilize "cage-free" or "free-range" egg production systems where birds are not physically constrained in the way that they are in the battery cage production system discussed above (Rollin 1995). This approach has been the basis of European directives that have banned battery cages and has been adopted elsewhere as a response to consumer demand for ethically produced eggs. The alternative (and not mutually exclusive) approach has been to specify a minimum space allocation for each hen as one component of an animal welfare standard or guideline. This approach is potentially compatible with battery cage systems and also with the furnished or "enhanced" cage system, also referred to as "colony housing" (Lay et al. 2011).

Space allocation is only one dimension of welfare in egg production. Basic physiological elements include access to food and water and living conditions that are free of ammonia and fecal material – criteria that overlap with environmental impacts. The ability to perform natural or species-typical behavior will also include a bird's access to nesting areas and the ability to sit on perches or perform grooming behaviors such as wing flapping and scratching claws. Not all cage-free or free-range facilities will necessarily be equipped with furnishings that permit these behaviors, nor are they necessarily guaranteed simply by focusing on crowding. Access to the outdoors is a somewhat controversial component of hen welfare. Considered in isolation from other aspects of a hen's environment, outdoor access may not be deeply significant, and if access areas expose birds to attacks from predators, going outdoors can be inimical to survival (Millman et al. 2010; Lay et al. 2011).

Current thinking on the ethics of animal welfare recognizes three broad domains. Standard *veterinary health indicators* of welfare include morbidity and mortality, as well as physiological functions such as respiration, digestion, reproduction (egg production), growth, and development. Pain, discomfort, and correlative indicators of satisfaction or feelings of well-being constitute a set of *cognitive indicators* for welfare, while nesting, wing flapping, and scratching or going outdoors are *behavioral indicators*. A key area of philosophical debate arises in connection with the interpretation of behavioral indicators. One way of understanding the ethical significance of an ability to perform natural or typical behavior is to presume that birds suffer when they are prevented from doing so. That is, one assumes that hens experience some degree of cognitive discomfort or frustration when their living conditions preclude the performance of an indicated type of behavior. On this interpretation, the ethical significance resides in the experience or feelings of the animal, and the behavior itself is an easily observable and specifiable signal that can be addressed through policy or management. The alternative view is to attribute ethical significance directly to the behaviors themselves, irrespective of whether birds experience frustration or dissatisfaction when they are unable or unwilling to perform them (Swanson 2010).

These contrasting views underlie several points of continuing dispute with respect to current and future initiatives that might be taken on behalf of animal welfare in egg production. Outdoor access is an immediate case in point. Although production systems for eggs that can be labeled as organic require outdoor access, producers often observe relatively little use of outdoor areas, especially when outdoor temperatures are uncomfortably hot or cold. Given the assumption that it is the underlying experience of frustration that makes a behavior ethically important, there is no particular problem associated with this. Birds are in some sense choosing not to utilize outdoor areas, and it is reasonable that their actual behavior indicates a preference for remaining indoors. On the alternative view, a producer would have an ethical obligation to encourage or perhaps ensure that birds *do* use outdoor activities. Failure to do so would be regarded as unnatural and ethically problematic (Veissier et al. 2011).

These two ways of conceptualizing animal welfare have been noted by numerous authors. Peter Sandøe and Mike Appleby have characterized the first viewpoint as *welfarist* because it emphasizes animal feelings and preference satisfaction. The view that sees performance of natural behaviors as intrinsically valuable is what they call *perfectionist* because it specifies the behavior as something to which a producer (and perhaps the animal itself) should aspire, irrespective of an individual preference (Appleby and Sandøe 2002). Bailey Norwood and Jayson Lusk characterize people who prioritize the cognitive experience as "basic welfarists" and those who value performance of species-typical behaviors as "naturalists." Norwood and Lusk have conducted empirical research on human attitudes to animal welfare and have noted that some respondents will regard aspects of animal comfort and even survival as relatively unimportant, as long as the animal is living a life that would be comparable to the life that they would lead in a wild or natural setting. For example, such respondents do not regard loss of life from hawks or other predators as particularly contrary to animal welfare. According to Norwood and Lusk's research on the US population, basic welfarists comprise slightly less than half of Americans, while roughly the same number are naturalists, with the remaining minority being classified as "price seekers" who appear not to value animal welfare beyond the satisfaction of the most basic physiological needs (Norwood and Lusk 2012).

This basic philosophical divide is also relevant to the use of genetic approaches to address welfare problems in egg production. For welfarists, it would presumably be permissible to resolve a problem by breeding animals that were less inclined to the behavioral patterns or needs associated with pain or suffering. For example, hens have a genetically based drive to establish a dominance order (a pecking order), and in small groups they will do so through pecking at each other's feathers. Once established, this behavior typically recedes, but some individuals persist in feather pecking, and in large groups it may be impossible for birds to establish stable dominance rankings. In any case, in cage-free environments with a quarter of a million birds housed under a single roof, relatively weak birds will be subjected to pecking by so many different animals that they will suffer significant injuries, stress, and cognitive suffering. A potential response is to use breeding to develop birds with much weaker drives to establish a pecking order (Cheng 2010). The welfarist position will presumably offer a strong ethical argument in favor of such genetic strategies, while a perfectionist or naturalist perspective would presumably regard the attempt to remove this species-typical behavior as inimical to the naturalness of the bird's life.

More extreme genetic strategies might substantially alter a bird's basic physiological capabilities. Egg production has provided one example of this with blind chickens, a genetically stable strain of birds that are less inclined toward aggressive behaviors, presumably associated with their lack of sightedness. The blind chicken strategy for addressing welfare in egg production has been discussed in the philosophical literature and has, at this writing, spawned a more extended debate on the Internet. However, blind chickens have never been seriously proposed as a practical or ethically defensible approach for addressing welfare in egg production, and empirical research on blind chickens indicates that their welfare is so compromised by congenital blindness that it is unlikely to ever become a feasible approach in practice. This does not prevent the blind chicken idea from serving as a potentially useful thought experiment, often in conjunction with speculation on the potential for genetic modifications that might eliminate an organism's capability for conscious experience altogether. Such a thought experiment was pursued in connection with meat-producing (broiler) chickens in Margaret Atwood's work of speculative fiction *Oryx and Crake* (Warkentin 2006). Philosophers continue to explore the ethical arguments associated with alternative rationales for addressing animal welfare issues in livestock production through these more extreme forms of genetic modification (Thompson 2008).

Summary

Health and environmental issues, on the one hand, and hen welfare, on the other, provide the general framework in which ethical criticisms of industrial egg production continue to be mounted. The overall ethical evaluation of egg production should also take dietary benefits of egg consumption and consumer cost into account (Watkins 1995). At this juncture, ethical issues in egg production conjoin with arguments for and against vegetarianism or vegan diets. Public debates as well as critiques within the philosophical literature often overlook some basic socio-economic and biological elements of egg production when health, environmental, and animal welfare critiques of egg production (especially battery cages) conjoin with these broader themes. It is important to underline the utter separation of meat and egg production in modern industrial agriculture. Critiques of broiler production have their own merits, but the ownership structure of this industry, the production methods, and the breeds of birds that are used have little carryover to a critique of eggs. To note just two instances, the bone breakage that has been observed among broiler chickens does not occur in egg-laying hens, and while broiler production has become highly concentrated, the ownership of egg CAFOs remains more competitive and diverse.

In addition, many vegetarians continue to consume eggs. Ethical evaluation of egg production is thus highly pertinent to the ethical case for vegetarianism. Second, eggs are available in convenience stores and other inner city food outlets. They often are among the healthiest items available at fast-food restaurants. The ability to prepare eggs is widely dispersed and does not presuppose education. As noted above, egg production does not involve the use of antibiotic additives to feed. There are thus a number of reasons to view the ethical analysis of egg production and consumption as having a logical structure that differentiates eggs from other animal food commodities. Animal agriculture is not monolithic, in any case. Industrial producers specialize in one animal product, and the producers of one animal commodity view the producers of other types of animal protein as fierce economic and political competitors. In general, scholarship on ethical issues in all areas of food animal production would benefit from more detailed understanding of the structure of animal industries.

The above survey of ethical issues is not exhaustive. One welfare issue that has been omitted concerns the depopulation of CAFOs, a process fraught with technical difficulties. Because spent hens are not slaughtered for meat, they have little economic value, and there is little incentive for even the most basic attention to humane killing methods. A second set of issues arise in conjunction with the regulatory framework and the various mechanisms that are being used to organize and influence egg production. Like other animal producers, the egg industry has been targeted by activists and journalists seeking to develop sensationalistic stories – a practice that raises ethical issues itself. As such, there are many topics that can potentially engage future work on the ethical issues that arise in conjunction with industrial egg production.

Cross-References

- ▶ Animal Welfare: A Critical Examination of the Concept
- ▶ Industrial Food Animal Production Ethics
- ▶ Sustainability and Animal Agriculture
- ▶ *Telos* and Farm Animal Welfare

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Emergency Food System: Soup Kitchens and Food Pantries

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Synonyms

Bread lines; Emergency food; Food access; Food banks; Food security; Hunger; Pantries

Introduction

More than 800 million people globally do not have access to sufficient amounts of food on a consistent basis. The emergency food system, also referred to as the emergency food assistance system (by the USDA) or emergency food relief, is part of the private sector's efforts to address hunger and food insecurity among low-income individuals and families, as well as other vulnerable populations such as seniors and the homeless. As the name implies, programs under this umbrella aim to supply food to people in need *on a temporary and supplemental basis* at no cost. However, in many parts of the world the experience of hunger is an ongoing issue for a large

number of individuals, and as such people in need may access emergency food resources on an ongoing basis and rely on these resources as their primary means of accessing food.

In the USA, approximately one in six people, including about 17 million children, do not have continuous access to enough food to eat to meet their nutritional needs (Coleman-Jensen et al 2012). Given these levels of poor access many people around the world, including the USA, must rely on emergency food in order to stave off hunger and attempt to meet their nutritional needs critical to maintaining health and well-being. Due to persistent social and economic conditions that continue to make hunger and food insecurity a growing problem in the USA, it is clear that emergency food assistance programs have ironically taken on a regular and ongoing role in food provisioning for many Americans. Soup kitchens and food pantries are the dominant forms of emergency food in the USA. Estimates ranging from 12 to 21 million people in the USA annually utilize these resources to supplement their dietary needs. With continued threats to federal safety net programs such as Food Stamps (SNAP); Supplemental Nutrition Program for Women, Infants and Children (WIC); and the school lunch program, this condition of long-term reliance on emergency food is likely to continue (Nestle and Guttmacher 1992).

Soup kitchens, also referred to as emergency kitchens, breadlines, or meal centers, provide prepared foods for individuals and families to eat on-site. Meals at soup kitchens are typically provided for free, though sometimes clients are charged a low price at some facilities. Soup kitchens are nonprofit organizations and are typically staffed by volunteers and/or run by faith-based organizations. Much of the food and related resources used by soup kitchens are provided through charitable contributions.

Food pantries, on the other hand, are sites that distribute groceries and other food products for consumption off-site, most typically for at-home preparation. The groceries distributed to clients typically include major staple items such as grains, beans, and other proteins, as well as canned fruits and vegetables, among others. Foods are packaged together to include these staple items at most food pantries, though a smaller percentage of pantries provide for consumer choice, where clients "shop" the pantry shelves for preferred items and are not required to take products they do not typically consume. Food distributions to pantry clients are expected to last for several days.

Both soup kitchens and food pantries are viewed as critical community resources that support low-income individuals' and households' dietary needs. The majority of pantry and kitchen clients report high levels of satisfaction with the quality and quantity of foods and services they receive. In addition, there is a great deal of overlap among kitchen and pantry clients, with almost three-quarters of emergency food recipients using two or more resources. At the same time, however, there is ongoing concern among hunger and food policy activists that the gap filled by the emergency food system serves as a pressure valve that diverts energy and concern away from addressing the fundamental structural issues at the root of this persistent problem of hunger in the USA (Winne 2005).

This entry centers on the emergency food system in the USA, with a focus on food pantries and soup kitchens. The key issues of poverty, food insecurity, and hunger, which are the root problems and ultimately form the need for this system, are also addressed here in order to provide some background and context to the practices and understanding of emergency food. In addition, as the quality and quantity of food consumed is fundamental to health and well-being, the issues of health-related outcomes associated with food insecurity will also be briefly discussed in this entry.

Poverty, Hunger/Food Insecurity, and Health

Hunger and access to food in the USA are discussed in terms of food security. Hunger is a frequent condition of food insecurity and involves the involuntary lack of access to food

that is linked to the development of malnutrition over time (Cook and Frank 2008). Approximately half of emergency food clients are food insecure with hunger. Food security denotes access to readily available, healthful, culturally appropriate, and safe foods by all people, sufficient to meet the nutritional requirements for an active and healthy life. Thus, alternatively food insecurity is the condition of insufficient or uncertain availability of these foods or other barriers to acquiring these foods. Food insecurity may result in individuals seeking out foods in ways outside of the conventional food system, including utilizing emergency food supplies. The majority of emergency food recipients identify as food insecure, with approximately half of clients identifying as food insecure with hunger. Recently, the USDA moved to no longer report the number of households that experience food insecurity with hunger. This move has come under fire by food advocates and activists. Joel Berg of the New York City Coalition Against Hunger (NYCCAH), for example, states strong opposition to this move discounting the arguments the panel responsible for making this decision proposed, including the issues of measurability and the political nature of the word *hunger* (Wilde 2005). Berg argues that *hunger* in fact is a term that is used broadly and is, or can be clearly defined, and the move to eliminate this language itself is political and an attempt to remove the imagery of severe deprivation. The use of the term is still being debated among policy makers, scholars, and advocates with concern for the conceptual and ethical implications the language of hunger versus food insecurity connotes.

In the USA, food insecurity is regularly measured at local, regional, and national levels (USDA/ERS nd). Food (in)security is often measured at the household level and examines both physical and economic access to appropriate foods to meet nutritional needs of all members of the household. The US Census Bureau, through the Current Population Survey (CPS), collects the primary national measurement of food security in the USA. This survey, called the Food Security Scale (FSS), includes 18 questions examining household budget allotted for food, quantity and quality of food available for all members of the household, and instances of reduced food intake for adults and children in the household. The results of the FSS are reported by the US Department of Agriculture's Economic Research Service (USDA/ERS). This data is critical in informing programs and policy related to food access and emergency food support.

Food insecurity is a major health issue, especially among children, with infants and toddlers at particular risk for serious health implications and developmental problems (Cook and Frank 2008). Those making food purchasing decisions for households, most typically mothers, often have to navigate food choice and make tradeoffs such as choosing quantity over quality to prevent family/household members from experiencing hunger. Some of these tradeoffs might include choosing lower-cost energy-dense foods, over higher-priced nutrient-dense whole foods. There is some research that suggests these lower-cost energy-dense foods, which typically are more processed and contain higher amounts of fats and sugars, may contribute to adverse health outcomes. These foods typically are comprised of refined grains, added sugars, and fats, such as pre-prepared and prepackaged convenience foods (Drewnowski 2004).

In addition, people utilizing emergency food resources report more hardship with health and material resources than the general population – reflecting higher rates of poverty. Approximately half of pantry clients and two-fifths of kitchen clients report "fair to poor" health, as compared to a third of the general population. This poorer-than-average health status among emergency food services clients may be a barrier to and a reflection of their access to healthful foods. In addition, often times, mothers and other caregivers may reduce their own food intake in order to provide food for children in the household. This sacrifice on the part of caregivers further compromised their own health status.

In the USA, hunger and food insecurity are closely tied to poverty and consequently to the access to emergency food. This is largely due to the absence of state and federal safety nets and systematic benefits that ensure adequate food

supplies to individuals and households, which contrasts with other developed regions of the world, such as many nations in the European Union (Nestle and Guttmacher 1992). These conditions position the emergency food system to be forced to whatever extent possible to attempt to fill the gap left by the lack of federal support for the members of the food-insecure public.

The majority of emergency food clients in the USA report utilizing these resources due to low or fixed incomes. Poverty thresholds in the USA are closely tied to food access and are constructed around the affordability of food based on historical estimates of the amount of funds necessary to purchase a "minimally nutritious diet." The majority of emergency food clients live at or below 130 % of the US poverty line (USDA/ERS nd). This threshold is set federally and does not take into account regional differences in the cost of living, including variations in the cost of food, which can differ dramatically by geography in the USA. Thus, urban centers, particularly on the coasts, may face even higher food costs, but see the same benefit levels and thresholds, further comprising food access for these residents.

Emergency Food System

Throughout the period of the 1980s and 1990s, there has been a shift in food policy reducing the level of federally supported food assistance programs while at the same time the number of individuals in the USA requiring food assistance has been on the rise (Nestle and Guttmacher 1992). This erosion of federal level support has shifted the responsibility of food assistance to the state level including the private sector, as mentioned above. Much of the private sector is comprised of volunteer driven community-based and faith-based organizations that work tirelessly to organize and distribute food resources to those in need. However, Nestle and Guttmacher suggest that this shift is highly problematic due to the lack of adequate resources available through the private sector to meet the growing demand of hungry Americans. Furthermore, it has been suggested that the scale of this problem is unconscionable in a country with one of the largest economies in the world such as the USA, further suggesting that the federal government must take a larger role in addressing hunger and food security issues.

Much of the private sector work in emergency food is structured through a distribution system with food banks at the center that administer food and other related goods to local sites – food pantries and soup kitchens – for consumption by clients (Arnold 2004). Food banks are typically nonprofit organizations and may be independent, though many are part of national networks and partnerships. Food banks developed as repositories of emergency food and were once synonymous with food pantries. However, over time, food banks came to expand their role in the collection of food and shifted away from distributing food to consumers and toward working in collaboration with food pantries – which remained in the role of direct distribution – and soup kitchens. Second Harvest (n.d.) is a national organization, which was founded in 1971 and is the largest hunger-relief network in the USA. It administers a national network of food banks that supplies soup kitchens and food pantries across the USA.

The US government also supplies food to emergency food relief programs through The Emergency Food Assistance Program (TEFAP). TEFAP began in 1981, as the Temporary Emergency Assistance Program, distributing commodity foods, and is now legislated under the Farm Bill of 1990, where it was given its current name. In 2009, federal funding for TEFAP was over 600 million dollars, and the program provided over 700 million pounds of USDA commodity foods to states, to be distributed through local emergency food providers. Over 60 types of food products are made available through TEFAP and these include canned and dried fruits, canned vegetables, fruit juice, dried egg mix, meat/poultry/fish, dried beans, pasta products, peanut butter, rice/grits/cereals, and soups. TEFAP also provides administrative funds to states in order to support the distribution and storage of these food products.

The emergency food system also distributes a great deal of food that would otherwise go to

waste in the USA. This food is gathered and distributed by various food rescue organizations and include many donations from corporations. Much of this food, if not donated and distributed through the emergency food system, would end up as landfill. This activity contributes to the emergency food system's reputation as a food waste prevention option – increasingly part of the identity and mission of many food banks, which also sometimes are referred to as food rescue organizations (Poppendieck 1998). Food activist Mark Winne suggests that this role of food waste prevention/food rescue should not be such a major part of the emergency food system as it further contributes to serve as a pressure valve and distraction for policy makers and the public in addressing the more pervasive issues that set the conditions for hunger.

While some support for the emergency food system comes from the federal government, the majority of funding, food products, and labor come from charitable organizations and volunteers. Approximately two-thirds of emergency food providers are affiliated with faith-based organizations. A number of these organizations do ask clients to engage in prayer or related religious activities with them while receiving emergency food services. In a report by the USDA/ERS (n.d.), it states that the majority of clients are comfortable with these requests.

In a recent study conducted by the USDA/ERS, 90 % of clients reported that they were satisfied with the quantity and quality of the food provided at pantries and kitchens. However, a minority of clients in this study reported experiencing difficulty acquiring needed food at times, mainly due to barriers with transportation.

Soup Kitchens

As noted above soup kitchens are an emergency food resource, which provides prepared, often hot, meals to clients for consumption on-site. Meals are provided to individuals and families in need and typically do not require the provision of means testing or income requirements. Approximately a quarter of kitchen clients visit daily, with just under half visiting 2–5 days per week. Many clients rely on these meals to sustain them for months at a time, while a smaller proportion may rely on kitchens for years.

The majority of the food and labor that supply soup kitchens come from local resources, most often from charitable donations and volunteer support. Most soup kitchens are affiliated with faith-based organizations such as churches, which provide the facilities for preparing meals as well as the space to serve them to clients. Most soup kitchens are open during weekdays and serve either lunch or dinner, though usually not both. Even though soup kitchens are considered a form of emergency food relief, many individuals rely on them as a regular form of nutrition and sometimes for up to several years. For vulnerable populations, including homeless and the elderly, this may be their only meal of the day.

In the USA, soup kitchens entered mainstream awareness during the Great Depression but have been providing prepared meals to the needy since the nineteenth century. The Humane Society of New York established the first recorded soup kitchen in the USA in 1802. Soup kitchens continued to serve communities, but fell out of popularity during the 1820s as prevailing attitudes toward providing such charitable services shifted toward moralizing concerns related to the destruction of self-reliance among the poor and away from an ethic of providing for material needs of those less fortunate. However, the Great Depression brought on a resurgence of soup kitchens, which grew to feed millions of people during the1930s.

The USDA/ERS reports that during 2000 there were more than 5,000 soup kitchens in the USA, which served nearly a half million meals on a typical day and 173 million meals per year. Furthermore, over one million different individuals were served by soup kitchens in a typical month, with almost a quarter of these participants served being children under 18 years of age. However, most kitchen clients are single adults, the majority of whom are men. Nearly half of kitchen clients identify ethnically as non-Hispanic black, while just over a third identify as non-Hispanic white.

Food Pantries

As described above, food pantries are a community-based emergency food resource that provides food products to households for preparation and consumption off-site, most commonly in the home. The USDA/ERS estimates that approximately 32,000 pantries were in operation during 2000 and during an average month distributed 239 million pounds of food to over four million different households. This distribution is equivalent to approximately 2.2 billion meals per year.

Recipients of food for at-home use typically are required to meet income eligibility criteria set by the state. Nearly half of those receiving food from pantries are children under 18 years of age, with about a quarter of clients being single adults. Approximately half of pantry clients identify as non-Hispanic white and just under a third identify as non-Hispanic black. Pantry clients may be restricted or limited as to the number of visits per month they may make to a given pantry as directed by the pantry administrators. Of pantry clients, about half visit once a month; however. this is unlikely to reflect actual need, but rather system constraints placed on individuals and households.

The majority of food supplied through pantries is through charitable donations of funds or food products, along with some public funding and distribution of commodity goods as described above. Much of the distribution of this food is through food banks which are centralized locations that process food donations from individuals and organizations, as well as government distributions and coordinate among food pantries across a metropolitan area, region, or state. These organizations themselves are nonprofits and many are affiliated with national organizations such as Second Harvest, as described earlier. These organizations are critical in also rescuing food – the process of coordinating with food manufacturers and retailers to obtain foods that are not suitable for commercial sale but still safe and appropriate for consumption. This process takes an enormous number of volunteer hours in order to sort through foods and ensure it is safe for pantry clients. In many ways this process of sifting through donated food, a good proportion of which is not salvageable, serves the needs of donors as much as if not more than the recipients of this surplus food. Moreover, the energies put into "rescuing" food further serves to divert attention away from the pervasive problems that cause hunger to persist in the USA.

Food pantries distribute foods received from food banks, as well as local donations and purchased food stocks. The typical pantry, as mentioned above, limits visits per household to on average once a month. This is in contrast to the rates of average US households that shop for food at stores approximately twice per week. Clearly the resources available to them limit pantries, but these limitations severely constrain and shape the food access and practices of the communities served. There is a movement to increase the number of possible visits to pantries among administrators, emergency food provider, and food advocates, although the practical constraints of limited resources, space, food, and volunteer labor may remain a barrier for many organizations.

Discussion

Low-income individuals and households use a variety of strategies to meet their food and nutrition needs. However, many depend solely on emergency food system services such as food pantries and soup kitchens over long periods of time due to persistent economic difficulties as well as obstacles in accessing and/or insufficient public safety net programs. While a good number of clients utilize a mix of public and private resources, some clients prefer to avoid or have too much difficulty navigating government benefits and programs and thus solely rely on private sector support. This is highly problematic as the emergency food system is ultimately designed for short-term and periodic use and is ultimately not sufficiently resourced to serve as a long-term solution to hunger and food insecurity.

Emergency food, including food pantries and soup kitchens, along with other charitable activities that support individuals and families struggling with food insecurity may partly decrease

the risks of lack of availability and access to healthful foods, but the impacts of these activities can be difficult to measure as they are not systematically evaluated as part of national "safety net" programs such as food-related benefits including the Supplemental Nutrition Assistance Program (formerly known as Food Stamps) and aid to Women, Infants and Children (WIC), as well as feeding programs like school lunch. Furthermore, with the continual decline in funding and popular support for safety net programs, the emergency system takes on a greater role in feeding the hungry while at the same time serving as a pressure valve distracting the public and policy makers from the social and moral problem of hunger and food insecurity.

In a recent report from the USDA/ERS, it is suggested that more emergency food clients may participate in public food assistance programs if it were easier for these individuals and households to determine their eligibility. For this to be possible, these programs would need to include expanding efforts around outreach and education among clients and providers. However, the researchers from this report do suggest additional research is necessary to further understand how to facilitate the increase of access to these programs.

The USA is a wealthy nation with many resources that could address the persistent problem of food insecurity and hunger in a systematic way. While emergency food is a valuable resource to families and individuals in need, it cannot replace a comprehensive policy intervention that ensures the distribution of healthful foods to all. At the same time, even though there may be as many as 40 million Americans experiencing hunger over the course of a year, the US public has a limited understanding and awareness of the conditions and issues related to food insecurity and hunger. Clearly more research and education must be done to improve understanding among the public in order to build support for the types of policy and program intervention changes that must be made in order to solve the problems of food insecurity and hunger in the USA in a comprehensive manner.

Poverty is a critical factor in hunger and food insecurity. In the USA, unlike other regions of the world, enough food is produced to feed everyone in the country. So it is poverty that remains the greatest barrier to accessing healthy foods for low-income individuals and households in the USA. Currently, efforts to relieve hunger and address food insecurity are dominated by the private sector, particularly charitable and faith-based organizations addressing these problems in a valuable albeit ad hoc manner, with a great deal of good will but limited resources. However, in the USA, the major obstacle to a more systematic national intervention appears to be a lack of political will in the face of growing neoliberalism in various social sectors including health and social welfare.

Summary

The emergency food system, particularly food pantries and soup kitchens, provide a vital service to up to 70 % of individuals and households in the USA that may be at risk for hunger and in need of greater access to healthy foods at some point during a given year. Many of these individuals and household members are low income or elderly on fixed incomes, as well as other vulnerable populations such as the homeless. These groups experience some form of food insecurity due to limited resources and lack of a systematic public safety net program and therefore rely on the services provided by the emergency food system in order to meet their nutritional needs vital to maintain health and well-being. In the USA, more systematic policies and programs must be enacted to both compliment and support the valuable work of private sector emergency food, as well as find definitive and enduring solutions to the major problems of food insecurity and hunger in the country.

Cross-References

- ▶ Food Security
- ▶ Food Waste
- ▶ Obesity and Responsibility
- ▶ Poverty and Basic Needs

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Environmental and Animal Pragmatism

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Synonyms

American pragmatism; Eco-pragmatism; Ethical pluralism

Introduction

Environmental pragmatism is a cluster of positions within environmental philosophy that brings ideas from the American philosophical pragmatist tradition to bear on methodological and theoretical issues within environmental philosophy and ethics. Environmental pragmatism began to emerge in the environmental ethics literature in the early 1980s in light of concerns over the ineffectiveness of environmental ethics on environmental policy. Animal pragmatism emerged within animal ethics and philosophy in the early 2000s, bringing pragmatist thought to bear on a variety of human-animal relationships, as well as relationships between conflicting positions on animal ethics.

Environmental Ethics Prior to Environmental Pragmatism

The emergence of environmental ethics as a subfield of philosophy in the 1970s arose as a rejection of the ability of standard ethical theories to account for the value of nonhuman nature. Conventional ethical theories can be used to understand nature as having instrumental value, for example, when determining that humans are harmed through environmental degradation, or in the judgment of nature to be aesthetically pleasing. Nature, on a standard view, is valuable because it matters to humans. Ethical theories that ground the value of nature, as well as the value of all things, solely in their importance to humans are known as "anthropocentric" theories. According to these theories, only humans have intrinsic value; everything else has extrinsic or instrumental value for us. Reasons given for the intrinsic value of humans differ depending on the theory. For instance, utilitarianism attributes intrinsic value to any being that has the capacity to suffer; deontological ethics attributes intrinsic value to humans based on our rationality and autonomy.

The basic contention of early environmental ethicists is the broad claim that nonhuman nature has intrinsic value. Hence, conventional ethical theories, due to their anthropocentrism, fail to

capture the true value of the environment. If these views are inadequate, then new views need to be presented which are nonanthropocentric, that is to say, nature is valuable in itself and that the value of nature does not depend on its importance to humans. While environmental ethicists generally agreed that anthropocentrism did not provide a proper foundation for the value of nature, there are a number of other potential ethical principles that could serve as a foundation for the intrinsic value of nature. For example, according to biocentric theories, individual life forms, regardless of their possession of sentience, rationality, or autonomy, possess intrinsic value. According to ecocentric or holistic ethical theories, intrinsic value lies not in individuals, but instead in ecosystems or biotic communities as a whole. Philosophers such as Holmes Rolston, III, J. Baird Callicott, and Paul Taylor engaged in scholarly debates over which kind of nonanthropocentric ethical theory was the true foundation for the intrinsic value of the environment.

Given the connections existing between environmental ethics and the environmental movement, these theoretical positions were intended to provide a basis for stronger environmental policies by providing arguments for the intrinsic value of nature. However, while the field of environmental ethics has flourished on a theoretical level within academia, many of its key figures have lamented the relative ineffectiveness of the field in regard to contributing to increased interest in and protection of the environment outside the academy. It is here that environmental pragmatism gained traction within environmental ethics as a way of increasing the field's relevance.

American Pragmatism in Environmental Ethics

Though environmental ethics diverged from conventional Western ethics in its defense of the intrinsic value of nonhuman nature, it retained important similarities to theories such as utilitarianism and deontology in terms of its emphasis on foundationalism. American pragmatism rejects the idea that such foundations are necessary for ethics; instead it emphasizes context and situatedness. Rather than developing a fully formed ethical theory in the abstract and then applying it to particular concrete situations, pragmatism favors a case-based approach where an ethical principle may be applicable in some cases but not in others. Rather than arguing for and defending a certain set of principles and sticking to it regardless of the circumstances, pragmatism is geared toward finding solutions in a situation. Pragmatism recognizes that the world is dynamic, rather than static, and calls for a way of doing ethics that takes this into account as well.

Weak Anthropocentrism

Bryan G. Norton is one of the first philosophers to bring ideas from the pragmatist tradition to bear on issues within environmental ethics. Norton's 1982 papers "Environmental Ethics and Nonhuman Rights" and "Environmental Ethics and the Rights of Future Generations" convey his doubts regarding the possibility of deriving an environmental ethics from the rights or interests of nonhumans as well as future generations of humans, respectively (Norton 1982a, b). In 1984, Norton introduced the concept of "weak anthropocentrism" to the environmental ethics literature (Norton 1984). In a pragmatic turn, weak anthropocentrism entails a rejection of the dichotomy between anthropocentrism and nonanthropocentrism that has been perpetuated by environmental ethicists, as well as the alleged necessity of providing nonanthropocentric arguments for the value of nonhuman nature.

Norton distinguishes weak anthropocentrism from "strong anthropocentrism" (Norton 1984). Strong anthropocentrism is the view that felt preferences of human individuals are the determinants of value, and this is essentially the view which has previously been referred to simply as "anthropocentrism" and which has spurred the development of environmental ethics as providing an alternative to it. Because strong anthropocentrism takes the value of nature to rest solely on the satisfaction of human preference, this view can be used to justify the exploitation of nature with no ethical recourse.

In contrast, weak anthropocentrism provides a basis for criticizing purely exploitative actions toward nature by recognizing the strong ties between humans and other species (Norton 1984). As Norton writes, "[t]o the extent that environmentalists can show that values are formed and informed by contact with nature, nature takes on value as a teacher of human values" (1984). So, while strong anthropocentrism implies that humans simply develop or construct values and then impose these on nature, weak anthropocentrism essentially views the relationship between humans and nature as being part of a feedback loop, where nature itself "becomes an important source of inspiration in value formation" (Norton 1984). Norton goes on to argue that weak anthropocentrism can lead to the development of "powerful" reasons for protecting nature which are distinct from the strictly exploitative reasons for protecting nature provided by strong anthropocentrism (Norton 1984).

The Convergence Hypothesis

Norton continued to flesh out his pragmatic view of environmental ethics throughout the 1980s and first formulated the "convergence hypothesis" in his 1986 article "Conservation and Preservation: A Conceptual Rehabilitation." According to Norton's convergence hypothesis, "...if the interests of the human species interpenetrate those of the living Earth, then it follows that anthropocentric and nonanthropocentric policies will converge in the indefinite future. Showing respect for nature, its processes of life, may just be an alternative formulation of the injunction to show concern for resource stability essential to human survival over the longest term" (Norton 1986). On this view, whether a person takes nature to have intrinsic value or strictly instrumental value based on human interests, these two views will generally lead to the same positions on policy regarding protection of the environment. The convergence hypothesis has been revolutionary and controversial in environmental ethics because it challenges the view that environmental ethicists should be focused on articulating arguments in defense of the intrinsic (versus strictly instrumental) value of nature.

The convergence hypothesis is an excellent example of pragmatist modes of thought in its rejection of absolutism. For example, it may ultimately be the case that nonhuman nature *does* have intrinsic value, which is nondependent on human interest, or even on the interest of any sentient beings. At the same time, environmental policies are developed and evaluated by humans and are often dependent on human interests. While environmental ethicists may (or may not) have done an exemplary job in getting closer to the ultimate nature of reality regarding the value of nature, their arguments have been largely impotent at a policy level because many of the people responsible for environmental policy are more interested in the value of nature for humans.

Environmental pragmatism then raises the question of what it means to do philosophical work regarding the nature of value. It may, on this approach, be more important, even for philosophical purposes, to suspend metaphysical questions regarding the nature of value if the time spent pondering these questions detracts from the influence of environmental ethics on public policy. If Norton's convergence hypothesis is true and an anthropocentric view of value leads to advocating the same courses of action as a nonanthropocentric view, then it may be well worth it for philosophers to dedicate their time and philosophical expertise to articulating the most persuasive arguments in favor of environmental protection. If the most persuasive arguments in favor of this happen to be anthropocentric in nature, then, from the perspective of environmental pragmatism, this should be accepted in order for environmental ethicists to be as effective as possible.

Methodological and Historical Environmental Pragmatism

While environmental pragmatism's beginnings placed heavy emphasis on the importance of practicality within environmental ethics in keeping with the pluralistic nature of pragmatism, a variety of views have been articulated as part of environmental pragmatism. Andrew Light,

for example, makes a basic distinction between "metaphilosophical" or "methodological" environmental pragmatism and "historical" environmental pragmatism (Light 2004). Methodological environmental pragmatism consists of a critique of the methodology of environmental ethics, such as the aforementioned emphasis on the importance of environmental ethicists focusing on practical matters rather than becoming mired in strictly metaphysical questions which are removed from and have little bearing on concrete environmental issues. Light argues that this does not necessarily entail that environmental philosophers completely give up the largely theoretical questions that spurred the development of the field but that they "...must accept the public task as well, which requires that they be willing to translate their philosophical views about the value of nature, when necessary, into terms more likely to morally motivate policy makers and the general public even when they themselves have relied on nonanthropocentrism to come to their views about the value of nature" (Light 2004).

While methodological environmental pragmatism draws implicitly from the American pragmatist tradition due to its pluralist and democratic framework, historical environmental pragmatism explicitly brings particular aspects of the theories of pragmatists such as James, Pierce, and Dewey to bear on environmental issues and environmental philosophy. For example, Robert C. Fuller has argued that William James' provision of the scientific and evolutionary foundations of philosophical pragmatism can be used to understand the connection between the fulfillment and well-being of individuals and that of ecosystems, as well as the spiritual importance of conduct toward the environment (Fuller 1992). Piers H. G. Stephens and Jason Scott Robert have also done work on applying James' ideas to environmental philosophy, while Anthony Weston and Hugh P. McDonald have concentrated on the importance of the work of John Dewey for environmental philosophy (Stephens 2009; McDonald 2002).

In addition to Light's distinction between methodological and historical pragmatism, in their seminal 1996 anthology *Environmental Pragmatism*, Andrew Light and Eric Katz point to four major ways that pragmatist ideas have emerged within environmental philosophy. These include an analysis of the connections between American pragmatist philosophy and environmental issues; the articulation of strategies for linking environmental theory with practice, including activism and environmental policy; the examination of the normative theory undergirding particular environmental organizations in an attempt to work toward compromise and agreement between them; and arguments for pluralism in environmental theory (Light and Katz 1996).

Criticisms of Environmental Pragmatism

Criticism of Ethical Pluralism and the Convergence Hypothesis

A number of criticisms have been leveled against environmental pragmatism despite its popularity within environmental philosophy. J. Baird Callicott has been one of the most outspoken critics, arguing against ethical pluralism in favor of monism for the sake of having a consistent ethical theory (Callicott 1990). Callicott argues further that this monism should be based on work done within evolutionary theory and the natural sciences (Callicott 1995). While one may appeal to a variety of concepts (such as "God, creation, and stewardship") which may be more persuasive in particular cases for drawing support of environmental policy, Callicott does not grant that these are legitimate reasons due to their lack of scientific basis (he points out that anthropocentric values are economic in nature and must compete with other economic values which are related to the exploitation of nature, arguing instead that appeals to the intrinsic value of nonhuman nature may stand a better chance of success). Callicott has also attempted to show that Norton's convergence hypothesis is false by using the Endangered Species Act of 1973 as an example of a policy based on nonanthropocentric intrinsic value that would have been markedly different if it had instead been based on anthropocentric instrumental value (Callicott 2009).

Criticism of Environmental Pragmatism as a Philosophical Position

In his article "Environmental Pragmatism and Environmental Philosophy: A Bad Marriage!," Lars Samuelsson argues that, given that the nature of philosophy entails examining theoretical questions such as the potential for nature to possess intrinsic value, a position such as environmental pragmatism is actually not a philosophical position at all (Samuelsson 2010). Environmental pragmatism brings with it the assumption, according to Samuelsson, that environmental philosophers should be concerned with "saving nature" and making arguments that address public concerns and aim to affect environmental policy. Samuelsson recognizes the "theoretical merit" of being dispassionate and unbiased regarding the subject matter of one's area of research and argues that environmental philosophy should leave open the possibility that people working within this field do not necessarily have a bias toward arguing in favor of environmental protection of any sort (Samuelsson 2010). Environmental pragmatism threatens to undermine the philosophical goal of getting clear on "the problems that puzzle us," and many of the concerns of environmental pragmatists are best left to practitioners of more empirical fields of study (Samuelsson 2010).

Criticism of Methodological Environmental Pragmatism

Mark A. Michael parses out three different positions within methodological pragmatism and provides a critique of the alleged importance of methodological pragmatism for environmental philosophy. According to radical methodological pragmatism, environmentalists should give up on the task of providing well-founded theoretical grounding for environmental policy and focus strictly on connecting policy with values that people already have (Michael 2012). Moderate methodological pragmatism advocates that it is okay to work on theoretical grounding for environmental values but that differences regarding this should be put aside to work together to affect policy. Weak methodological pragmatism is the view that "environmental philosophers should work together where their policies coincide and there are no additional practical or moral considerations that might be relevant their ability to work together" (Michael 2012). Michael goes on to argue that radical and moderate methodological pragmatism are fundamentally flawed and that, while there are not significant objections to weak methodological pragmatism, the view is largely trivial (Michael 2012).

Animal Pragmatism

Recently, a number of scholars have begun to examine pragmatist approaches to animal ethics and to the relationship between human and nonhuman animals, resulting in the development of the tradition of animal pragmatism. This new area has taken a variety of forms, assessing issues such as the use of animals in food production, animal advocacy, the tension between animal and environmental activism, biomedical research on animals, and the relationship between humans and pets and other companion animals. In their introduction to *Animal Pragmatism*, Light and McKenna remark on the questionable relevance of the field of animal ethics in terms of its overall impact on the current industrial agricultural system and look to American pragmatism as a philosophical area that may be able to contribute to practical concerns regarding the treatment of farm animals (Light and McKenna 2004).

Pragmatism on Animal and Environmental Advocacy

Light looks at ways in which methodological pragmatism can be applied to issues regarding the treatment of animals. For example, the implementation of "humaneness" as a criterion regarding the removal of "pest" animals from ecosystems which they threaten is a clear point of convergence for environmental and animal advocates, where few environmentalists would completely reject the need to treat animals as humanely as possible even if some action should be taken for the sake of ecosystems (Light 2004).

Pragmatism and Animal Welfare

Paul Thompson contemplates animal welfare scientist David Fraser's criticism of the field of animal ethics as being too exclusively concerned with abstract theoretical issues regarding the treatment of animals (Thompson 2004). While many of the issues tackled by animal ethicists such as Tom Regan and Peter Singer do have real-world implications, there is an immense shortage of animal ethicists who are well versed in particular technical practices, which are staples of industrial agriculture. Also, while Regan, Singer, and others have been very vocal regarding the promotion of vegetarianism, fewer philosophers have looked at ways to improve the lives of farm animals and what criteria could be used to signify such improvement. Thompson looks to the philosopher Bernard Rollin as an example of someone undertaking a pragmatic approach to farm animal welfare, though Rollin does not identify explicitly as being influenced by the American pragmatists (Thompson 2004).

Rollin brackets the question of whether or not animals should be used in food production and instead accepts that they are and then looks at specific ways that animal lives can be improved (Rollin 1995). For example, in his book *Farm Animal Welfare*, Rollin catalogs a number of standard procedures regarding animal treatment in industrial agriculture, such as debeaking chickens and castrating cattle, and suggests ways that these methods can be made more humane to increase animal welfare, sometimes arguing that certain practices should be discontinued entirely due to being harmful and unnecessary (Rollin 1995). Rollin's specific ethical prescriptions are undergirded by his adaptation of the concept of *telos* (from Aristotle) to the field of animal ethics. As Thompson writes, "...animal telos is intended to reflect the biological and functional needs that would be characteristic of a given species. Thus, if pregnant sows experience a drive for nesting behavior, this will be characteristic of the pig telos" (Thompson 2004). Rollin's idea is that treating an animal in such a way that it can fulfill its telos will generally result in higher welfare.

Pragmatism and Animal Use in Research

Todd Lekan applies pragmatist thought to the use of animals in biomedical research. He looks for ways to balance the interests of scientists who use animals for research and advocates who work for animal welfare organizations. The dialogue and compromise that Lekan advocates is indicative of the pragmatist emphasis on the development of science, which is informed by public interests through communication between members of the scientific community and laypersons. One way that Lekan proposes to mend the gap between animal advocates and scientists using animals in research is by necessitating the inclusion of animal advocates on institutional animal care and use committees, or IACUCs (Lekan 2004). IACUCs evaluate proposals for research projects, which include the use of animals in various capacities. However, at this time there is no legal requirement for animal advocates to serve on these committees (Lekan 2004). The absence of such a requirement leaves open the possibility that research projects may be approved, which potentially allow for low levels of welfare regarding animals used in such projects. By proposing the required inclusion of animal advocates on IACUCs, Lekan hopes to work toward the achievement of a "middle ground" between abolition and the use of animals in research (Lekan 2004).

Pragmatism and Companion Animals

In her 2013 book *Pets, People, and Pragmatism*, Erin McKenna examines the ways that American pragmatist philosophy can enhance understanding of the relationship between humans and their pets and companion animals. Drawing from her own life experience and devoting entire chapters to horses, dogs, and cats, respectively, McKenna utilizes the pragmatist ideas of naturalism, pluralism, developmentalism, experimentalism, and fallibilism to develop subtly nuanced positions on a variety of human-animal interactions, such as the use of animals in breeding, research, competition, and work, ownership of animals, and dealing with the death (or impending death) of one's companion animals (McKenna 2013). While

many animal and environmental philosophers drawing from American pragmatism focus on the work of Peirce, Dewey, and James, McKenna addresses (in addition to these) the ideas of Jane Addams, Charlotte Perkins Gilman, and Alain Locke as they are applicable to human-animal relationships (McKenna 2013).

Though McKenna's arguments and conclusions are subtle and complex, she argues against the outright rejection of human-animal relationships that is taken by some of the more radical animal advocates and philosophers in favor of a view that sees many human-animal relationships as having the potential to be mutually beneficial, rather than necessarily involving the exploitation of animals on the part of humans (McKenna 2013). Often, the moral permissibility of particular human-animal relationships depends on a number of context-specific particularities. For instance, some horses genuinely enjoy engaging in certain types of competitions, while others may not be physically and psychologically suited for competition (McKenna 2013). McKenna writes that "[a]s long as one has appropriately matched the activity with the physical and psychological abilities of the horse and is able to work with the particular personality and interests of the individual horse (respect the *plurality* of horses), there is not *inherently* wrong with these activities from the Pragmatist point of view" (McKenna 2013, emphasis in original).

Regarding the death of companion animals, it is important to understand and to respect the nature of the animal as much as possible and not to let this respect be overridden by human desires, such as the urge to keep an animal alive as long as possible. Given the evolutionary history of humans and companion animals (especially dogs), it is important for ethical reasons to take into account the fact that these relationships are mutually transformative rather than unidirectional.

Summary

Environmental and animal pragmatism both incorporate ideas based in the American philosophical pragmatist tradition and emerged due to concerns over the ineffectiveness of animal and environmental philosophy in affecting policy and addressing concrete issues. This entry traces the historical development of environmental pragmatism and the differing views that comprise it, as well as some of the criticisms leveled against it. The recent emergence of animal pragmatism is also discussed, as well as several ways in which American philosophical pragmatism has been brought to bear on specific issues within animal ethics.

Cross-References

- ▶ Animal Welfare: A Critical Examination of the Concept
- ▶ Environmental Ethics

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Environmental Ethics

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Introduction

The development of environmental ethics was inspired by the widespread perception of an "environmental crisis" in the 1960s. Rachel Carson's landmark book *Silent Spring* (1962), which documented the accumulation of dangerous pesticides and chemical toxins throughout planetary food webs, played a vitally important role in raising awareness of this crisis. Never before and since has a book been so successful in providing impetus for action against a common threat to so diverse a body of people.

Silent Spring was published 1 month before the Cuba missile crisis and owed its worldwide success at least in part to Carson's comparison between the effects of atomic radiation and those of synthetic chemical pesticides. By framing pesticides as another form of fallout, Carson's book made a powerful impression on a generation that grew up under the shadow of nuclear destruction. It brought about the transformation of the earlier conservation movement into a worldwide environmental movement.

An important milestone in the emergence of environmental ethics was the first Earth Day on April 22, 1970, when environmentalists started urging philosophers who were involved with environmental groups to think through the norms and values that lead to environmental problems, as well as the norms and values that are necessary for resolving them.

Anthropocentrism and Non-anthropocentrism

In its early stages, the debate among academic philosophers on environmental issues was strongly stimulated by Lynn White's seminal article "The Historical Roots of Our Ecological Crisis." In this article from 1967, White claims that Christianity, as "the most anthropocentric religion the world has seen" (p. 1205), is to be blamed for the ongoing exploitation and degradation of nature in the occidental world. Richard Routley (1973), in another highly influential article, also identifies anthropocentrism, or basic human chauvinism, as the core principle of Western ethical systems and argued that it is inconsistent with a true environmental ethic. A thoroughgoing environmental ethic would reject the anthropocentric principle of total use, "implying that every natural area should be cultivated or otherwise used for human ends, 'humanized'" (p. 206).

In the footsteps of authors such as White and Routley, environmental ethics developed primarily as a radical critique and correction of anthropocentric ethics. There are at least three main approaches to radical non-anthropocentric

environmental ethics: Arne Næss' deep ecology (1989), in which the current environmental crisis is attributed to modern humanity's anthropocentrism; Murray Bookchin's social ecology (1995), which explains hostile behavior toward nature in terms of the existence of hierarchical relationships among human beings; and ecofeminism (see Merchant 1983), which points to androcentrism rather than anthropocentrism as the main culprit and assumes a strong relationship between suppression of nature and of women. It is interesting to notice that this discussion has made it very difficult to reconcile environmental ethics with an agricultural perspective, because the latter, necessary for survival and quality of human life, has a clear anthropocentric focus.

An important goal within this field has long been to find a convincing theory of the intrinsic value of natural entities. The debate focuses on whether this noninstrumental value of nature has a subjective or an objective character. Subjectivists claim that the only sources of value are the evaluative attitudes of humans, whereas objectivists (such as Routley) deny that value depends on the attitude of valuers (O'Neill 1992).

The Expanding Circle

Another important debate within the new field of environmental ethics concerned the question of which entities possess intrinsic value. Here the idea of the so-called expanded circle proved to be important, i.e., the idea that humans' moral development is characterized by a constant extension of the moral community (Nash 1989). In the beginning, the circle of beings considered morally relevant was confined to fellow tribesmen, but in the course of history, this circle gradually expanded until all of humanity was encompassed, a milestone reached during the Enlightenment in the declaration of human rights. At first these rights only applied to male proprietors, but this gradually changed during the nineteenth century, with the abolition of slavery, the emancipation of the laborer, the introduction of female suffrage, and the ban on child labor.

As discussed below, the moral community once again experienced a powerful expansion during the twentieth century and now extends to future generations. However, the expansion of the moral community did not come to a halt at the human species boundary, but also continued, step by step, outside the domain of humankind, first to animals (zoocentrism), next to plants and microorganisms (biocentrism), and finally to collectives such as endangered species and complete ecosystems (ecocentrism).

Transgenerational Ethics: Past and Future Generations

In reaction to the emergence of environmental problems on a global scale, the moral community recently underwent a powerful extension to future generations. This expansion of the moral community is evident in the 1989 Brundtland report *Our Common Future*, in which sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Present generations are obligated by considerations of (distributive) justice not to pursue policies that create benefits for themselves but impose costs on those who will live in the future.

The Brundtland report mentions not only justice *between* generations (intergenerational justice) but also justice *within* generations (intragenerational justice) as preconditions for sustainable development (see also "▶ Sustainability of Food Production and Consumption"). For example, there is a huge difference between the rich North and the poor South with respect to the consumption of natural resources. This difference can be visualized with the help of the so-called ecological footprint ("EF" for short) (Wackernagel and Rees 1996). The EF is a measure of human demand on the Earth's ecosystems that indicates how many hectares of productive land and sea area an average person needs for his or her consumptive activities on an annual basis. The present footprint of inhabitants of poor countries is far below the global average of

2.2 ha, whereas the footprint of those of rich countries is far above this average.

A bone of contention with respect to sustainability lies in how far nature's services can be viewed as resources that are substitutable (in the sense that it is acceptable that when one destroys one and leaves another intact) or not: the first view is called weak sustainability and the second view strong sustainability (Norton 2005). Weak sustainability allows for virtually unlimited substitution between man-made, manufactured capital, which incorporates resources such as infrastructure, labor, and knowledge, and natural capital, which covers the stock of environmental services. The decline of natural capital can be compensated by an increase of manufactured capital. Intergenerational equity is guaranteed as long as the total capital is left constant over time. Strong sustainability on the other hand denies that man-made and natural capitals are interchangeable, implying that natural resources should be passed to future generations still intact in their original form.

People have duties not only to future and current generations but also to past generations. One should pay honor and respect to the dead. That means remembering their achievements, continuing their work, or paying compensation to their children for a wrongdoing they may have suffered. Transgenerational ethics can underpin the notion of "cultural heritage." Of course, these retrospective, present, and prospective duties can conflict with each other.

Zoocentric Ethics: Utilitarian and Deontological Perspectives

In his 1840 *Preisschrift über die Grundlage der Moral* [*On the Basis of Morality*], Arthur Schopenhauer remarked, much to his regret, that above the entrance of occidental ethics hangs a prohibition sign with the inscription: "Tiere müssen draußen bleiben" [Animals have to stay outside].

One of the first modern philosophers who successfully denounced this situation was Peter Singer. Singer (1975) blames traditional ethics for the fact that animals are wrongly excluded from the moral community. Traditional ethics attributes a superior moral status to humans on the basis of their exclusively possessing specific capacities like the ability to think or to speak. If this criterion were applied rigorously, however, then newborn children and demented people would not deserve any moral consideration. If one wants to avoid this consequence, then one has to choose a less demanding criterion for right of entry to the moral community. Singer borrows this criterion from Jeremy Bentham, the famous founder of utilitarianism. "The question is not," Bentham stated in 1789, "Can they reason? Nor Can they Talk? But Can they *suffer*?" If one accepts the ability to suffer as the main criterion for right of entry, then there is no reason to exclude animals from the moral community.

Singer argues that one should engage in actions that result in the greatest good for all sentient organisms. Thus, in the utilitarian calculus, the damage to animal welfare has to be weighed against the human benefits of food, shelter, medicine, and so on. Animal experiments can, for instance, be justified on utilitarian grounds if substantial human health interests are at stake which outweigh the harms to the animals and when there are no alternatives that produce a greater net balance of benefit over harm.

Tom Regan has strongly rejected utilitarianism as foundation of animal ethics. In his influential 1983 book, *The Case for Animal Rights*, Regan develops a theory of animal ethics along deontological lines. According to Kant's categorical imperative, one should treat fellow humans never merely as a means, but always at the same time as ends-in-themselves. Tom Regan has applied Kant's categorical imperative to animals. Animals should not simply be appreciated for their instrumental value but they should be respected for their inherent value. To achieve this, one should grant animals certain rights, according to Regan. These rights prevent trade-offs between animal welfare considerations and human welfare considerations. For Regan, virtually any type of captivity or manipulation of a sentient animal is morally unacceptable, irrespective of the possibly beneficial

consequences for the protection of rare or endangered species.

Although most animal ethicists only attribute moral standing to individual animals, and not to plants or collective entities such as species or ecosystems, they are nevertheless convinced that animal ethics is an environmental ethics, because individual animals can survive and flourish only if they have a sustainable and sound environment.

Biocentric Ethics: Egalitarian and Hierarchical Approaches

The next step, the transfer of ethical fundamentals from human beings to plants and microorganisms, was taken by Paul Taylor, who was influenced by Albert Schweitzer (1923) and his "reverence for life" ethic. Taylor (1986) defends a biocentric position, implying that not only humans and animals should count as members of the moral community but all living beings, including plants and microorganisms. Without exception, all organisms deserve moral consideration because as "teleological centers of life," they have a good of their own. This good consists in the realization of capacities and the fulfillment of needs in a regular, well-balanced way that goes with the species-specific nature of organisms. According to Taylor, human beings can claim no primacy over other living beings. On the basis of his "principle of species impartiality," all organisms should be treated with equal care and respect, regardless of the species they belong to. However, not all biocentric approaches are egalitarian and consider all organisms to be equal. Hierarchical approaches make an organism's value dependent on their organizational level; they will generally attribute higher value to animals than to plants.

Endangered Species and Biodiversity Protection

While some people would dispute whether ethical obligations exist to protect or prevent harm to individual organisms, many more are willing to acknowledge that it is morally wrong to jeopardize the continued existence of an entire species. This has become a particularly central issue in public land-use policy as urban development and habitat loss have increasingly become major causes of species extinction.

Much of the reasoning used to justify concern about loss of endangered species in recent years has clearly been anthropocentric in nature. There are many important pragmatic reasons for protecting endangered plant and animal species (see also "► Biodiversity and Global Development"). They represent a tremendous biological storehouse, the loss of which may deprive us of substantial medical, scientific, and commercial benefits. But non-anthropocentric arguments have also been offered. Similar to the positions embraced by animal rights supporters, the protection of species diversity is sometimes defended on the grounds that species have an inherent right to exist regardless of the utility or value such species might hold for humans (Rolston 1986).

Ecocentric Ethics: Land Ethic Versus Animal Ethics

Both Singer's utilitarian (animal welfare) approach and Regan's deontological (animal rights) approach center on individual organisms, the difference being that Singer allows for utilitarian trade-offs between the various interests of individuals. The same holds for biocentric approaches. For both zoocentrists and biocentrists, collectives (e.g., endangered species) do not possess any intrinsic value or direct moral standing at all. This individualistic approach was opposed by philosophers who felt that the narrow focus on individual welfare failed to address the concerns of environmentalists about pollution, biodiversity loss, habitat fragmentation, and so on. They advocated a holistic approach in which organisms are perceived as parts of a greater whole such as biotopes or ecosystems. The *locus classicus* of this holistic approach is *A Sand County Almanac* (1949) by Aldo Leopold (1887–1948), a famous nature

conservationist who was strongly influenced by the science of ecology. The basic moral rule of his so-called land ethic goes as follows: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold 1949, p. 262).

Around 1980, a fierce conflict erupted between individualistic animal ethicists and holistic environmental ethicists. Tom Regan maintained that as long as proper respect was shown for the rights of individuals, the biotic community would also be preserved, simply because this community is ultimately made up by individuals. Environmental ethicist Baird Callicott (1980) depicted this conviction as a certificate of "ecological illiteracy." Animal ethicists make no distinction whatsoever between wild and domesticated species, between rare and common species, and between native and exotic species. According to Callicott, the moral worth of individuals is relative to be assessed in accordance with their particular relation to the collective entity which Leopold called "the land." Tom Regan responded to this attack with the accusation that environmental ethicists were committing the crime of "environmental fascism" by subordinating the rights of individuals to the interests of the greater whole. "Environmental fascism and the rights view are like oil and water, they don't mix" (1983, p. 362).

Eight years after his frontal attack, Callicott (1989) offered individualistic animal ethicists an olive branch. As a compromise, he proposed to order one's moral relations according to concentric circles. He now made a distinction between three different communities: the human community, the mixed community of humans and domesticated animals, and, finally, the wider biotic community that also includes wild animals. This attempt to reconcile individualistic animal ethics and holistic ecoethics through a theory of concentric circles comes down to a division of labor between three moral regimes: traditional, anthropocentric ethics is about humans and their relations to each other, zoocentric and biocentric ethics are about the well-being and the integrity of domesticated and cultivated species, and ecocentric ethics deals with wild species as members of the biotic community and as parts of the ecosystem.

Climate Change and Global Justice

A new impulse for environmental ethics is the all-pervasive problem of climate change. It permeates everyday actions in the West, such as eating meat and driving a car. It challenges environmental approaches to find the causes of climate change and, as a consequence, the proper allocation of responsibility for human actions that increase climate change. Responding to climate change requires huge investments in new technologies both to moderate and to accommodate climate change, and the main issue here is who is to bear the burden? (see also "▶ Climate Change, Ethics, and Food Production"). Consider an issue that was already implicitly mentioned in the discussion about sustainability: is it ethically acceptable to put price tags on natural services to make clear what damage is being done and what repairs should be done? On various levels, the issue of "monetarization" or commodification plays a role: rich countries, for example, can satisfy their duty to compensate for increasing climate change by investing in climate neutral technologies in poorer countries, or individual countries can charge climate changers to pay for their role in climate change. Many will argue that this type of commodification is inappropriate, given the intrinsic value of nature, and that paying a price means degrading the climate as a common good; finally it motivates the rich to continue with their conduct and not to look after more sustainable patterns of behavior. There are also other arguments against pricing, including the fact that pricing requires a strict analytical approach to exactly delineate which elements and particular services of the environment are harmed and which are not. The itemization or disaggregating this requires is argued by many to require a slicing up of nature which is impossible; you cannot piece by piece unravel the threads of which nature's network is composed (O'Neill, Holland and Light 2008).

Methodological Approaches: Principalist, Virtue/Care, and Pluralist Value Approaches

Next to this substantive grouping of approaches, a more methodological division is possible between fundamental or principalist positions, value- and experience-oriented positions, and pragmatist positions. In the first approach, the idea is that ethics should begin with identifying and justifying fundamental principles and obligations that can rightly claim universal respect and agreement. On the basis of these principles, people can then try to tackle more practical problems by applying them to local circumstances. The ideal principles function more or less as foundations but also as searchlights that assist in identifying the main bones of contentions. Utilitarians like Peter Singer (1975) and deontologists like Regan (1983) argue in this way. Regan, for example, argues for not interfering with animals on the basis of the principle of animal integrity. The principalist approach is helpful in delineating lots of possibilities but does not assist in procedural questions of discussing them, such as the selection of urgent topics, the procedure, and the type of information needed; moreover, it leaves out virtue ethics and long-term processes.

The value-oriented approach, like the first two, is a top-down approach, starting with the right values and then delineating what a valuable agriculture could be (Sandler 2007). A kind of ideal picture is sketched, and concrete reality is measured according to that. However, there are other approaches that start with human experiences. Eco-phenomenology, based on phenomenology, studies the nature of humans' and animals' first-person experiences, which include moral feelings of the environment and behaviors with respect to it. Abrams (2010) delineates a primordial space of relationality in which beings become experiencing humans and animals. Environmental hermeneutics emphasizes the importance of narratives and stories that people tell (O'Neill, Holland and Light 2008). In the case of Hulme (2009), this line of thought is unpacked considering mass and social media myths.

Another approach is the pluralist and democratic approach. This one starts with the practices in which people are involved and tries to find their standards of excellence and their aims, and on the basis of these values and norms, it searches for problems, inconsistencies, and failures and then develops improvements (O'Neill 2008; Keulartz et al. 2004; see also "► Environmental and Animal Pragmatism"). Although the other approaches can be used as searchlights in these processes, they are not used as principles. In the case of animals, it means that the a priori abolitionist position of, for instance, Regan is rejected and one looks instead to practices in which human-animal relationships can flourish and that one tries to expand these: not leaving animals alone but living with them (Donaldson and Kymlicka 2011; Harroway 2008). This approach has also a clear connection with the capabilities approach of Sen (2010), who stresses that the concept of justice can be given shape step by step in comparing different practices that promote the flourishing of the capabilities of people and nature.

The Task of Environmental Ethics

Environmental ethics has a difficult task: it not only requires the application of ethical principles, but it also requires extensive analysis in which technical details are to be taken seriously. During this process, cherished notions of fundamental, non-applied branches of philosophy, such as the radical distinction between humans and animals or between culture and nature, can turn out to be insufficient.

The main tasks of environmental ethics are, first, to give a coherent overview of all the ethical problems people are confronted when dealing with environmental problems, such as pollution, habitat destruction, biodiversity loss, and climate change, and the preservation and conservation or construction of ecosystems. Therefore, environmental ethics is very much a collaborative endeavor with the environmental sciences, but it tries to do more than these particular disciplines in that it tries to unify all of different aspects of the problems and different levels of analysis. Second, environmental

ethics explicates, analyzes, and evaluates the most relevant and important ethical issues. Again, it does this together with other disciplines, but it also maintains close contact with stakeholders, and so it can contribute to acceptable solutions. Third, environmental ethics can delve deeper by proposing and explicating ethical principles, norms, values, and meanings that are important in dealing with environment; analyzing cases is very helpful here. Finally, environmental ethics can contribute to the question of how to study the environment and so can help to improve the environmental sciences. Finally, "environment" is an essentially contested item, thoroughly impregnated with values and ethical questions. It cannot be studied in a neutral way, and ethics can help in analyzing its meaning.

Just like in any other philosophical discipline, nothing is outside debate and unquestionable: controversies abound. However, within the arena of environmental ethics, there is one value that seems to be a fundamental assumption: the environment is an essential context for and element of human life. Many environmental ethicists want to argue for more than this and believe that the environment has an independent meaning which cannot be neglected. The environment covers relationships that one cannot annihilate; they require maintenance, exercise, and cultivation. When humans distance themselves too much from environmental relations, for example, when important elements of the environment are made of plastic or are only available through two-dimensional electronic screens, they are degrading these relations and themselves.

Because humans always have multiple bodily and material meaning experiences of their environment, humans have to exercise the capacities that allow them to have these as much as possible in balance with other important capacities. As a matter of fact, these meanings are always culturally and socially differently shaped, but humans have to continuously learn to deal with those differences and to be sensitive to the relevant environmental problems and overlapping concerns. The bodily aspect of our relation to environment also implies that a sense of place, even in a mobile society, is important in connecting with landscapes and with the people one trusts. This anthropological insight could contribute to a better relationship with the environment: less spoilage, less waste, and less neglect.

Environmental Ethics and Politics

The rise of environmental ethics was accompanied by activism, by writing, by organization of sit-ins and boycotts, by initiating local conservation areas, by participating in social media, and by political action. The relation between environmental ethics and politics can be diverse and can be directed toward governments, farmers, corporations, and supermarkets. Moreover, these kinds of activism manifest themselves in the supermarket by urging for more and relevant information on the ecological footprint of products, where they come from, how they are made, and which ethical decisions are made in their production process. Political action can be so strong that governments are compelled to issue strict regulations or better oversight of existing regulations; some companies are playing a key role and business can in some cases be seen as a "green avant-garde." Many citizens find it frustrating that environmental problems and solutions are not always a priority for political parties and so exercise their agency via traditional media, new social media, or directly via the civil society groups.

Therefore, many ethical consumers become members of NGOs and other organizations when they want to contribute to "other regarding" political and ethical action. They contribute to these joint actions, although it is often not in their direct own interest, but in the interest of others, often people abroad. Environmental ethical activism is therefore more than citizen action, because it often transcends the borders of the nation-states to many areas in the world, like rainforests, tiger parks, and river deltas. Many activists act out a new kind of obligation, and in particular in acting together, they develop a first-person plural perspective of a group that act "vicariously" as advocates of silenced groups like next generations or nearly extinct animals.

For ethicists engaged in controversial issues such as animal welfare or environmental degradation, it is not always easy to meet norms of scholarly integrity and to take the relevant aspects fairly into account. Pure neutrality in this field is impossible; however, the rules and values of good scholarship are clear for many, and upholding them can have a purifying and ideas generating effect. One of these values is the concrete engagement with practitioners and nature managers; here one learns what concrete problems arise in dealing with a certain ecosystem in which people have lived for a very long time. One learns to understand that these people often care very much about their surroundings and that environmental fundamentalism, which under all circumstances puts the environment first and gives the people living in it only an insignificant role, is a serious mistake.

Ethics and Environmental Sciences

The relationship between ethics and the environmental sciences is often described as a kind of norm-fact relation: the sciences deliver the facts and ethics develops principles and norms to act upon. Often, the deliverers of the facts, the scientists, are attributed also normative tasks in dealing with humans' distorted relations with the earth (see "► Ecotopia"). Lewis Mumford writes "One of the major tasks of the twentieth century is the resettlement of the planet. The past three centuries have been centuries of random exploration … spontaneous and guided by insufficient knowledge; and much of the work of settlements to be done over again …. Population that spread with no more social direction than the surface tension which gives definition to an ink blot, must be regrouped and nucleated in a fashion that will make possible a co-operative, civilized life. Industries … must now flow out into new centres … conscious scientific intelligence must determine the new loci of industrial advantage" (Mumford 1940, p. 388; Keulartz 1998). However, these scientistic proposals run several severe risks. First, the environmental sciences (like any science) suffer from controversies, and it requires normative assumptions to choose one party; second, societal processes have a logic of their own and cannot change just because scientists say that they should. Moreover, environmental sciences incorporate values and normative assumptions that steer their research. So, there are perspectives that try to have a more critical and distanced relationship with the sciences and to look for a broad spectrum of inspiration, like social movements and various neglected social practices.

Outlook: Future of Environmental Ethics

One assumption of the environmental ethics of the eighties and nineties of the last century (in particular deep ecology, Naess 1989) was that the environmentalists of the West should have very strong opinions about the "wild" ecosystems in the South: they have to be preserved, and poor people that live in these areas are harming nature and should give way to, for example, nearly extinct species like tigers. It turns out that the opposite is true: poor people are much more dependent on regular ecosystem services, and as the Indian social ecologist Ramachandra Guha (1994) argues, environmental and human justice need to be brought in balance (see also "► Environmental Justice and Food"). The future of environmental ethics lies in a careful integration of global and local orientations, of natural and human values, and requires respecting the diversity of nature and humans and a sustainable form of agriculture. In particular, in Asia the challenges, especially those posed by climate change, are enormous and will require integrating population growth, increasing welfare, and growing demand for animal proteins on the one hand and nature conservation of huge areas with incredible ecosystems on the other. The Asian religious traditions, just like other movements, can be an inspiration. Finally, the stalemate between an environmentalism – which focuses on wild nature – and agriculture, which focuses on the expression of a so-called anthropocentric, dominating attitude, needs to be expanded to include more sophisticated approaches that consider the need of all humans to live well with food and nature.

Summary

Non-anthropocentrism is one of the main starting points in environmental ethics, and it implies that the moral domain covers not only humans but also animals and, depending on one's outlook, species, ecosystems, and the land. According to transgenerational ethics, even future generations are considered to be moral objects, which raises the issue of balancing current generational interests with those of the future. Utilitarian and deontological perspectives will give different answers to these questions, as will egalitarian and hierarchical approaches. An important issue is what to do with endangered species and biodiversity protection. According to ecocentric ethics, the land requires priority vis-à-vis animal ethics. A recent and growing challenge is the relationship between climate change and global justice. From a methodological perspective, one can distinguish between principalist, virtue/care, and pluralist value approaches. The tasks of environmental ethics were discussed as well as the relationships between environmental ethics, politics, and the environmental sciences.

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Environmental Justice and Food

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Synonyms

Accessibility; Agriculture; Climate change; Diet; Environmental justice; Food

Introduction

Environmental justice, understood here as a call for stronger consideration of social justice in environmental policy, is receiving increasing attention in policy, politics, and academic research. With social justice understood as concerns of fairness and equity as they are experienced within and between societies, environmental justice advocates make claims relating to the ways in which features of the environment, both positive and negative, are experienced differently depending on demographic factors such as ethnicity, gender, and income. Food – an essential environmental resource, intimately bound up with our health, practices, and cultures and stemming from increasingly globalized and industrialized production systems – is an issue that should be at the heart of these calls.

In mapping out the food dimension of environmental justice, this entry explores four particular ways in which the consumption and production of food have implications for justice. The first is the accessibility of food, which is quite distinct from other consumer products and has wide-ranging implications for health and social inclusion. The second is climate change, a key *inter*generational and *intra*generational justice issue. Agriculture and food processing and distribution not only contribute to climate change, they are also likely to be affected as its impacts are experienced. The third is the perception of injustice in global supply chains, with palm oil as a specific example. Finally, the relationship between diet and justice to nonhuman nature is considered.

Environmental Justice

The environmental justice movement is generally understood to have originated in North America in the 1970s, with roots in the civil rights and anti-toxics movements. Protests about the location of toxic disposal sites raised concerns about disproportionate impacts upon demographic groups, particularly in terms of race and ethnicity. Agyeman recounts a clash of ideology between environmental justice campaigners and the established environmental movement. He argues that the former can be seen to represent a "grass-roots (re)definition of environmental issues, not (only) as wildlife, recreational or resource issues, but as issues of justice, equity and rights" (Agyeman 2000, p. 36). It can be seen, therefore, as a social justice challenge to the environmental movement. The concept and movement have expanded to bring environmental justice dimensions to campaigns on farmworker rights, incinerators, lead poisoning, and transportation, to name a few.

Gottlieb and Joshi build on the common notion that environmental justice is about recognizing the environment as "where we live, work, and play," to introduce food justice as "where, what, and how we eat" (Gottlieb and Joshi 2010, p. 5). It is, they continue, about "ensuring that the benefits and risks of where, what, and how food is grown and produced, transported and distributed, and accessed and eaten are shared fairly" (2010, p. 6). Food democracy builds on another central tenet of environmental justice, that of procedural justice, in which fair and inclusive procedures are in place to address injustices and eliminate negative environmental impacts at their source (Agyeman 2003).

As the notion has spread around the globe, so have a multiplicity of conceptualizations. While the first decades of environmental justice campaigning saw a focus on the ways in which race and ethnicity affected environmental burdens, recent research has focused on injustices experienced due to age, gender, indigenous status, disability, and income. The scope has broadened from a focus on "environmental bads" to one that also encompasses "goods," such that it is concerned not only with protecting people from the effects of pollution but also with providing access to environmental resources, such as transportation and green space. Agyeman has posited "just sustainability" as a concept that brings together environmental justice with more conventional environmental campaigns toward a "sustainable society, locally, nationally and internationally, both within and between generations and between species" (Agyeman 2003, p. 323). While we should recognize that not all efforts to minimize environmental impact will

maximize social justice and vice versa, just sustainability can be read as a call to find common ground between these agendas.

In the UK, there has been no direct equivalent of the environmental movement in the North America. It can be seen as an emergent policy principle rather than a direct focus of grassroots anger (Agyeman 2000), and there has been a focus much more on income than on race and ethnicity. In contrast to the grassroots origins of environmental justice in North America, work on the issue in the UK was initiated by established environmental NGO Friends of the Earth (Walker 2012, p. 25) and by the Environment Agency's establishment of a program to look at "environmental inequalities."

The environmental justice movement in South Africa drew many parallels with the USA, making connections between the civil rights movement and anti-apartheid struggles, sharing a focus on toxic and polluting activities, and making deliberate contrasts between these concerns and more traditional colonial and postcolonial ideologies relating to wilderness and nature conservation (Walker 2012). In Central and Eastern Europe, the "Transatlantic Initiative on Environmental Justice" networked with US contacts to work on regional issues, with a focus on the discrimination against Roma.

Although these are examples of self-identified environmental justice activity, it is also evident that environmental campaigners around the world have increasingly taken on board justice concerns. Palm oil and climate change, discussed below, are just two examples of this. In discussing environmental justice, then, we need not be limited to those movements and organizations that refer to their work as environmental justice, but be open to broader discourses in which concerns about fairness and the distribution of impacts on people have influenced thinking on issues of environment and sustainability.

Access to Food

A well-established food justice issue is the accessibility of food to disadvantaged populations. This can be observed not only at a global scale but also within societies in the Global North. In an increasingly urbanized society, our food is generally produced, processed, and packaged as part of a globalized supply chain, with attendant impacts around the world. In this sense, it is like any consumer product. Yet food presents a special challenge, not least because it is a physiological requirement and one that we need to consume often: at its most basic level, it is not substitutable. In comparison to shortages of other consumer goods, lack of access to food provokes a very strong sense of injustice. Our diet has a profound impact upon our mental and physical well-being: it is not simply the bare provision of food that should concern environmental justice, but access to a healthy, culturally appropriate diet.

One aspect of access to food is affordability. A report by Friends of the Earth as part of the ESRC Global Environmental Change Programme (Stephens et al. 2001) found that around 20 % of the UK population had difficulty affording healthy food, especially where other costs such as fuel and rent take priority. Food insecurity in developed countries has been linked to a prevalence of obesity, diabetes, anxiety and depression, loss of dignity and to lower educational attainment and behavioral issues in children (Burns et al. 2010, p. 2). In the Marmot review of health inequalities and the social determinants of health, food and diet were recognized as part of a group of health issues with "persistent and complex causes and relationships [which are] multi-faceted, between, for instance, early years, education, employment, living environment, income and health" (Marmot et al. 2010).

Another aspect is the availability of healthy food and the provision of affordable, adequate transport to reach shopping facilities (Social Inclusion Unit 2003). A study into accessibility in the West Midlands town of Sandwell found that many residents had no fresh food within 500 m of their homes – which is the distance a healthy person is considered able to walk in 10–15 min – whereas the food that was available locally comprised predominantly high fat, high salt, cheap, and easily storable foods (Steel 2013). Numerous studies of

cities in the USA have identified links between limited or no fresh food access and health-related disparities associated with race, ethnicity, and income (Gottlieb and Joshi 2010), and, as discussed, this "grocery gap" can be linked to a "transportation gap." "Food deserts" has become a popular description of such situations and illustrates the complex relationship between local environments and diet.

As an issue of justice, however, food accessibility is concerned with more than just physical and financial access to basic foodstuffs. Food is bound up in our social and cultural lives, and what it means to "eat well" varies from culture to culture and person to person. Food demands competencies from the consumer: we need knowledge and skills to plan our diets and to select, store, and prepare meals, and these competencies can mean the difference between a healthy relationship with food and an unhealthy one. Understandably, then, projects such as the Bentley Bulk local food initiative (Sherriff 2009), Growing Manchester, and Incredible Edible Todmorden all incorporate elements of education and awareness raising.

Such an understanding demands a nuanced conceptualization of food security: Burns et al. (2010, p. 2) attempt to do this, for example, with "all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximises self-reliance and social justice." It has also been argued that discourses and practices relating to "alternative foods" may be specific to particular cultural contexts or ethnic groups through the ways in which they are constructed and understood. Guthman et al. argue, for example, that "many of the discourses of alternative food hail a white subject and thereby code the practices and spaces of alternative food as white" (2011, p. 264). It is important, therefore, that inclusivity and cultural appropriateness are taken into account when creating projects and systems designed to improve accessibility, an example of justice as recognition and inclusion.

The temporal dimension of food consumption is also distinctive: we consume food often and make choices about it daily. In comparison with other consumer purchases, such as televisions or cars, food is subject to an ongoing series of daily and weekly choices and, although this means that there are in theory opportunities for rapid changes in diets, these must be understood within the context of enduring habits and social and cultural meanings. That is, food consumption must be understood as more than a series of individual choices: it is an ongoing relationship. An improvement in food accessibility, therefore, is more likely to result from ongoing sustainable practices and systems that engage with cultures and communities, rather than simple, one-off interventions.

One way to improve food access is to promote local growing projects at the individual, household, or community level. The availability of green spaces therefore becomes an issue. Green spaces have been identified as promoting other benefits as well, including improving air quality reducing flooding, and raising overall neighborhood quality (Walker 2012) and can thus be considered an environmental good. Involvement in food growing has been recognized as bringing numerous benefits beyond the direct contribution of food availability, including opportunities for social interaction, physical exercise, and skills development. Germany's Interkulturelle Gärten, for example, are aimed at helping integration into a "migration society" by bringing together people from a variety of backgrounds with food and outdoor activity as a focus (http://www.stiftung-interkultur.de/). This is an example of an approach to environmental justice that encompasses both the cultivation of environmental goods and the minimization of environmental bads.

Climate Change

Food production, consumption, and distribution both affect and are affected by one of most pressing and wide-ranging international justice issues: climate change. This is the change experienced in climate as a result of rising global mean temperatures due to an accentuation of the naturally occurring greenhouse effect, a process commonly

referred to as global warming. "With climate change," argues Walker (2012, p. 179), "we are confronted with evidence of patterns of inequality and claims of environmental justice that span the globe, that permeate daily life and which pose threats to the current and future health and well-being of some of the poorest and most vulnerable people around the world." EU food consumption accounts for 31 % of all consumption-related greenhouse gas emissions, while in the UK the figure is estimated at 19 % (Sustainable Development Commission 2008). It is a prime example of *inter*generational (in)justice, since current emissions cause climate change impacts in coming decades. It is also a case of *intra*generational (in)justice since, while the greatest proportion of the greenhouse gas emissions come from the Global North, that is, the richest, most economically developed countries, it is well established that the Global South – the poorest, least economically developed countries – will bear the brunt of the impacts (Walker 2012).

A further dimension of justice in the relationship between food and climate change is the vulnerability of agriculture to changes in climate. Climate scientists are not able to predict exactly what impacts will occur, but they could carry a high risk of causing major damage. Policy makers must therefore take into account both uncertainty and risk. The emerging consensus is that higher-latitude regions such as North America and Northern Europe may benefit from longer periods of warm weather that may increase yields, but water shortages may constrain production. On the other hand, in the low-latitude regions such as Africa, parts of Asia, South America, and Australasia, the negative impacts are already being seen (Garnett 2008). Extreme weather could affect transport and storage infrastructure, and fertilizer plants and manufacturing sites, and could put the rural poor, who rely in a direct way on getting to market to both buy and sell, in a particularly vulnerable position. Moreover, such fluctuations could threaten the security of the world food supply and bring increased volatility to food prices, again affecting poor consumers the most. The world's poorest and most vulnerable will be hardest hit by climate change, and this applies at the global scale as well as within countries in the Global North (Marmot et al. 2010, see pp. 77–78, 127–129).

(In)justice in the Supply Chain

Transnational agricultural corporations control 40 % of world food trade, with 20 companies controlling trade in coffee, six controlling 70 % of wheat trade, and one controlling 98 % of packaged tea (Patel 2013). One justice dimension of food is the concern about the impact of industrialized and globalized agriculture and associated industries.

Protests within the global neoliberal economy can be seen as "a call for recognition and preservation of diverse cultures, identities, economies and ways of knowing" (Schlosberg 2004, p. 524). People's movements exist with the aim of "conserving livestock diversity and protecting the basis of sustainable agriculture" as a reaction to the pressure to produce meat for export (Shiva 1999, p. 59). In Brazil alone, the equivalent of 5.6 million acres of land is used to grow soya beans for consumption by farm animals in Europe (Lang and Heasman 2004). These "ghost acres" not only illustrate the inefficiency of much agriculture but also highlight equity concerns: land used to grow food for export becomes unavailable to the poor to grow staples to meet basic needs. This process fuels displacement to urban areas, adding to overcrowding and creating new challenges of feeding rapidly urbanizing populations. Between 1979 and 1999, when Kenya almost doubled the proportion of its vegetables being grown for export, vegetable consumption in the country decreased by 39 % (Jones 2001, p. 52).

An example of these global impacts through the corporate food regime is the "palm oil industrial complex" (Pye 2010, p. 854). The nonprofit, industry-led Roundtable on Sustainable Palm Oil has been created to promote the production and use of sustainable palm oil (Laurance et al. 2010), following concerns about the ecological and humanitarian impacts of palm oil's rapid spread across tropical regions, especially Malaysia and Indonesia. Alongside palm oil's use across the

food chain, a driver for its development in global markets has been the push for biodiesel in the EU's transport targets: a fuel once seen to be sustainable but now associated with rainforest destruction and food crisis (Pye 2010). Environmental justice campaigners allied themselves with indigenous peoples, whose lifestyles, such as farming smallholdings, were seen as exemplars of sustainable resource management. International NGOs such as Friends of the Earth and Greenpeace have campaigned on this issue, not only from the angle of more conventional environmental concerns, such as deforestation and the plight of the orangutan, but also from the point of view of the displacement of, and health impacts experienced by, the indigenous peoples. There have been numerous protests by the "independent peasantry," and some village-led struggles have been successful in preventing the imposition of plantations (Pye 2010).

The New Economics Foundation is one of the organizations raising concerns about the dominance of supermarkets and drawing connections with justice issues in the supply chain (Simms 2007). Campaigners argue that the supermarket business model, in its attempts to bring uniformity to products and cut costs, results in produce that does not fit high standards of cosmetic uniformity being wasted and therefore also the effort that went into growing it; workers being subject to low wages and cost-cutting hazardous conditions; and environmental resources, not least land and water in the Global South, being used for export products and luxury horticulture items rather than for the production of produce that local people can access and afford. While supermarkets have programs to improve supply chain standards, campaigners argue that they are "freshening the dragon's breath" (Simms 2007, p. 282) rather than making fundamental change. Well-known standards such as Fair Trade offer a way to try to ensure higher standards and fairer reimbursement for producers, but some argue that this does not bring fundamental change but is "a way for farmers, hanging on by their fingernails, to be able to hang on a little longer" (Patel 2013, p. 317). It is argued, for example, that underrepresentation of farmers on the certification bodies, in comparison to that of distributors and retails, means prices are still relatively low and pressure to grow monocultures continues. The point is not to dismiss the role of supermarkets and efforts to improve trading standards and working conditions, but rather to show that these have been subject to claims of (in)justice.

Justice to Nonhuman Nature

While the environmental justice discourse is predominately concerned with injustices to people, there is a school of thought that nature itself should be considered a subject of justice. Given the role of animals and ecosystems in food, this is of interest in this entry. That is, parts of nature should be treated as moral subjects because they have worth beyond their value to humans. While statements about the rights of nature, and its intrinsic value, are rhetorically impressive, they are viewed by some as ontologically and practically problematic, although it could of course be argued that this is the case for all attempts to ground rights, including human rights.

The notion of environmental pragmatism can be considered an alternative to the attribution of intrinsic value to nature. It holds that there is nothing upon which intrinsic value can be placed that does not also have some extrinsic value. For example, the protection of rainforests could be argued on grounds of their intrinsic value, for their own sake, but the same argument could be made on less controversial grounds by appealing to the extrinsic value of their contribution to the climate that supports human life, the habitat it provides for humans, or the pleasure individuals have from knowing that rainforests exist. Some therefore argue that an "injustice" to a part of nature can be (more usefully) understood as an injustice to those people who benefit from it, and this certainly makes the concept more workable in the context of current environmental justice discourse.

Another way to understand the impact of food production on ecosystems is through considering the impact upon individual animals and species: while, a rainforest may seem a rather nebulous

moral subject, justice to animals may be a more workable conceptualization. Spreading monocultural production, for example, has an impact on biodiversity and this can threaten the habits of wild animals. The use of pesticides and fertilizers in agriculture can also have a detrimental effect on wildlife. In April 2013, for example, the EU banned some widely used pesticides out of concern for bee health and the value of their pollination services. In some cases, endangered species are hunted for high-value food products: bluefin tuna, the Chinese giant salamander, and green sea turtles are examples, as are lions and tigers. In some instances, however, there is a complex relationship between human rights and the preservation of a species, as is the case with whale hunting by the Inuit in the polar regions of North America. In such instances, there is a need to address the competing values of nature and humanity.

An issue that has direct resonance with justice and nonhuman nature is the role of animals in agriculture and in our diets. Philosopher Peter Singer, seen as the founder of the modern "animal rights" movement, has argued that we have responsibilities in terms of the ways we treat other species, concluding that we should not be using them for food. He argued that animals are moral subjects because they are sentient and feel pain. As well as concerns for animal welfare, the thinking behind vegetarian and vegan diets reflects concerns about the environmental impact and inefficiency of meat production, particularly in its intensive forms such as factory farming (FOA 2006); the global justice implications of the spread of soy and palm oil to produce animal feed; the health implications of diets high in meat; and the welfare of animals in agriculture, particularly intensive farming. While some argue for the wholesale removal of animals in agriculture, others see some uses as beneficial, particularly in more traditional production systems in which they can provide fertility, traction, and useful by-products.

Summary

Environmental justice has developed from its roots in the 1970s in North America to a movement, policy perspective, and area of research that have international reach and geographical differentiation in their application and conceptualization. Food production and consumption, which is intimately related to human health and environmental quality, is an important area of environment justice. One dimension is the accessibility of food, an exploration of which has revealed the importance of understanding not only physical accessibility but also the competencies people have in dealing with food and the ways in which food is bound up in our social and cultural worlds. Another is climate change, which is a prime example of *inter*generational and *intra*generational justice. There are concerns about the injustices experienced by those working in the global supply chain or displaced to make way for its spread. Finally, while environmental justice has been primarily concerned with justice to human communities, it can be argued that elements of nature, can also be brought within an environmental justice frame and that this has implications for the role of animals in agriculture.

Cross-References

- ▶ Climate Change, Ethics, and Food Production
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Food Deserts
- ▶ Peter Singer and Food
- ▶ Urban Agriculture
- ▶ Vegetarianism

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Epicureanism and Food

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Synonyms

Epicure and epicurean; Gourmand and gourmandism; Hedonism

Introduction

The briefest definition of Epicureanism is hedonistic materialism. However, this technical description is potentially misleading to those unfamiliar with philosophical terminology. Similarly, the terms "epicure" and "epicurean" are now commonly associated with luxurious or recherché appetites and even vulgar excesses, although the Hellenistic Greek philosopher Epicurus (341–271 BC) encouraged moderation and a simple diet. It is true that he advocated pleasure (*hēdonē*) as a criterion of ethical choice, but his ethics must be understood within the context of his physics. To understand what Epicurus taught about food and pleasure, or even what he meant by pleasure, one must turn to the ancient sources.

The first vulgar yet comedic caricatures of Epicureanism emerged in antiquity, deceptive but memorable distortions of the teachings of Epicurus. Philosophical opponents from his own day including his own disaffected students, later Roman and Greek authors including Cicero and Plutarch, early Church Fathers, and medieval sources misrepresented and distorted Epicurus and Epicureanism to such an extent that their caricatures have persisted in common use today. However, the positive influence of Epicureanism on Renaissance, Enlightenment, and Romantic thinkers and on modern intellectuals and writers demonstrates the indestructible longevity of and persistent ideological resistance to this Hellenistic school of thought.

Basic Description of Epicureanism

According to Epicurus, human happiness is possible only through an understanding of the physical world and its unseen workings. Ignorance of one's surroundings and of the composition of the universe leads to irrational and superstitious preoccupations, such as fear of death and dread of the gods. Epicurus sought to rid mankind of these worries through an explanation of theoretical physics based on the atomism of Leucippus and Democritus. Through careful study of the workings of the universe and the knowledge that everything consists of atoms and void, man is able to achieve peace of mind (*ataraxia*), an inner calm and sense of equilibrium, which is the highest pleasure, the greatest goal in life. Epicurus also encourages a careful discrimination among pleasures, rejecting pleasures that are momentarily intense but followed by pain. He argues for moderation, the pleasure obtained by the self-sufficiency of living a simple life, the joys of friendship, and even the withdrawal from an active political career, as summed up in the maxim, *lathe biōsas* ("live unnoticed").

The philosophy of Epicurus demonstrates a keen awareness of, engagement with, and frequently polemical responses to the works of his philosophical predecessors and contemporaries. Although clearly in debt to the earlier work of the atomists, Leucippus and Democritus, and the hedonism of Aristippus, Epicurus nonetheless criticizes their work as insufficient. He attacks other philosophers on whom his own work rests, including Plato and Aristotle, and his former teachers, reserving particular contempt and vitriol for Nausiphanes, an atomist with skeptical inclinations, who clearly had a formative influence on Epicurus. However, Epicurus did not allow criticism of himself from his followers. An oath of obedience to Epicurus and strict adherence to his teachings were required of members of Epicurean communities. Some of the most vicious comments about Epicurus and his philosophy come from his contemporary and former student, Timocrates, who, upon leaving the school, wrote a book called *Pleasant Things*, in which he accuses Epicurus of profound ignorance of philosophy and disgusting habits, including cohabiting with numerous women (perhaps a criticism of Epicurus' inclusion of women as full members of his school), spending an immoderate amount of money on food, and vomiting twice a day because of his luxurious living. Diogenes Laertius mentions these criticisms in his biography of Epicurus but discounts them as calumny.

Sources

Although Epicurus was a prolific author of over 300 works, few survive in their entirety or at all.

What little is known of his life is found in the tenth chapter of Diogenes Laertius' *Lives of the Eminent Philosophers*, written in the second century AD. Diogenes' biography also preserves the text of the three complete letters of Epicurus (the *Letter to Herodotus*, the *Letter to Pythocles*, and the *Letter to Menoeceus*) and a collection of quotations known as the *Principal Doctrines*. A fourteenth-century Vatican manuscript preserves a similar collection of quotations, the *Vatican Sayings*.

Among the primary sources for Epicurean philosophy are the fragments of an inscription from Oenoanda, in Lycia, modern southwest Turkey. In the second century AD, Diogenes of Oenoanda, an Epicurean Greek, carved a summary of Epicurus' philosophy onto the wall of a portico in his hometown. The inscription provided Diogenes' synopsis of Epicurus' teachings on physics, epistemology, and ethics. The three registers of the inscription contained three treatises, on old age, on physics, and on ethics. Less than a third of the inscription, an important source, has been recovered.

Charred papyrus fragments of Epicurus' 37-volume treatise *On Nature* and the works of authors who quote him were found in the eighteenth century in the personal library of the Epicurean philosopher and poet, Philodemus, at Herculaneum. Some 1,500 papyrus scrolls were semi-preserved at the Villa of the Papyri when the city was buried by volcanic ash during the eruption of Vesuvius in AD 79. Because of the

extremely fragile condition of the recovered papyri, it was not until the mid-1980s that researchers were able to develop an effective technique for reconstructing and reading the fragmentary documents. Today, a UCLA-led international team of scholars, the Philodemus Project, works to reconstruct, translate, and publish the texts. Philodemus (ca. 110 BC–ca. 35 BC) was a member of the literary elite, who counted the Roman poet Virgil (70 BC–19 BC), possibly Lucretius (ca. 99 BC–ca. 55 BC), and Horace (65 BC–8 BC), among his many students. Philodemus' circle was an important point of entry for the ideas of Epicureanism and other Hellenistic philosophies into the Roman world and Latin literature.

Numerous quotations, fragments, and testimonies on Epicurus found in Greek and Roman literary sources are collected in Usener's (1887) compilation, *Epicurea*.

However, the most important extant source for Epicurean philosophy is Lucretius' hexameter poem, *De Rerum Natura* (*On the Nature of the Universe*), the title itself a translation of Epicurus' Greek *Peri Phuseōs* (*On Nature*). Lucretius' work is best understood as a lengthy exposition of Epicurean philosophy, addressed to his patron, the Roman aristocrat and politician, Gaius Memmius. Lucretius describes the poetic form of the treatise as "honey on the cup of wormwood" (a phrase perhaps better understood as "a spoonful of sugar helps the medicine go down") as it is calculated to make the work's technical content more pleasurable and palatable to its reader. Lucretius' poem is dominated by the Epicurean desire to free mankind from superstition and fear of death. Death is nothing more than the dispersion of atoms, which make up the human soul. Although the gods exist, they are unconcerned with human affairs and need not be feared. For if they concerned themselves with mortals, they would be troubled, and gods in their blessedness, by definition, cannot be troubled. Rather, their tranquility provides the ideal for Epicurean peace of mind, which each member of the sect should strive to emulate.

A brief summary of Lucretius' poem will show which aspects of Epicureanism he chose to elaborate. Book I is devoted to an explanation of atoms and the void (space necessary for the movement of atoms) and an attempt to refute the physical systems presented by the pre-Socratics Heraclitus, Empedocles, and Anaxagoras. Book II presents the kinetics of atomic theory, with particular emphasis on the properties and movement of the atom. Book III discusses the material composition of the human soul and develops various arguments for its finite existence. Book IV contains Epicurean theories of sense perception, psychology, and will, concluding with a disillusioned description of love and sex. Book V discusses the origins of the world, astronomical phenomena, the origin and development of the human species, and the growth of human institutions, language, art, and religion. Book VI, loosely organized, explains various natural phenomena, including thunder, lightning, the periodic rising of the Nile, the attraction exercised by magnets, etc. It concludes rather abruptly with a description of the plague at Athens at the beginning of the Peloponnesian War.

Although Lucretius is faithful to the teachings of Epicurus, his primary focus is on Epicurean physical theory. There are, however, moments in the poem when Lucretius either highlights parts of the Epicurean system or depends upon methodologies or procedures that he does not explicitly set forth. These are the *Canonic* ("Rules of Investigation"), Epicurus' moral theory, and the beliefs about the gods and religion.

Insofar as the criteria of truth and moral theory are relevant to a discussion of food and pleasure in Epicurean thought, further discussion of these elements is necessary.

Epicurean Criteria of Truth

The fundamental criterion is sensation. All objects of perception are true and real, and the criteria of truth are sensations and concepts and feelings. Epicurus holds that while sensation is irrational, there is no other criterion by which one can test it. Sensation must be trusted as a reliable guide to the world, insofar as it is perceptible. Thought is derived from sensation. The

perceptible world is an instructive guide for the investigation of imperceptible objects. Several images of any one class of things unite to form a general concept of a thing, to which we can refer as a test. This general concept of Epicurus is called "anticipation," because it allows one to anticipate or identify the appearance of anything one seeks or wishes to construct. The third criterion of truth is feeling (*pathos*), which is the basis of Epicurean moral theory. All sensations are accompanied by feeling, but feeling is the distinction between pleasure and pain.

Epicurus distinguished between two classes of objects of investigation: things perceptible in normal experience and things imperceptible. The latter category is subdivided into things that are perceptible but distant (not close at hand for investigation), such as celestial bodies, and things, which by their very nature are imperceptible, such as the atoms and the void.

Epicurean Ethics

Epicurus' *Letter to Menoeceus* is probably the best exposition of Epicurean moral theory. However, this theory is also evident in most of the *Principal Doctrines* and in many other quotations and references in other authors. It is not, however, featured prominently in *De Rerum Natura*. According to Epicurus, every sensation is accompanied by the feeling (*pathos*) of pleasure or pain. The end or purpose (*telos*) of action is pleasure; pleasure is good; pain is bad. Like sensation, feeling is immediate and irrational. It is also universal. All living creatures, as soon as they are born, take delight in pleasure but resist pain. For example, they desire the pleasure of not being hungry and not being thirsty. They do this by instinct, a natural impulse apart from reason. Not only is pleasure an immediate and irrational sensation but the processes of pleasure and pain are also atomic movements of dislocation and readjustment. Epicurean moral theory is firmly grounded in its physical system.

The assertion that it is man's purpose (*telos*) to seek pleasure ("the pleasure principle") led to popular misconceptions of Epicurean morality in antiquity and later. For example, in a hostile passage, Plutarch alleged that the Epicureans measure the amount of pleasures with compasses, from the stomach as center (Plut., *Non posse*, 1098D). However, this was not Epicurus' philosophy. He did not teach, as did the hedonist Aristippus and his followers, the Cyrenaics, that each successive moment should be filled with maximum pleasure. Epicurus comments in his *Letter to Menoeceus* that when he talks about pleasure as the goal of life, he is not talking about the pleasures of sensuality, but rather of freedom from pain and mental affliction. It is not eating, drinking, and sex but sober reasoning and the virtue of prudence that produce the happy life. The highest pleasure is thus associated with the absence of pain (*aponia*).

Three further considerations refine Epicurus' concept that pleasure should be sought and pain avoided. Some pleasures bring pain; some pains result in pleasure; therefore, not every pleasure should be chosen, nor every pain avoided. Pleasure is the satisfaction of want. According to Epicurus, what the body desires is not to be hungry, not to be thirsty, and not to be cold. Such pains are caused by atomic dislocation, and thus, the process of readjustment brings pleasure, as does the equilibrium that results. The static or *katastemic* pleasure of equilibrium is greater and longer lasting than the pleasure of movement (*kinetic* pleasure). The Cyrenaics had been aware of the distinction between katastemic and kinetic pleasures but rejected it. For the Cyrenaics, katastemic pleasures were not pleasures at all but rather the experiences of a corpse.

Lucretius clearly describes this satisfaction of want with reference to eating and drinking. The taste and consumption of food and drink bring a certain kinetic pleasure, but it is in their satisfaction of the pains of hunger and thirst that they restore equilibrium to the body. Overindulgence in food or drink, while resulting in immediate kinetic pleasure, would disturb the equilibrium of the body and therefore should be avoided. It is always the katastemic equilibrium of satisfaction that should be sought over the kinetic pleasure of consumption. Cicero, himself a Stoic clearly engaged in polemic against the rival

Epicurean school of thought, misrepresents Epicureanism by saying that the Stoics understand correctly that the first natural impulse of children and animals is for self-preservation, while the Epicureans hold that this first impulse is for kinetic pleasure. Rather, it is clear that Epicurus sees this first natural impulse as a desire for katastemic equilibrium, akin to a desire for self-preservation, as it depends on the satisfaction of basic needs. Epicurus would acknowledge that the kinetic pleasures of taste and consumption accompany the satisfaction of the pains of hunger and thirst, but it is incorrect to attribute to him the notion that the first natural impulse is solely for the thrills derived from these sensations.

Thirdly, there is a limit to pleasure as the satisfaction of desire, beyond which pleasure cannot be increased, but simply varied. Desires may be divided into three classes: physical and necessary, e.g., food, clothing, and shelter; physical but not necessary, e.g., sexual pleasures; and neither physical nor necessary, for example, elaborate food or clothing. The first must be satisfied, the second should be limited by prudence, and the third should be rejected as unnecessary.

If one considers all these elements together, what emerges is that the maximum amount of pleasure is to be obtained from the simple life, which brings pleasures free from pain, results in the static pleasure of equilibrium, observes the limits of pleasure, satisfies those physical pleasures that are necessary, and wisely limits or rejects those that are unnecessary. This simple life is within the reach of everyone, as nature has made it easy for humankind to satisfy its most basic needs. What is not easy is unnecessary to satisfy.

There are pains of the body over which one does not have the same control as over one's basic needs, such as those due to disease or accident. If pain is acute, it does not last long, for it either kills or is cured. If pain is chronic, it is not severe and even permits a predominance of pleasure over pain. To obtain complete freedom from pain, one needs both the control of one's bodily desires and the gift of health.

The mind, too, has its special pleasures and pains. It shares the pleasures of the body, but it also has the capacity for memory and anticipation, which the body does not. The mind also has its own unnecessary desires, which may bring pain, such as avarice, and the desire for wealth, ambition, and public recognition, such as honors like crowns and statues. Desires for power and wealth often lead to crime; the possession of wealth and power seldom leads to the security of a tranquil life. Lucretius also discusses the pain associated with the mind's ability to look back, which gives rise to remorse or the pangs of a guilty conscience, together with fear of punishment. This is often associated, especially in religion, with the fear of death. These latter two great fears of the mind arise from its ability to look into the future. Both the fear of the intervention of the gods in this life and the fear of the punishment of the soul after death may be dissipated by study of Epicurus' physical theory.

Beyond the dissipation of fear, the mind's greatest positive pleasure is obtained through the study of philosophy, which Epicurus promotes as appropriate and enjoyable during all stages of life. The joy of friendship is also encouraged, and the study of philosophy with a friend unites these two highest pleasures of the mind. Finally, to guard against all disturbance of the mind, the true philosopher will eschew public life and politics and live unnoticed (*lathe biōsas*).

Significance of Epicureanism/Conflation with Gourmandism

It should be clear from Epicurus' moral theory that he advocated a life of moderation and simple pleasures and that he taught that happiness is possible even when one experiences physical pain. Nonetheless, detractors often sought to distort and discredit Epicureanism for ideological purposes. Thus, maxims such as "men feast and drink because they know that pleasure is short-lived" (*De Rerum Natura* 3.913–15) are taken out of context and are understood, incorrectly, as a synopsis of Epicurean ethics. The hedonism of Aristippus and his followers is often wrongly attributed to Epicurus.

Epicureanism According to Early Church Fathers

Early Church Fathers such as Justin Martyr, Tertullian, Clement of Alexandria, Jerome, and Augustine, some quoting Cicero extensively, sought to discredit Epicureanism. They exaggerate the primacy of the "pleasure principle," viewing it as incompatible with the forms of asceticism popular in the early church. In addition, they saw Epicurus' teachings about divine indifference to human concerns or afflictions and the mortality of the soul as inimical to Christian thought, for Epicureans deny the immortality of the soul and invoke the study of philosophy and the workings of the physical universe to allay fears about death and the afterlife that are provoked by religious superstitions.

However, neither Epicurus nor Lucretius was an atheist, and both adduced arguments for the existence of the divine. Impiety, according to Epicurus' *Letter to Menoeceus*, is to accept popular opinions about the gods, which in fact misrepresent them. Plutarch relates that Epicurus used to claim that although he destroyed providence, he left a place for piety (Plut. *adv. Colot.* 8.1111B). In Epicureanism this piety manifests itself in the contemplation of the world with an untroubled mind, which is in itself an act of worship. Since the tranquil life of the gods is the moral ideal, the imitation of their life is a form of worship. Epicurus saw in this tranquility a communion with the divine. In this way, "a blessing comes to men from the gods," as Eusebius, an early Church Father noted (Euseb. *Praep. Ev.* 15.5).

Although the school of Epicurus at Athens was still open in the third century AD, when other schools had been closed, by the early fifth century, Augustine, a Neoplatonist, could declare that "their ashes [those of the Stoic and Epicurean schools] are not so warm as that a single spark can be struck out from them against the Christian faith" (Aug. *Ep. 118*, ch. 2). Augustine singles out Epicureanism as the school of thought most in conflict with the tenets of Christianity.

Middle Ages

As Epicurus' teachings were considered the least adaptable to Christian theology, his works did not circulate in the medieval period as widely as those of other pagan writers, such as Plato and Aristotle. Nonetheless, Lucretius' poem was available in ninth-century Germany and in France during the twelfth. Quotations of Lucretius appeared in the Latin grammars of Probus and Nonius Marcellus, in Isidore of Seville's encyclopedic *Etymologies* (seventh century), and in Hrabanus Maurus' *De Universo* (*On the Universe*, ninth century). However, apart from Lucretius' poem, there is no systematic treatment of Epicurean philosophy in this period.

But during the Middle Ages, a double image of Epicurus emerges: on the one hand, Epicurus the philosopher, the proponent of an atomistic view of the universe, and, on the other, Epicurus the gatekeeper of the garden of earthly delights, playing the vulgar roles of cook, bartender, and pimp. (Cf. Martianus Capella's *Marriage of Mercury and Philology* [fifth century], John of Salisbury's *Policraticus* [1159], John Gower's *Mirour de l'omme* [1376–1379], and Chaucer's *Canterbury Tales*.).

Christian polemic against Epicurus continues. Towards the end of the medieval period, Dante locates Epicurus in the Sixth Circle of his *Inferno* for denying the immortality of the soul.

Renaissance

Poggio Bracciolini's discovery of a manuscript of Lucretius' poem in a monastery near Lake Constance in 1417 aroused great excitement, but the first extended Humanist treatment of Epicureanism was Lorenzo Valla's (1431) *De Voluptate* (*On Pleasure*), which was written without reference to Lucretius. Although Lucretius was readily available by the mid-fifteenth century, the general identification of Epicureanism with extreme hedonism was such as to discourage the orthodox from too open an interest in this philosophy. Nonetheless, Michel Montaigne's *Essays* (1580) demonstrate a more than casual familiarity with Lucretius, containing no fewer than 149 quotations. François Rabelais'*La vie de Gargantua et de Pantagruel*, five sequential novels written in the sixteenth century, are Renaissance tales based on medieval themes. Although Rabelais does not mention Lucretius or Epicurus by

name, his novels clearly bear the impression of the bawdy medieval persona of Epicurus. The story is that of a long wish fulfillment in nearly all areas of mental and physical, although not sexual, desire.

Among the scientists of the Renaissance who sought to revive the theories of the workings of the universe espoused by Epicurus and Lucretius were Giordano Bruno (1548–1600) and Galileo Galilei (1564–1642). Both of these men suffered severe censure from the Catholic Church for these and their other ideas, considered heretical.

Afterwords

In the seventeenth century, the anti-Aristotelian philosopher and scientist Pierre Gassendi undertook a dramatic revision of Epicureanism to remove it of elements at variance with Christian teaching. Although Epicureanism was practically unrecognizable as a result, Gassendi's efforts led to a dramatic upsurge in European scholars' interest in the scientific theories of Epicureanism. Influenced by Gassendi, John Locke's interest in Epicurean Canonic (the "Rules of Investigation") and in the primacy of sensation in the formation of ideas played an influential role in the development of British empiricism. Gassendi's counterpart in the English-speaking world was Dr. Walter Charleton, graduate of Magdalen Hall, now Hertford College, Oxford, and physician in ordinary to Charles I and Charles II and future fellow of the Royal Society and the Royal College of Physicians. Charleton's first publication, *The Darkness of Atheism Dispelled by the Light of Nature* (1652), advertised that it was the "new" atomism that he espoused. At about this time, a characterization of the Epicurean emerges that is closer to the modern connotation of "epicure," someone who cultivates refined and sophisticated tastes and manners at table. William Whately's *Prototypes* (1646) describes Potiphar as "such an epicure was [he] – to please his tooth and pamper his flesh with delicacies."

In nineteenth-century America, Thomas Jefferson identifies himself as an Epicurean in his 1819 *Letter to William Short* and provides therein an accurate précis of Epicurean philosophy. In England, the Epicurean promotion of happiness as the chief end of living provided support for the Utilitarian movement of Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873). Bentham was an ethical hedonist, and drawing upon Epicureanism, he held that the moral rightness or wrongness of an action was a function of the amount of pleasure or pain that it produced. He formulated an algorithm, the *hedonic calculus*, to facilitate selection of the best course of action by considering the variables of the intensity, duration, certainty, proximity, proliferation, purity, and extent of pleasure and pain associated with it. Bentham's student Mill correctly cites the primacy of intellectual over physical pleasures in Epicureanism, and Mill's "proof" of the principle of utility adduces the Epicurean reliability of sensation. According to Mill, just as visible objects can be seen and audible objects heard, so desirable objects are desired. Walter Pater's *Studies in the History of the Renaissance* (1873) and his philosophical novel *Marius the Epicurean* (1885) were important contributions to the Aesthetic and Romantic movements. In the early twentieth century, the works of the French author and philosopher Anatole France (*The Garden of Epicurus* [1895] and *The Gods Are Athirst* [1912]) demonstrate sympathy with Lucretius' Epicureanism. In 1921 France won the Nobel Prize for Literature, and in 1922 the Catholic Church placed all of France's works on its Index of Prohibited Books.

Summary

The positive influence of Epicurean philosophy throughout the ages should not be underestimated. Simultaneously, the satiric caricatures of the vulgar gourmand and the fussy epicure yet persist. Nonetheless, these are incorrect characterizations of Epicurus' original philosophy.

Cross-References

▶ Aesthetic Value, Art, and Food
▶ Food-body Relationship

▶ Gluttony
▶ Gustatory Pleasure and Food
▶ Taste, Distaste, and Food

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Equipment Sharing in Agriculture

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Synonyms

Machinery sharing; Shared use of farm assets

Introduction

For many farming operations, shared use of machinery may offer a "trifecta" for improving farm business performance – increased profitability through production efficiency and cost reduction, reduced risk, and a reduction in invested capital. Shared use of machinery, with or with joint ownership, is one strategy growers have explored to gain access to equipment that is used only infrequently and is relatively expensive, making individual ownership impractical or even infeasible. Access to new, technologically advanced farming equipment can directly affect the income statement through improved productivity and quality and replace expensive or hard-to-find labor. Higher capacity equipment than could otherwise be owned alone can reduce time windows needed to complete critical operations (e.g., planting or harvesting before the rains) significantly reducing production risk. In many cases, owning only a share of a high-priced machine reduces individual investment and the invested capital, increasing returns on assets and equity. However, the fact that shared use of machinery is relatively rare suggests that the costs involved in sharing outweigh the benefits for the vast majority of farmers.

Machinery sharing rings and other farm-level cooperative arrangements are more common in Europe and Canada. A report on the socioeconomic impacts of rural business rings in Scotland estimates that 23 % of Scottish farmers belong to a machinery ring. De Toro and Hansson report 5,000 members in 20 associations in Sweden

noting this is only about one-fifth the level of activity in Germany (2004). Harris and Fulton (2000a) report more than 1,000 member farms in 47 CUMA's (Coopérative d' Utilisation de Matériel Agricole – loosely translated as "cooperative for the use of farm implements") in Quebec. In the United States, the practice of sharing equipment and labor with other producers on a more routine basis is less common, but there is some evidence that interest in the idea is growing. For example, the original idea behind the agricultural leasing firm MachineryLink was to share machinery between farmers over a geographic distance in order to take advantage of differences in growing seasons across regions.

Potential Benefits of Equipment Sharing

Cooperative equipment and labor sharing arrangements cannot only permit small- and medium-sized producers to access cost-reducing technology and economies of scale without incurring significantly more debt or acquiring more land, they can also provide less obvious benefits. For example, management and marketing benefits for the operation and its participating producers may come as a by-product of the coordination required to make the cooperative work.

Working in a group to share machinery tends to increase the number of acres serviced by the machinery, reducing inputs and average costs, for a given amount of output. Sharing can therefore result in greater efficiency, making newer, larger, and more technologically advanced equipment economical. Capital costs decline as the number of partners increases for two reasons. First, self-financing becomes easier. Second, capital will be used more intensively and thus more efficiently. In addition, group members can in some cases improve labor productivity, making more efficient use of labor during peak fieldwork times, by coordinating tasks to reduce duplication and allowing for task specialization (Allen and Lueck 1998; Edwards 2009b). Such managerial improvements result in internal economies of scale or an ability to produce more output with the same inputs.

The coordination of farming activities related to equipment sharing may also result in external economies of scale, or size advantages enjoyed in accessing inputs, obtaining and negotiating terms of credit, storage, services, and marketing and distribution opportunities. For example, larger farms can often negotiate volume discounts on inputs. Larger farms may be able to attract specialty contracts that pay premiums for delivery of a larger amount of product. Like marketing cooperatives which obtain higher retail prices through quality assurance, smaller farmer groups may be able to successfully coordinate production practices such as planting and harvest times, in order to maximize quality specifications.

Other benefits include an ability to draw on the experience, labor, and ideas of other members, lower financial risk, shared operational risk, and environmental benefits from reduced input use. Sharing equipment is also a strategy to help younger farmers get started in farming with lower upfront investment in machinery (Edwards 2009; Samuelsson et al. 2008; Andersson et al. 2005; de Toro and Hansson 2004; Harris and Fulton 2000a, b; Gertler and Murphy 1987; Gertler 1981; Groger 1981).

Potential Costs of Equipment Sharing

Thus, the question arises: if there are so many potential advantages to sharing equipment with other growers, why is the practice so rare? Certainly, there are some apparent additional explicit costs from sharing equipment relative to individual ownership. Transportation costs of moving equipment among farms can be significant, particularly if sharing occurs over some distance. There may be costs incurred in setting up an agreement, for example, legal fees for designing contracts or establishing a formal business entity and in enforcing the agreements and settling disputes should the need arise. In addition, there are a number of more subtle potential costs involved in joint use of an asset like farm machinery. A number of pecuniary and nonpecuniary costs may be incurred by partners in a sharing arrangement as a result of the need to make collective

decisions and the division of the benefits derived from the jointly owned or shared asset(s). Potential drawbacks identified in the research include a loss of timeliness in field operations, decreased autonomy in decision-making, more complex management, potential problems with lenders and split lines of credit, and difficulties in unwinding the arrangement should the partners desire to do so.

Because joint owners of an asset do not bear all the wealth effects of their decisions regarding that asset, joint ownership inherently produces conflicts of interest (Holderness 2003). The remainder of this entry discusses five overlapping categories of potential conflicts associated with shared use and ownership of an asset: scheduling of use and timeliness concerns, moral hazard or free-riding problems, costs of collective decision-making, opportunism and hold-up problems, and risk.

Scheduling of Use and Timeliness Concerns

One of the more obvious potential conflicts that may result from shared use of farm equipment is disagreement regarding who has use of the machine when. Crop yields and quality are impacted by the dates of planting and harvesting. Since the window of optimal timing for farming operations is often short and can be highly uncertain due to weather variability, timeliness is a critical issue. The value of losses due to bad timing is difficult to measure, but can certainly result in lost revenue due to less than optimal yields and quality (de Toro and Hansson 2004; de Toro 2005; Larsén 2007). The timeliness issue may be compounded when sharing occurs over some distance because of the time taken to transport the equipment to partners' field. On the other hand, significant distances between sharing partners may alleviate this problem if planting or harvest windows do not overlap. Farmers may experience fewer weather delays in farm operations if fields are more spread out. In addition, if pooling resources allows sharing partners to afford larger, higher capacity equipment, timeliness issues may not increase and, in fact, may be reduced if coordination of use is not too cumbersome (Edwards 2009).

Scheduling of equipment use to minimize, or at least reduce, timeliness costs can be achieved in a variety of ways. Contracts that include stiff penalties for failure to deliver the equipment can incent partners to hold to negotiated dates of transfer (Wolfley et al. 2011). In situations where sharing partners are geographically proximate, timeliness costs can be alleviated by treating all members' fields as one large operation and scheduling use on an "as ready" basis or by devising a rotation system that takes advantage of differences in land types (e.g., higher ground is typically ready to be worked earlier than lower ground (Artz et al. 2010)).

Moral Hazard or Free-Riding Problems

A free rider is a person that benefits from an effort contributed by other members of a group without contributing sufficiently himself. Free-riding problems may occur in equipment sharing arrangements when one or more of the partners involved do not contribute their fair share of equity, do not contribute a proportionate share of labor (an effort moral hazard problem), or do not provide adequate care of the shared machinery (an asset moral hazard problem). These situations occur when there is asymmetric information, in particular, when any individual member's benefit is determined by the joint effort of the group, and it is difficult to verify the actions of other partners because effort is not perfectly observable. When an asset is shared, users of the asset may have incentives to overuse or misuse the asset because they do not take into account the full value of the asset if they own only part of it (Holmstrom and Milgrom 1994; Holderness 2003; Holmstrom 1982). Wolfley et al. (2011) provide the following example: "a moral hazard problem, for example, may arise when one producer agrees to perform maintenance on the machinery as stated in the contract, but only performs the maintenance shortly before delivery rather than according to the manufacturer's recommendations." The effort moral hazard problem may become more severe as the number of partners increases because each partner shifts effort from farm to off-farm activities (Allen and Lueck 1998).

Monitoring can help ensure that other members are careful with the shared equipment or are contributing an agreed-upon number of hours of work when labor is shared, but it may be costly (Allen and Lueck 1998; Larsén 2007). Allen and Lueck (1998) find that when production is seasonal and there are many stages to production with few tasks, monitoring costs are high, and partnerships are relatively rare. Larsén (2007) contends that social norms, peer pressure, and dynamics (repeated interaction) can mitigate the moral hazard costs involved in sharing arrangements. She concludes that when there is a high degree of trust among partners, the perceived moral hazard problems are negligible.

The free-riding result rests on fairly strong assumptions about the inability of partners to observe one another's efforts. In reality, one likely can tell how much effort partners are putting forth (although imperfectly), so some amount of "horizontal monitoring" or informal policing through peer pressure is possible and effective at preventing free riding. This is more likely when partners are located in close proximity to one another, as opposed to sharing over long distances. Sharing equipment with a neighbor, or neighbors, facilitates observing one another's behavior on a regular basis. Personal relationships among the collaborating farmers make free riding more costly in terms of social norms (Larsén 2007). Furthermore, repeated interaction with partners sharing arrangements that exist over time (multiple years) provides incentives for producers to act in good faith in order to maintain the relationship. In cases where monitoring is more difficult, such as sharing machinery over long distances, well-written and enforceable contracts can help solve free-rider problems.

Costs of Collective Decision-Making

Joint use or ownership of farm equipment requires some degree of joint decision-making by the partners involved. Collective decision-making can be costly, not only in terms of the time involved but also because it may result in inefficient decisions, particularly when individuals in the group place their own interests above the interests of the group as a whole (Hansmann 2000).

Sharing equipment with other farmers decreases autonomy and reduces flexibility in individual members' decisions. While some types of equipment may allow for a degree of variation in cropping systems across member farms, other equipment might not. In these situations, collaborating farmers need to decide on a common production system. Brand loyalty or loyalty to particular suppliers can cause conflict and may prevent members from realizing other potential benefits of their cooperation, such as savings from bulk input purchases. If labor is also shared, the off-farm commitments of individual members may cause disagreements about the timing and amount of contributed labor (Artz et al. 2010). Conflicts of interest and inefficiency of collective decision-making can prevent quick responses to rapid changes in conditions which can be problematic in farming due to its weather-dependent nature and high levels of uncertainty.

Collective decision-making is easier, less costly, when the interests of group members are well aligned. This emphasizes the need for finding like-minded partners with whom to share equipment. Also, devising relatively efficient methods for making decisions such as delegating information gathering and other tasks to individual members or committees and establishing voting procedures can also significantly reduce these costs.

Opportunism and Hold-Up Problems

Sharing equipment with other farmers could create situations for opportunism and hold-up problems. Opportunism, in a broad sense, refers to a willingness to act in self-interest at the expense of another party (Love 2010). In the context of sharing a piece of farm equipment, one member may act opportunistically by failing to deliver a shared combine to his partner at an agreed-upon date, for example, if weather delays result in an inability to complete harvest in a timely fashion. In somewhat larger groups, a majority of group members could act to exercise their right of control in the decision-making process in such a way that members in the minority are harmed. For example, a majority of younger members could vote for the group to undertake significant

investments in new equipment. Members looking to retire or leave the sharing arrangement in the near future might not realize the returns from the long-term investment.

Hold-up problems, or situations in which one party to a contract holds some economical bargaining power and uses it to exact concessions from another party, can also arise in this context (Cai 2003). This may be especially likely when members' preferences, or resources, are not well matched. Hold-up problems can occur even without opportunism, in cases where unusual or unanticipated events render the current agreement obsolete (Love 2010). For example, even among farms of roughly equal size, differences in land productivity, or a localized weather event, could create a situation in which partners' financial resources diverge. As a result, they may disagree about when to replace or sell a shared machine, with the dissenting farmer effectively holding up his partner(s).

Additional Risk

Entering into a joint ownership arrangement can effectively tie the outcome of a critical farm operation (e.g., harvest) to another person's decision-making and behavior. In this way, partners in equipment sharing agreements can expose themselves to additional risk. A partner may not uphold his end of the bargain to deliver a shared machine on time or may incur a loss that has impacts on other partners. For example, individual default could lead to a collective liquidation of the asset. Well-written and enforceable contracts or a high degree of trust among partners can mitigate some of this uncertainty.

Summary

Shared use of farming equipment has the potential to improve farm business performance by enhancing profitability, lowering risk, and reducing invested capital. Yet, the costs associated with the variety of possible conflicts inherent in the joint use of an asset render the practice relatively rare. Nevertheless, interest in equipment sharing may grow as machinery costs rise, and the level of technical knowledge and skill required for production increases. It is unlikely that widespread adoption of these models for sharing machinery will occur given their complicated nature unless solutions for resolving conflicts are devised and disseminated. Future work should therefore be aimed at developing practical strategies for reducing or eliminating these potential conflicts involved in shared use of an asset.

Cross-References

▶ Farms: Small Versus Large

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Escoffier

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Synonyms

César Ritz; Fine dining; French chefs; Haute cuisine; Menu design; Restaurant service

Introduction

The prima facie ethical problems surrounding the cultural practice of luxury dining are obvious enough. A market for great luxury implies great wealth disparity and is essentially classist. The fact of luxury dining entails that some significant measure of the wealth of the better off is used for their own optional enjoyments instead of for the benefit of the needy. Luxury dining typically involves the extraordinary use of animals, for arguably frivolous human pleasures. It can also involve uses of land and energy resources that are inefficient, unjust, and unsustainable. Luxury dining arguably involves a very inefficient use of human capital as well, consuming countless labor hours that might be better spent helping to solve real problems, in order to tantalize a lucky few. In a world in which human malnutrition and poverty are widespread, enormous wealth is concentrated among the few and powerful, inhumane treatment of animals for food is routine, and unsustainable and inefficient agricultural and harvesting practices abound, luxury dining as a cultural practice must, from an ethical point of view, stand suspect at a minimum and perhaps be convicted. If a practice is suspect, then so must be its practitioners and perhaps chief among those its founders. One such founder of the current practice of luxury dining is the subject of this essay, the chef and father of modern French *haute cuisine* Auguste Escoffier. So it must be conceded at the outset that, from a variety of perspectives, Escoffier's contribution to ethics may well be negative.

But the ethical significance of a practice is more than just its overall tally on the ledger sheets of justice and the good. Ethics broadly conceived concerns the conditions for flourishing – excellent – human life. Cultural practices are in substantial part constitutive of situated human lives and thus represent opportunities for pursuing and attaining excellence of the self. Individual and collective pursuit of excellence within a cultural practice also advances the practice itself and may significantly contribute to the advancement of the social life in which that practice has its place. Striving for excellence within, and the advancement of, cultural practices is moreover a paradigmatic exercise of practical rationality, and so the development of new cultural practices provides opportunities for human beings to realize most fully their distinctive and highest virtues. The development of cultural practices in the

context of new kinds of lives, careers, artistic expressions, and social arrangements, each with their own distinctive normative dimensions and opportunities for excellence, may therefore be a significant contribution to ethics in this broad sense. In this light, Escoffier's contributions to ethics are substantial. Moreover, not only did Escoffier make substantial contributions to the development of a cultural practice, he did so in a way that was itself virtuous, with significant degrees of generosity, charity, and respect and concern for others, thus setting standards of excellence not only within his profession but for the conduct of that profession itself. These contributions, as well as some of the ethical concerns they bring with them, will be the focus of this essay, which begins with a brief sketch of Escoffier's long and productive life.

Life

Auguste Escoffier (the "Georges" which often precedes the "Auguste" was a nickname) was born in 1846 at Villeneuve-Loubet, in Provence. At the age of 13, he was apprenticed to his uncle's popular restaurant in the nearby resort city of Nice, there gaining his first experience of the hot, unsanitary, rough, and slavish life of the restaurant laborer. He was also exposed to wealth and its demands for excellence. Having completed his apprenticeship, Escoffier left Nice in 1865 for a position at the esteemed restaurant Le Petit Moulin Rouge, in Paris. He began service as a lowly kitchen assistant under Chef Ulysse Rahaut, who, though a tyrant typical of his metier at the time, recognized ability and ambition; he steadily promoted Escoffier through the ranks.

In 1870, the Franco-Prussian war broke out, and the Ministry of War, in need of cooks to serve the headquarters of the army of the Rhine, conscripted Escoffier, then on active reserve, from the Le Petit Moulin Rouge. During the campaign, Escoffier faced constant pressure to produce meals for a moving encampment with few provisions. He learned how to make much from want, wasting nothing. France lost, the army of the Rhine was taken, and Escoffier was encamped with hundreds of other prisoners of war near Mainz. Food was scarce and conditions deplorable. But Escoffier soon managed to get himself appointed as chef to some aristocratic French officers whom the Prussians had interned in luxurious villas in Wiesbaden.

In 1873, Escoffier returned to Paris and Le Petit Moulin Rouge, taking over as chef de cuisine from the departing Rahaut. He introduced radical kitchen reform, banning the consumption of alcohol and the use of loud and vulgar language. Le Petit Moulin Rouge thrived and was a draw for royalty and celebrities. Around this time, he began his friendship with the actress Sarah Bernhardt, which would last the rest of her life. He also began experimenting with the preservation of foods, especially the canning of tomatoes. Tomatoes were a principal ingredient in many of his dishes, along with garlic – he was a true Provencal – this latter to the delight of his clients when they were unaware it perfumed their fare and often to their horror when they found out.

In 1884, Escoffier, now married to the poet Delphine Daffis and running the kitchens at the famed Maison Maire in Paris, received the summons that would make him a star. The Grand Hotel in Monte Carlo had lost the services of its valued chef. The hotel's director, and ambitious Austrian of humble origins named César Ritz, reasoned that he might as well seek out his departed chef's *maître*, who happened to have been Escoffier. Ritz made Escoffier a generous offer, which the chef accepted. Neither "Ritz" nor "Escoffier" was a household name at the time; both would soon become so.

It was at the Grand Hotel that Escoffier became persuaded that the complicated display system of the Grand Cuisine of the time, in which numerous elaborate and varied dishes were served to tables all at once, should be abandoned and replaced by a simpler kind of cooking, with meals tailored to the desires of individual diners. His conversion was total and zealous. He began revolutionizing kitchen organization, recipe design, menu composition, and even table setting to suit the new style. His motto was "*faites simple!*" He also ramped up his writing career, which had more or less begun in 1883, when he cofounded the *journal L'Art culinaire*, to which he contributed for many years.

One client of the Grand Hotel was the impresario Richard D'Oyly Carte, who had been made rich and famous by his productions of Gilbert and Sullivan operettas at London's Savoy Theater (James 2002, p. 113ff). D'Oyly Carte lamented the state of London hotels and dining and hatched a plan to remedy the situation: he would build a new hotel in London of the most opulent style imaginable, to go along with the Savoy Theater, and he would get Ritz to run it. Ritz's price was as follows: an astronomical salary, 6-months-a-year leave to pursue his own interests, and Escoffier to run the Savoy kitchens. Ritz approached Escoffier, who, daunted by the idea of dealing his French *cartes* to English tastes, reluctantly agreed to set up the Savoy kitchen and train the staff. Escoffier expected to be at the Savoy for some several months. He stayed for about a decade.

The labor of putting together a proper French kitchen *á la* Escoffier at the Savoy was enormous, especially since the dismissed staff had trashed the place before departing (Escoffier 1985). As Escoffier expected, winning the English over to French cuisine was a considerable challenge. His efforts were ingenious. For example, he tricked the English into eating frog's legs by coyly naming them "cuisses de nymphes" (nymph thighs). He also knew he could not trust the English, or even the English headwaiters, to order a dinner intelligently from an extensive *á la carte* menu of the sort he had devised. So, in an ironic turn back to the older style, he invented the *prix fixe* menu, a set meal devised by the chef at a given price. All the efforts paid off. The Savoy was a huge success, the place to be and be seen. Escoffier and Ritz were the talk of London society.

Ritz and Escoffier left the Savoy in 1898, under mysterious circumstances. But they were now in a position to do as they pleased. Ritz and his company set up the Ritz Hotel at the Place Vendome in Paris and then the Carleton Hotel in London, with Escoffier designing the kitchens and menus and with the Carleton in direct and successful competition with the Savoy. Ill health forced Ritz into retirement in 1906. Escoffier continued his writing, publishing in 1903 his mammoth *Le Guide Culinaire* in 1903, a bible of French classical cooking still consulted by chefs around the world. He also sought commercial success with preserved tomatoes and a variety of bottled sauces and jarred pickles. In this as in so much else, he was a pioneer of what is now a very common practice among celebrity chefs.

Escoffier helped establish the *Ligue des Gourmands*, an international culinary society that put on, to much press attention, elaborate multicity dinners with identical menus of dishes from *Le Guide Culinaire*. He also helped found and contributed to the culinary journals *Le Carnet d'Epicure* before the First World War and *Revue Culinaire* after (James 2002, p. 228ff). Escoffier played the role of celebrity chef with vigor and panache, presiding over culinary exhibitions, lecturing, and arranging important dinners for aristocracy and royalty, including, on at least three occasions before the First World War, Kaiser Wilhelm II, who, so impressed by one meal Escoffier had put on, exclaimed "I am the Emperor of Germany, but you are the Emperor of Chefs." This oft published remark morphed into the title with which Escoffier's name has ever since been associated: "The King of Chefs, and Chef of Kings."

Escoffier retired from the Carleton in 1920, but remained engaged in sundry restaurant and commercial projects, and continued lecturing and writing. In 1928 he was made *Officier de la Legion d'Honneur*, the first chef to be so honored. 1934 saw the publication of his second major work, *Ma Cuisine*, with some 2,500 recipes. On February 6, 1935, his wife of 56 years, Delphine, passed away at their Monte Carlo home. Escoffier followed her 6 days later.

There is a sad, but necessary addendum. Escoffier's and Ritz's departure from the Savoy has long been a matter of mystery. It was hasty, and no obvious reasons were made known. Beginning in 1984 (Barr and Levy 1984), the English journalist Paul Levy has alleged that Ritz and Escoffier were dismissed on the grounds that they had been wooing investors for Ritz's new Carleton Hotel, which was to compete with the Savoy, at the Savoy's own expense. Levy alleges, and there is corroboration for these allegations, that Escoffier signed a confession that he

took illicit commissions – kickbacks – from the hotel's suppliers. To what extent this confession is merely an admission to what would have been unremarkable business as usual at the time, and obtained by the Savoy only to defend against the possibility of a suit for wrongful dismissal, is unclear.

Elevation of the Profession

Escoffier insisted on a level of dignity and decent working conditions for kitchen staff that was unprecedented. The caricature of the angry, shouting chef who rules by terror and berates his staff still has some truth to it, but it was very much the norm of mid- to late-nineteenth-century France. Escoffier insisted on a quiet kitchen, in which the chef could speak rather than yell his orders and still be heard. Indeed, given the other changes in kitchen practices he initiated, this was necessary. Escoffier demanded the highest standards of sanitation in his kitchens and of his workers. Food preparation areas were to be spotless and tidy, as were the cooks who worked in them and their standardized uniforms they wore. Working neatly and cleanly became acknowledged virtues. He believed that cooking is a dignified craft, worthy of an artist, and of great social importance. He treated his colleagues in a manner consistent with this and made considerable efforts to ensure that professional cooks were taken cared of in their retirements and old age – even the tyrant Rahaut (James 2002, p. 218). Rather than protect secrets of his own success, as a tradesman might do, Escoffier self-consciously spread them, so as to improve the lot of diners everywhere and the dignity and conditions of those who cooked for and served them. The success of Escoffier's restaurants, and the comprehensive and progressive training he provided to his employees, meant that the practices he instituted in his kitchens spread into industry standards. As Hegel pointed out, it is only within the constraints imposed by norms or standards that freedom and creativity become meaningful. By generating and propagating new standards for how a professional kitchen ought to be run, Escoffier made it possible creatively to excel at meeting those standards.

Escoffier's collaboration with Ritz had lasting social impact. The union of luxury and modernity of both bed and board, the attention to elegance and detail, and the uniformity of that standard throughout the Ritz chain of hotels had never been equaled. Their Savoy was the first public establishment in England at which it became fashionable for the aristocracy to dine and to see and be seen. Previously, British men of means or title dined primarily at their clubs, and it was thought shameful for a Victorian woman of character to dine in public in the company of men. Ritz and Escoffier, bringing continental customs across the channel, changed that forever. Men now wanted to dine publically at the Savoy and its imitators, and, if modestly attired, women could join them. English women could thus be seen, could listen, and could even be heard in public gatherings in the same site as men of rank, power, and privilege (Ashburner 2004). American practice, as was so often the case, followed the English (Ritz and Escoffier collaborated on projects in New York and Pittsburgh). Possibly, this contribution to what might be called the publication of respectable women had some significance for the suffrage movement in England and the United States. In France, women had long dined publically in restaurants with men, so Escoffier and Ritz's ventures instigated no parallel change of practice there; French women did not get the vote until 1944.

Brigade System

Escoffier introduced and refined the brigade system of kitchen organization, designed on the plan of the military brigade – a command consisting of a number of battalions variously deployed. Prior to this introduction, restaurant cooks tended to be responsible, either individually or in small groups, for the production of dishes from start to finish (the exception being the saucier, responsible for producing the four mother sauces on which all others were based). This prior system was highly chaotic, individual cooks each having to do the several steps their various dishes required and often needing to share, or compete for, the same heat source or equipment to do so. Under Escoffier's plan, the kitchen was organized

around stations, each with its own dedicated staff, with the various steps of recipes distributed to the stations suited to their performance. The various components of a dish are prepared in parallel at the several stations and then assembled on the individual diner's plate (or the serving platter, if the dish is finished tableside). In a large kitchen, there might be seven or more stations, e.g., *garde-manger* (larder), pastry, roasting, fish, *entremetier* (vegetables, soups and salads, etc.), and sauces, each with its own chef (*chef de partie*) and several cooks ("commis") and perhaps apprentices.

Nowadays, many professional chefs begin their careers in culinary academies. But it is well known that the best training a professional chef can receive is the sort made possible by Escoffier's innovation: rotation through each of the stations of a brigade, starting at the bottom. That way, you must do, and hence learn, everything. And given the hegemony of the brigade system, the skills learned are transferable to any comparable establishment. Even today, the most talented and ambitious graduates of cooking academies hope for a chance to make such a rotation, at the best and most professional restaurant kitchen that will have them. They follow a well-defined career path carved out by Escoffier. Prior to Escoffier, the cook had really only one route to something like real professional respectability: private service in the hire of nobleman. Escoffier is the first of the great French chefs to earn fame cooking for the public, as a restaurateur, as have almost all others after him.

Progress is rarely if ever without cost, and the development of institutional structures and practices yield new forms of oppression as well as flourishing. Thus it should be pointed out in fairness that the brigade system makes possible a kind of alienation through specialization. If a cook is not in fact rotated through the various stations, but is permanently posted to a particular task, they have not a career in which they learn, develop, and progress to the goal of becoming a chef, but the equivalent of a dead-end assembly line job. And in fact, most kitchen brigades, at least in the United States, are staffed not by aspiring chefs making progress through the ranks, but by low-wage, often immigrant, laborers, with little chance of advancement and a kind of permanently narrow skill set that would ill suit them for employ even as full-service short-order cooks. It is one thing to learn the craft of professional cooking through serial exposure to all of its facets. It is quite another to spend 8 hours a day, 5 days a week, 50 weeks a year cleaning lettuces, tossing salads, and slicing fruit. Where labor has no guarantee of a voice in the conditions of its employ, the brigade system can operate to limit as much as to enhance opportunities for flourishing.

Revolution in Menu and Service

The brigade system led to a number of substantial developments in dining style and practice. Before its advent and popularization, the so-called French service was the restaurant norm: all dishes, hot and cold, soups and roasts, and savories and sweets, would be brought to the table at once (or in a few stages, each featuring a full range of kinds of dish), in large portions of more or less ornate composition. Diners then would select the dishes that most pleased their eye. For large parties this might mean that a diner got to eat what was close to him or her. The finer the restaurant, the more numerous and elaborate the dishes served. The area in which a chef could best show off his talent was in presentation, and the spectacularly elaborate presentation was the glory of French culinary art. Often enough the dishes were pieces of architecture – indeed, famous buildings modeled in hard pastry, marzipan, lard, what have you – intended for show alone. Such *pièces montées* were the centerpieces of the Grand Cuisine of Carême. In contrast, in service *à la russe* – in the Russian style – diners are presented with dishes in sequence, according to the proper order of consuming them. This has obvious advantages: dishes are presented and eaten at their proper temperatures and in suitable order, and everyone at the table gets a share of each dish. But it has disadvantages as well, related to both timing and variety. Because dishes are prepared and plated to order, the diner must

wait, and if a dish is very elaborate and time consuming to prepare, the wait will be excessive. So dishes must be comparatively simple. Variety also suffers because so much of the cooking takes place during the service itself: the same number of cooks can produce a greater variety of dishes in say, 8 hours, than they can in two. While the Russian style service had been introduced to France in the 1830s (Tannahill 1988, p. 302), such limitation kept it from becoming widespread.

The brigade system compensates for these limitations by breaking down dishes into their component parts and thereby increasing efficiency. The various components of the dishes on offer are prepared in advance for optimal readiness and ease of finishing execution at the time an order is placed. Accordingly, each station in the brigade has its own *mise en place* ("put in place"). This preparedness, tailored to the exigencies of the offerings, makes the production of the dish once ordered vastly less time consuming. But it also permits each station to perform many more tasks of similar kinds at once, allowing for far greater variety in the dishes that can be offered and prepared on demand. Escoffier's brigade system thus allowed him both to introduce the *à la carte* menu, from which individual diners select what they want to eat from among many choices, and to facilitate the rise to dominance of the Russian style of service and its variants. These are industry standards diners take for granted today.

The logic of the brigade system also has consequences for how a recipe can be written, leading to a new systematization and codification of classical French cooking. Escoffier's recipes can be maddeningly terse. For example, the recipe for *Tournedos Rachel* – an elaborate dish of filet steaks on toast with artichokes, marrow, and red wine brown sauce – is a mere 41 words long. (Escoffier 1969, pp. 382–383). Since the dish is composed of its components, its recipe need only mention the immediate components and their combination. But those components might themselves be highly complex. *Le Guide Culinaire* presents the composition of elements into components and components into dishes in a near axiomatic fashion. This work gives the canonical versions of the repertoire of classical French dishes; it is intended for professional chefs, who still consult *Le Guide Culinaire* today.

The typical French home cook knows better than to try to attempt the classical dishes of the professional French kitchen. Part of Child, Beck, and Bertholde's accomplishment in *Mastering the Art of French Cooking* (Child et al. 1961) was to convince American home cooks that they could indeed produce many of those same dishes in their own kitchens. They did this by writing recipes for them that reintroduced the many steps Escoffier's recipes left out and explaining clearly and in detail the techniques required to perform them. But that accomplishment would arguably have been impossible had Escoffier not systematized and codified the classical cuisine they then made relatively accessible. In this sense, Escoffier revolutionized not only professional but home cooking and dining as well, encouraging an increasing number of passionate amateurs to adopt fine restaurant dining standards as their aim.

The idea that food prepared and consumed at home should resemble food served from professional kitchens is potentially problematic, given the typical elaborateness and richness of much luxury and other restaurant cooking, as well as the tendency of restaurants to justify profitable pricing by means of excessive portions. Those who can afford the money and time it takes to replicate restaurant food at home may do so at considerable cost to their health; those who cannot may choose to forgo preparing their own food altogether, relying instead on unhealthy processed and fast foods. If a regular diet of simple, whole, unprocessed, fresh foods is healthiest, the restaurant meal is dangerous paradigm for what one should strive for at home.

Efficiencies and Consideration for the Less Fortunate

Escoffier was attentive to the fact that fine restaurant dining is a social practice requiring plenty while many have little. He knew, and

appreciated, that his was an exclusive art possible only where there are deep pockets and a leisured class. He also believed that it, and he, ought in some way to serve the common people.

Excellence in cooking, as Escoffier insisted, requires fine, fresh ingredients, and this in turn requires that, to a great extent, the kitchen must start from scratch every day. For this reason, supplies must be readily and regularly available and purchasing precise and controlled. Waste is economically and ethically unacceptable, but in a restaurant dedicated to excellence and a new start every day, it is inevitable. Escoffier did what he could to minimize it and, in the course, to make sure that those in need benefited from the excess luxury of those with plenty. When the quails' breasts alone figured on the banquet menu, the legs were saved for the nuns to collect for the needy. He extended the Little Sisters of the Poor a standing invitation to collect surplus every morning for distribution to the hungry, first at the Savoy and then at the Carleton (Escoffier 1997, p. 99).

During the war, Escoffier had witnessed and deplored the way that procurement contracts were awarded to lowest bidders, who were then so ill funded and otherwise unscrupulous that they failed to perform to the contracts' standards, to the detriment of the troops. He was convinced that this practice should be stopped, and the quest to induce the ministry to put an end to it became something of a crusade for Escoffier later in his career (James 2002, p. 192). He also witnessed the starvation conditions at the camps for rank and file prisoners in close proximity to the plentiful conditions enjoyed by their captured officers. In general, he had the feeling that the war had been badly mismanaged by the command, causing great suffering and defeat for the troops. Perhaps influenced by these experiences, Escoffier regarded the problem of poverty as one of mismanagement and distribution, rather than scarcity. He championed modern methods of food preservation that reduce spoilage, pioneering the development of canning, mass market pickling, the bouillon cube, and other forms of conservation. In an era in which highly processed, industrially produced, prepackaged foods have come to dominate the diets of a great many people, to the detriment of their health and that of the environment, and in a way that thoroughly alienates them from both the ultimate sources of their nutrition and the craft by which raw ingredients become food, this early participation in canning and processed foods must necessarily have a sinister cast. But it is unlikely that this constellation of problems could have been foreseen by Escoffier, who simply wanted to make palatable foods available in lean times and make a bit of money.

Escoffier's concern for the unfortunate extended to theory as well. His 1910 *Projet d'assistance mutuelle pour l'extinction du paupérisme* proposed what amounts to a tax-funded social insurance program for the old, infirm, and needy. The plan included a national lottery to fund the construction and operation of rest homes for the elderly and the suggestion that retired resident cooks be recruited to serve in the kitchens. It also included a call for the establishment of a confederated Europe and a cry against the funding of a standing peacetime military, the need for which arose precisely because of the independence of the various European states. These ideas anticipate the modern welfare state and the Eurozone.

Summary

Because of Escoffier's influence, restaurant cooking has become a respected profession, whose successful practitioners enjoy considerable esteem. He revolutionized the way luxury restaurant kitchens were organized and, in turn, the way restaurant dining is conceived. In collaboration with César Ritz, Escoffier brought a new kind of fashion to the world of gastronomy, thereby engendering considerable alteration of the social status it enjoyed and of the society that enjoyed it. Escoffier's writings have had a lasting impact, and in particular, his *Le Guide Culinaire* still serves as the definitive treatment of French restaurant cooking technique around which much professional modern Western cookery is built. He pioneered various methods of food preservation, with lasting impact. Finally,

Escoffier was himself a charitable man publically concerned with the welfare of those less fortunate than his typical client.

Cross-References

- ▶ Aesthetic Value, Art, and Food
- ▶ European Cuisine: Ethical Considerations
- ▶ Food and Class

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Ethical Activism with Consideration of the Routine of Food Culture

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Synonyms

Ethical application of Korean food culture; In activism in food life; Ritualization of healthy food life

Introduction: Ethical Problems in the Present Food System

According to the 2009 World Hunger Map by the World Food Programme, present world food system has very serious problems as follows. More people die of hunger every year than from AIDS, malaria, and tuberculosis combined, and almost one billion people regularly suffer from hunger (www.wfp.org). Malnutrition prevents children from reaching their full developmental and cognitive potential, and one child dies every six seconds from hunger-related causes. On the contrary, according to the World Map of BMI (body mass index) 2011, the overweight (BMI more than 25 %) area covers most countries of the world except Asia and Africa, and especially Kuwait and Egypt are classified as obese countries, their citizens with a mean BMI of 30 %. These numerical values show that the imbalances of food supply due to access and availability and inequality of wealth around the globe are very serious.

Systematic approaches in solving the problems have been tried around the world. For example, industrial forms of farming informed by science improved the mass production of food and mass breeding methods, generally in the Northern Hemisphere, have been supplying abundant meat to consumers. However, even though advanced farming technology, industrialized agriculture, and stockbreeding have contributed to relieving global starvation, they have raised other problems, e.g., the unequal distribution of wealth and contamination or destruction of the environment.

In this entry, ethical activism as an essential and fundamental solution will be discussed. It is an essential problem in need of a fundamental solution and involves changing our eating habits and making food accessibility more relevant to everyone. From the viewpoint of ethics based on the biology of cognition, the causes of the problems should be reduced to every one's doing, and thus, its correction of wrong ways of doing or action is the most important (Maturana and Perksen 2004). It is not easy to point who are the responsible, but in the present world food

system from product to consumption, the most responsible could be the people who live in affluence in any country. People in affluent have a duty to benefit the worst off.

Definitions of Ethical Activism, Food System, and Food Culture

The concept of ethical activism, on which there have few discussions, seems to involve the idea that in order to resolve collective action problems of a political nature, it is rather important to act in a way that produces effective results instead of simply stressing an awareness of the seriousness of the problem and trying to choose valid norms. According to this thinking, even though we have had many discussions about how the ethical norms should be established, the norms will not be justified without results from action and practice. That is, ethical activism emphasizes the fact that practice in company with actual activity verifies and validates an ethical theory. But for this, a radical question from the current cognitive science should be drawn: Is the effect of the activities limited to validation of an ethical theory?

Note, however, that activism in this entry has another basic premise about what constitutes "activities." The idea of the embodied mind which is free from the Cartesian dualism (Varela et al. 1993) takes the viewpoint that the activities inside our body are the determining factors of all the processes, from feeling and thinking to decision and action (Johnson 2007). According to this, what should be stressed is how to calibrate people's habit or routine in which numberless activities are from moment to moment linked to each other. A personal habit or a custom of a society is a patterned linkage of the activities. It means that in our approach to the ethical problems related to the food system, how to calibrate our feeling, desire, thinking, decision, action, etc., should be the main issues of our discussions, since it is believed that a new epistemology of food ethics and a new motive of effective practice can be set according to this calibration.

From that viewpoint, it is necessary to give attention to the concept "food system." The meaning of a system is so comprehensive that it cannot be explained easily. But in brief, a system not only involves all the elements inside it but gives a direction to them. In a system, every element sets in its good position and harmoniously keeps a mutual cooperation and dependence with all others, and thus, a system as a whole can dynamically take its course in which all its elements are ruled and guided, for example, the system theory developed by L.v. Bertalanffy in which a society or an ecosystem is regarded as a lived system.

According to this understanding, it is possible to call the food system a food culture, because the biggest system in human society is a culture. The food system is one of the representative cultures that exist everywhere and in every time. A present food culture of a nation is actually an outcome of a long tradition of food system, which involves various types of interchanges between human beings and foods from the nature. In other words, the meaning of food system includes not only a whole interaction between human beings and the nature such as agricultural production, distribution, consumption, and waste but also all the things or affairs that can exist or occur vis-à-vis foods. Therefore, it is natural to observe how our activities respond to the current food culture and also to discuss how we can intervene in the current system and direct it toward a more ethically healthy situation, that is, correction of inequity or recovery of surroundings in the world.

Ethical Problems and the Present Food Cultures

A food culture is a sociohistorical product of a long time-tested food system, and thus, a food culture of a nation or a place could be an optimized one for that nation. Generally speaking, the food culture itself, e.g., food system in medieval times or in the slavery in the ancient era, was not a great problem against the environment before modern times or pre-mass consumption time, even though food shortages have still threatened people.

However, at present time, every food culture diminishes its own features in the course of

globalization and many Asian countries have experienced substitution of traditional food cultures for the Westernized ones or the Americanized ones. Rapid urbanization in most regions expedited mass consumption of foods, and the mass consumption also induced mass production through new technologies. Such mass production and mass consumption brought about serious modification not merely in food culture but also the relationship between human beings and the nature. The serious modifications are interlocked with various kinds of problems that are extended from individuals' health problems to environmental contamination or destruction. It must be true that human beings, as eaters or as the subjects of food culture, have to take responsibility for the problems, because intemperate appetite and excessive eating and drinking have brought the serious causes to the problems (Singer 1995).

In this entry, it will be clarified what the detailed essences of the food culture are and a direction for further studies on food ethics will be proposed. Along with this, a discussion about how to develop a model for ethical activism for a better food culture, which proposes to reduce human beings' exploitation against the nature and to recover equality of food consumption in the global society, by applying that model from tradition of food culture will be given.

Three Orders of Food Culture and Embodiment of an Individual/a Society

Food culture means not only the foods (edible things) themselves but human activities related to them. This is because the concept of culture basically involves human activities including looking for foods and cooking them. Those human activities have a basic and general aim, that is, for survival. But that aim and effects of the activities are not limited to survival. They interface with nearly every aspect of human lives and their influences are so wide and deep because nothing can be done without eating. Therefore, food culture is the very beginning of all human affairs and is a prerequisite or essential part in an enormously ecological circulation of all human affairs. A sound ecology of our society is the basis of our survival and sustainability.

In order to easily advance our inference, it is necessary, by taking an anthropological research view, to classify the details of food culture into three orders as follows. The first is the order of food to food communications. We can observe this as a kind of harmony among various foods which have been developed in a culture or a tradition, and thus, most of a traditional menu would be considered a good model of the order. The second is the order of foods to human beings/human beings to foods communication. In this order, we can observe the influence of food on health, temperature, mind, soul, etc. Note that this is related to our habit of adversely picking out food ingredients, cooking recipe, how to eat, etc. Finally, it is the order of human being to human being's communication with foods as the center. For example, this is related to with whom to eat, how to make social relationships by invitation to a dinner, what/how to talk in mealtime, and so on. Most human affairs do not seem to be free from these orders; rather, these orders have been providing causes to most human affairs.

These three orders are related to each other in a complicated way. Human beings' routine is in fact the limitless circulation of these orders. Therefore, it is natural to specify the routine rules of human living. In this context, a question should be drawn for developing the idea of ethical activism mentioned above. Is this circulation merely daily phenomenon? It may be more seriously influential on human beings. It is true to express the influence on human beings is organization of a unique pattern on their desire, thinking, decision, and behavior. In other words, it is natural to be called as a kind of accumulation effect or a kind of adaptation effect. According to the accumulation or adaptation, a figuration of a unique pattern on the mind and body, more exactly speaking embodied mind, is shaped. The process of the figuration is of course a process of human negotiations with social and natural environment, and thus, the result of the figuration of every person or every society is necessarily different from other's. The figuration is performed

not merely on the individual but also on a community or a nation (Imamura and Imamura 2007).

Whatever food culture may be, it is actually the result of the figuration in a long-term process. All the human affairs cannot be free from the figuration. Carefully observing the contents and direction of the figuration is central. What the contents and direction of figuration on an individual or on a society are will exert a decisive role in future human civilizations too.

In addition, it is necessary to consider how the three orders in one complexity of food culture embodies the individual as a personal and social being, the society as a cultural complexity, and the world as the sustainable assembly. Firstly, it is natural to focus on the effect on the result of action and reaction between food culture and an individual as a personal being. In this case, what draws attention is the way the food culture has embodied the individuals. Personal eating habit or personal division between preferred foods and avoided foods is the results of the embodiment. Secondly, it is also reasonable to focus on the effect of the result of the action and reaction between food culture and the society as a cultural complexity. In this case, that is how the food culture has embodied a society. Furthermore, there must be numberless interactions between human beings and the world. According to these interactions, the world is also changing itself as human beings are changing in various ways to make use of the world and simultaneously to adapt to the world.

These embodiments can be observed in any traditional culture in the world. Here, in order to exemplify the three orders, let me analyze them with examples from Korean typical food culture.

Korean Food Culture as the Figuration by Buddhism and Confucianism

Even though current Korean food culture is said to be very much transformed from a traditional one to Americanized one, most families still keep Korean traditional food customs in their daily lives. Most Korean food restaurants also do not exclude the traditional food culture. Generally speaking, Korean food culture is a phenotype of a long-lasting context which has been built by various civilizations such as shamanism, Buddhism, Confucianism, and Daoism. Korean food culture can be explained more analytically with the ideas of three orders expressed above. That is, the Korean food culture is the enacted one with entanglement of the three orders through a long historical context. Here, what should be stressed by the concept of context is the history of figuration. This is actually a long-term process of reproduction of Korean food culture. Whatever food culture it may be, it is repeated through routine and the routine is strongly supported by rituals and ritual-like installation that pattern the behaviors of personal and social beings into a very typical system of customs. In Korean history, Confucianism and Buddhism seem to be the main influences/factors of the figuration and the reproductions. Korean history is said to have a long context of about 4,500 years, and Confucianism and Buddhism have their history of more than 2,000 years in the Korean peninsula.

If so, how have Confucianism and Buddhism exerted their influence on the present Korean food culture? Both of them have developed their own metaphysics combined with the polished system of rituals, ceremonies, and etiquettes for proper practices. That is why they have been able to dominate the food lives or food culture as well as daily lives of Korean people for so long time. In the lives of Korean people, there are innumerable things to consider, which can be traced to the two traditions. Here, according to the three orders, a few points which are typical to Korean food culture will be highlighted.

The First Order in Korean Food Culture

What should be observed from the view of the first order as food to food communication is the traditionally organized menu and harmonious relationship among the foods in the menu. This order in every place or every nation is the important basis of the food culture, and the order itself is a mirror of the interactions between human

beings and nature. Korean food culture has constructed its own menu as the others have done in their own orders.

Some representative examples of the first order of Korean food culture are as follows: The first feature of the order is the clear division of main foods from side dishes. The second is fermented foods such as gimchi, soybean paste, and so on. These are established as daily essential foods. The table generally shows vegetable-oriented diet rather than meat diet. Frugality of the table is respected and harmony among foods is also emphasized. The frugality means the restriction of the number of side dishes. The reason why the frugality is emphasized lies firstly in underlying wariness against the deleteriousness or sickness arising from loss of balance between foods and human body.

Maybe one of the Korean typical menus which shows such food to food order is "bibimbap" which is easily chosen on aircrafts affiliated to Korean companies. The "bibimbap" which consists of rice with wild herbs, little piece of cooked meat, and traditional red pepper paste and should be mixed together for eating shows a good example of respecting the frugality and harmony among foods.

The harmony means beneficial combinations for human health and lives and such combinations theoretically supported by Confucian metaphysics. According to Confucianism, every material has its own quality and properties, and the quality and properties can exert influence on the whole or parts of a human body. Confucianism, as a philosophical background, supports the food system with a kind of bio-cosmology; one ultimate principle with yin and yang and five primary substances as the substantial foundation of the ultimate cosmos give the food to food order harmony. Even other food culture of other region or society has its own philosophical background, but it is right to tell it is supported by its traditional religion or philosophy, for example, Indian food menu and Hinduism or Thai menu and Buddhism.

For example, green color of a food material exerts an influence of strengthening the function of the liver and at the same time regulates or assists to make a human being demonstrate the temperament of benevolence. On the other hand, red color does the similar influence to the heart or blood and relates to the temperament of courteousness. There are more and more cases. But what is important is that the combination or the harmony among the foods directs people's bodily health and promotes a well-poised mind. In this sense, these combination and harmony among foods naturally have linkages to the second order.

The Second Order of Korean Food Culture

In relation to the second order, the teachings of Confucianism and Buddhism are the primary considerations. The teachings raise a fundamental question. What's the purpose of eating? Of course, survival and health are the primary purposes of eating, but both teachings suggest a higher purpose, which must be connected to the ultimate purpose of human life. Confucianism teaches about the duty to fulfill one's lifework and Buddhism provides a path *nirvana* (nirvana, an ancient Sanskrit term used in *Indian religions* to describe the profound peace of mind that is acquired with *moksha* (liberation)). Eating is a routine activity through which the lifework of Confucianism or *nirvana* of Buddhism can be achieved. Thus, so many taboo words or religious precepts have been given. This means that if food culture is not sound, then one cannot achieve the ultimate goal.

In this second order, excessive desire or appetite is not good for health or the achievement of the ultimate purpose. As one of the most intense desires inside human body, our appetite should be controlled properly, though, of course, it should not be suppressed to such an extent to be deprived of vitality. There is a similar instruction in the two great thoughts which have led Korean people to develop a typical food culture. The similar instruction is *ahimsa* which means no destruction of life in Buddhism and "selective taking of animal life" from Confucianism. Thus, what Korean people embodied as a main principle of food culture is the minimum consumption of meat

that is necessary to build healthy bodies or to maintain sound lives.

The control over the excessive appetite/desire to eat is not just the control over inside activities but also embodiment of harmonious way of mind-body cultivation. In this order, both Confucianism and Buddhism teach the following: Immoderate drinking alcohol and eating meat are frowned upon, because to eat and drink should not be for pleasure-seeking but for fulfilling lifelong work. Buddhist Five Commandments including drinking of no alcohol and *ahimsa* and the Confucian memorial service practiced at every beginning of mealtime are the ritualized social institutions. Like these, the instructions of the two great religious traditions are not restricted only to the maintenance of health. Rather, it is natural to tell that the two thoughts commonly have set an ultimate purpose for human being's successful life (Maturana and Varela 1980; Varela et al. 1993; Varela 1999). Of course, each definition of the two on the ultimate achievement is not the same as each other, but basic ideas of both are the same. The same idea between them is that only due to a longtime self-cultivation or self-organization, an individual can become an ideal being, like Buddha or Confucius, who is regarded as the representation of ultimate achievement and who had already experienced a stage of an enhanced being on the fundament of the harmony in mind and body. In regard to the second order, what should be emphasized is the fact that their achievement based on their control over the basic desire involving the appetite.

The process of self-cultivation is the process of self-organization, in which the subject embodies the true virtue of self-constraint. Activities of the body along with the embodiment are changing their direction from being pursuing delicious foods and nice drinks to allowing minimum meal ingestion in a degree that makes possible only self-cultivation with healthy body. Additionally to such people's mind, the nature is regarded as the object to give their respect in return for their getting vitality and fitness from the foods produced in the nature (Yoo 2011). That is much different from ordinary person's mind that regards the nature or foods as the target of attack and acquisition with greed. Therefore, an unexpressed but very necessary and basic principle is that the second order has its extension up to the achievement of the ultimate stage of the self-organization (Yoo 2011).

The Third Order of Korean Food Culture

In the third order, the order of person to person communication is reflected in table manners or the food rituals (not limited to preparation). The two great traditions have established so comprehensive ritual installation in Korean society. These installations correspond to Korean people's routine practices and are embodied by Korean people. What exactly is entailed by embodiment? The answer cannot be simple, but what is definite is that ethics coupled with manners is very tightly obeyed. Until now, the most influential in Korean society are elders first, filial piety, faith between friends, etc. Such ethics together with manners are still influential with table manners. These cultural phenomena show Korean food culture has promoted communal spirit in daily ordinary lives as well as in official ceremony.

The effects of such table manners and rituals prepared with foods have not been limited within the communications of mealtime. In fact, the mealtime communications are the important parts of the whole life of a person in a day. In other words, the mealtime communications firstly with family and secondly with other people in society are bound to be repeated around 87,600 times under the assumption that a person can live until the age of 80. From birth to death, there could be no such routinely repeated activities. But I think such routinely repeated habits perform a more important function to an individual's self-organization than occasionally repeated thing does or a rare occurrence can do. If so, what is the function of the routinely repeated thing?

In reality, this question is also applicable not only to the third order but to the first and second ones. Accordingly, this could be a more comprehensive question to the effect or function of a food culture to human life.

Ethical Activism on the Basis of Cognitive Science

What is, with the concept of the ethical activism, originally intended in this entry lies on this point. The patterned activities like eating and living habits are very decisive to our self-organization and so we must reflect our daily food life and must look for the way how to regulate the intemperate appetite and how to reorient the habits toward getting a peaceful mind-body situation and harmonious living with the environment.

Existing ethical arguments have been continued with attention to how to make the ability to choose good norms and to apply them to action. Their way has an old-fashioned premise that the thinking and decision with the reason must be the absolute basis of morally good conduct. But connectionism, one of current cognitive scientific paradigms about human cognition, proposed an entirely different idea about human thinking and action. According to it, there is nothing like reason inside human being. Instead, there exist only endlessly repeated connections and ensembles of activities from the whole elements of body from the viscera up to the brain. The connections and ensembles are not perceived but various kinds of phenomena can be perceived as the results of the connections and ensembles such as feeling, desire, emotion, thinking, calculation, comparison, decision, and action. These phenomena are traditionally called activities of human beings themselves, too. But these activities are merely the results from the connections and ensembles of other kind of activities that are proceeding at a deeper level as brain or viscera. Our activities can be classified at least into two categories: implicit knowledge and explicit one. This classification is very important to understand the different levels of our activities and it is closely related to the categories of know-how and know-what (Varela 1999). In addition, the former is regarded to keep more sensitive response system to affordance of outer things. According to the latest researches, more parts of our daily activities are organized with the implicit knowledge than with the explicit one. The implicit knowledge is not innate but embodied inside and giving a direction to one's habitual behaviors. Actually, habitual behaviors or know-how as implicit knowledge is of great importance in putting oneself unconsciously into a certain moral mood or emotional mood which is the actual base of one's moral decision with using one's reason (Varela 1999).

Many parts of our ethical problems are related to the behaviors which are repeated automatically in routine life. With the current food system, many examples of implicit knowledge and affordance can be observed. For instance, think of the case of drinking habit of a man. To this man, alcohol gives off more affordance than to a normal person. This means that the owner of drinking habit has a stronger directivity to alcohol than the normal person. Then, is this directivity innate or not? It is not innate but must be embodied by itself during more or less long time. And in the process of the embodiment, the connections and ensembles of inside activities from the level of brain, viscera, etc., by a gradual process, have been patterning the sensitive response system to alcohol. This change inside the man means that he has got a system of implicit knowledge to sensitively react to the alcohol, and as a result of the change, the system could manipulate the man inversely. Actually, the person cannot easily throw away the drinking habit. In this case, the directivity to alcohol is a kind of implicit knowledge which is not well designed and at the same time cannot be realized by the person itself, because the directivity operates in the subconsciousness level and the person realizes only the feeling of alcohol drink as the result of the directivity operation. If so, does the person have no method to recover non-drinking habit except being treated with medication in a hospital? Of course, the answer is different along with cases, but it cannot be denied that there could be an autotherapy. The autotherapy is not a special one but a very common or usual thing, that is, the correction of the habit. Even if another person gives a strict warning against the expected harmful situation and reminds the norms about abstention from drink, the habit can rarely stop. In this context, a critical question can be drawn. If one knows what to do,

then can the person do it? In other words, is to know what to do and to know how to do automatically joined? On the contrary, the correction of habit is an entrance to access the level of implicit knowledge and a way to interfere into the patterns of the connections and ensembles and give a newly corrected direction.

Therefore, it is the tacit knowledge that should be focused in the discussion about the ethical activism. Food culture ranges over both the levels of explicit knowledge and implicit one. Explicit knowledge involves how to cook, how to make out menu, etc., which are made by a person's considering. Implicit one can be observed in the old habits and unchangeable patterns, which rather rules a person's consciousness and intention. Most problems arise repeatedly from this implicit knowledge. Subconscious direction and habitual routine actions belong to the tacit knowledge, which comes from the embodiment of the ritual-like patterns in daily life but rather make stronger influence on human behavior and whole life than the explicit one.

The present food culture of the whole mankind is actually mixed with various contexts, and there are some countries which have no marked tradition of food culture as Michael Pollan points out (Pollan 2007). In many cases of daily life, traditional instructions and rituals are neglected. The ultimate purpose of eating changes to pleasure/enjoyment from the lifelong work and thus not only mass consumption and mass waste but also mental depravation is making the deep-rooted problems more unsolvable.

Concluding Remarks

In fact, such food culture clustered with the three orders is easily looked in any region or society, and every regional food culture has developed its own food menus, diet treatment, and table manners. Even if there are many differences among food menus, every regional food culture has, keeping the three orders inside supported by a traditional religion or philosophy, developed its own customs which include how to maintain one's health, how to make harmonious human relationship, how to save foods, and how to make the earth and the nature sustainable. If not the case of a desperately poor country or countries suffering from starvation, most countries have developed and kept such customs until recent time even though among them still remains a kind of food material acquisition by a way of animal abuse, for example, foie gras in France.

Even most developed or developing countries have experienced, in the process of industrialization, important changes of their daily way of eating living from traditional food custom to a modernized one which regards economy of time and high-calorie, low-cost food as important, but such aspect began to be criticized as one of the main factors of injuring personal health or destroying the humanity of a society, and thus, nowadays, anti-fast-food or anti-junk food campaigns, for example, slow food movement or LOHAS (Lifestyle of Health and Sustainability), are in response of many people and many regions. However, if an important thing should be added to, that is to recover or rebuild a healthful human relationship by breaking bread together with family or neighbors or friends enjoying glib talks. It means what is important is human relationship shaped around the table manner as well as food menu.

Therefore, as a conclusion, the most basic and necessary practice for a healthy food system is to rebuild the food culture by refreshing the eating habits or food customs. In addition, it is necessary to refer to the good tradition which has developed the polished system of rituals, ceremonies, and etiquettes combined with a complete metaphysics in every region or country. By doing so, figuration and reproduction of a good food culture will be feasible. Depending on this reflection, ethical activism will acquire its verity by setting up right habits and doing so in daily lives.

Summary

This entry has three targets from the viewpoint of philosophy and cognitive science. The first is to elucidate the food system with three orders of

food culture. The second is to make clear the essence of the ethical activist approach to the present problems related to food culture. The third is to propose an actual solution of ethical activism. This entry is designed depending on the studies of Asian traditional philosophy, especially Confucianism and Buddhism and at the same time depending on the connectionism of Francisco J. Varela and others' cognitive science and the study on ritual practice and ritual installation by both of Imamura. Korean traditional food culture is analyzed and the main points of the tradition will be discussed as preferable methods for dealing with the present food system and food ethics. The main remark is to rebuild our routine referring to the main point of traditional food culture.

Cross-References

- ▶ Agricultural Ethics
- ▶ Asian Cuisine: Ethical Considerations
- ▶ Buddhism, Cooking, and Eating
- ▶ Buddhist Perspectives on Food and Agricultural Ethics
- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Food Rituals
- ▶ Food Waste and Consumer Ethics
- ▶ Food-Body Relationship
- ▶ Gustatory Pleasure and Food
- ▶ Meat: Ethical Considerations
- ▶ Waste and Food
- ▶ You Are What You Eat

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Ethical Assessment of Dieting, Weight Loss, and Weight Cycling

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Synonyms

Antiobesity medication; Bariatric surgery; Slimming; Slimming diets; Weight reduction

Introduction

Overweight and obesity, a moderate to severe accumulation of excessive fat in the body, result from an imbalance between calorie intake and expenditure, leading to an increased risk of developing heart disease, diabetes, and cancer. Emerging on an epidemic scale in the second half of the twentieth century, the problem of overweight and obesity with an increasing global prevalence resulted in 0.5 billion obese and 1.4 billion overweight adults in 2008 (WHO 2013) due to sedentary lifestyle and the changing foodstuffs and food trends and eating habits.

What has happened to our food? In the developed regions of the world, with the United States as the most prominent, it has become abundant, thanks to the improvements in agricultural

production, and it has become diversified; higher in sugar, salt, and fat; and thus more tasteful due to the improvements in food processing industry. Thus, both the availability and the desirability of the food have increased, along with its energy density; today there is a plethora of high-energy-dense food on the market. A well-known example of the effects of these developments have been observed with the emergence of fast-food chains: the rate of obesity among adults in the United Kingdom and among children in Japan doubled in a decade in which the number of fast-food restaurants in the United Kingdom and the fast-food sales in Japan also doubled (Schlosser 2001), consistent with the positive association detected between fast-food consumption frequency and weight gain in the long term (Pereira et al. 2005). And what about our meals? The breakfast has either been skipped or shrunk to a bowl of cornflakes; the lunch has been split into hourly snacks in number with each being almost equal to a meal in calories; and the dinners in front of the TV set in the living room function as the popcorn in the movie theater. The people who have gained excess weight at various rates, the sufferers of this combination of unhealthy food and unhealthy eating habits, use a variety of means to lose it, which is mostly the following of a weight-loss diet.

And, as a second and absolutely non-negligible group, there are the dieters who would actually – at least medically – do well enough without dieting at all. In contrast to the growing number of overweight people, the second half of the twentieth century also saw the emergence of the thin ideal, which for decades has promoted the thin female body through accordingly thin media figures including models, actresses, performers, etc. (Gard and Wright 2005). The thin ideal with varying impact on females from the teenager to the elderly, with a normal weight or who are slightly overweight, has caused body dissatisfaction and a subsequent need for weight reduction, which again is mostly tried to be achieved by following a weight-loss diet. The duration, frequency, and severity of such dieting depend on the extent to which the ideal is internalized.

Therefore, those who are overweight and those who think that they are overweight constitute together the customers of the multibillion dollar weight-loss industry today, which offers them so many products from multifarious weight-loss diets to equally various teas and supplements, pills, and preparations – advertised almost always with one or more of the adjectives "quick, effective, organic, natural, and herbal."

Dieting, Weight Loss, and Weight Cycling (Yo-Yo Dieting)

And these products are often introduced by irrelevant people. Endocrinologists, the medical professionals working in the field of endocrinology, metabolism, and nutrition, have given their patients advices on correct nutrition. In addition to these physicians, however, such advices are frequently given today by physicians from irrelevant fields or even by nonphysicians on the media, who call themselves, and are presented as, nutritionists, dietitians, or assertively enough, "experts." Therefore the first of these titles, nutritionist, will be used in this entry, interchangeably with the words introducer or marketer when appropriate, to mention those who have a product or an assertion to declare about nutrition, weight loss, dieting, and the like.

Weight-Loss (Slimming) Diets

Nutritionists appearing on the media are well aware of the basic golden principles for a healthy life and weight, which include a balanced diet of all food groups, a healthy amount of water intake, a regular exercising, and a sufficient sleep; though these are now regarded by some as "clichés already known by everyone." Both today and in the past when people were less likely to be overloaded with information on any issue through the media not so widespread yet, conventional medicine has been successful in health promotion with the practice of these simple principles. However, it is also noticeable to nutritionists and to any observer that the number of the people who want to lose weight and lead a healthy life has increased.

An increase can also be observed in the interest in innovation and what is novel. Instead of being content with clichés, most people today want to lose weight without feeling hungry or changing their lifestyles and eating habits, keep fit without getting tired due to exercising, and feel vigorous without wasting time in sleep. There is a demand in society for new diets, new methods, and new suggestions accordingly developed. Nutritionists who are aware of this trend and confident of their education, knowledge, and thus their ability to benefit the society with their original opinions generally give it a try. They know that the above mentioned well-established practices will continue to yield successful results when applied to; however, they also know that suggesting through the media what is unheard of will quickly provide them with the attention of those seeking new easy means to lose weight. In addition to financial and emotional advantages, an increasingly popular name means an opportunity to stand out among other nutritionists (or competitors, in terms of the weight-loss market) as a trendsetter and to reach more people (or customers, in terms of moneymaking by receiving them in an office – but not patients since most nutritionists are not physicians). Such attempts for attention become the generator of the information pollution encountered every day on the TV shows or the Internet, in which many "miraculous" methods allegedly capable of providing a specific amount of weight loss are introduced, including herbal teas and recipes, recently developed diets, and drugs, allegedly again, harmless and of natural content. And the original opinions vary enormously, to give a few well-known examples: some argue for having six (or eight or even ten) light meals a day to keep fit, while some insist that it had better be limited to three main meals. Some highlight that olive oil is the healthiest cooking oil while others find butter innocent denying its association with cholesterol. Vegetarianism has long had its advocates, who are now challenged more loudly by supporters of different diets based on animal products. The continuously increasing diet options lead to a great discussion and an even greater confusion over the issue. In the last few decades, probably no other domain of medicine than overweight has been so frequently intruded with so meddlesome claiming.

Appearing on a TV show or publishing a book or launching a website with technically no chance to examine or even see the recipient of the information, there would be no great difference between an oncologist suggesting a specific type of chemotherapy with specific dosage to all those with cancer and a nutritionist suggesting a specific type of weight-loss diet with specific amounts of nutrients (such as "matchbox-sized piece of cheese and plain coffee in the morning") to all those with overweight. However, when the popular weight-loss diets are considered, it is seen that a single diet is vigorously claimed to help everybody with weight reduction, with no restriction specified on the use of the diet with respect to the age, gender, and personal background of its prospective followers, including their diabetes status and history of any metabolic disorder. Whether the type of the diet be low carbohydrate, low fat, or low calorie and whether its developer be a physician or a nonphysician, how can one unhesitantly set forth a one-day, one-week, or one-month menu which is indubitably not equally appropriate for millions of people? More specifically, for example, how safe is it to recommend a weight-loss diet which encourages the ad libitum consumption of animal fat and meat relying on a restriction of carbohydrate intake to those with a high risk or history of coronary disease or hypertension?

At this point, one might argue that a single pharmaceutical, too, is introduced to the market for the utilization of millions of people with an associated disease. However, with proper medical practice and regulation, there will be nuances. First, it is, or is not, prescribed to patients according to the initiative of a doctor as a result of an examination and evolution process, not provided or presented to them by the producer itself. Second, when it comes to weight loss, an ethical physician would not resort to a pharmaceutical unless less invasively modifying the eating pattern or physical activity level of the patient is not possible or effective, whereas most weight-loss diet marketers make use of every advertising gimmick to lure the magic

cure seekers. Third, pharmaceuticals are introduced with a set of directions and cautions concerning their use and users, and like other conventional medical treatments, they are produced after years of clinical research and observation – what about the advices and products of most nutritionists and diet developers, what is their scientific basis if they do not rely only on some personal observations and interpretations? Every year, thousands of new weight-loss products from diets to drugs and books are introduced globally, but not an equal number of studies are carried out on the issue in the same period of time, which, at least numerically, means that a considerable portion of such newly emerged products is either a modified version of the earlier products with some scientific basis or just made-up in terms of scientific method.

A 2004 study by the US Federal Trade Commission indicated that, of the investigated advertisements of weight-loss products such as nonprescription drugs, dietary supplements, diet patches, creams, wraps, and devices, 49% in 2001 and 15% in 2004 contained at least one claim which were found clearly false and scientifically infeasible (FTC 2004). Advertising techniques included asserting a recommendation or endorsement from a medical entity and featuring figures dressed in a lab coat. The seeming improvement between 2001 and 2004 might be accounted for the encouragement of the media not to run advertisements with such claims being effective (however, unlike the United States, many countries still lack similar regulations to screen out deceptive advertising on the media). And, it should be noted that fabricating and marketing a false weight-loss diet is much easier and more low cost than it is for a false tangible weight-loss product. Because, to reach its willing target, a weight-loss diet only needs be read on a book, newspaper, or magazine or heard from the TV or the radio, whereas the availability of false products such as drugs, supplements, patches, creams, wraps, and devices is partly restricted by factors associated with their distribution and material production. In comparison to related products and services, a fabricated weight-loss diet is much more likely to encounter and get taken in by.

There have been studies indicating that the diets followed by millions of people and reported by its followers to provide benefit might actually be non-recommendable or clinically non-superior to other weight-loss diets in the long term (Astrup et al. 2004) or that there is no sufficient evidence to recommend for or against their use (Bravata et al. 2003), and it has also been reported that the same diets might be dangerously inappropriate for some (Chen et al. 2006). However, a frequent argument of the followers of the popular weight-loss diets is "everybody follows it," which is mostly ensued by "nothing bad happens." In fact, no immediate "disastrous" results should be expected when a weight-loss diet that indeed causes the insufficient intake of a nutrient, for example, is followed, which will be often the case for even a "crash diet" characterized by severe nutritional deprivation. Because human body is a mechanism perfectly programmed to survive with an ability to synthesize many organic compounds and convert them into each other, unless it is exposed to prolonged starvation. Thus, the negative health effects of a specific type of diet might not be necessarily immediate and easy to observe or measure. Furthermore, not causing a disaster in practice – to be exact, deaths or irreversible negative health effects – does not constitute enough justification in principle for the existence of a weight-loss diet. In medicine, when a treatment is introduced for the utilization of a group of people, its introducer is obligated to submit scientific evidence indicating its potential to provide benefit; otherwise, it would not conform to the fundamental principle of beneficence of the medical ethics.

The above-discussed fact that many of those who show up in the field of weight loss are not health-care professionals might explain their unawareness of such principles, but does not make it acceptable. It is arguable that commercial products cannot be equated with medical procedures and cannot be expected to conform to medical principles; however, a weight-loss diet, just like a weight-loss drug or supplement, is a direct intervention to the state of health of an individual, which is exactly the case with medical procedures, meaning that it can be – or should

be – expected to similarly fulfill some criteria and to have been produced in conformity with a set of principles set to maintain the well-being of individuals. Though often stated by the marketers of the popular weight-loss diets, neither "my diet has never been reported to do anyone damage" nor "I guarantee a weight loss up to 20 pounds with the formulas in my book" is a medically valid or even meaningful statement. An expected utility for the majority does not mean proven utility or safety, as noted. Furthermore, reported efficacy does not necessarily mean true efficacy. Testimonials cannot be presented or treated as clinical evidence. When to introduce a product directly associated with health, one should be able to reveal a reference with a statement close to "this clinically tested diet has shown to provide a weight loss up to 20 pounds in a period of 3 months, compared to the control group." However, this nearly seems to be a utopian expectation, given the current situation of the weight-loss industry.

On the other hand, success in weight reduction depends not only on the removal of the excess weight from the body but also on keeping it off. Many people who achieved to lose pounds through a low-calorie diet regain an equal or greater amount of weight in time. This generally results from a later failure to adhere to the dietary or lifestyle changes adopted in the weight-loss period. It is also partly attributable to an inability to develop self-monitoring skills and self-control over eating behaviors, equipments about which the weight-loss diets on the market provides no advice. Finally, the long-term success rate of weight-loss maintenance varies among studies, from reviews concluding that the majority of the dieters experience weight regain (Mann et al. 2007) to those indicating a greater percentage of successful maintainers (Wing and Phelan 2005).

However, some people experience a more distinct fluctuation in their weight, repetitively losing and regaining some of it in a relatively short period of time, a condition called as "weight cycling" or "yo-yo dieting." Weight cycling is characterized by a repetitive failure to maintain the initial weight loss that is intentionally obtained during each cycle; however, it has no uniform definition, which complicates the assessment of the related studies to draw clear conclusions with respect to its effects on health. Although weight cycling has been suggested to adversely affect the immune system and to result in a lower resting metabolic rate (Hooper et al. 2010), being thought to complicate the future attempts at weight loss, it has also been reported that a history of weight cycling does not impede the future efforts to lose weight, accounting the less favorable metabolic profile of weight cyclers for differences in body composition (Mason et al. 2013). However, aside from its possible physiological effects on the metabolic rate, its probable psychological effects such as disappointment and frustration might make it more difficult for an individual to start and manage another challenge to lose the regained weight each time.

Analyses have indicated that an individualized diet with an energy deficit of 500–600 kcal is one of the best options in dietary management of weight, and it has been stated that a greater energy deficit might trigger an urge to eat (Haslam and James 2005). A hormonal contribution to this urge is also possible, being shown that diet-induced weight loss is accompanied by a perturbation in hormonal homeostasis with an increasing level of ghrelin, which stimulates appetite (Sumithran et al. 2011). Indeed, a greater desire to eat is disgruntledly reported by most people on a weight-loss diet, which leads some to uncontrolled overeating following an unpleasant period of dieting and eventually weight regain. And the adversities become intensified and more frequent as an intervention becomes more radical. Taken all together, it is reasonable to suggest that an unhealthy diet causing a drastic deficit of energy intake, in order to promise a greater weight loss in less time, might pave the way to becoming a weight cycler, in addition to many negative health effects. And that kind of diets are a glut on the weight-loss market.

Weight-Loss (Antiobesity) Drugs

It therefore appears to have a potential of harm to health when the mind of the weight-loss diet marketers is infected with the intention of

popularity and financial gain. And what happens when the weight-loss pharmaceuticals, argued for a few paragraphs before, are produced improperly; that is, when they are marketed with their effects not being clinically well studied and well observed enough?

It is noticeable that a back-and-forth pattern that has streamed through decades is associated with their use. Many such drugs have been introduced to, and soon afterward withdrawn from, the market: In the early 1930s, highly toxic 2,4-dinitrophenol was introduced, and in 1938 it was withdrawn from the market due to many side effects such as cataracts, renal failure, and hyperthermia. Between the 1940s and the 1960s, amphetamine use prevailed with millions of tablets including those intended for weight loss. The 1960s saw the emergence of the thin ideal and the parallelly accelerated introduction of pharmaceuticals for weight loss. Phentermine was approved in 1959 and fenfluramine in 1973; 18 million prescriptions had been written for the two until the 1997 withdrawal of fenfluramine due to side effects such as heart valvular damage. Dexfenfluramine was short-lived being approved in 1996 and withdrawn in 1997 due to its association with heart valvular abnormalities. Similarly, sibutramine was approved in 1997 and withdrawn in 2010, due again to serious cardiovascular side effects. Orlistat approved in 1999 has managed to survive to date despite its reported potential to cause severe liver injury. This is an extremely brief history on the US weight-loss drug market only (Ertin and Ozaltay 2011), other countries have their own stories with related drugs, which would again include side effects, withdrawals, and negatively affected users.

The undesired results with these drugs from the 1930s to the 1990s cannot be deemed as historical empirical faults with weight-loss medication. They cannot be ethically deemed simply as empirical because their intentional introduction for the sake of moneymaking, despite their poorly studied side effects and mechanism of action, has cost lives, and they cannot be deemed as historical because they keep killing, as apparent from the news about deaths due to the use of either the now-banned drugs or nonregulated supplements, such as those from China. And this is because people who medically need to, or externally imposed to, be thinner seek effortless solutions, instead of attempting a more demanding fight against the underlying conditions (Swierstra and Keulartz 2011).

Weight-loss medication appears to have always provided modest efficacy versus considerable risks. Given the principle of non-maleficence, a physician is ethically obligated to ask this simple question before prescribing such a drug: is it worth that? Is a modest result also obtainable by other means such as behavioral modification worth risking a set of known and unknown side effects in the short and long term? And for the nonprescription drugs, supplements, and all other similar products that comprise a large portion of the weight-loss market, individuals should be able to conceive of asking themselves the same question, which seems to be possible through creation of a general awareness.

Weight-Loss (Bariatric) Surgery

There have also been developed surgical procedures to treat obesity, introduced and then modified or abandoned, such as jejunoileal bypass. However, unlike the case with the weight-loss diets and drugs introduced and promoted by non-health-care professionals, the surgical treatment of obesity has remained under the control and within the practice of medical authorities, due to – or thanks to – the complexity of the procedures, and it has been considered as a last resort by both the physicians and the patients, as it ought to be. People should reserve a little of their wariness of scalpels for pills.

Summary

Weight-loss dieters fall into two categories: those suffering from perceived overweight and those suffering from actual overweight. Determination of the personal priorities with or without psychological support might be more convenient and effective for the first group, such as achieving an expected level of thinness versus maintaining

a state of health. As for the latter, it is a fact that obesity is a serious health condition with its implications on health and is difficult to cure and cope with. Modification of the diet to reduce or control the caloric intake would be helpful for weight loss or management. However, such modification would vary by the patient-specific factors and can thus be brought following a detailed examination by a physician and only a physician from the relevant branch, not a popular weight-loss guru on a TV show who is actually a cardiologist, for example. This is not because these people are never capable to make a sound suggestion on the issue, but because their suggestions need confirmation by relevant authorities.

A considerable percent of people with a complaint of, or complications due to, being overweight expect great success in weight reduction without great effort. This leads them to seek some sort of magic methods to provide weight loss and hence fuels the growth of the related industry. Every alternative, when it is marketed convincingly enough, seems to the audience to be worth to be given a try. But instead, more of an approach with rational skepticism should be employed. Individuals from both categories who seek help for weight loss and management should be knowledgeable with the identity, competency, and affiliation of those to whom they resort. Prior to using a weight-loss service or product, including weight-loss diets, they should seek an approval from trusted authorities and clinical evidence for its safety and efficacy, if any.

A non-individualized weight-loss diet developed without taking into consideration the age, gender, genetics, medical history, and personal and initial conditions of a patient is a threat to health. On an individual scale, consulting with a physician prior to using a weight-loss product could be preventive against any possible harm. On a mass scale, government regulations on the media both to prevent its overload with false advertising and to use it to raise the public awareness would work.

It has been suggested many times, as is mentioned here, that significant success in weight loss and management is obtainable by determination in simple lifestyle changes including dietary modification, such as elimination of high-energy-dense food with low nutritional value, and introduction of regular physical activity, at any level from attendance at a gym to a 15-min walk. The issue of dieting, including the practice of a diet intended for weight loss, must not be subject to underestimation or be left to the direction of nonmedical entities. Because, despite the amazing achievements in many fields of medicine, a healthy diet is still one of the most powerful weapons of medicine to prevent and alleviate most ailments, as has been for millennia.

Cross-References

- ▶ Ethics of Dietitians
- ▶ Gender and Dieting
- ▶ Obesity and Consumer Choice

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Ethical Matrix and Agriculture

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Synonyms

Decision-support; Ethical tools; Practical ethics; Principlism; Public participation

Introduction

The critical examination of complex ethical problems in food production has traditionally received little attention within the agriculture and agricultural biotechnology sectors. The lack of formal ethical assessment stems from a persistent view that increased food availability is an unequivocal moral good in light of the potential three billion additional people expected to be alive by 2050 (Hourdequin et al. 2012). Agricultural biotechnologies such as genetically modified organisms and intensive farming practices involving new chemical fertilizer and pesticide products, animal rearing, and milking techniques have often been portrayed as morally benign practices because of the projected welfare gains to global civil society from abundant food production. By contrast, however, academic agricultural and environmental ethicists have highlighted a growing concern with the ethical issues embedded within new technologies and farming practices, problems which resist simple resolution because of the multiple ethical principles at stake, and the myriad stakeholder interests that must be negotiated within civil society.

For example, an ethically justified agricultural practice may emphasize the protection of ecosystems, animal welfare, or increase of low-cost food to vulnerable communities. Though each of these priorities has a basis in established theory, often policies and strategies to achieve these goals are mutually exclusive and no single concern obviously overrides all others. Disagreement will also emerge over the status of different "concerned interests" in the sector. For example, within some ethical traditions, animals, ecosystems, and even the land itself can be said to have rights based upon the intrinsic moral value of these systems, independent of human use. In other traditions, nonhuman life is construed as a resource to be valued in relation to human consumption; thus incompatibilities emerge between competing ethical perspectives established in different normative ethical theory traditions and between different interested parties within the agricultural sector.

Such problems are compounded by continual technological change which produces new and previously unforeseen ethical issues, which in the agriculture sector have notably arisen in relation to novel gene technologies used to tailor biological organisms. The development of

genetically engineered organisms for food production has raised concerns in public debate not only over biosafety, industry accountability, trust in institutional governance, and consumer choice in relation to food-labeling systems but also over the status of living organisms and humans' capacity to alter the fabric of nature (Thompson 2007; Melin 2004; Ridder 2007). These issues have caused a degree of *moral outrage* in countries such as the United Kingdom, stimulating the significant public controversy and the formation of community-based organizations and action groups campaigning against global agricultural biotech firms. These political actions have prompted the governments of numerous European nations to engage in formal practices of participatory technology assessment (PTA) aimed at evaluating risks, costs, benefits, and multiple stakeholder values to aid science policy and legislation. Notable examples include the United Kingdom's "GM Nation?" public debate of 2002, Germany's Diskurs Grüne Gentechnik (discourse on green biotechnology) in 2001, and the BioTIK initiative – an expert ethics committee and the citizen-focused consensus conference approach of the former Danish Board of Technology (Hansen 2010). Together these PTA processes are aimed at providing civil society input into and oversight of controversial technology development practices and, through the involvement of various stakeholder actors, a degree of deliberative democratic control of technological regimes.

This entry examines a particular approach to PTA emerging in the agricultural biotechnology sector, termed the *Ethical Matrix*, developed by bioethicist Benjamin Mepham (1999). The Ethical Matrix (hereafter EM) aims to bring together a range of ethical principles and explore the implications of the application of each principle to a range of "interested parties" (sometimes referred to as "stakeholder groups"). The following sections of the entry explore:

1. The background to the Ethical Matrix as a technology assessment tool
2. The principles and stakeholders applied in the matrix and how they are chosen
3. How it can be applied as a decision-support tool

Background to the Ethical Matrix as a Technology Assessment Tool

Embedded within the assessment of technological impacts in the agriculture sector is a concern with systematic evaluation of ethical issues; and yet the stakeholders involved in these processes, be they scientists, agriculturalists or "lay" citizens, frequently lack the specific training and expertise to do so. A concern is therefore raised that simply "getting people round the table" to talk about multiple and conflicting values and myriad ethical principles is insufficient to justify particular practices or policy choices, because such deliberation lacks clarity, philosophical grounding, and an appropriate analytical structure. This lack of clarity in evaluating ethical issues is, in essence, a competence gap within PTA. Thus, practitioners and theorists in applied ethics have sought to expand and develop a range of "ethical tools" designed to aid different participants in ethical evaluation.

Ethical Tools

The concept of an ethical tool implies a type of philosophical device that provides a decision-support framework or methodology for structuring and facilitating group deliberation on the ethical issues arising from a technology, policy, or practice (Forsberg 2007). An ethical tool must delineate the terms of the debate; facilitate ethical deliberation among a range of stakeholder actors who possess relevant technical, scientific, or policy expertise (but who are not necessarily trained ethicists or philosophers); and provide mechanisms to reach specific conclusions or policy recommendations to aid policy development, legislative oversight, or technology implementation practice.

The Philosophical Underpinnings of the Ethical Matrix

The Ethical Matrix is a tool to structure discussion and facilitates reflection upon ethical issues in relation to new technologies, policies, or courses of action. Schroeder and Palmer (2003)

place the Ethical Matrix within what is termed a *Rawlsian* tradition of metaethics, whereby the emphasis is upon the *procedures* of ethical decision-making. John Rawls (1951) published an outline of a decision procedure for ethics, arguing that reasonable principles are required in order to determine which courses of action can be justified. Such principles, Rawls argued, must be consistent with the considered judgments of any impartial and competent moral judge (who is capable of understanding the basic premises and thinking logically about the consequences of courses of action); and so such principles must adhere to a "commonsense rule" of being recognizable and uncontroversial to a rational and impartial individual who is not formally trained in philosophy. Mepham's Ethical Matrix follows in this Rawlsian tradition, in the sense that it provides a model for people who are not philosophers to base their analysis of ethics upon familiar principles and commonsense rules.

A Principlist Approach

The Ethical Matrix is composed of two interrelated elements. The first is the establishment and application of a range of prima facie ethical principles that are commonly understood as relevant to the case in hand, and the second is a list of agents that have "interests" in the outcome of the case. In PTA, interested parties are usually referred to as "stakeholders," though the Ethical Matrix broadens this definition to include nonhuman as well as human individuals whose interests might be affected. These two elements are then put into a matrix in order to outline and assess the interaction between them – stakeholders along the y-axis and principles across the x-axis – thus emphasizing the inherent compromise in ethical analysis between multiple and competing interests and ethical requirements (Mepham 1999).

The multiplicity of principles and interested parties makes the Ethical Matrix a fundamentally pluralist and principlist approach to ethical evaluation. It is pluralist in the sense that its appeal to a range of prima facie ethical principles contrasts with the various mono-theoretical approaches that have emerged in disciplines such as environmental ethics (such as those espousing an intrinsic valuation of nature). This pluralism shares common ground with philosophical pragmatism in applied ethics, built upon the recognition that different types of moral principles can be brought to bear on different problems and that these principles must not only be relevant to examining the interests and actions and outcomes of/for different "stakeholders" or interested parties but also amenable to practical use and application by users. It is a principlist model in the sense that ethical justification is derived not from the application of specific theories but from a selection of principles as per the Rawlsian tradition. The use of principles is based upon the notion that they are commonly understood by a broad range of actors within society and thus have a broad degree of support from both ethical theories and within the cultural beliefs of the participants using the matrix. Principles therefore replace normative ethical theory frameworks so that the language and terminology of formal academic philosophy can be eschewed in favor of terms that are easily understood and hence can be used by a range of diverse actors.

The supposed strength of a principlist approach lies in the allowance of a stronger case based on one principle to outweigh a weaker case based on another in particular circumstances. This presents an alternative to monistic normative ethical theory approaches that tend to assert a single principle (or set of related principles) over others. A metaethical question then arises about the choice of principles to populate the matrix and how they are used in practice. Mepham (2005) asserts that the principles used in the matrix must:

- Be based in established ethical theory to give it authenticity
- Be sufficiently comprehensive to capture the main ethical concerns
- Employ user-friendly language as far as possible

In the first iterations of the matrix, the principlism of medical ethicists Beauchamp and

Ethical Matrix and Agriculture, Table 1 An example Ethical Matrix for genetically modified food crops

	Principle			
Interested party/ stakeholder		**Autonomy**	**Justice**	**Well-being**
	Biotechnology firms	Intellectual property protection allowing innovation in the biotechnology sector	Encouraging low-cost solutions to crop farming, stimulating economic development for agrarian farmers	Improving the resilience of GM crops, increasing overall food production
	Farmers	Avoiding restrictions on patented crops Avoiding pressure/coercion from multinational agricultural biotechnology firms	Fair bargaining power to regulate seed prices	Livelihood protection from crop failure due to insects and viruses
	Consumers	Transparent food labeling encouraging consumer choice on GMO consumption and access to information on GMO imports	Opportunities to participate in decision-making (like GM Nation?). Preserved rights to protest against GMOs	Government regulation of GMOs and biotech R&D. Monitoring and ameliorating potential health and environmental risks
	The environment	Integrity of "nature" – intrinsic valuing and protection of ecosystems from potential cross-pollination with GMOs	Proxy representation of environmental interests in agricultural policy by nongovernmental organizations	Maintaining biodiversity Protecting ecosystems from environmental degradation and resources depletion

Childress was directly imported (Beauchamp and Childress 2001):

- Autonomy – respecting the decision-making capacities of autonomous persons
- Non-maleficence – avoiding the causation of harm
- Beneficence – acting in the best interests of others
- Justice – distributing benefits, risks, and costs fairly

These four principles have become well established in the medical profession for guiding professional practice and decision-making in patient care. Mepham condensed this list further, substituting the two principles of beneficence and non-maleficence for a single principle of well-being – for simplification and because of the interrelationship between preventing harm and enhancing quality of life. Autonomy and justice were kept, although in later revisions this justice principle was relabeled as "fairness" in reference to the Rawlsian concept of "justice as fairness." Table 1 shows an example Ethical Matrix that applies these principles – comparing the different positions adopted in relation to biotechnology firms, farmers, consumers, and environment. This example matrix uses the three original principles, as Mepham did when applied to the agriculture sector in early case studies of dairy farming practice (Mepham 1996). Mepham initially stated that because these principles were well tested within medical ethics (and established in commonsense morality due to their representation of dominant normative ethical theories), if one were to change the principles used, then this would require significant philosophical justification. However, as the tool was gradually taken up by different theorists and practitioners to different case studies, a more contextualist approach to principle selection has emerged. Mepham has thus since amended the original assertion, with more recent iterations allowing for the substitution of different ethical principles when appropriate for different cases (Mepham 2005).

The process of choosing specific principles, and hence how the ethical discussion is framed, remains unresolved, however. In early iterations

of the matrix, principles and interested parties were defined in a top-down manner, in the sense that they were decided upon before deliberation started by the teacher/convener/facilitator that sets up the deliberative process. In later revisions and applications, the choice of principles and interested parties has itself been a participatory process, in the sense that the deliberating participants decide the terms (Irvin and Stansbury 2004; Kaiser and Forsberg 2001), and so principle and interested party criteria are populated in a more bottom-up fashion. However, some of these parties represented within the matrix may themselves be deliberating actors, whereas others are not (or in the case of the environment or future generations, cannot). Thus, there is a potential imbalance, as certain interests are actually represented (by deliberating stakeholder actors) and others must be represented by proxy. Thus, there is a need for tools to fairly justify the choice of principles and interested parties represented in the matrix and to correct for power imbalances that may occur between them, in order to remove any bias that may emerge in policy outcomes where some deliberating stakeholders seek to skew outcomes towards their specific interests. Cotton (2009a, 2014) suggests that one means to alleviate this problem would be to take Rawls's concept of a decision procedure for ethics further. He suggests that one should adopt the concept of "reflective equilibrium" to structure deliberation using the matrix. Reflective equilibrium allows deliberators to choose among the principles to be included through the use of an iterative process of ethical reflection. Reflective equilibrium involves moving between a range of available principles and comparing and applying them to considered judgments, moral intuitions, and practical circumstance and then recontextualizing and choosing the principles for the matrix in light of such intuitions and judgments (Rawls 1951). This is a contextualist method of choosing principles, which grounds principle selection based upon the specificities of the case, rather than the top-down selection by an expert practitioner, and hence allows the user to more substantively justify why particular principles are used within the matrix.

Principlism and Ethical Theory

By adopting a principlist approach, Mepham argues that the principles in the matrix do not constitute an ethical theory as such nor does the matrix directly use ethical theories. The principles are in fact a set of moral premises intended to clarify and assist deliberation (Mepham 1999, 2005). However, in practice there are direct similarities between principles and specific normative ethical theories, and so the principles could potentially be used as shorthand representations of broader theoretical frameworks. If so, the three principles can be understood as being roughly in line with three dominant philosophical perspectives in normative ethics: deontology (emphasizing personal moral duty), utilitarianism (emphasizing the maximization of aggregate welfare), and justice as fairness (emphasizing procedural equity in decision-making processes).

Though theories play a role in the matrix, the matrix is nonetheless intended as a tool for mapping out and discussing the issues underpinning a decision, rather than determining an ethical decision based upon a particular set of rules or adherence to a particular ethical doctrine. Mepham asserts that the matrix seeks to remove philosophical bias in influencing the decision outcome, allowing individuals to come to their own conclusions based upon philosophical reflection and rational argumentation, and is therefore ethically neutral in its intent (Mepham 2000). It is therefore situated within the procedural or discourse ethics domain of Habermas (1991), whereby the moral deliberations by rational individuals confer ethical value upon the resulting decision.

Using the Ethical Matrix in Practice

Within the matrix itself, the content of the empty cells can be populated in two ways. Firstly, it is possible for the individuals using the matrix to think through the consequences of the policy or decision under consideration for different stakeholders, and then write in those consequences. This format can prove useful when using the

Ethical Matrix to teach agricultural and food ethics. By structuring an individual's personal reflections on the issue under consideration, the matrix requires individuals to think like each of the actors within the matrix's list of stakeholders. This requires moral empathy and moral imagination – encouraging the users to put themselves into the shoes of the affected party and consider the conditions under which each of the ethical principles is upheld or violated. Each cell of the matrix therefore shows the interaction between stakeholder and principle, usually either in terms of behaviors and practices or outcomes and consequences depending upon the elements under consideration. For example, by imagining the position of an agricultural biotech firm, the user then attributes moral agency to the firm and will likely focus upon the ethical implications of different behaviors and practices that the firm is imagined to employ. By contrast, "the environment" could be construed as a relatively passive bearer of impacts (such as when ecological systems are harmed by pollution) or conversely as a set of physical conditions which, when altered, could in turn benefit or harm specific human actors (as is the case when examining the impacts of climate change on vulnerable communities). Thus, the imaginative process of moral reflection on the interests of "the environment" could focus upon the consequences of other agents' behaviors in relation to its protection or upon the secondary consequences of technological interventions in natural systems.

Though useful for individual reflection, the Ethical Matrix has also proved popular, and arguably more useful, when used by groups of stakeholders that represent a range of competing interests. Thus, it becomes a tool less for structuring personal reflection and more for facilitating group discussion as part of a technology assessment. In both the individual model and the group model, the matrix must draw upon both factual and normative information. However, as Jensen et al. (2011) assert, some facts may be relatively straightforward and go unchallenged, whereas others may stimulate substantial disagreement among those deliberating using the matrix. Structuring discussions by populating the cells provides a framework through which evidence, both factual and normative, can be challenged – emphasizing the controversial and contingent nature of ethical issues in the management of risk in new technological developments. Once completed, the cells of the matrix represent the outcome of a deliberative process in which synergistic or antagonistic relationships between principle and stakeholder emerge.

Decision-Making with the Ethical Matrix

The matrix has been used in a number of case studies, both to evaluate its efficacy as a decision-support tool and to develop substantive discussion of ethical issues in a range of applied ethics fields. The first multi-stakeholder applications emerged within the discipline of agriculture and food ethics. Practical cases evaluated the ethical issues related to dairy farming issues such as assisted milking technologies (Millar 2000), cattle transportation (Whiting 2004), and evaluation of novel or functional foods (Mepham 1999), alongside other environmental ethics-related concerns such as forestry management, (Gamborg 2002) bioremediation of radiologically contaminated sites (Oughton et al. 2003; Howard et al. 2002), and long-term management of radioactive wastes (Cotton 2009b). One particularly relevant agriculture-related case study concerns the assessment of GMOs in fisheries management (Kaiser et al. 2007). This latter study by Kaiser et al. (2007) was significant in that it evaluated the Ethical Matrix as a participatory tool used by both expert and lay users in evaluating the ethical issues surrounding the management of GM salmon. They observed that the Ethical Matrix proved valuable in structuring ethical discussions for both expert and lay participants, allowing all deliberating actors to contribute to the ethical debate. In particular they noted that a lay panel of participants which were initially skeptical of biotechnology ended up with a more positive evaluation of the potential use of GM salmon by the end of the process, and so the Ethical Matrix encouraged participants to distance themselves from preconceived ideas

and judge on the basis of information and principles that are designed to serve the common good.

In each of the aforementioned case studies, the role of the matrix in decision-making takes different forms. Though the population of the cells through deliberative dialogue provides a useful framework for discussion, this alone is insufficient in making a decisive policy. The stages highlighted above allow the gathering of ethical facts, serving to map out and stimulate deliberation. Additional stages are required if this is to be taken forward in formulating policy options and alternatives for agriculturalists and biotechnologists. One means to do this is to use the matrix to identify a series of "ethical impacts" and weigh them appropriately (Mepham 1999). This can be done by dividing the completed cells into two groups, showing the positive and negative ethical impacts – white boxes representing a respect for the principle with respect to that stakeholder and black boxes representing an infringement. This shows the areas where political action is needed either to redress injustices or uphold current values. A more detailed analysis would use a ranking of respect/infringement across a weighting scale, using the Likert-type numbering system, e.g., −2 strongly infringe to +2 strongly respect with 0 neutral (Mepham and Tomkins 2003). This ranking can be done in a participatory manner as Gamborg (2002) suggests, by using the matrix in expert-led consultation process in a panel session, similar in some respects to a citizen's jury. An expert panel on the topic under consideration is put together and composed of scientists, biotechnologists, agricultural specialists, policy makers, lawyers, etc. Each presents their "client's cases," outlining the pros and cons for each group identified in the matrix. This is followed by participatory ranking in a manner similar to nominal group technique (see, e.g., Andrews 2013) – each panel member and member of the lay public audience holds a copy of the matrix. After the presentation of cases and ensuing discussion, each person indicates in each cell of the matrix, whether they feel that the ethical principle is likely to be upheld, violated, or unaffected by the proposal, using the Likert scale to rank their perspective. By collating these responses, it is possible to obtain a verdict on the ethical perspectives of the group on the issues identified and hence, i.e., a measurement of the prevailing ethical mood among the participants (Mepham et al. 1997). Such a model is democratically pluralistic, in the sense that it incorporates lay public responses, voting and weighting of issues, and hence can prove useful for participatory technology assessment.

Summary

The Ethical Matrix can fill a competence gap where citizen actors and other stakeholders need guidance in structuring deliberation on ethical issues around a technology, policy, or practice and in making firm decisions on courses of action, within the context of a participatory-deliberative decision-making process. As Oughton et al. (2004) assert, the matrix can be used to help identify the relevant information required for decision-making (i.e., the facts, values, and stakeholders involved), helping to avoid bias towards specific moral values and addressing conflicts between them in a systematic way. However, even with all relevant information and systematic representation of different values, they recognized that moral judgment must be exercised while also questioning who this moral judge should be. So the Ethical Matrix, like other emergent ethical tools, provides a useful means to structure deliberation on the ethical issues inherent in new technologies and food policies; however, such tools cannot substitute rational deliberation and reasonable moral action, and care must be taken when choosing the right "moral judges" to take part.

Cross-References

- ▶ Agricultural Ethics
- ▶ Biotechnology and Food Policy, Governance
- ▶ Ethics in Food and Agricultural Sciences
- ▶ Expertise in Agriculture: Scientific and Ethical Issues
- ▶ Food Ethics and Policies
- ▶ Industrial Food Animal Production Ethics

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Ethics and Food Taste

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Synonyms

Egoism; Flavor; Food choices; Food preferences; Gluttony; Gustatory preferences; Reasons; Taste; Weakness of will

Introduction

When people choose what to eat, one of the main reasons is the taste of the food. Many people in the world do not have much choice in their diets given their poverty, but in the Western world, the average consumer enjoys an overwhelming variety of affordable foods. The focus of this entry is the role of taste in the food choices of those who do have a choice. With more choices comes more responsibility; deciding what to eat has a moral dimension as well since food choices have an enormous impact on the agent's health, the environment, and the well-being of other humans and animals.

The core puzzle posed by taste is its involvement in the most common and ubiquitous cases of what look like weakness of will. Many people find certain foods morally bad because of their presumed or genuinely harmful consequences. For example, one might intend to become a vegetarian if one cares for animals and wants them not to suffer. However, despite of the intention, the person may fail to do so because of her high preferences for the taste of meat. Other examples include the wish to eat healthier or less fattening foods, but somehow the intention gets trumped because one is unable to resist the good taste of those foods. Tastes thus seem to have much more motivating force than often acknowledged. The ethical dimension of the issue is evident when one considers the failure of large masses of people to eat foods that they know to be better for themselves, the environment, the animals, and other people.

The entry is structured as follows. Section "What Is Taste?" clarifies the notion of "taste." Section "Tastes as Reasons" discusses the relation of tastes and reasons. Section "The Puzzle of Unethical Food Choices" introduces the puzzle of unethical food choices. Sections "Bad Food Choices as a Consequence of Weakness of the Will" and "Bad Food as the Subjectively Rational Choice" discuss two alternative answers to the puzzle. Section "Are People Egoists?" considers whether ethical egoism might explain the unethical food choices. Section "Ethical Gourmandism" summarizes Korsmeyer's ethical gourmandism which holds that the taste of food depends on its moral properties. Section "Is There a Duty to Train One's Taste?" asks whether there might be a moral duty to train oneself to not prefer the bad foods.

What Is Taste?

By a food's "taste," one normally means much more than what is actually tasted by the taste buds. What is meant corresponds rather to the notion of "flavor," a sensation caused by a complex interplay of various sensory modalities, including taste and olfaction, among others (Auvray and Spence 2008). This entry follows the ordinary usage by taking "taste" to mean mostly flavor. Sometimes other aspects are included in "taste"; for example, the texture and mouthfeel of a food are an important part of how pleasurable it is to eat, so evaluations of "taste" (e.g., "corn chips are delicious") can be made on the grounds of flavor, texture, color, and possibly other features.

It is well known that foods do not taste the same to everyone (see, e.g., Prescott (2012)) which is why one also needs to talk about how something tastes *to someone*. This holds both for descriptive properties (e.g., salty, sweet) and evaluative properties (delicious, tasty, disgusting). In what follows, it is taken for granted that people's tastes differ so by saying that something tastes salty, bad, delicious, and so on; what is meant is that it tastes that way to the person

under consideration. Finally, evaluations of foods do not depend only on taste but also on what is being evaluated; for example, sourness may be a positive quality in lemons but not in corn syrup (Korsmeyer 2012).

Tastes as Reasons

People act on reasons and may have reasons for actions even if they are not motivated to act on those reasons. This suggests one of the main classifications of reasons into *internal* and *external* reasons (also known as *subjective* and *objective* reasons). Internal reasons have motivational force and are hence connected to the desires and preferences of a person; they are also *motivating* reasons. External reasons in contrast are reasons that exist for a person, say a reason not to kill or drink poison, without the person necessarily having any motivation to act on that reason or even know of its existence. Many philosophers take *moral* reasons to be independent of anyone's desires or other motivations (for a defense, see (Parfit 2011)). However, once a person is aware of the moral reason or has that moral reason, then it is an internal and motivating reason (for a clear exposition and criticism of this common view, see (Schroeder 2008)).

What kind of reasons can be provided by tastes? Suppose that a person is hungry and wants to eat (or thirsty and wants to drink: everything that is said here applies to drinks as well). Luckily they happen to have a certain good-tasting food in their fridge and they are aware of that fact. Ignoring all possible other reasons for or against eating that food, does its good taste provide a reason to eat it? Common sense clearly says "yes"; eating tasty food causes pleasure and everyone wants pleasure. The pleasure gained from eating tasty food offers a motivating reason to eat it as well as a *prudential* reason that recommends eating it.

Can tastes provide moral reasons? The answer depends on whether the ethical theory under consideration holds that pleasure is good and that there is a duty to pursue the good. Egoism would most clearly promote the idea that pleasure from taste gives a moral reason. Consequentialist theories often hold that pleasure is good but how much value there is in gustatory pleasure depends on the particular theory. It is not easy to see how a deontological theory could attribute much value to tastes except by citing duties towards oneself of which experiencing pleasures might be one. In any case, except for egoism, most ethical theories seem to hold that gustatory pleasure offers at best a very weak moral reason.

The Puzzle of Unethical Food Choices

If gustatory pleasures do not provide weighty moral reasons, one faces the following puzzle. Many people find certain foods bad; for example, they might consider the food unhealthy or its production too harmful for the environment, other people, or animals. These people have an internal and motivating reason not to eat such foods. Moreover, suppose that not eating those foods is not merely something that would be morally good but optional for such a person; it is mandatory from the point of view of morality given their beliefs about the food in question. However, many of such agents do *not* change their eating habits because they enjoy the food's taste so much. Hence the puzzle: how can people be knowledgeably and systematically acting against their best moral judgments?

As was mentioned, some philosophers like Parfit take moral reasons to be independent of anyone's beliefs or desires. Such views hold that whether the puzzle of unethical food choices is a moral problem depends on whether the foods in question actually are morally bad. The puzzle thus has two important ethical dimensions: first, it shows a potential conflict in people's moral beliefs and their actions which is a problem of moral agency. Second, *if* there are morally bad foods which knowledgeable agents nevertheless fail to avoid, the problem becomes one of political philosophy and raises questions about public policies towards the bad foods.

Are there genuinely morally bad foods? Leaving aside the question of where the competing moral frameworks might differ, most views would agree that foods are bad if their production causes serious environmental damage, much

suffering to sentient beings or health problems to their consumers. It is worth emphasizing that most foods are not intrinsically bad: the foods whose production currently has bad consequences could often be produced in a perfectly ethical way, and "unhealthy foods" are typically unhealthy only if consumed in large quantities or as a part of an unbalanced diet. Whether a food is unethical depends essentially on how it was produced, on the current state of the world in other respects, and importantly, on the quantities consumed.

Regarding the current production methods, the most plausible candidate for being bad food is factory-farmed meat. Industrial farm animal production, *aka* factory farming, has been shown to have extremely negative consequences to the local and global environment, to the people living in the vicinity of the farms, to the welfare of the animals, and to humans generally due to the development of microorganisms that are resistant to antibiotics which is a consequence of routinely giving animals antibiotics to prevent them from developing illnesses (Pew Commission on Industrial Farm Animal Production 2008). Pluhar argues that any existing moral theory would morally condemn factory farming (Pluhar 2010).

Even if not factory farmed, producing meat is generally more harmful than growing vegetables. The livestock industry contributes around 20 % of all the greenhouse emissions in the world (McMichael et al. 2007). Even if the animals lived an otherwise good life, they suffer in transportation and when they are slaughtered. Philosophers have defended vegetarianism on the basis of various ethical frameworks, for example, on utilitarian grounds (Singer 1990), or on the basis of consideration of the rights of animals (Regan 1983). However, even if one accepts that there is nothing wrong in principle with killing animals for food, the current amounts of meat that is consumed are a huge burden for the environment (Cafaro et al. 2006). There is also a correlation between health problems and meat consumption (see, e.g., Crowe et al. 2013; Rohrmann et al. 2013). Hence, large quantities of meat can be considered bad food.

Finally, some foods have little nutritional value but provide a lot of energy. Obesity and its consequences are a major risk for individuals as well as for societies in terms of health-care expenses. Increasing sugar intake has been shown to increase the risk of type 2 diabetes irrespective of obesity (Basu et al. 2013). Foods that are high in sugar are thus bad foods when consumed in large quantities. Also, given the sedentary lifestyle of most Westerners, foods with high calorie contents may easily lead to obesity. Hence, the typical snack foods (chocolate, cookies, candies, potato chips) and sugary sodas are bad foods to people who do not burn the calories obtained.

The above examples show that unethical food choices are not merely a problem of moral agency but also a genuine moral problem: there are foods with undeniably bad consequences given the way they are currently produced and the amounts consumed. In what follows, the focus is on the puzzle from the point of view of moral agency, and hence, what matters is not the actual badness of a food but what the agent *believes* to be bad; for simplicity, let us call the latter "bad food." There are broadly two lines of explanation to the puzzle which will be discussed next.

Bad Food Choices as a Consequence of Weakness of the Will

The first and the most common real-world explanation relies on the idea of weakness of the will. The view explains the puzzle by saying that people often fail to act according to their best moral reasons since they are not enough strong-willed to do what they think is the best. What happens is something like the following: the person judges that there is most reason not to eat bad food. But when she is grocery shopping, she feels a powerfully motivating desire to eat something really tasty. And before the reflective mind (or the will) has time to intervene, the shopping cart is full of bad foods. The call of gustatory pleasures can thus trump the judgments of what is best to do all things considered. The agent ends up acting irrationally, against her best reasons. The inability of the will to resist the pleasures of tastes is probably one of the best and most common cases in favor of there being weakness of will.

This view raises several difficult questions. An especially hard question is how the weak-willed

action came about. The views which hold that one can only act on reasons one is aware of will have to say that there was no reason for the action, only a cause. Alternatively one needs to distinguish between "competing minds" which have competing reasons.

The competing minds assumption is by no means as straightforward as it seems. For one, it seems reasonable to suppose that each person has just one self. So if the will is the self, who or what is the part of the self whose urges to eat must be resisted? As intuitively explanatory as the idea seems of the self being occasionally hijacked by one's "primitive" wants, selves seem to be partly constituted by one's deep desires, fears, and other such features. As long as one is not talking about eating disorders or genuine food addictions (if there are any), the weakness of will view may construe the realm of reasons and the self too narrowly.

Bad Food as the Subjectively Rational Choice

Another line of explanation holds that the apparently conflicted agent simply has stronger reasons for not giving up bad food than they have in favor of change. This view denies that people act irrationally when they do not follow their avowed best reasons and hold instead that they are actually acting according to their best reasons. The puzzle is solved when one recognizes that people may be mistaken about what their best reasons are, and in fact, the best guide to the reasons they have is to see which reasons best explain their actions. A similar line of thought has been defended by Socrates (Plato 1997) and Hare (1952).

The link between the agent's best reasons and rationality was discussed above in connection to the weakness of will view which held that in not acting for her best reasons, the agent is being irrational. But that can mean two things: that the agent is being *subjectively* irrational or *objectively* irrational. The weakness of will view need not be committed to the agent being objectively irrational; as Arpaly has argued, sometimes an agent is in fact doing the most objectively rational thing even if she did not do what she thought was the best (Arpaly 2000). In contrast, subjective rationality has to do with the coherence of the agent's reasons and actions rather than with the objective goodness or validity of those reasons. The view currently under discussion holds that a person cannot be *subjectively irrational* since they always act according to the best reason, whether they know it or not. Since reasons are what guides actions, it cannot happen that one did not act for one's strongest reasons. Call the view under consideration the *subjective rationality* view.

Suppose this view is correct. That means that if an agent fails to give up bad food for its taste, then tastes are actually extremely strong reasons to her. Given the setup of the puzzle, the agent *believes* to have the best reasons to give up bad food. But since reasons motivate, if she does not act as her alleged best reasons tell her to, then she is mistaken either about the reasons she has or about the strength of her reasons. To her the best reason is in fact gustatory pleasure which to her weighs heavier than the reasons she has for taking the food to be morally bad.

The subjective rationality view has some interesting consequences. First, since it allows that people may not know their reasons, it does not need a sharp distinction between reasons and causes. Second, it offers a simpler and more optimistic view of persons: we have just one self and there is no weakness of will. If one acts in ways that appear unwilled to the person (and she is not under drugs or otherwise manipulated), then she simply needs to take a good introspective look and try to find her true reasons for why she acted the way she did. The view thus holds that one's own reasons are not transparent to one and therefore one may be mistaken about them.

Are People Egoists?

If the subjective rationality view is on the right track and the food choices of the unethical agents reveal their true reasons, that suggests that their gustatory pleasure is a stronger reason to them than, for example, their health or the well-being of animals or the environment. Probably the only moral position consistent with such an attitude is ethical egoism which holds that one ought to do what is in one's own best interest. So given the

failure of many people to change their eating habits despite of their trying, it is worth asking if the morally puzzling agents in fact hold the moral views they claim to hold, or if they just pretend to, or are under an illusion regarding their moral beliefs.

Pleasure is a powerful motivation, and delicious food causes great pleasure to many. So giving up pleasurable bad foods might be seen as too demanding a sacrifice since with the exception of damage to health, many bad foods are more harmful to the nature and animals than to the eater. People may thus believe in the badness of some foods but still value their own pleasures more. Such excessive valuing of the pleasures of food is traditionally known as gluttony. Tefler argues that gluttony is commonly behind unethical food choices (Tefler 1996, ch. 6).

Ethical Gourmandism

The previous discussion supposed that there are two separate dimensions which influence food choices: the moral properties of the food and the food's taste. However, Korsmeyer argues that at least in the case of a person who is cultivated and discerning regarding foods, a food's taste is affected by the food's moral properties. The view which she labels *ethical gourmandism* stands in opposition to the view in aesthetics which holds that aesthetic and moral properties of works of art are independent, and hence, a work of art may, for example, have high aesthetic value even if it is morally questionable.

Korsmeyer's argument depends essentially on the view that the evaluative properties of a food depend on identifying the food. There is empirical support for that, for example, from a study which showed how people's evaluations of a cold salmon dish depended on whether it was presented as mousse or as ice cream (Yeomans et al. 2008). There are plenty of ordinary cases too which support the view, for example, when someone is happily eating a pie until they find out that the filling contains snails which the eater finds disgusting.

However, such cases are also apparent counterexamples; since the person was happily eating the pie, was not she simply wrong in thinking it is disgusting? Korsmeyer avoids the problem by distinguishing evaluations of tastes from evaluations of tastes of foods (Korsmeyer 2012, p. 92). Thus, she could say that even if the ignorant pie eater finds its taste nice, it does not follow that she finds the taste of snail pie nice because to her snails are disgusting. If that is right, then food tastes have an essentially cognitive component to them.

The next step in her argument is that being a cultivated and discerning eater (a gourmand) requires knowing the origin and production methods of the foods since these are essential to discerning the tastes. She gives an example of a Scotch whisky whose flavor is described by an expert as follows: "The spirit has a fine, golden color, got from long years in cask in a dark, stone-walled, slate-roofed, earth-floored warehouse above the river Spey. The nose is vinous, floral and smoky, like gardenias in a cigar box" (Hills 2000, p. 171; cited in Korsmeyer 2012, p. 93). Korsmeyer argues that to truly appreciate and discern the color and the flavors requires knowing the conditions in which the Scotch was produced since, as is illustrated by the description, the methods leave traces in the taste.

Given the cognitive component of evaluations of the tastes of foods and the requirement that a gourmand knows the means of production of foods, Korsmeyer argues that moral evaluations also influence tastes. Hence, if one condemns the force feeding of ducks for making *foie gras*, one should not enjoy the taste of it. However, such cases do occur; they are instances of the puzzle of unethical food choices. Korsmeyer holds that the agents of such cases are being inconsistent. Her suggestion seems to be that if one undergoes a careful scrutiny of one's moral beliefs and taste preferences, one cannot go on enjoying unethical foods.

Is There a Duty to Train One's Taste?

Unethical food choices are a problem of moral agency. But the problem becomes one of public policy if there are genuinely bad foods which knowledgeable agents nevertheless fail to avoid.

For the sake of the argument, suppose that there are bad foods. Can people be blamed for their knowledgeably unethical choices? If tastes can cause even a moral person to act against what they take as their best reasons, maybe they just do not have the choice to act otherwise. So they cannot fight against the call of gustatory pleasures, but what is more, they cannot choose which foods cause them gustatory pleasures. As unfortunate as it is, most people prefer the tastes of bad foods.

The assumption here is that one can be morally blamed or praised for an action only if one chose the action. We have seen that the unethical food choices may be a consequence not of one's genuine choosing, but of either weakness of will or of unacknowledged reasons. Those people thus cannot be blamed for their food choices, goes the argument.

Now, maybe people cannot resist delicious food, but they can influence what they find delicious. So even if one cannot be blamed for originally having morally bad tastes, tastes can be trained. Despite of the genetic basis of our tastes, the biggest factor in our preferences is habituation (Logue 2004). As Korsmeyer argues, we cannot blame the nature for our food choices since our tastes are a result of cultivation (Korsmeyer 2012).

If one is unable to resist bad foods, one may have excellent reasons to train one's taste so as to prefer better foods. By far there has been a contrast between two kinds of agents: those who think that the best reasons support giving up bad food and the explicit ethical egoists who think that they have a moral right if not even a duty to themselves to eat bad but tasty foods. The former agent certainly has a duty to train their tastes; not only will it ensure that they will make the moral food choices, but they are also causing themselves more pleasure by learning to prefer good foods.

Surprisingly, the egoist as well may have a duty to train their taste. This can be illustrated by comparing two egoists: one who trained their taste to prefer good foods and one who did not. During the taste training period, the egoist's gustatory pleasure diminished but once she is adapted to the new tastes she gets equally much pleasure out of food as before. In addition, she is healthier, probably weighs less, and hence looks better which matters to most people, and she might also be better off due to external consequences. And even if we suppose that good food can never be quite as delicious as bad food – for which there is no evidence – the slight loss in gustatory pleasure is certainly gained in pleasures coming from better health, and of all the pleasures, one gains while possibly living longer.

Summary

Nowadays an informed food choice must take into account the ethical considerations regarding the consequences of the food and its production. Many people are unable to resist bad foods due to their taste even when they know it would be morally better not to eat them. This puzzle of unethical food choices raises questions on the role of tastes as reasons. Are they not reasons but merely causes which trump the best reasons of the weak-willed agent? Or are they in fact reasons not recognized by the agent? If tastes are the strongest reasons, that suggests that people might in fact be ethical egoists or gluttons who do not give much weight to the negative consequences of bad foods compared to the pleasure of tastes. The entry also asked whether people have a duty to train their tastes to prefer better foods and suggested that even an egoist has reasons to do so.

Cross-References

- ▶ Cooking, Food Consumption, and Globalization: Ethical Considerations
- ▶ Environmental Justice and Food
- ▶ Informed Food Choice
- ▶ Vegetarianism

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Ethics in Food and Agricultural Sciences

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Synonyms

Discourse ethics; Ethical and public engagement; Expert knowledge; Food and culture; Harms and benefits; Morality; Professional ethics and food; Public trust; Risk and uncertainty; The commons; Vulnerability and food

Introduction

Global agriculture and food production face a series of challenges over the next few decades. These challenges include growing food in a way that minimizes the environmental footprint of both plant and animal agriculture; producing renewable bioenergy to address the anthropogenic impacts of climate change (FAO 2011); producing safe, animal welfare-friendly, and nutritious food in sustainable and water usage responsible ways (FAO 2012b; Foresight 2011); containing invasive species and harmful pathogens and pests; balancing market conditions with rights and needs of people; and ensuring global food security and the viability of food and bioenergy production for whom it is a livelihood (see FAO 2009a, b, 2012b; Godfray et al. 2010). These challenges are intimately connected and require integration and synthesis of data collection, responsive public policy making, progressive regulations and management strategies, scientific and technological expertise, and layperson ways of knowing. Meeting these challenges will also require political will (in some cases), forward facing national policies around food and fuel, and information sharing and collaboration between global partners.

While the role of science, in particular agricultural and foods sciences (and their respective

scientists), in meeting these challenges is critical, science by itself cannot meet the challenges mentioned here, since many of the concerns involve both values and ethical visions of how this generation of human beings intend to live and the kind of world they want to shape. These are normative questions that fall within the purview of *ethics*.

Ethics is concerned with values, virtues, principles, and customary habits and practices (Thompson 1998). It is the study of good and bad, right and wrong, and of the criteria that can help in both the evaluation and determination of right from wrong conduct and modes of living well. Ethical frameworks like the Ethical Matrix can be used to facilitate systematic dialogue and deliberation in order to solve difficult moral and social issues in more inclusive and participatory ways. Ethical views are tied to moral beliefs and values. Values are ideas that are action guiding, serve as the basis for justifying actions and meaningful lives, and promote responsibility toward others. Values provide guidance to live well with others and for other private and public dimensions of human flourishing. Ethics functions to promote trust and sustain good relationships, which can also be instantiated through stewardship of nonhuman animals, the environment, and Earth's resources.

In meeting the abovementioned challenges, the agricultural science community (a multidisciplinary field that intersects with different domains – e.g., food sciences or natural science disciplines that enable food production and also politics, sociology, ethics, economics, and disciplines that produce nonedible commodities such as biofuels) must not only engage in research, innovation, and technologies and commodities development in agriculture. The agricultural science community must also engage with the ethical and value systems of the many publics who are impacted by global agriculture and production of food. Engagement with private industry seems critical too, and appreciating the business values and motives of productionism and market cum shareholder-driven priorities is part and parcel of the nexus between ethics, science, and profit seeking that dominates contemporary global agriculture. Where private industry is unable or unwilling to meet the public or common good dimension of agriculture, agricultural and food scientists working in the public domain will likely have to work with policy makers to engender public support for continued agricultural research, innovation, and product development in ways that distribute the benefits and burdens equitably among various stakeholders and which promote human dignity and flourishing across all regions of the world. *Ethical trust* between the agricultural and food scientific communities (which may have different impacts and influences in different parts of the world) and the world's public is central in order to address the global challenges mentioned above and the ones yet to be anticipated.

Why Is Trust an Important Ethical Issue for Agricultural and Food Sciences?

Trust, in the service of promoting and sustaining good relationships, is an important ethical issue for those working in the agricultural and food sciences given the types and magnitude of risks that the public may be exposed to every day from agricultural and food products and their attendant science and technologies. When it comes to something as intimate as food or nonedible agricultural products such as bioenergy that impact daily living, food and agricultural scientists are beholden to the public's ". . . attitude of optimism that the good will and competence of [the members of the agricultural and food sciences community] will extend to cover the domain of [their] interaction with [them, the scientists], together with the expectation that the trusted [scientists] will be directly and favorably moved by the thought that [the public] are counting on [them, the scientists]" (adapted from Jones 1996, p. 4; see also Limoges 1993). The reliance on or confidence in the good will of the trusted persons (such as experts, like scientists) is a three-place relation of "entrusting." The public trusts scientists with information, that they also have unique expertise regarding investigatory methods or processes, and with the possession of technologies that may impact their well-being, where the

former grants scientists "discretion" to determine how best to steward information and/or resources (adapted from Baier 1986, p. 237). In the case here, this discretion leaves the nonexpert-dependent member of the public, morally, epistemologically, and physically vulnerable to the harm of being made worse through manipulation, negligence, and/or betrayal.

While not uniform throughout the world, efforts to select and improve crops and animals for high productivity through intensive agricultural practices since the 1960s have been adopted as the central driver for feeding the world and behind what is often thought of as "progress" vis-à-vis the Green Revolution. In intensification, research and development and advances in agronomy, animal sciences, and food sciences have been dominated by "productionism" and steered by utilitarian and market-driven values (Thompson 2010). However, the utilitarian-guided productionism has been met with steady criticism for environmental damage and pollution, loss of biodiversity, and impacts on rural communities (Thompson 1995; FAO 2012b). Arguably, some form of intensification is needed to feed and provide energy for a growing world population which is expected to grow to be over nine billion by 2050. The emergence of novel areas of specialization and the complexities of modern technologies (e.g., waste treatment technologies, genomics, modern molecular biotechnology, genetic engineering, cyber and telecommunications) keep the public from knowing their food and other agricultural products more intimately, and thus, they must rely on the competence and good will of experts. Members of the public will extend trust, distrust, or remain agnostic depending on how they perceive scientists discharging their professional responsibilities. They may be highly distrustful if innovation comes at the expense of human rights and is not environmentally sound or sustainable or if the harms and benefits are not distributed equitably among the relevant stakeholders and if commercial products are not produced or traded in concert with scrupulous business practices.

Credibility is the moral capital of scientists and is earned or enhanced when scientists communicate openly with the public about their considered evaluations of the empirical evidence (Rollin 1996) or when they frame the relevant evidence in ways that help the public rationally to recognize the evidence for what it really is and how it may or may not impact their lives and futures. In an era of hyperepistemic dependency, ethical trust is an invaluable currency and can seem to be in short supply in many discourses involving *risk*. The hierarchical inequilibrium that exists between "expert" scientists and the public is characterized by vulnerability, since the latter lacks the appropriate expertise, ability, and education (Burgess 2004; Thompson 1986). These characteristics engender a power differential between the expert and members of the public. Thus, inculcating virtuous professional conduct and establishing codes of ethical practice are important ingredients in building and maintaining a trustworthy relationship between the lay public and the scientific community.

Ethical Trust and Risk

Increasingly, professionals in agricultural and food sciences who provide expertise to public policy making or whose research may have a large impact on society are asked to take into account the inextricable connection between what they do (be they bench or applied researchers) and the impact of what they do on broader social concerns and aspirations. Social acceptability of scientific processes as it relates to agriculture and its products revolves around whether regulations, policies, practices, and standards are grounded morally and validated scientifically (Lackey 2007; Doremus and Tarlock 2005). The presence of poor scientific methods in data collection, appropriateness of the study methods employed to gather data, and research design features like representativeness, biases, repeatability, uncertainties, and whether there is adequate transparency and lucidity associated with how the results of a particular study are derived, are questions agricultural scientists must confront about the efficacy and integrity of their science in the service of the public good.

Professionals in the agricultural and food sciences must be cognizant that (i) the public (citizens and consumers) are concerned about who communicates what and when to them about edible and nonedible products from agricultural sources, (ii) that public policy makers are concerned about reliability of the relayed science in the name of protecting the public's interest, (iii) industry agents are often concerned about the science that helps them promote their bottom lines, and (iv) producers rely on scientists to help them carve out an existence in this era of intensive food and nonfood production from agricultural sources. In a climate of uncertainty and risk, the underlying interests and values associated with the different groups create ethical tensions that need to be considered in the policy-making process in the event that agricultural sciences claims to be or is employed as an epistemological authority or arbiter (Thompson 1986).

Thus, *ethical trust* is highly valued despite the availability of information through the Internet and the relative ease (in most cases) of accessing it and/or of finding "an expert." The quality, reliability, and credibility of our sources of information and scientific content and decisions about what scientific studies should be funded, how scientific information should be communicated to the public, how data is stored and disseminated, and how science should be used to inform public policy are ascientific concerns that often have ethical and political implications and nuances (see Borner and Menz 2005). When trust is called into question, it seems natural to be concerned about and to scrutinize the nature of the expertise and raise expectations of what an expert should be, especially due to the risks that the public may be exposed to vis-à-vis the products engendered by the food and agricultural sciences (e.g., when food security, safety and quality, and public health are at stake).

Agricultural scientists are steeped in discourses associated with *risk*. According to Brunk et al. (1991) "a risk debate is not primarily a debate between those who accept the verdict of scientific risk and those who do not. . . Neither is it primarily a debate within science itself. Rather it is primarily a political debate—a debate among different value frameworks, different ways of thinking about moral values, different conceptions of society, and different attitudes toward technology and toward risk-taking itself." The epistemic dependency and trust found in the expert-nonexpert relationship discussed above are emblematic of a "risk debate." Furthermore, agricultural and food sciences are also informed by social processes, and scientists may find themselves making decisions that are either inherently normative or conditionally normative. "An issue is inherently normative if resolving it consists of endorsing a normative claim" (Brunk et al. 1991, p. 154). Those who are concerned about the presence of genetically modified foods in the food chain, for example, with *AquaBounty's AquAdvantage* genetically modified salmon, may be worried that the US Food and Drug Administration's environmental assessment is unable to give either a complete or an accurate portrayal of all the risks and environmental and health harms involved, especially if wild salmon stocks become "contaminated." Proponents who are anti-genetically modified foods claim that no data set can, for that matter, account for the risks and uncertainties associated with this technology, since the likelihood of escapes and subsequent impacts on wild salmon stocks and human health cannot be adequately quantified by scientific measures alone.

Scientists may also encounter conditionally normative issues (Brunk et al. 1991, pp. 30–31) where judgments are appealed to in order to resolve the issue since data is momentarily unavailable. For example, "AquAdvantage salmon is safe for the environment and for human consumption" may be premised (at the time) on a narrow adoption of the "probabilist" or "expected utility model" of risk (Thompson 1995), where risk is taken as a product of the "probability" or likelihood of a harmful outcome occurring and its magnitude (Friedman and Savage 1948). By circumscribing the magnitude of harm, for example, the FDA preemptively decided on the normative conditions that matter. The public feels that a rushed process has usurped their autonomous decision-making opportunity, they may be suspicious of experts who reduce

risk to a utilitarian ethical basis. Those concerned about genetically modified foods and those who depend on "the wild caught label" or wild fisheries for their livelihoods, on the other hand, may see the matter as inherently normative if risk is conceived in terms of personal well-being (Plough and Krimsky 1987; Thompson and Dean 1996) and whether or not they feel hoodwinked or betrayed by the experts and the FDA.

Agricultural and food scientists must be in a position to comprehend fully the broader impacts of choices and decisions that they make based on assumptions, values, and preferences to which they are committed in the discharge of their professional responsibilities as scientists. They should also be cognizant about which of these ethical concerns takes priority over others in the public consciousness, and whether the burdens and benefits associated with either the results they infer or line of thinking they advocate (either intentionally or not) are equitably distributed among the relevant stakeholders. Cultivating certain professional virtues can go a long way in promoting a trustworthy relationship with the lay public. Examples of these virtues include respect, honesty, openness, compassion, conscientiousness, integrity, and accountability. Alongside these virtues, professional rules, e.g., oaths to the professions and codes of ethics, can offer guidance to agricultural scientists and prompt them to understand their obligations to the public and their colleagues and what constitutes acceptable behavior.

Sources of Specific Ethical Concerns Related to Trust

The agricultural and food sciences must contend with both substantive and procedural ethical issues. Substantive issues are about philosophical and normative commitments associated with the moral status of particular matters such as the intrinsic or extrinsic ethical concerns of genetically modified food sources. Procedural issues are about the ethical governance and decision-making mechanisms that involve science, technology, policies, laws, regulations, and best practices.

On the substantive side, agricultural and food scientists must contend with ethical diversity. Ethical diversity can be instantiated in different ways and includes (adapted from Anthony 2012a):

1. Competing ethical frameworks
2. Contrasting duties to the commons
3. Varying conceptions of harm
4. Differing accounts of sustainability

On the procedural side, agricultural and food scientists may be steeped in discourses about the shape of their engagement with the public, producers, policy makers, and industry. A key challenge is to ensure that the discourse spaces promote engagement and trust through consultative knowledge transfer and laypublic and multidisciplinary involvement, collaboration, and empowerment (see, e.g., Burgess 2004). Thus, it is important that many relevant viewpoints are represented in order to produce a deliberative process that is robust and not "hijacked" by special interests. In policy making, scientists need to show understanding for the difficult issues and sensitivity to different value systems, regardless of their personal viewpoint, and encourage transparency and honest brokerage of complex issues (see, e.g., Pielke 2007).

On the epistemological side, the agricultural sciences must be cognizant of the nuances associated with epistemically dependent relationships which can undermine public trust, such as knowledge deficits that can lead to information hierarchies of power and estrangement. The tendency to privilege facts over values and the temptation to relegate or trivialize values to the realm of the emotional or as knee-jerk responses may also plague science-public discourses (Felt et al. 2009). These issues are briefly considered below in turn:

Substantive Issues

1. Competing Ethical Frameworks

   There is significant disagreement about how to understand the common good across many value and ethical systems. Those working in agriculture and food may be perplexed

about "what is the right thing to do." They may be influenced by religious and cultural principles. Appreciating a fuller range of ethical perspectives at the frontiers of food and agricultural sciences is essential to ensure equity and avoid tunnel vision. Here are but a few ethical approaches that pervade common morality:

Rights and duties, benefits and harms, and/or virtues and vices are part and parcel of common morality and impact ethical decision-making processes. They underscore how individuals evaluate the behavior of others as well as give guidance for their own habits. Briefly, a rights-based approach holds that moral subjects ought to be treated with dignity and they possess certain claims that cannot be "trumped" by consequences, no matter how good the outcome (see, e.g., Thompson 1998). Here, the morally obligatory or permissible action is the one which protects the moral interests of rights bearers. Proponents of this view may voice their disdain if certain agricultural technologies or policies benefit a few on the backs of the least well off in society. A harm-benefit approach, on the other hand, reflects consequentialist thinking. On a standard account of this view, namely, utilitarianism, right action is that which produces the best possible balance of good consequences over bad consequences for all the relevant parties (see, e.g., Thompson 1998). Proponents of this view may ask if the utilitarian ethic that is the engine behind much of contemporary agriculture has unintended consequences (or can it genuinely promote a more sustainable model of resources use and management vis a vis "sustainable intensification"), such as devastation of rural communities and landscapes, biodiversity loss, soil erosion, water pollution, and human and animal health and welfare, and if so, how the harms-benefits associated with the successes of this ethic have been calculated. Virtue ethics, as a normative ethical theory, contends that right action is that which is consistent with the set of ideal qualities of character or dispositions that promote excellent people and/or good citizenship (see, e.g., Hursthouse 2006). The question "What sort of person/community should an individual or community aspire to be?" takes center stage. The theory involves what one (or a community) regards as worthwhile pursuing or preserving through food mores and agriculture with the view that the activity will contribute to human flourishing.

The interplay between rights, virtues, consequences, and other value systems may influence how agricultural and food scientists understand what is central to food security, for example. A utilitarian perspective may emphasize food security as availability of food, and thus, scientists committed to this approach will likely promote efficient production and abundance of food commodities at a low cost. A rights-based view may highlight cultural acceptability of food and ensure that the right to food, i.e., access, is premised on treating people with dignity and equity over cost or production efficiencies. A virtue's view may emphasize the agency of people in the food system and habits of character that promote sustainable communities through and with food and agriculture (Anthony 2012b).

2. Contrasting Duties to the Commons

The commons here refers to interests shared or resources held together within the public domain. Many contend that some portion of Earth's natural resources (e.g., land, water, air) should be available to all people to carve out an existence in order to sustain themselves. Further, "know-how" in order to produce food and the opportunity to be self-reliant should also be accessible to the public without too many bureaucratic and corporate barriers. That is, human beings, when not causing harm to others, should be free to pursue the means to produce nutritious and safe food according to their value systems and should not be blocked by private enterprise or hindered by governments. Community or civic self-reliant agriculture can be seen as reflective of the US Land Grant mission. Garret Hardin (1968) warned against the depletion of shared resources by individuals (or private enterprises) acting independently and

rationally according to their own self-interest at cost to others or society's long-term best interest. Overfishing and overgrazing by monolithic commercial interests, for example, are forms of "enclosure" or monopoly that threaten this notion of the commons, especially when fertilizer or pesticide use, soil erosion and nutrient depletion, skyrocketing greenhouse gas emissions, and excessive waste produce dead zones that endanger human and animal communities just for immediate-term private gain (see, e.g., FAO 2012a, b).

Scientists can help the public and policy makers decide how to address competing duties and how to limit damage and manage the commons by means of governmental intervention and/or regulation by international bodies and how to protect against inimical exploitation of natural resources by private interests. They can also help to empower local communities by strengthening civic food networks and through knowledge transfer projects. Whether scientists and policy makers encourage a more cooperative view as the best way to achieve a more sustainable agricultural commons in the long run or let the market decide will have implications for our environmental and natural resource capital (see, e.g., Parry et al. 2005; Tilman et al. 2011).

3. Varying Conceptions of Harm

The principle "Do No Harm" can be understood as being motivated by either the principle of non-maleficence or the principle of beneficence (see in Beauchamp and Childress 2008). In the former case, scientists may be motivated by the negative duty to (a) refrain from imposing greater harms than benefits to a population at risk, (b) avoid causing pain and suffering or death, or (c) end futile or non-fruitful strategies in order to meet certain agricultural challenges. Others committed to the principle of beneficence may be spurred on by the positive duty to relieve suffering, disease, or malnutrition and may focus on preventative or prophylactic measures. In both cases, scientists need to be sensitive to the different measures that might enter into their deliberations and the corroborating evidence that they take up. Weighing and weighting (i.e., how much weight is given to a particular outcome) will also determine how they consider the cost-benefit analysis as will whether or not they are committed to a decent minimum or threshold view of human well-being (see McMahan 1998). The cost benefit-analysis may take the form of utilitarianism, namely, to promote the greatest good for the greatest number or pareto optimality, that is, an action is permissible so long as what benefits the initiator of the action does not significantly harm others. Further, a more basic question is what agricultural and food scientists think about who can be the recipient of moral harm and benefit. Can animals or nature be the object of direct moral consideration, for example? The predominant view is that the "environmental commons" has no legal status other than in economic terms. It is often thought of as property, and thus land use for agricultural development and expansion for intensive purposes is often seen as progressive and preservation efforts as impractical and obstructive, even inimical to human well-being. Careful calculations must be made in order to estimate the spatial and temporal dispersion of the impact of agricultural and resource development. Scientists and policy makers may not always be sensitive to how the benefits and burdens should be distributed intra- and cross-generationally and interspecifically and thus cannot ensure that they are distributed equitably. Further, they may not always appreciate how spaces and resources held as commons are valued passively for their recreational, aesthetic, or noninstrumental values. Hence, it is important that ethics be integrated into these discussions.

4. Differing Accounts of Sustainability

Currently, there appears to be a sociopolitical struggle around the normative dimensions of "sustainability" (Thompson 2010, p. 262). There are many views on sustainability that complicate how food and agricultural products are valued. Scientists should be open-minded when they assess,

communicate, and manage concerns around sustainability since there are national, regional, and philosophical differences around this notion. The view of sustainability that is adopted has implications for the moral and epistemological outlooks and research agendas pursued (Thompson and Nardone 1999).

A dominant view of sustainability in discourses around food and agriculture revolves around resource sufficiency, where sustainability is "the rate at which resources are being consumed [over a time frame for which] the practice is to be sustained. If current or foreseeable supplies meet or exceed the calculated amount, the practice is sustainable" (Thompson 2010, p. 223). Resource sufficiency is concerned with the duration of availability of a given resource over a period of length. Exponents of this view of sustainability often rely on technology to fix their way out of challenges (Thompson and Nardone 1999).

Functional integrity, another popular conception of sustainability, is the capacity of a system to maintain itself without external disruption, centering on component aspects of an agri-ecological to regenerate (Thompson and Nardone 1999). Exponents champion reproducibility and resilience of the whole system (Thompson 2010, p. 229). According to Thompson (2010), exponents of functional integrity rely on norms, values, and perceived obligations as inherent dimensions of agri-ecological systems.

Procedural Issues

Effective and responsible sites of public engagement are also central to promoting ethical trust between agricultural experts and the lay public. If the process of engagement with an informed public is undertaken as an open and honest process of inquiry (see, e.g., Dewey 1927; Hickman and Alexander 1998), then this will help to legitimize the ethical basis behind policy decisions. Public and multidisciplinary input at opportune moments can provide crucial evaluation of the relative merits of scientific claims and augment arguments that have a moral flavor and provide additional insights when scale and impact of risks associated with agricultural challenges are considered. When members of the public are actively more involved in the process of public policy making through engagement mechanisms that afford transparency and visibility, they are not only more confident that they have some semblance of control over how complex and controversial scientific issues are discussed, framed, and resolved, but there appears to be genuine opportunity for debate or dialogue concerning more basic questions over fundamental values or virtues related to the direction or shape of the enterprise (Felt et al. 2009). Appreciating the extent to which "facts" and "values" confound the engagement process is also central. By encouraging laypersons, policy makers, and scientists to equally commit to a process of mutual learning and to reflect on the pervasive bias that "Western science" fact is more authoritative over values (and are seemingly without social influence), policy makers may reduce hierarchical inequilibrium inherent in these relations. So as long as scientific knowledge is automatically accepted as superior to any value position and as long as simple regulations become the foci for resolution to complex problems, some segment of the general public may have a hard time getting behind certain innovative and potentially fruitful policies (see, e.g., Pielke 2004).

Scientists who engage with the public must also guard against "downstreaming" (Felt et al. 2009, p. 362), a form of displacing ethical concerns to the margins or postponing important conversations about substantive issues that involve relegating public consultation to later stages of the policy innovation process. Downstreaming may weaken legitimacy and confidence in the outcome of a policy-making process and produce contempt for the sources of advice. Downstreaming can occur if the ethical is identified with the legal, for example. This maneuver actively forestalls the need for further debate and deliberation especially if the presence of existing regulation about a certain issue is taken (by those with decision-making authority) as a satisfactory terminal point. Participants who are fatigued by political apathy, or disenchanted

by public discourses around food and agriculture may also defer their ethical jurisdiction and competency to so-called scientific or regulatory experts. Deflection of this sort of ethical responsibility to the regulatory space may mask the necessity of pursuing ethical inquiry into specific issues. When ethical questions are sidelined this way, laypersons may feel marginalized as a consequence of a lack of representation and opportunity to shape the trajectory of food and agricultural policies, especially in the wake of risks and impacts of novel technology on society (Haimes 2002). Proxy representation by self-proclaimed expert scientists and policy makers could fall short of what lay sources of knowledge may advise.

Epistemological Concerns

Members of the lay public may not be aware of all the nuances that apply to the science and technologies involved in food and fuel production. For example, how should public officials employ and manage water more efficiently for agricultural purposes and what technologies ought to be applied in order to be more judicious about water and land use for agricultural production, both for plant- and animal-based systems? In some cases, given an untutored canvass of the available information, the lay public may be justified and rational in their initial estimations about specific issues (e.g., about the impact of genetically modified foods on their health) but may be inadequately informed, may be misinformed, or have false beliefs. While scientists and philosophers can help them to reason better, in many cases, the public may need help to digest and frame the relevant information and evidence in ways that enable them to rationally consider the evidence for what it is actually. It can be seen in instances of scientific and moral uncertainty, especially in the presence of conflicting "expert" testimony, knowledge deficits, and lack of awareness about agricultural and food issues. Since many members of the public do not have an independent understanding of the science and technologies that can be employed to resolve dilemmas and disputes, they are epistemically dependent on those in the know. They place trust in food and agricultural scientists to communicate impartial information about their work and the risks associated with agricultural products. A public that has a distrustful view toward "experts" may feel justified in discounting the evidential basis of the claims made by scientists who are perceived as coy, cagey, and not credible.

Scientists must be vigilant not to overestimate the value of the facts to which they appeal or arrogantly privilege only their own expertise. Facts or evidence-based claims are often the site of political struggle (Irwin 2006). Agricultural and food scientists should be aware that scientific evidence are also associated with values, preferences, and judgments and they can influence the ways in which the scientists pursue their research or the recommendations they make (Pielke 2007; Heymann et al. 2009). Furthermore, in instances where laypersons already feel subservient to the authority of "experts," they may devalue their own empirical assessments (Felt et al. 2009). Here, there is a danger that ethics problems evaporate and are not considered when members of the public do not have confidence that their evidence counts as the "right facts". This is an example of ethical disenfranchisement. Which facts are employed and dismissed will impact the identification of what issues should be raised and how they ought to be framed and addressed. Furthermore, there is a danger of dismissing other sources of knowledge, for example, indigenous and place-based knowledge as inferior, untutored, irrelevant, or emotional. The epistemic asymmetry between facts and values remains sharp, where facts are taken as "givens," but values are "constructed" or "merely one's opinion," or trivially characterized as "emotional." Thus, in theory, there is a bias toward evidence-based claims as being stronger than value-based lay knowledge. However, the "fact-value divide" may have less force in reality at the end of the day. Which "facts" matter and why (e.g., how values are placed and displaced) depends less on there being a hard line separating facts from values but on social influences like outcomes and priorities set by communities with influence.

Summary

Agriculture continues to play a major role in the economic, social, and ethical activities of many communities in developed nations and emerging economies around the world. Apart from feeding people and providing jobs, agriculture, as a source of bioeconomy, is the vital lifeblood for many individuals and communities. Agriculture contributes to food stability and security and to the health and prosperity of both urban and rural communities.

Ethics, especially ethical trust, is the lynch pin that holds together the nexus of agents and elements that make up the global food and agricultural system. Since agricultural and food sciences are highly specialized and layered, consumers and citizens must defer to the good will and expertise of the cadre of scientists to "mind the store." Trust in the scientific community is central since many of the developments necessary to meet the challenges mentioned above are public goods and will require a strong public commitment (in the absence of private inclination or commercial interests), to make ethically measured investments in agricultural research, innovation, and technology development. Successful partnerships between the private and public sectors are crucial in identifying priority areas for research and development, managing risks, and appreciating the practical and ethical concerns faced by different communities around food and agricultural issues. When concerns cannot be met through public-private partnerships, public support is essential to pursue research outcomes that promote a more resilient, sustainable agricultural and food system whose benefits may be shared equitably by all.

Public consultation with respect to the ethical consequences or application of policy should be encouraged in earlier stages of the policy innovation process (Wilsdon and Willis 2004). Earlier engagement with a diverse lay public is central to help them appreciate the moral and epistemological issues at stake and to come to terms with policy and technical solutions. Scientists can help to link seemingly unrelated constituents in the food system to solve problems of food supply, processing, distribution, and use. Emergent collaborations that reflect a participatory decision-making process by a plurality of stakeholders can also promote the interest of the most vulnerable members of society if their advice is directly sought whenever possible to find innovative solutions for the challenges mentioned about and to build truly equitable, healthy and sustainable food and agricultural systems.

Cross-References

- ▶ Agricultural Ethics
- ▶ Expertise in Agriculture: Scientific and Ethical Issues
- ▶ Sustainability of Food Production and Consumption

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Ethics of Agricultural Development and Food Rights in International Organizations

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Synonyms

Accountability; Agricultural sustainability; Codes of conduct; Fairness; Food rights; Guidelines; International organizations; Justice; Principles; Responsibility; Standards; Value conflicts

Introduction

Ethical concerns about the right to food and agricultural development are evident in debates within various United Nations (UN) agencies or associated international organizations (IO) and many agreements, commissions, working groups, and programs that those IOs implement or facilitate. Values conflicts and consensus have appeared in negotiated agreements leading to numerous founding charters and technical treaties, reflecting diverse notions, objectives, and applications of fairness, justice, accountability, and responsibility. Ethical assumptions, tensions, and compromises are embedded in various standards, guidelines, principles, and indicators for defining, measuring, and effectively ensuring adequate, safe, nutritious, and culturally appropriate food, food rights, and agricultural development. Ethical issues have related to seed propagation, food growing, cultivation and processing methods, trade in food products, livestock production, horticulture, herding, fishing or aquaculture, pastoralism, plant gathering, agroforestry, and more. Interconnected ethical and rights concerns across UN agencies and other IOs have overlapped with discussions about access to and control over food, genetic resources, seeds, land, water, cultural heritage, and indigenous knowledge protection.

These and other ethical issues concerning food security, food rights, and agricultural development addressed by the UN or other IOs are referred to in academic literatures discussing food and agricultural ethics, environmental ethics, and development ethics; human rights and agricultural law; and in various UN, civil society, legal and farmer analyses or interpretation guides, and other primary documents. This entry reviews relevant debates, documentation, and reference materials historically and how these themes have evolved in contemporary contexts.

1930s to 1980s: Early History of Food Rights, Safety, and Ethical Trade

Various notions of moral duty for wealthier, more privileged nations toward suffering or poorer peoples and countries were embedded in early twentieth-century global politics and IOs. That duty, sometimes based on even older or traditional cultural beliefs, as well as modern Christian or other religious, cultural, philosophical, and humanistic values, becomes translated into secular concepts about political, economic, or social justice. Those in some cases were transformed into specific legal commitments or obligations of governments with shared global diplomatic norms in our modern international (Westphalian) system based on sovereign nation states. However, such ideas were never pure moral goals or legal strategies. They were always mixed with competing ideological, geopolitical, and socioeconomic objectives of governments as well as differences within or among their different ministries or agencies, including those people appointed to negotiate with, or who work in, IOs as diplomats or public servants.

Incipient policy ideas, legislation, projects, and program proposals linking ethical responsibilities of more fortunate countries to address the health, food, and nutritional needs of others, as well as economic or geopolitical interests of some countries to ensure open trade and increased consumption of agricultural products, were evident in discussions as early as the 1930s in the now defunct League of Nations (O'Brien 2000).

During the Second World War, planning for the new postwar UN reflected more urgently and widely shared moral values but also conflicting perspectives. They reflected geopolitical tensions and national interests of the soon to be victorious Western Allied powers that created the UN system which exists today and various international agreements, development programs, and agencies which contributed to or followed from its birth. The Food and Agriculture Organization (FAO) of the new UN was conceived in 1943 during war, as a postwar technical agency focused on food security. The United States hosted the FAO's first planning meeting with a vision built partly on a basic moral objective, "freedom from want of food," an aspect of the democratic justice vision and political, security, and moral values embedded in President Roosevelt's classic 1941 "four freedoms speech." The new FAO, established in 1945, was the first technical agency in a new UN system built on stated moral objectives as well as socioeconomic or perhaps even "distributive justice" aims (Macer et al. 2003, p. 482). Its 1945 Constitution affirmed that all nations joining would ". . .promote the common welfare. . . (while) contributing towards an expanding world economy and ensuring humanity's freedom from hunger...."

FAO's founding ethical vision and operational mandate had no explicit human rights objectives, but the 1948 *Universal Declaration on Human Rights* gave the FAO and other IOs a clearer moral as well as legal compass. The 1948 Declaration pledged 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 . . ." (Article 25). Later agreements, such as the 1966 United Nations *International Covenant on Economic Social and Cultural Rights*, enshrined more specific (albeit still vague) agricultural development and food security rights. However, governments did not easily meet such food rights obligations, or sometimes for sensitive political, religious, cultural, economic, or other reasons even intentionally avoided them. Instead, new IOs or programs, often championed and hosted by a particular government with its own unique ethical views, had to address specific concerns (including ethical tools or guides) for ensuring different kinds of food or agriculture rights. New IOs or programs partly addressed tensions, conflicting claims, and weaknesses of human rights law concerning food or agriculture by facilitating ethically significant codes of conduct, guidelines, standards, and principles.

In 1961, an International Convention established the International Union for the Protection of New Varieties of Plants (UPOV) as an IO to encourage plant breeding by granting breeders intellectual property rights for new plant varieties. Its mandate aimed to encourage and safeguard breeders' interests while serving national agriculture development. The UPOV resulted in some major ethical debates and practical, legal challenges between opposing sets of rights, those of breeders and farmers. For example, farmers could be breeders but still have their traditional agricultural knowledge or germplasm exploited by scientist breeders, governments, and private corporations and may not have their own varieties recognized or protected.

During the early 1960s, ethical concerns also emerged surrounding the international trade and consumption of safe food. The FAO and World Health Organization (WHO) formed the Codex Alimentarius Commission (CAC) in 1963 to develop food standards, guidelines, and texts such as codes of practice under the Joint FAO/WHO Food Standards Program. The CAC, which continues its work today, set out to develop standards for particular types of foods, commodities, or industries based ostensibly on scientific or objective rationale for ethical codes and guidelines. Its work has covered a range of measures related to food additives, pesticide residues, nutrition levels, contaminants, hygiene, food labelling, and more.

In the 1970s, government and public consumer concern grew over the emerging power and some unscrupulous behavior of the food and agriculture industry in addition to worries about unsafe food. The FAO/WHO Program and CAC produced a *Code of Ethics for International Trade in Food Including Concessional and Food Aid Transactions*, adopted first in 1979,

revised in 1985, and again in 2010. Its major objective was to establish principles for the ethical conduct of international trade in food, to protect the health of the consumers, protect import countries from dumping, and ensure fair food trade practices. But Codex work has still been contentious over competing values, allegations of inappropriate corporate industrial influence, technical disputes over what should be deemed safe, and different definitions of ethical trade. This Code was (and still is) a voluntary mechanism to encourage (not legally insure) food safety standards by companies and governments while not inhibiting international trade. An ideology (or for some an ethical value) of free trade market "fairness" partly competes with food product safety considerations in the Code.

The FAO in 1983 established a *Commission on Genetic Resources for Food and Agriculture* (*CGRFA*) to develop international policies and agreements related to management of plant genetic resources as well as farmers' rights. Initial UPOV work (noted above) to protect breeders' rights had conflicted with farmers' concerns and broader ethical considerations of competing rights claims. A 1989 FAO Conference partly reconciled this conflict adopting two resolutions (*Resolution 4/89, Agreed Interpretation of the International Undertaking*, and *Resolution 5/89, Farmers' Rights*) aiming to balance breeders' and farmers' rights. One major ethical issue ostensibly resolved was affirming a principle of greater respect for farmers' values, traditions, and knowledge. Other serious ethical concerns soon emerged over Intellectual Property Rights (IPRs), especially claimed by corporations, partly resolved in legal terms (yet without well addressing important ethical concerns) under the Agreement on Trade-Related Aspects of Intellectual Property Rights (known as TRIPS) in 1986, which came into effect in 1996 under the new World Trade Organization (WTO). Yet how best to interpret and apply farmers' and breeders' rights, as well as indigenous peoples rights (who may also be farmers) in human rights law and in trade, has remained ethically contentious, legally confusing, and politically debated and remains open to conflicting interpretations (Andersen 2005; Moore and Tymowski 2005; and Oguamanam 2006). IPRs and TRIPs remain contentious now despite ostensibly greater legal protection for farmers and indigenous rights in principle.

1990s to 2000: Sustainability, Agricultural Biotechnology, Genetic Safety, and Bioethics

The 1990s began as the Cold War ended. But other debates or concerns relevant to sustainability, food, and agricultural development ethics followed with major implications that some IOs, particularly UNESCO and then FAO, were to explore more strategically and systematically. With guidance from the FAO, the CGRFA, and other agencies or commissions, new IOs or programs were launched to coordinate more effective responses to ethical as well as practical challenges for conceptualizing sustainable agriculture and achieving food security.

The 1992 Rio Declaration on Environment and Development and the United Nations Conference on Environment and Development (UNCED) agreed by most world leaders reflected shared ethical assumptions or values or principles intended to shape a common (sustainable) future. Principle 15 of the Declaration building on some earlier academic and UN deliberations affirmed the value of "the precautionary approach" stressing that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." This "precautionary principle" was one of UNCED's key ethical guiding notions for future environmental (and food or agricultural) decision-making, although it has remained a contentious idea, continuously debated for its moral, policy, and practical implications, especially related to assessing environmental as well as legal risks associated with genetically modified (GM) seeds, plants, or food among other issues. UNCED's *Agenda 21* vision offered tools, mechanisms, and targets. *Chapter 31* referred to "Scientific and Technological Community" responsibilities to develop codes of

practice or guidelines regarding environmentally sound and sustainable development and "...establish advisory groups on environmental and developmental ethics...to develop a common value framework...." Other Chapters discussed "sustainable agriculture," farmers, and more, implicating IOs' follow-up.

UNCED planning coincided with negotiations for the 1992 *Convention on Biological Diversity* (CBD) and a new IO, the Secretariat of the Convention on Biological Diversity (SCBD). The CBD posed a major ethical challenge, that is, "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies..." (Article 1, Objectives). What can be considered "fair" or "equitable" and whose rights to consider was (and still is) a major ethical and legal concern. Contentious technical debates and political negotiations have been in the CBD language of "access to genetic resources and benefit-sharing" (ABS) with competing rights claims, ethical arguments about sharing and access, as well as improved standards for trade, and stated (but still conflicting) needs of researchers, governments, industry, farmers, and indigenous peoples (Moore and Tymowski 2005; Greiber et al. 2012).

Other IO processes also recognized serious ethical concerns associated with the rapidly emerging field of biotechnology research. In 1991, the CGRFA in consultation with over 400 international experts from the scientific community and civil society prepared a *draft Code of Conduct on Biotechnology*, to maximize its positive effects and minimize possible negative effects. In 1993, the FAO through the CGRFA recommended that the biosafety component of the draft Code be forwarded to the CBD to be considered for its Biosafety Protocol then under negotiation. The CBD approved the *Cartagena Protocol on Biosafety to the Convention on Biological Diversity* in 2000. That technical agreement aimed (among other things) to ensure safe handling, transport, and use of living modified organisms (LMOs) resulting from biotechnology. The Protocol did not, however, fully resolve many larger ethical issues associated with agricultural biotechnology.

In this same period, the Consultative Group on International Agricultural Research (CGIAR), in 1997, already involved with FAO, CGRFA, CBD, and other IOs or processes reflected on how ethical principles could strengthen its own mission. The CGIAR, a quasi-UN agency established in 1971 to promote agricultural sciences for development and poverty reduction among developing nations, today consists of 15 specialized centers working in over 100 countries. The CGIAR has partnered with other IOs to protect agricultural biodiversity and native varieties through gene banks, in situ conservation, crop research, and training. Its 1997 draft *Ethical Principles Relating to Genetic Resources* referred to four principles: equity; trusteeship of genetic resources; respect, responsibility, and integrity in science; and social benefits encouraging individual centers to elaborate with respect to their particular mandates.

The CBD after 1995 gradually broadened its mandate demonstrating biodiversity's relevance to food and agriculture. By 2000, the CBD launched a new work program on agricultural biodiversity for its "conservation and sustainable use." This was another contentious ethical concern as private corporations accused of "biopiracy" sought to assert rights to commercial exploitation of (and at times exclusive patenting of) genetic resources under the CBD and its ABS provisions or through other IO mechanisms such as the CAC, TRIPS, CGIAR, and WTO.

Further complementing (and complicating) CBD's work, the FAO, with the CGRFA (noted above), worried about loss of genetic resources as a whole, with many species or varieties under threat yet important for future agriculture development and food security. The CGRFA wanted to conserve those resources with local people's rights in the context of national sovereignty. For those purposes, the CGRFA in 1993 adopted a nonlegally binding *International Code of Conduct for Plant Germplasm Collecting and*

Transfer. But ethical concerns continued over different interpretations of human or indigenous rights claims to nature or genes conflicting with corporate IPRs within the CGRFA Code, CBD, TRIPS, CGIAR, and other mechanisms.

During the 1990s, some science and technology issues became even more publicly contentious. In response, the Educational, Scientific and Cultural Organization (UNESCO), in 1993 launched an International Bioethics Committee (IBC) and created a new bioethics program, initially working on human genome issues, but later addressing plant genetics with food and agriculture. In 1998, UNESCO established the *World Commission on the Ethics of Scientific Knowledge and Technology* (*COMEST*) as an advisory body to address broader concerns (ten Have and Jean, 2006, p. 336).

Toward the end of the 1990s, many ethical challenges posed by rapid advances in science and society more clearly and urgently implicated food and agriculture. The FAO commissioned a related study of FAO staff views. That review, based on 103 interviews, indicated that although ethics had not been openly discussed much until then most staff members had strong ethical motivations. FAO staff perspectives covered a range of broad ethical issues (food, rural development, information, biotechnology, sponsorship/funding, environment, animals, and personnel) including many more specific subthemes (Bhardwaj et al. 2003).

2000 to 2008: Ethical Biotrade, Water, Corporate Accountability, and Food Rights

As the new century began, many interrelated ethical challenges affecting food security, agriculture, and human rights persisted, intensified, grew, diversified, and became more complex but were still poorly debated or analyzed in public discourse or IO policies and programs. However, after 2000 some IOs began to more systematically (through dedicated new programs and budgets) address some of those issues. They began a more critical examination of the ethics of emerging technologies applied to food and agriculture; how to best realize food rights; began to focus more strategically on water and climate change issues (some affecting food and agriculture); and initiated a dialogue about ethical guidelines for corporate industrial behavior affecting agri-food businesses.

Among the principal IOs or special new initiatives implicating food security and agricultural development ethics were the FAO and UNESCO (introduced above) and new IOs or offices including the UN Global Compact (UNGC) and the UN Special Rapporteur on the Right to Food, both beginning work in 2000.

The United Nations Conference on Trade and Development (UNCTAD) which had been founded in the 1960s to better represent the economic, trade, and investment interests of the poorer, and then politically marginalized developing countries, made a small contribution to ethical trade guidelines affecting food and agriculture products among other sectors.

UNCTAD's new work focused on trade issues related to the CBD and other international initiatives. This resulted in new *BioTrade Principles and Criteria* in 2007, which included Criterion 2.2 stressing that "management of agrobiodiversity should include agricultural practices that contribute to the conservation of biological diversity" and "create conditions that favour the regeneration of natural ecosystems." Criterion 4.4 further underscored that "Negative impacts on, *inter alia*, productive and local cultural practices that affect diversification and food security should be prevented" (UNCTAD 2007).

UNCTAD also provides guidance by serving on the board of a related new NGO called the Union for Ethical BioTrade (UEBT) established in 2007. The UEBT has focused on further developing related concepts and principles, with more specific technical standards and verification frameworks. These have all built on UNCTAD's seven *BioTrade Principles and Criteria*, namely, (i) conservation of biodiversity, (ii) sustainable use of biodiversity, (iii) fair and equitable sharing of benefits, (iv) socioeconomic criteria, (v) compliance with national and international regulations, (vi) respect for the rights of actors

involved in BioTrade activities, and (vii) clarity about land tenure, use, and access to natural resources and knowledge. Agriculture, as well as aquaculture, sourcing, harvesting, production, processing, value chains, market development, and food trade, cuts across all of these principles. UNCTAD's most recent work further offered specific guidelines for assessing biotrade resources based on biological as well as socio-economic studies (UNCTAD 2013).

New attention in this period also focused specifically on transnational corporations (TNCs) including discussions of agribusiness. One UN Commission on Human Rights report in 2003, for example, on *Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights* mentioned TNC obligations toward the realization of the right to adequate food. Among the new UN initiatives have been strategies to improve corporate social responsibility (CSR). The UNGC articulated "ten principles for a better world," which support human rights, labor standards, environmental protection, and (more recently) anticorruption, for those businesses which signed on to the Compact.

However, critics of the UNGC and many other CSR initiatives, which benefit from the UN image, affiliation, or guiding principles, have suggested essentially that this type of CSR focuses on ideas of "responsibility" and voluntarism in codes of conduct or guidelines while it advances positive corporate images but avoids corporate "accountability." The UNGC, they argue, has not provided any clear monitoring or enforcement mechanisms (Corporate Watch 2006, p. 8). One UN study historically documented this issue, highlighting similar concerns with brief reference to food corporations (Bendell 2004).

UNESCO after 2000 also identified major ethical issues, analyzed policy implications, made additional program recommendations, conducted ethics education activities, prepared learning resources, and facilitated new international agreements. In 2002, it made ethics one of five priority areas under its Social and Human Sciences Program. One initial result was UNESCO's 2005 *Universal Declaration on Bioethics and Human Rights*, which under Article 17, referred to ". . .the role of human beings in the protection of the environment, the biosphere and biodiversity." A major ethical implication of that agreement among UNESCO member states is that "the world's major food crops depend on new genetic material from the wild to remain productive. . ." (ten Have and Jean 2009, p. 251). This UNESCO Declaration complements others including the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) in 2001 and the 1994 TRIPS Agreement.

UNESCO, in the new century, also began more focused work on various other ethical issues associated with biodiversity, water, and climate change. As early as 2000, UNESCO's COMEST was working on water ethics. One report focused on freshwater consumption and use referring to agriculture and food security implications while offering suggested ethically based guidelines. It said food security was a "moral imperative" and that "more efficient use of water for agriculture should be encouraged to increase soil production and crop yield and to avoid waterlogging and salinization (Selbourne 2000, pp. 11–13, 38).

In 2007, UNESCO's *International Hydrological Program* with support from its *Division of Water Sciences* with others co-organized an *International Conference on Water, Ethics and Religion* in Stockholm and a workshop in Spain while engaging other UN agencies. Those meetings discussed, among other issues, ethics of virtual water in food trade, as well as broader food security, food production, and governance concerns. The meeting and research report involved experts from the United Nations University (UNU) and International Water Management Institute (IWMI), a Colombo-based CGIAR center working on interrelated water, environment, and food issues (Llamas et al. 2007, pp. 81–96, 171–186).

For UNESCO, the Asia Pacific region was one of the most active in establishing new networks, hosting conferences, and producing publications on ethical issues some including references to food and agriculture ethics. One, for example, in 2010 as its title suggests, wrestled with the issue

of *Universalism and Ethical Values for the Environment* as part of a new UNESCO "Ethics and Climate Change in Asia and the Pacific (ECCAP) Project" (Rai et al. 2010). Another, the following year, entitled *Ethics and Biodiversity*, included analyses concerning biodiversity and food production, food safety, food webs, water, climate change with concern over rights claims and food security, as well as special reference to Asian contexts and cases (Macer 2011). Several other working groups and UNESCO meetings as part of this work addressed related ethical issues.

The FAO after 2000 formally designated ethics a new priority for interdisciplinary action partly in response to expanding TNC influences among other factors. It established a new Committee on Ethics and an independent Panel of Eminent Experts to review critical issues and inform decision-making. The FAO over the next several years held consultations on particular ethical issues, conducted studies, and issued a series of reports. They included a broad overview: (1) *Ethical Issues in Food and Agriculture*, 2001; (2) *Genetically Modified Organisms, Consumers, Food Safety and the Environment*, 2001; (3) *Expert Consultation on Food Safety: Science and Ethics*, 2002; and (4) *The Ethics of Sustainable Agricultural Intensification*, 2004. Those reports, addressing many issues FAO staff earlier identified, including more recent concerns, such as such as biofuels, articulated various ethical challenges and dilemmas while offering some technical analysis of specific issues with recommendations for policy-makers.

After 2000, some IO work more explicitly linked human rights, food security, and agriculture with ethics, drafting or calling for related guidelines, particularly with concern over the growing role of TNCs which arguably have ethical, if not legal, responsibilities to contribute to the realization of the "right to adequate food." The *UN Special Rapporteur on the Right to Food* at the time asserted that their global reach was "not matched by a coherent global system of accountability" and that "despite wielding greater power than ever before" TNCs were "trying to avoid being held accountable. . ." (Ziegler 2006, pp. 16–18). The FAO began facilitating consultations and reports on ethical issues with practical accountability tools for TNCs and others. This resulted first in the 2004 *Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security*.

The CGIAR in this same period began reflecting more seriously on ethical questions in response to internal reviews as well as public criticism of its biotechnology work. In a 2007 *Report of the Biosafety Panel to the CGIAR Science Council on Biosafety Policy and Practices of the CGIAR Centers*, the CGIAR suggested much debate had been about the perceived morality of transgenic technology, but that its concern was "practical ethics," or learning from and adopting "best practice." The CGIAR did not question the moral value of transgenics research, which it had been increasingly engaged in and planned to continue. It instead focused on "safety" issues and protocols. Nonetheless, the CGIAR's first major ethical review in 2008 acknowledged it had poorly analyzed or responded to many "sustainability" or "protecting nature" concerns and that budget pressures could undermine an ethical vision (CGIAR Science Council 2008, p. 86; and discussed in Nelles 2011, p. 412).

Finally, one other IO after 2000, the United Nations Environment Program (UNEP), which had partnered with UNESCO since the mid-1970s on joint environmental education (EE) activities, made a small contribution under its EE unit programming to environmental ethics education. UNEP produced a guidebook with illustrations referring to food security and agriculture challenges among many others (Jickling et al. 2006, passim; and UNESCO n.d.).

2008 to Present: Agrobiodiversity Protection, Land Grabs, Responsible Investment, Climate Crisis, Environmental Change, and Sustainable Agriculture

Interconnected global financial, fuel, and food security crises during 2008 and 2009, with food

riots over prices, hunger, and access, led to protests worldwide among farmers, consumers, and civil society groups (Holt-Gimenez et al. 2009). Such deepening and widening problems contributed to ongoing and new ethical considerations. Climate change concerns with ethical debates about some responses, such as biofuels competing with food security and ecological objectives, also created new, more complex dilemmas for IOs and led to new debates and initiatives. Governments and TNCs seeking new food sources and profit-making opportunities including new land acquisitions brought new ethical debates amid CSR ideas, corporate accountability, and the need for better guidelines for business and investment that would still insure farmers' and broader human rights. New IO initiatives followed.

By this time initial CBD negotiations led in 2010 to the *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*. It included a new responsibility commitment on how best to conserve and protect agrobiodiversity. UNEP also made a small contribution to related debates in partnership with a university-based ethics center. It published a related ethics report which pointed out that the CBD, which also was concerned with the importance of biodiversity for food security and sustainability of the world's food supplies, did not define the meaning of equity and fairness (Schroeder and Pisupati 2010, pp. 9, 19). The UNEP study included analysis of human rights and benefit-sharing issues surrounding the ITPGRFA and other themes.

Ethical issues over agricultural biotechnology, relations among scientists and small farmers, and IPRs intensified as CGIAR partnerships increased with private sector companies, foundations, and government donors' influence over research priorities. After the complete restructuring of the CGIAR in 2009–2010, it newly addressed ethical issues in 2012, adopting *CGIAR Principles on the Management of Intellectual Assets* (known as "*CGIAR IA Principles*") implying it had a responsibility to share its research results as a "public good" while strengthening national research systems to combat poverty among the poorest while promoting sustainable development. The referential, interpretative context for *IA Principles* implementation was various legal agreements, treaties, protocols, and processes and human rights instruments including the CBD, Nagoya Protocol, UPOV Conventions, and others.

Also in 2012, the FAO helped conclude both *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* and *FAO Guiding Principles for Responsible Contract Farming Operations*. One major related review facilitated by the UN Committee on World Food Security (CFS) has also been *Principles for Responsible Agricultural Investments* (PRAI) Zero Draft, to be finalized in 2014 as stakeholder consultations continue. That work built on FAO collaboration with the International Fund for Agricultural Development (IFAD), UNCTAD, and the World Bank (see IFAD, the UNCTAD Secretariat, and the World Bank Group 2010). The PRAI draft focuses on eight main principles to improve or strengthen "responsible investments in agriculture and food systems" including reference to food security and nutrition and the progressive realization of the right to adequate food. . . (Principle 1); economic and social issues (Principle 2); environment, natural resources, and climate change (Principle 3); cultural issues (Principle 4); policy coherence and sector development (Principle 5); governance, grievance mechanisms, and accountability (Principles 6 & 7); and review mechanisms and accountability (Principle 8). Numerous other agreements, codes, and processes underpin or link to the proposed PRAI (Committee on World Food Security 2013). Still other IO initiatives and related CSO or business led activities complement CFS and PRAI work (Committee on World Food Security 2013).

The CFS after 2009 when it underwent reform (partly in response to the 2008 food, financial, fuel, and emerging climate crises) has been one of the more innovative, civil society responsive mechanisms of the UN system, including family farmers, fisherfolks, herders, landless, urban

poor, agricultural and food workers, women, youth, consumers, and indigenous people. But although various groups have engaged in PRAI negotiations, some, including Via Campesina, GRAIN, and other key civil society networks and farmer movement organizations, criticized the PRAI concept, assumptions, and ethical foundations. They suggest the FAO should prevent land grab abuses, yet through the PRAI it (unethically) legitimizes farmland grabbing by corporate and state investors. Fundamentally, as they note, the PRAI and similar instruments are all *voluntary* guidelines (i.e., suggestions), not legally enforceable food rights or farmer rights (i.e., to protect land or biodiversity, produce food, save seeds, etc.). Some civil society and farmer rights critiques center around this overarching ethical issue as well as the basic, institutionalized problem of a TNC-dominated global agribusiness and food system supported by governments. They demand justice against rights abuses and support for alternative (agroecological, small farmer based) systems (GRAIN 2012; Holt-Gimenez et al. 2009).

Reflecting similar concerns with respect to some overlapping or broad ethical issues identified or implicating the FAO, WHO, Codex, CBD, CGRFA, UNESCO, CGIAR, and WTO, a FAO Expert's Commission on Ethics argued that core ethical issues in food and agriculture arising from the TRIPS, for example, were then still unresolved and pressing. Those issues were:

- The increasing risk of a transfer of important knowledge from the common domain (public goods) to the private domain, often controlled by corporations
- The likely negative impact of the TRIPS Agreement on the livelihood of poor farmers
- The uncertain impact on sustainable access to affordable, safe, nutritious food for consumers with limited income
- The environmental impact, including the effect on biodiversity

(Food and Agriculture Organization of the United Nations 2011, p. 32)

Finally, also under UNSG auspices and administrative coordination of the Sustainable Agriculture Team of the UN Global Compact (UNGC), the UN is currently developing the Sustainable Agriculture Business Principles (SABPs) in consultation with a "Core Advisory Group" (CAG) of various business, civil society, NGOs, experts and academics, commodity roundtables, as well as other UN agencies. The UNGC's initial *white paper* identified six "frames" for SABPs based on the following ideas: (1) be environmentally responsible; (2) ensure economic viability and share value; (3) respect human rights, create decent work and help rural communities to thrive; (4) encourage good governance and accountability; (5) improve access to and transfer of knowledge, skills, and technology; and (6) aim for food security, health, and nutrition. It further suggests drawing from "Principles for Responsible Engagement" adapted from a November 2010 guide related to business and water policy. A final agreement on SABPs is expected sometime in 2014 (UN Global Compact 2013).

Over the past decade, but especially since the interconnected food, financial, and fuel crisis of 2009–2009, global environmental problems have also intensified and become more difficult to curtail or mitigate. They include: land degradation, deforestation, desertification, pollution, aquifer depletions, greenhouse gas emissions and climate change, habitat and biodiversity loss, GMO contamination/pollution, and more. A recent FAO experts' review summarized some of these and the ethical response needed as "essentially twofold." The first is to promote conditions to ensure access to adequate food. The second is to promote policies and measures ensuring ecological sustainability of food production (FAO 2011, p. 10). These two main ethical concerns – food rights and ecological sustainability – will likely remain central to current public debates, unresolved science and policy conflicts, and related IO initiatives in the future.

Summary

Ethical debates and proposed norms or guides, some linked to food rights and security discourse, have been part of food and agriculture within UN system and affiliated IOs since their early

foundations in the 1940s. Beginning in the 1960s and 1970s, food safety and quality issues grew with ethical concerns among existing or new IOs and agreements. From the 1980s environmental issues and sustainable agriculture concepts informed ethical debates as well as new codes of conduct in food and agriculture. After 2000, the increasing power of TNCs involved in food and agriculture, greater environmental awareness, and human rights concerns, as well as criticism from civil society and farmer groups, leading to new investment codes and principles, some still under negotiation. Yet many ethical debates remain inadequately addressed by IOs today. Unresolved concerns still surround questions of TNC accountability and if "ethical" only approaches (i.e., principles, standards, voluntary codes, etc.) will be sufficient to insure environmental sustainability and food security rights or support ecologically sustainable agricultural development that will further adequate and dignified livelihoods for small farmers.

Glossary of IO Terms/Acronyms

ABS Access to genetic resources and benefit-sharing
CAC Codex Alimentarius Commission
CBD Convention on Biological Diversity
CFS Committee on World Food Security
CGIAR Consultative Group on International Agricultural Research
CGRFA Commission on Genetic Resources for Food and Agriculture
CHR Commission on Human Rights
COMEST World Commission on the Ethics of Scientific Knowledge and Technology
CSM Civil Society Mechanism (CSM), Working Group on investment of the CFS
CSR Corporate social responsibility
FAO Food and Agriculture Organization of the United Nations
IBC International Bioethics Committee
IPRs Intellectual Property Rights
ITPGRFA International Treaty on Plant Genetic Resources for Food and Agriculture
OECD Organisation for Economic Co-operation and Development
PRAI Principles for Responsible Agricultural Investment
SABPs Sustainable Agriculture Business Principles
SCBD Secretariat of the Convention on Biological Diversity
TRIPS Trade-Related Aspects of Intellectual Property Rights
UEBT Union for Ethical BioTrade
UNCED United Nations Conference on Environment and Development
UNCTAD United Nations Conference on Trade and Development
UNESCO United Nations Educational, Scientific and Cultural Organization
UNGC United Nations Global Compact
UPOV International Union for the Protection of New Varieties of Plants
WHO World Health Organization
WTO World Trade Organization

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Ethics of Dietitians

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Synonyms

Decision-making framework; Dietitians; Ethics; Food; Medicalization; Nutrition

Introduction

Registered dietitians are those charged with addressing nutritional health in clinical, public health, and private environments as well as overseeing the production of large-scale food operations in hospitals and other organizations. Given the ethical debates surfacing within contemporary food and nutrition topics, dietitians are often in positions where ethical decisions are required. However, ethics as an area of inquiry within dietetics is limited. Furthermore, there is a paucity of evidence that ethics is taught to dietetic students during their undergraduate education. This situates dietitians as having to address ethical issues while being largely unprepared to do so. The purpose of this essay is to outline ethical debates in dietetics and propose a means to adequately prepare food and nutrition professionals for ethical decision-making frameworks arising in practice. Additionally, areas of further inquiry into ethics within the context of dietetic education and practice will be outlined.

Dietetics as a Profession

A hallmark of the dietetic profession is that it emerged from home economics in the 1970s. Increasing determination to medicalize nutrition and remove the work of dietetics from the home and place it more squarely in the public realm underscored this period in the profession's historical development. Along with this move came the growing importance of the dietetic professional association that marketed dietitians as trusted authorities on nutrition and food. In doing so, the association made clear that dietetics was an exclusive profession to which entry was only granted by completing a 4-year university degree and a 1-year practical internship completed typically in a clinical setting. Simultaneously, the associations developed codes of ethics to guide dietetic practice.

Codes of Ethics in Dietetics

Dietitians of UK, the Academy of Nutrition and Dietetics (USA), the Dietitians Association of Australia, and Dietitians of Canada have all provided their codes of ethics for public viewing online. Although these national codes exist, their enforcement varies. In Canada, for example, the regulation of dietetic practice is a provincial matter, thus leaving the national association's code of ethics unenforceable. The ten provincial regulatory bodies have provided distinct but not dissimilar codes for dietetic practice that apply to members in each province. If there is an ethical violation, the provincial regulatory body has jurisdiction to address that violation. According to representatives at each nation's association, reported ethical violations are extremely rare in dietetics.

Ethical Dilemmas in Dietetics

As mentioned earlier, the nature of dietetic work heightens the possibility of ethical dilemmas in practice. Food has long been known to be associated with ethical debate given its strong moral- and value-laden meanings. In the preface to the newest edition of "Food, Morals, and Meaning," Coveney (2006) writes "...we can understand that nutrition is not only a science but also an ethos which presents a problem for modern

individuals in regard to their food choices and pleasure" (p. xvi). As dietitians are socialized into the profession of food and nutrition, their own beliefs and attitudes combine with those held by the profession. At times, this presents great conflict and tension for the practicing dietitian (Gingras 2005). Several such dilemmas are outlined in the following section.

Ongoing Ethical Dilemmas

Scope of Practice

As the field of dietetics continues to evolve, so too does dietitians' scope of practice. As dietitians venture into new areas of practice, they inevitably encounter new and unique ethical issues. Dietitians currently work primarily in the following areas: clinical practice, foodservice management, research and education, and industry/consulting (Anderson 1993). Specific issues faced by dietitians in these varying practice areas will be outlined in more detail below. However, it is helpful to first think about what types of ethical dilemmas might be encountered by dietitians working in different domains. Clinical ethical issues include patient autonomy and rights, confidentiality, and artificial nutrition support. Additionally, as dietitians take on new clinical duties such as finger pricking for blood glucose testing or inserting nasogastric tubes to feed those who cannot eat through by the mouth, individual practitioners have an ethical responsibility to only engage in such acts when they feel competent to do so (Steinecke and The College of Dietitians of Ontario 2012). Individuals working in foodservice management face ethical issues related to human resources management, as well as the management of other resources such as money, materials, and time (Anderson 1993). Those working in research and education must deal with plagiarism, knowledge translation and dissemination, and ethical research pertaining to human subjects. Finally, dietitians who consult for or represent industry must be keenly aware of the potential for conflict of interest to arise in their work, which could impact their professional ethics.

Tube Feeding and End of Life

The issue of artificial nutrition support at end of life rose to prominence in the public eye with the case of Cruzan vs. Director, Missouri Department of Health (1990), regarding the withdrawal of nutrition support from Nancy Cruzan after she had been in a persistent vegetative state for 5 years after falling victim to a car accident at the age of 26. The issue came to light again with the Terri Schiavo case of 2005. In both cases, life support was eventually discontinued for the patient; however, substantial ethical questions remained unresolved (O'Sullivan Maillet 2008). In a position paper put out by the American Dietetic Association on the "ethical and legal issues in nutrition, hydration and feeding," three major ethical frameworks through which end of life care can be viewed, each with a distinct perspective, are outlined. The first is the utilitarian view, most famously purported by Mills in which the ethical option is the one that provides the greatest positive effect and least negative effect on all individuals impacted. The second perspective is Kant's deontological viewpoint whereby certain actions are viewed as inherently right or wrong irrespective of their consequences. Finally, there is an Aristotelian outlook, which focuses on the virtue of the decision maker (O'Sullivan Maillet 2008). The association maintains that "the patient's right to self-determination [should be] the overriding principle" in decision-making. In cases where an individual is unable to express their own desires, a substitute decision maker should speak on behalf of the patient guided by what they believe the patient would want, even if this is against the said decision maker's personal desires (Andrews and Marian 2006).

In a study on the opinions of Louisiana dietitians on nutrition support and end of life, Langdon et al. (2002) found that a majority of dietitians (60 %) were in support of "foregoing, withholding, or withdrawing nutrition support at end of life." Although most dietitians believed that the patient or family are the most qualified to make decisions regarding the matter, 95 % thought that the dietitian should be involved to some extent in the decision-making process.

However, only half of them felt qualified to provide the necessary information to be of assistance. Interestingly, research has shown that continued nutrition support in terminally ill patients may in fact be detrimental. It can lead to increased gastrointestinal fluids and subsequent vomiting increasing the requirement for nasogastric suctioning, increased respiratory distress and choking due to fluid retention in the pulmonary system, peripheral edema, and increased urine, which may lead to the requirement of catheterization in weaker individuals. Furthermore, terminally ill patients do not usually report hunger and often have little desire for food. The major negative impact of withdrawing nutrition support at this stage of life is dry mouth, which can be alleviated with proper mouth care (Andrews and Marian 2006). For a more comprehensive discussion of artificial nutrition support, individuals should refer to Monturo's (2009) review of the issue as published in the Hasting's Report from 1971 to 2007.

Industry Business and Food Service-Related Ethical Issues

Although dietitians in all areas of practice may at some point be confronted with potential conflicts of interest, dietitians consulting or working for industry or profit (whether in food service or private practice) must acknowledge this ethical issue on a daily basis. This is because they have obligations to diverse groups of people including clients, customers, managers, partners, and shareholders (Grandgenett and Derelian 2010). One example of an ethical dilemma faced by dietitians in industry is the request to endorse the marketing of a product that may not have substantial scientific evidence to support its use. Alternatively, dietitians may promote a product by citing appropriate scientific evidence, but neglect to disclose their personal affiliation to company or trade association, which is also considered unethical. In the new age of social media, many dietitians maintain personal websites or blogs on which they may endorse certain foods or products. It is not uncommon for companies to approach dietitians with propositions to promote their products in exchange for some sort of material compensation (Grandgenett and Derelian 2010). Even if the compensation takes the form of free samples of the product, this can be considered a conflict of interest. More mundanely, dietitians have also been accused of being co-opted by the diet food industry in their promotion of low-fat foods, which have not been shown to reduce the risk of chronic disease (Austin 1999).

Dietitians working as foodservice managers also face conflicts of interest as food manufacturers may offer incentives or rebates to hospitals that purchase their products over those of a competitor. Even if the organization and not the individual manager receives the incentives, they may still represent a conflict of interest. In these cases, dietitians should follow facility guidelines on the acceptance of gifts, make sure that products purchased meet nutritional guidelines and meet the best interest of patients, and provide full disclosure of both real and perceived conflicts of interest. An ethical dilemma, which is unique to dietitians working in food service, is the issue of employees taking food home. Although at first pass this is tantamount to theft, the action becomes ethically gray in instances where the food is about to expire or is left over and therefore will be thrown out. Furthermore, the act is akin to managers and other hospital employees taking left over catering home after a meeting. Therefore, this is an issue of institutional culture, and clear polices should be developed based on ethical principles (Barkley 2008).

Body Weight Regulation

Taking "obesity management" as one example, dietitians are currently advised through national practice guidelines to promote "healthy weights" and encourage their patients and clients to lose or gain weight to fit into a body mass index category of "normal." A wealth of new data exists that this advice is contraindicated and continuing to draw on obsolete weight management advice perpetuates medicalization of the body (Sobal 1999) and weight stigma (Puhl and Heuer 2009; Gard and Wright 2005).

In an era where many individuals living in developed countries have instant access to so much entertainment, information, communication, and even food, there is a desire among many consumers to employ a "quick fix" to meet their weight loss goals. In response to this desire, there are a plethora of dietary supplements that purport the benefit of weight loss, as well as a small number of pharmaceutical products. It is important that dietitians remain up to date with the research and employ evidence-based practice when counseling patients regarding the use of such products (Biesemeier and Cummings 2008).

Research Ethics

The most common ethical breach in scientific research is compromising data integrity. This can take the form of data fabrication or publication of misleading data. Reporting bias, whereby researchers only publish data that are consistent with their research objectives, personal beliefs, or funders' interests, also falls into this category. Another major issue of academic integrity is the practice of either excluding authors who have significantly contributed to the research or including authors who have failed to do so (Nicklas et al. 2011). An ethical issue specific to healthcare research, especially when carried out in a community setting with underserved populations, is the provision of ancillary care for research participants. This problem is further complicated in nutrition-based research since food is not merely medically therapeutic, but also a basic aspect of the human experience encompassing social, emotional, and cultural dimensions (Merritt and Taylor (2012). Merritt and Taylor (2012) discuss three potential ethical challenges related to this issue. First, providing such care may impact study outcomes, particularly in trial-type study designs. Second, there is the question of whether any care provided to participants should be offered to the community at large. Third, field workers are typically not clinicians but require adequate training to determine the need for ancillary care, since they are in closest contact with participants and community members and therefore more in tune to their needs.

New Ethical Issues to Consider

Unique Ethical Issues Related to the Aging Population

In recent decades, many countries have gone through a demographic shift resulting in an increasing proportion of older individuals in their populations. Dietitians face many unique ethical challenges when servicing older individuals. Increasing evidence has linked dietary factors to healthy aging as they are not only important for the treatment of chronic diseases, but also for the prevention of such conditions (Leppert 2009). However, food does not only serve a therapeutic purpose in the lives of individuals. What meaning people derive from food is determined by social, emotional, and cultural factors. Therefore, especially for older individuals, food and diet can have an enormous impact on quality of life. The ethical dilemma then becomes, to what extent should a dietitian recommend restricting intake of certain foods in the name of health, when those foods are important to older individuals for other reasons. This issue is further complicated in institutional or community program settings where governments or organizations mandate dietary parameters. For example, dietitians may face questions such as what to do if an 85-year-old with hypertension wants to eat eggs and bacon every morning? Or how should they discuss limiting sweets with a 94-year-old with diabetes whose blood sugar level occasionally rises beyond clinical guidelines when they eat chocolate bars? Dietitians also need to realize that elderly clients who have limited social contacts and are seen at home are particularly vulnerable to power dynamics in the client/provider relationship (Leppert 2009).

Organizational Ethics and Resource Allocation

As dietitians become more involved in business in both the private and public sector (e.g., taking on more administrative duties within hospitals), they need to begin to think more about the ethics of organizations. Issues arise in the areas of

human resources (such as hiring, firing, job and task outlines, and provider fatigue/burnout), internal and external communications, and corporate responsibility (to clients, shareholders, and communities at large). Even non-managerial dietitians need to be thinking about these issues. For example, interprofessional collaboration and dynamics may pose ethical challenges when another healthcare professional provides what a dietitian believes to be misinformation to a patient or client. Dietitians may also think about advocacy for increased positions within a healthcare organization. Although resources are strained, limited dietitian availability in both acute and chronic care settings may be detrimental to both clients who are not getting the best care possible and dietitians who may face burnout.

Food Security, Cultural Competence, and Environmental Sustainability

The World Health Organization defines food security as "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life" (2013). This definition is often expanded to include notions of acceptability and sustainability. To that end, dietitians need to ask whether the dietary recommendations they make are appropriate given these factors. For example, dietitians may want to consider education of patients or clients regarding sustainable food choices when recommending they consume potentially environmentally harmful foods such as fish. Additionally, some people may not find genetically modified organisms acceptable, while others may feel that such foods might increase environmental sustainability. It is important that dietitians remain up to date on the evidence regarding such foods so that they are able to make unbiased recommendations while at the same time remaining sensitive to consumer beliefs and values (Roberts et al. 2006). Acceptable foods are also culturally appropriate, and while cultural competence is considered best practice, an argument can be made that it should also be considered ethical practice.

Perhaps the most important component of food security is access. Dietitians need to be aware of diet-related disparities, defined as "differences in dietary intake, dietary behaviors, and dietary patterns in different segments of the population compared to the general population," and nutrition-care disparities, defined as "differences in access, delivery, and health outcomes of dietetic services offered to people with similar conditions," which together make up "dietetics-related inequalities" (Fileti 2011). Furthermore, dietitians need to ask themselves to what extent are they personally and professionally responsible to reduce such disparities through actions such as advocacy?

Nutrigenomics

Perhaps the most recent ethical issues to emerge in the field of dietetics are those related to nutrigenomics. Researchers have found links between genetic variance and individuals' ability to digest, absorb, or be otherwise impacted (either positively or negatively) by certain nutrients as well as their potential susceptibility to nutrition-related chronic diseases. The study of gene-diet interactions and the increasing availability of genetic tests on which clinicians can base recommendations raises questions regarding confidentiality, privacy, and genetic discrimination. Many questions remain unanswered: Should insurance companies have access to the results of such tests? Do dietitians have the duty to warn relatives who may have similar genetic susceptibilities? Should those unable to provide informed consent be tested? Should the testing be made available to minors and those who cannot afford such testing procedures (Reilly and DuBusk 2008)? Additionally, the psychosocial effects of receiving such test results are still unknown (Ryan-Harshman et al. 2008).

Ethical Decision-Making Framework for Dietetics

The framework that follows is but one example of a step-by-step process of ethical inquiry that can be applied to difficult situations a dietitian might encounter in practice. This process can be worked through independently or collaboratively with

others representing interdisciplinary practice areas. The benefits of working through such a framework collaboratively are the enhanced veracity of a final decision multiple perspectives can offer. The expectation is to apply the decision-making framework from beginning to end without missing a single step.

1. **Problem**
   Name the problem clearly. Where is the conflict? What are the various perspectives on the problem?
2. **Acknowledge Feelings**
   What are the "gut" reactions? Are there biased perspectives? What loyalties to individuals hold to these varied perspectives? How do such loyalties influence the final decision?
3. **Gather the Facts**
   What are the ethically relevant facts? Whose account of the facts counts most? Have all the relevant perspectives been obtained? What do the institution's policies or guidelines say? What does the relevant law say?
4. **Consider Alternatives**
   What are the alternative courses of action? What are the likely consequences?
5. **Examine Values**
   What are the preferences of the person receiving care? Are other values relevant? Which of the values conflict?
6. **Evaluate Alternatives**
   What other options are available? What are the implications and consequences of each of those options?
   Adapted from http://www.stmichaelshospital.com/pdf/ethics/ethical_decision_making_framework.pdf

By recognizing the ethical dimension to any eating or nutrition issue, dietitians can apply an ethical decision-making framework to it and then decide how to proceed. Applying an ethical decision-making framework may or may not have a variety of implications. It may or may not change the dietitian's course of action. It also may or may not help the dietitian to feel more at ease with whatever decision they make and whatever course of action they take. However, what the ethical decision-making framework does allow is an opportunity for the dietitian to apply a thoughtful analysis to any particular issue, ideally in a collaborative setting, so as to make a wholly informed decision on how to act.

Areas of Future Inquiry

Given the dearth of evidence demonstrating the effectiveness of applying ethical frameworks in dietetic practice, a first effort in this regard is warranted. Qualitative research with dietitians who consent to be interviewed about their process through ethical dilemmas would also shed light on approaches that buttress "good and right" decisions regarding food and eating. Additionally, there has been no research in dietetics regarding the impact of ethics in the curriculum on decisions made in practice. Curricular interventions, those applied in undergraduate dietetic education, would initiate a more committed professional loyalty to ethical frameworks as well as determine which ethical frameworks are best applied to which ethical dilemmas. Longitudinal studies that follow students into practice and explore the ethical issues encountered and the steps taken to address those issues are ultimately the best determinant of future ethics curriculum.

Summary

Despite ethics being an under-examined topic in dietetics, food and nutrition "experts" encounter many diverse ethical issues in practice. Gender studies, law, ethics, and the humanities can help inform ethical approaches to practice in dietetics. Ongoing research into effective ethical decision-making and education of new practitioners is warranted.

Cross-References

- ▶ Ethical Assessment of Dieting, Weight Loss, and Weight Cycling
- ▶ Eating, Feeding, and Disability

▶ Eating, Feeding and the Human Life Cycle
▶ Ethnicity, Ethnic Identity, and Food
▶ Food Ethics and Policies
▶ Food Security
▶ Medicalization of Eating and Feeding

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Ethics of Nutrigenomics

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Introduction

Nutrigenomics is the study of the relationship between genes and food; like all applied sciences, it develops through contact with society. Normative assumptions, embedded in the way researchers formulate aspects of nutrigenomics research, affect this contact. These assumptions

may or may not be in alignment with currently held societal norms and values on food and health. To discuss the possible pros and cons of an alignment of nutrigenomics' assumptions and those currently held in society, one needs to reflect ethically these assumptions. The prominent view on gene-based and customized nutrition embodies at least three normative concepts. First, food is exclusively interpreted in terms of disease prevention. Second, striving for health is interpreted as quantifying risks and preventing diseases through "positive" food–gene interactions. The third normative idea is that disease prevention by minimization of risks is an individual's task. The thesis of this entry is that these concepts on currently dominant customized nutrition will not match easily with the concepts on food and health of various food styles that roam western societies and with a broader view of the relationship between food, health, and the meaning of life. Many people don't want to be a health freak. The non-synchronized coevolution of nutrigenomics and of society due to this mismatch of food styles and values is a challenge for nutrition scientists. To synchronize and optimize the realignment of customized nutrition and society, it is proposed that customized nutrition's research policy changes to a research partnership with society on the basis of fair representation of various food styles, in which health is not the only food value. Some current research programs develop those more encompassing views on customized nutrition.

Nutrigenomics Research: Organization and Assumptions

Organization

Nutrigenomics is directed to contribute to the response of complex health problems, including but not restricted to pandemic risks or the "obesity epidemic." The research covers a variety of specialties and requires a lot of money, collaboration, and interdisciplinary work. Biology, nutritional sciences, and human physiologies are some of the disciplines to study the gene–diet interaction. The molecular focus on gene sequences and gene expression is the most important. Quite a number of scientists are working in this field of research. In the USA there are big groups working at UC Davis and with the FDA, in New Zealand we have Nutrigenomics New Zealand (NuNZ), and in Europe we have the DIOGenes and NuGO consortia and the Dutch Nutrigenomics Consortium. In particular, in the first decade of this century, scientists were able to gather a lot of support, and a lot of money went to this undertaking, making nutrigenomics "big science" (Afman and Müller 2012, p.68). The promise of nutrigenomics to lower public health cost was taken seriously by many policymakers and funding organizations, and many scientists felt that for the first time, nutrition science was being listened to (Penders 2010, p. 13).

Normative Assumptions of a Prominent Script in Nutrigenomics

In Komduur, Korthals, and Te Molder (2009), there are three normative assumptions distinguished in present nutrigenomics research. The authors selected papers written by ten nutrigenomics scientists (Ordovas, Mooser, Müller, Kersten, Afman, Milner, Dwyer, Wahli, Saguy, and Saris), four representatives of the food industry (German, Watzke, Mutch, and Moskowitz), and two nutritionists (Trujillo and Davis). Together these most salient normative assumptions on health and consumers comprise a prominent script in nutrigenomics.

As a result of the analysis, it turned out firstly that in the texts chosen, values regarding food are exclusively explained in terms of disease prevention through food. Health is therefore seen as a state preceding a sum of possible diseases, and food has an intervening role in delaying these possible diseases. Secondly, it is assumed that health should be explained as a calculable interaction between food and genes. Health is minimized to quantifiable health risks and disease prevention through food–gene interactions by the "right" food choice. The third assumption is that disease prevention by minimization of risks through the right food choice is the responsibility of the individual. The individual has to pay attention to make the healthy food choice and to

act accordingly on the basis of this personal responsibility either through finding out personal risks revealed through personal tests or through finding out to which risk group he or she belongs.

Together, these assumptions suggest that the good life (a life worth living, with the means to flourish and thrive) is equated with a healthy life, in which risks should be preventively calculated and balanced and in which the individual should have the prime responsibility to act in accordance to the outcome of tests by selecting the right type of food. Persons, who do not accept this task, do not act responsibly. The strong emphasis on health and the positive influence of nutrients in health was for some the reason to call this set of assumptions "nutritionism" (see Scrinis 2008).

A Daily Life Vision on Health

However, views on the relationship between health and food are notorious multi-interpretable and very diverse. This diversity is studied by sociologists; moreover, philosophers have also put forward very different views on this relationship (next section). According to the extensive sociological literature on views in daily life about health and the relationship with one's own body and with food, health is seen as a positive good that concerns the way one feels oneself as a healthy and respected person (Pajari et al. 2006; Payer 1988). This positive state is not determined by feelings of unrest or even concern for the coming of diseases in the near or far future; on the contrary, experiencing the living body and respected interactions is an enduring element of being healthy. Constantly worrying about your health during food choices is seen as an obsession for health and is viewed as a characteristic feature of a health freak and not of a social and convivial friend and relative. When persons are exclusively led by health considerations in their daily life, they are seen as disrupting the solidarity between themselves and their friends and relatives (Bouwman et al. 2009). In particular, food, as a kind of starter, occasion, or even excuse to have interaction and communication with other people, is seen as a social device par excellence to maintain and deepen preferred social relations and to have conversations. Meals and drinks together are the most common mechanisms to maintain social networks and to share opinions about prospects and problems of life with people one likes. The type of meals and drinks chosen are intrinsically connected with the type of persons one wants to be in interaction with; food is an identity issue. People that do not align easily in the choice for the food chosen for health reasons but look perfectly healthy are seen as health freaks. Stubborn differing from others and always quarreling about the food offered are seen as making fuss about social relationships and not trusting others sufficiently.

In selecting certain types of food, people mostly get their knowledge about food qualities (and therefore also about the healthiness of the food chosen) from relatives and friends that are most trusted, not from scientists (Bouwman et al. 2009). Both with respect to their understanding of food products, as in handling the behavioral and social implications of this information, they rely heavily on their talks with friends and relatives during a meal or a drink (Leathwood et al. 2007). From these already referred to reports on qualitative research on talk about food and health we are confirmed about the range of different topics that according to daily life consumers belong to the issue of health and food, and the association between them that are made, and the way these different aspects are brought in some kind of liveable balance or even harmony (Pajari et al. 2006). In general, it turns out that consumers have quite a broad and multifaceted non-biomedical definition of health, in which personal well-being plays the most important role in connection with social relations.

It is not well known what quantitative surveys say about the frequency and spread of these different views on food and health in the total population, but these reports give ample evidence of the range of different aspects that according to consumers can belong to liveable beliefs of health in relationship with food. They show that there is a coherent view on the good life incorporating

a broad concept of health that is quite different from that incorporated in the assumptions of the prominent script of nutrigenomics.

Health in Philosophy: Good Life

Many philosophers have tried to show that it is typical for human beings to ask themselves questions like the following: what do I want in life? What is the meaning of life? What makes my life worthwhile for me and others? Posing those questions implies that living routinely and unreflectively one's life is not really the best thing to do. Due to the fact that human beings have so many diverse potentialities and vulnerabilities, and that life is finite (temporal), it is necessary according to most philosophers to examine what the meaning of life for human being can be. Under the general heading that the complexity of life urges one to examine what one really wants and how to live, the answers of these questions cover different ideas of the good life. The good life is therefore the name for ideals and ideas that are often not reached but are seen as guidelines and that can make individual actions and events meaningful. The answers to the questions of what to live for differ greatly, because some argue in favor of happiness (like hedonism and utilitarianism), others for religion or philosophical meditation (like Plato and Aristotle), others for doing just and good (like Kant), and again others for a life of passion (like Nietzsche). The common thread of the idea of the good life is that human life is only worthwhile in examining its meaning in terms of certain values and putting those values as guidelines and perspectives in living (Komduur et al 2009; Graham 1990).

Humans should examine what they really want, taking into account their capacities, talents, networks, interactions, and vulnerabilities between birth and death. The idea of the good life therefore covers not only issues of living in a decent, just, or moral way together with other persons but broader also in finding out what the meaning can be of living the way one lives; it is about "human flourishing" in connecting with a broad range of other cherished values, like health, solidarity, and care. It has therefore a personal twist, which is however not to say that it is an individualistic idea (for the following, see also Komduur et al. 2009). Martha Nussbaum, who did a lot in examining the historical and systematic functions of the idea of the good life, argues that "to the Greeks, 'eudemonia' (happiness) means something like 'living a good life for a human being'. (. . .) Aristotle tells us that it is equivalent, in ordinary discourse, to 'living well and doing well'" (Nussbaum 1986, p. 6). The idea of the good life is about being respected as a member of the community and about the well-being of the community and future generations as well and therefore of doing and feeling good.

This philosophical emphasis on the broad concept of good life, the broad concept of health (as feeling good), and the relationship of health with other values in life coincides with the definition of the WHO from 1948, where health is seen as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity."

It is interesting to note that the founding father of human rights, Immanuel Kant, cherished the same opinion on the meaning to food and health. First, in his very influential essay on "What is Enlightenment" (1784, Kant 1949), he connects his ideas about being free, autonomous, and mature in choosing your own food as a kind of third liberation next to being free in saying how the world is (the issue he elaborated upon in his famous first critique of pure reason) and expressing how the world should be (he elaborated upon this issue in his second critique of practical reason):

> Laziness and cowardice are the reasons why such a large part of humanity, even long after nature has liberated it from foreign control (naturaliter maiorennes), is still happy to remain infantile during its entire life, making it so easy for others to act as its keeper. It is so easy to be infantile. If I have a book that is wisdom for me, a therapist or preacher who serves as my conscience, a doctor who prescribes my diet, then I do not need to worry about these myself. I do not need to think, as long as I am willing to pay.

Kant never wrote the (third) critique on the gastronomical reason and how to reach maturity

in that area, but his most suggestive comments on food are found in his "Anthropology from a Pragmatic Point of View" (1790). In general, he places humans between nature and reason. Man's capacities derive neither from nature nor reason alone but from the two together, where nature stands for the passions and sensual experience and reason stands for transcending nature by using the faculty of reasoning to know, will, and appreciate (judge). For instance, to enjoy art and food socially means to transcend nature; it is to judge something that is given (nature) but structured according to the standards of judgment that are shared among rational beings (reason; beyond nature). The main thrust of Kant's text is to emphasize what human beings can make of their nature; it is not about how nature has made them. Human beings must embrace the drive toward maturity, must stand on their own two feet, even if they hesitate and stumble in the process. Taste plays a special role here. It has, according to Kant, the extraordinary ability to stimulate reasonable solidarity through enjoyment. Enjoying food once means that you will want to enjoy the meal (together with others) again; this feature marks culture within society. But food is also more than that. A good meal with good people is an occasion on which experience and reason are united in the individual's enjoyment at a given moment, a moment that can be repeated again and again. Good meals engage reason, which acts on the emotions, which in turn stimulate solidarity and humanity. Eating according to reason therefore means to have meals together and to enjoy the reasoning of others; it means also to let health only be one factor in choosing the food.

Since the time of Kant, many developments have taken place; at present many try to connect the idea of the good life and its concomitant idea of human flourishing with ecological and social challenges like environmentalism and consumption (Crocker and Linden 1998). Consequently, a good meal often comprises also ideas about the ethical acceptability of the production processes of food stuffs (Korthals 2004). Nevertheless, just as in antiquity, the idea of good life comprises a broad diversity of values, and health is only one of them.

Lack of Alignment of Nutrigenomics and Daily Life

From the story until now about the three different views on health and food, it can be easily inferred that there are considerable differences between the prominent nutrigenomics script, the philosopher's view, and daily life views on health and food. The three normative assumptions of the prominent script seem to be contradicted by the other two. Nutrigenomics assumptions simply do not align with ideas, values, and attitudes in daily life. What will be the reaction of the genomics scientists that adhere to these assumptions? A study of the texts quoted in Komduur 2009 gives the most plausible answers of the script to these differences (see also Komduur 2013). One of these answers goes something like this: the consumer needs more reliable and understandable information and more knowledge to make up his or her own mind and to change the usual unhealthy food habits. Here, the solution is to give better information to the consumers (Leathwood et al. 2007).

The second reaction is that because consumers have already access to so much information and they in general know what to do, but are evidently unable to act accordingly, food scientists decide: let's try to seduce the consumer by good-looking products with a health benefit. Promoting certain products is then the second solution to the gap between science and daily life. Therefore, for example, some scientists promote the eating of fish and the use of fish oil (Oken et al. 2008).

However, the issue is, are these scientists not "overdoing" the health scripts too much, in the sense that it is quite impossible for daily life consumers to live according to these exacting types of information, assumptions, advices, or products? For example, the advice to use as often and as much as possible fish oil would mean eating quite distasteful salads or experiencing fish-taste in meat. Would consumers like to do that? Probably not. Moreover, many consumers know about the depletion of fish resources and therefore they will not heed to this advice.

The emphasis on knowledge or information on the relationship between eating certain food

stuffs and future health seems for many consumers (and philosophers) only one aspect of the different aspects of life one has to cope with when one wants to have a good life. Other values are at stake as well, and life's complexity exactly asks everyone to strike a balance between them continuously.

Finally, one has to consider in how far scientists are legitimatized to choose for the kinds of soft paternalism in taking care of the healthiness of consumers (Dworkin 2005). Can one ever be so sure about the dominance of the value of health over other values to prescribe the behavioral assumptions of nutrigenomics? Why not change the script and look for different types of nutrigenomics that more align with the complexities of daily life? Will a science push not backfire because so many uncertainties with respect to the relations between genes and food do galore (Korthals and Komduur 2010)? Why should only consumers have to change their life? Should science not produce knowledge and information that is more enabling to deal with the complexities of daily life?

Realigning Nutrigenomics with Daily Life

The differences between normative assumptions and daily life assumptions can probably not be bridged by producing information or new products or, more generally, by a one-sided offense from the side of science (see Korthals 2011). Probably nutrigenomics has also to change its assumptions and research trajectories and to take more into account the complicated web of responsibilities with respect to health. One way to find new bridges is to look to alternative scripts in nutrigenomics, and there are some, for example, the ones that can be called public health nutrigenomics and taste genomics. These other scripts clearly start not from a narrow personalized health perspective but from a broader health perspective or even from a totally different perspective, the genomics of taste. Prof. El-Sohemy from the University of Toronto in his Nutrigenomics of Taste – Impact on Food Preferences and Food Production, 2007, for example, outlines issues of the relationship between food, health, and taste. Others, like Khoury (2005), develop nutrigenomics in close connection with considerations on common chronic diseases. By taking into account the embedded meaning of health nutrigenomics, one can formulate more socially acceptable research priorities. The full complexities of health can even better be incorporated by organizing end user panels in the different genomics research trajectories. Many nutrigenomics scientists feel the urge to produce recommendations of food intake, but they forget that their competences and knowledge do not lie in that quite complex field. Therefore, it seems advisable to let recommendations of food based on nutrigenomics be accompanied by social research of its successful applicability.

Summary

In this entry visions of the meaning of health and food in life are discussed in several rounds, and it is argued that a current and prominent script of nutrigenomics is at odds with those of daily life and of philosophy. A better interaction between science, ethics, and daily life could guarantee more fruitful results. It would result in better research priorities, better products, in which better means more socially applicable knowledge and information. The advantages are that by better listening to ethical assumptions of consumers, and by taking the science's and consumers' views seriously, science can have a better impact and can be a more trustworthy partner in tackling the complexities of daily life.

In discussing the relationship between health and food, ethical assumptions are unpacked in personalized nutrition, daily life, and philosophy; they are compared and a manageable realigning of them is proposed. This applied ethics strategy does not use (academic) ethics as a kind of traffic light that gives green or red lights to scientific developments that will either progress or not, but tries to start from explicating ethical assumptions interior to a certain field of practice and then

looks for fruitful integration of science and society (Keulartz et al. 2004). The social embedding of science without moral pain means making explicit moral scripts inside science, comparing these scripts of science with that of ethics and daily life ethics and finally looking for alignments.

Cross-References

- Eating and Nutrition
- Ethics in Food and Agricultural Sciences
- Food Ethics and Policies
- Food Labeling
- Food Risks
- Informed Food Choice
- Systemic Ethics to Support Wellbeing

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Ethnicity, Ethnic Identity, and Food

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Synonyms

Exotic food; Immigrant food; Immigration

Introduction

This entry explores ethical issues concerning ethnicity, ethnic identity, and food in the United States. This entry focuses solely on the United States because of its large diversity and immigrant population. However, there are parallel cases in Canada and England where ethnicity is tied to multicultural societies, recent immigration, and racial classification.

In the US context, food has been used to maintain both ethnicity and symbolic ethnicity for early and more recent immigrants. However, ethnic food can also be a pathway to both understanding new immigrant groups as well as alienating the other, especially racial and ethnic minorities. Ethical debates surrounding how and why we consume ethnic food expand our study of ethnic food especially in the US context.

Ethnicity is largely tied to an understanding of race but has been differentiated as based on culture and ancestral heritage, while race is a constructed category based on perceived physical differences (Gans 1979; Lu and Fine 1995). Ethnic food in the United States historically becomes a significant marker of identity for immigrants, Italian and Jewish, by the 1920s (Diner 2001; Gabaccia 1998). More recently, ethnic food is a marker of community ethnic and religious identity for Latina, African, South Asian, and Middle Eastern immigrants.

The study of ethnicity and ethnic food is interdisciplinary and includes important philosophical and sociological theoretical frameworks. Narayan's work problematizes the ethical aspects of eating ethnic food and particularly the food of the "other." She explores how consumption of ethnic food can be linked to reducing xenophobia. Appadurai examines how the imposed construction of a national cuisine often linked to postcolonial projects and can lead to *gastronomic imperialism*. Heldke introduces and problematizes *cultural food colonialism* as the process of eating food from developing or third-world cultures and how sociohistorical processes like colonialism play a role in how and why we exotify food of the other. These social and philosophical discussions of ethnic food are significant to understanding the ethical implications of ethnic food and ethnicity.

Exploring Ethnicity, Ethnic Identity, and Food

Key concepts and themes in the discussion of ethnicity, ethnic identity, and food include ethnicity, symbolic ethnicity (Gans 1979), immigrant identity (Diner 2001; Gabaccia 1998), food parochialism, and culinary imperialism (Heldke 2003; Narayan 1997). Community, solidarity, and identity are all important functions of food (Anderson 2005). Abarca (2004) also looks at ethnicity through the lens of authenticity as a creation. This is an ethical issue as it questions who has power in constructing authenticity or who has claim to authenticity?

Ethnicity and Symbolic Ethnicity

Ethnicity is largely seen as a social construction based on shared cultural heritage, and race is understood as a social construction based on shared perceived physical traits. This section explores how ethnicity and symbolic ethnicity can help frame our discussion on ethnic food, ethnicity, and ethics. How ethnicity is displayed is one aspect of the ethnic dimension of food. Ethnicity of white ethnic groups is often more palatable to the dominant group.

Gans historically defined ethnicity in the United States as symbolic ethnicity pertaining to third-generation immigrants and future generations who have been able to successfully assimilate into the dominant culture including Irish, Italian, and Jewish Americans (Gans 1979). Symbolic ethnicity refers to an optional ethnicity available largely to white ethnic immigrants in multicultural societies. In this case, we focus on the United States because ethnic identities are often understood, created, and maintained through food, cultural events, and communities (Lu and Fine 1995).

Isajiw (1993) and Van den Berghe (1984) explore approaches to the social scientific

definitions of ethnicity. Isajiw explains that ethnicity is a social construction based on perceived cultural traits that takes place in everyday life (1993, p. 4). Van den Berghe also understands ethnicity as a social concept and (1984) understands food as an expression of ethnicity. "Our cuisine is the symbolic expression of our sociality, first in the intimate domestic sphere, and by extension with the larger group that shares our specific culinary complex: the inventory of food items, the repertoire of recipes, and the rituals of commensalism. Along with language, the food complex becomes a basic badge of ethnicity" (van den Berghe 1984, p. 392). He also claims that food is easier to maintain and share than an ethnic group's language or religion, so in many ways, food is the key to cultural transmission (Van den Berghe 1984, p. 393). Van den Berghe ultimately argues that the culinary complex is often the easiest way to reinforce ethnic ties and pass on ethnicity (Van den Berghe 1984, p. 393).

Lu and Fine (1995) explore the meaning of ethnic food in their exploration of ethnic restaurants and ethnicity and identity. Their research emphasizes how cultural symbols are used to display ethnicity, and ethnicity "depends on a set of consistent actions that permits others to place an individual in an ethnic category" (Lu and Fine 1995, p. 535). Ethnicity is ultimately realized in the United States through festivals, food, and consumption. Fine and Shun Lu emphasize that like ethnicity, authentic ethnic food is a social construction, and "the secret of the acceptance of ethnic food resides in the harmonization and compromise between seemingly contradictory requirements: being authentic and being Americanized, maintain tradition while unconsciously modifying it" (Lu and Fine 1995, p. 547).

Herbert Gans may have once referred to this type of identity maintenance as symbolic ethnicity, but further research on Italian immigrants reveals that food for Italian immigrants includes varieties of ethnic cuisine, structure (meal times), and rituals that continue to reinforce family and community ties. Food is a way to maintain much more than symbolic ethnicity for many immigrants in the United States.

Memory food is one way that immigrant women recreate a homeland in the American diaspora. Memory food is both a method for remembering one's ethnic and cultural heritage through cooking with family members and a technique for preserving culinary skills, through the sharing of food preparation. Memory foods are the dishes that are passed on from one generation to another often by grandmothers and mothers rather than through recipes (Camargo Heck 2003, p. 216). Memory food allows immigrants to maintain and renegotiate food traditions and ethnic identities but also create ethnic solidarity (Camargo Heck 2003, p. 217). Ray also explains that foodways are a way for society to understand how immigrants and ethnic groups construct class, ethnic, gender, and religious identities (Ray 2012, p. 43). "The importance of food in immigrant culture makes restaurants, grocery stores, and kitchens important sites where ethnicity is practiced and reproduced on a daily basis" (Ray 2012, p. 198).

Ethnic Identity, Immigrants, and Food

Food has been an avenue for American immigrants to maintain ethnic identities within families and communities. Hasia Diner (2001) and Donna R. Gabaccia's (1998) historical work on food, ethnicity, class, and immigrant American families demonstrates the significance of food in community and ethnic identity maintenance for Italian, Irish, and Jewish immigrants. Gabaccia's work highlights how food has been a means of ethnic identity building for Italian immigrants through community and shared meals. Diner adds a class and comparative analysis to Gabaccia's work as she points out how food was a way of breaking down class divisions historically for Italian, Irish, and Jewish immigrants in the early twentieth century. Vallianatos and Raine (2008) explore how consuming food is linked to constructing immigrant identities for South Asian and Middle East immigrants. Vallianatos and Raine explain that "Food also connects across time and place, and for many migrants, food is an essential component of

maintaining connections to home. How and what kinds of food are consumed recall families and friends left behind, and by continuing to consume both everyday and celebratory food migrants preserve these transnational relationships and enact their companionship with those back home" (2008, p. 357). Food is used to maintain a connection to the homeland, and through the consumption and creation of traditional food, immigrants are able to do this (Vallianatos and Raine 2008, p. 368).

Studying food is a way to also study ethnicity, culture, community, and identity. Gabaccia emphasizes that studying food is a mechanism for studying multiethnic societies (p. 9). American immigrants maintained immigrant foodways because food helped maintain tradition, social distance from other ethnic groups, and social status (p. 51). "American food" was ultimately created as a social construction in opposition to ethnic food in the late nineteenth century by American "cultural elites" (p. 125).

The first wave of acceptance of ethnic food in the United States occurred during the 1960s and 1970s largely because of an increase in immigration and counterculture (Belasco 1989; Johnston and Baumann 2010). However, "ethnic food" must be placed in a contemporary sociocultural context. Hippies and counterculture groups often saw ethnic food as an alternative to imperialism and capitalism (Gabaccia 1998, p. 212). "For some counter-cultural Americans, seeking a healthier way to eat returned them to their own ethnic traditions. Vegetarian and healthful versions of ethnic foods developed alongside the traditional ethnic fare offered at food festivals and featured in community cookbooks in the 1970s" (Gabaccia 1998, p. 214). "By the1980s 10 % of all restaurants in the US were ethnic. The majority of these ethnic restaurants were Chinese, Italian and Mexican" (Gabaccia 1998, p. 218). By the 1990s, foodie tastes favored the natural, organic, and exotic which also welcomed ethnic cuisine (Johnston and Baumann 2010). This was also partly because of globalization and the continuing increase of immigration in the United States. But ethnic food also became one understanding of multiculturalism and symbolic ethnicity. Eating ethnic food was one way that Americans often viewed themselves as multicultural, open, and tolerant. Food can be viewed as a gateway to inclusive cultural practices, perhaps decreasing xenophobia. Abarca's work examines the ethical dimensions of ethnic food consumption.

Abarca's (2004) research explores and questions how society defines and understands ethnic food. She explores and questions the cultural acceptance of ethnic food into dominant American culture, as well as how ethnic food is perceived in terms of real or imagined authenticity. Who has ownership or access to ethnic and or authentic food is an important ethical and philosophical aspect of studying food and ethnicity. She explains that "Without undermining the positive consequences of ethnic food consumption, an overly enthusiastic focus on these social effects can result in creating a deceiving notion of accepting ethnic minorities into mainstream culture" (Abarca 2004, p. 6). Food is often the one aspect of new immigrant communities that dominant cultures find digestible, but she expresses caution pertaining to this perceived acceptance. Secondly, she calls into question how authentic food is understood. Like ethnicity, authenticity is also a social construction. "Claims of authenticity in ethnic cookbooks and restaurants demonstrate the ideological complexities embedded within the phrase, "authentic ethnic food"" (Abarca 2004, p. 10).

Johnston and Baumann (2010) explore how ethnic connection is an important aspect of how "foodies" understand authenticity in relation to food. The authors define foodies as those who self-identify as having a strong interest in the "education, identity, exploration, and evaluation" of what they perceive as good food (2010, p. 61). Foodies tend to believe that particular ethnic cuisine should be cooked by specific ethnic groups; sushi should be cooked by Japanese and samosas should be made by Indians. How foodies understand authentic food raises ethical issues about how authentic and ethnic food is defined and who defines these terms. This desire for authentic food often results in reductionist understandings of racial and immigrant groups. Johnston and

Bauman emphasize that the ethics in assuming ethnic immigrants or racial minorities can inherently cook the food of their cultural ancestors is problematic and often leads to reinforcing cultural stereotypes.

Culinary Imperialism, Gastronomic Imperialism, Food Parochialism, and the Future of Ethnic Food

Ethnic food also has ethical and political concerns. Recent research has shed light on issues of power and privilege as they relate to ethnic and exotic foods. Appadurai introduces the term *gastronomic imperialism* as a type of cultural imperialism in which dominant forces impose culinary concepts and values onto a subordinate society or culture. Appadurai's work on Indian cuisine and cookbooks reveals one type of *gastronomic imperialism* with the British-imposed creation of curry as the national cuisine of India. Indian food became the ethnic other as a result of British colonialism. But curry became a fabricated national cuisine as a result of British rule. Appadurai explains, "What we see in these many ethnic and regional cookbooks is the growth of an anthology of naturally segregated images of the ethnic other, a kind of ethnoethnicity, rooted in the details of regional recipes, but creating a set of generalized gastroethnic images of Bengalis, Tamils etc." (Appadurai 1988, p. 15). These generalizations of the gastronomic other erase the specific details of regional ethnic cuisines.

In *Exotic Appetites*, Heldke (2003) introduces the concept of *cultural food colonialism*. She explains that this refers to cooking and eating ethnic foods from "economically dominated" or third-world cultures (2003, xv). Cultural imperialism refers to imposing dominant cultural and social practices, while cultural food colonialism refers to appropriating these practices (xviii). Food adventurers are often engaged in food colonialism as they see eating as an expedition (xxiii). Heldke emphasizes that food adventurers come from privileged class and often racial positions, and therefore, the ethics of privilege come to the forefront of her analysis. Ethnic food rather than ethnic peoples is often more welcomed by food adventurers in privileged positions (Johnston and Baumann 2010, p. 102; Abarca 2004).

Uma Narayan (1997, p. 180) welcomes the eating of other cultures over "food parochialism." She explains that she grew up in a family and community where strict dietary restrictions associated with caste, class, and religion often reinforced strong boundaries and that eating the food of "others" allows for more openness to other cultures, perhaps allowing for less xenophobia. "Growing up in a context where food was intimately connected to caste status and various regimes of purity, it is food parochialism that tends to strike me as dangerous, while a willingness to eat the food of 'Others' seems to indicate at least a growing democracy of the palate. While eating ethnic foods in restaurants might result only in shallow, commodified, and consumerist interaction with an 'Other' culinary culture, it seems preferable at least to the complete lack of acquaintance that permits the different foods of 'Others' to appear simply as marks of their strangeness and' Otherness'" (Narayan 1997, p. 180).

Kershen's research highlights that xenophobic attitudes in society were often reflected in food racism, culinary imperialism, and food colonialism, because food can also be a source of racial stereotyping (Kershen 2002 pp. 2–8). Jan Whitaker's (2005) work on the Anglo-American home highlights themes of race and food purity in the American context.

Summary

Ethnicity and ethnic food by nature are social constructions and, therefore, will continue to evolve as the makeup of societies and immigrant populations change. In the US context, food has been used to maintain both ethnicity and symbolic ethnicity for early and more recent immigrants and more recently is an avenue for creating community and passing on one facet of ethnicity to the next generation. Ethnic food can also be a pathway to both understanding new immigrant

groups and alienating the other, especially in the case of racial minorities. Heldke, Appadurai, Abarca, and Narayan's theoretical perspectives are important in understanding the ethics of culinary colonialism and ethnic food.

Cross-References

- ▶ Authenticity in Food
- ▶ Food and Place
- ▶ Race, Racial Identity, and Eating

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EU Regulatory Conflicts over GM Food

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Synonyms

GM food = agricultural biotechnology

Introduction

Since the 1980s agricultural biotechnology has been promoted as a symbol of European progress and political-economic integration. Policy language has focused on "modern biotechnology," encompassing various techniques, yet policy measures have favored genetic modification techniques and their products. According to proponents, agbiotech provides a clean technology for enhancing eco-efficient agro-production. By the late 1990s, however, this technological trajectory was stigmatized as suspect. It was being called "GM food," or *OGM* in Romance languages or *Gen-Müll* (garbage) in German. The trajectory

became negatively associated with factory farming, its hazards, and unsustainable agriculture. GM products have generally faced commercial and/or regulatory blockages to market access in Europe.

In the 1990s controversy over agbiotech in the European Union (EU), proponents criticized opponents for unfairly targeting or blaming a benign technology as a symbol of wider issues, such as industrial agriculture and globalization. As this complaint illustrates, proponents often draw distinctions between a technology and its context or consequences, while critics generally emphasize links between them. Indeed, technological controversy involves power struggles over how to define the issues at stake, even the nature of the technology. How can the conflict be explained? What can be learned from this experience for other new technologies?

Making Europe Safe for Agbiotech

Since the 1980s the European Union (EU)'s integration project has promoted biotech as a symbol of progress. By the early 1990s, biotech further epitomized promises of a "knowledge-based society," promoting capital-intensive innovation as essential for economic competitiveness and thus European prosperity (CEC 1993). New policies were being designed for a "competition state," directing resources toward the domestic capacity for global competitive advantage (Cerny 1999).

This featured efforts to attract private-sector investment, to subordinate public-sector research to private-sector priorities, to marketize public goods, and to generate globally competitive knowledge. According to this narrative, eco-efficient technologies would bring a competitive advantage and thus societal benefits, but Europe risks losing these benefits through inadequate financial rewards or overregulation. New policies sought to make Europe safe for agbiotech as normal products.

EU agbiotech policy was also linked with a trade liberalization agenda by invoking objective imperatives of global competition. In parallel, the European Commission promoted agbiotech as essential for economic competitiveness and thus for survival of the European agri-food sector as well as its techno-scientific capacities. By the mid-1990s EU-US discussions were identifying "barriers to transatlantic trade," which must be removed through regulatory harmonization, especially for biotech products as a test case (Murphy and Levidow 2006).

Through EU decision-making procedures, regulatory criteria internalized biotechnological models of the socio-natural order. Under the EC Deliberate Release Directive, member states must ensure that GMOs do not cause "adverse effects" (EEC 1990); the scope of "adverse effects" was left ambiguous, to be clarified for each product in its context. Some member states warned that GM crops could generate herbicide-tolerant weeds or pesticide-tolerant pests, but official EU risk assessments classified such effects as merely agronomic problems. This normative judgment accepted the normal hazards of intensive monoculture while also conceptually homogenizing the agricultural environment as a production site for standard commodity crops. Through a technicist harmonization agenda, Europe was being de-territorialized as a purely economic zone, devoid of cultural identities (cf. Barry 2001, p. 70).

Thus early EU regulatory procedures incorporated policy assumptions of the agbiotech promoters. Under "risk-based regulation," societal decisions on agbiotech were reduced to a case-by-case approval of GM products, within a narrow definition of risks, placing the burden of evidence mainly upon the objectors. Each time the Commission proposed to authorize a GM product, it gained a qualified (2/3) majority in the comitology procedure representing EU member states, where dissent was marginalized.

These decisions complemented the wider policy framework of higher productivity for economic competitiveness, as an expected benefit from agbiotech products. This agenda was depoliticized by invoking objective imperatives such as globalization, treaty obligations, and "risk-based regulation." By the mid-1990s, EC policies were making Europe "safe" for agbiotech to achieve commercial success while

subordinating regulatory criteria to economic competitiveness.

The technology was being coproduced along with a marketization of nature and society (Jasanoff 2004), in the name of eco-efficiency improvements for agriculture. Regulatory procedures authorized "safe" GM products, which could then enter the EU internal market as extra options for farmers. They would have the free choice to buy more efficient inputs for global competitiveness. As unwitting consumers of GM food, the public would effectively support a beneficial technology serving the common good of Europe. Within this model of rational market behavior, members of various European publics had little scope to act as citizens.

Putting Agbiotech on Trial

By promoting agbiotech within a neoliberal framework, the EU system provoked great suspicion and even opposition, which grew from the mid-1990s onward. Agbiotech was turned into a symbol of anxiety about multiple threats: the food chain, agro-industrial methods, their hazards, state irresponsibility, and political unaccountability through globalization. The controversy often gained large public audiences through the mass media, as well as active involvement of many civil society groups. They took up concepts from small activist groups as well as from high-profile campaigns of large NGOs. Together these activities developed citizens' capacities to challenge official claims and created civil society networks to which governments could be held accountable.

These activities criticized, used, and eventually reshaped the EU regulations. Demands for accountability took the form of various formal and informal trials. These dynamics continuously expanded trials, defendants, and arenas – what was put on trial, how, where, and by whom. Such trials arose along three overlapping themes – safety versus precaution, eco-efficiency versus agro-industrial hazards, and globalization versus democratic sovereignty – as shown in this section.

Safety Claims Versus Precaution

Lab and field trials were intended to generate evidence of product safety, thus demonstrating a scientific basis for expert risk assessments, which in turn could justify commercial authorization of GM products. Yet safety science became contentious. Expert safety claims underwent criticism for bias, ignorance, and optimistic assumptions (Levidow et al. 2005). Such criticism gained force from suspicion that public-sector scientists had lost any independence from agbiotech promotion.

When France led the EU-wide approval of Bt insecticidal maize 176, its favorable risk assessment was widely criticized by member states as well as NGOs. When France further proposed to approve maize varieties derived from Bt 176 in 1998, Ecoropa and Greenpeace filed a challenge at the *Conseil d'Etat* (the French administrative high court) on several grounds: that the risks had not been properly assessed, that the correct administrative procedures had not been followed, and that the Precautionary Principle had not been properly applied. These NGO arguments gained some support in the court's interim ruling. Thus a government was judicially put on trial for failing to put a GM product on trial in a rigorous way.

When UK lab experiments claimed to find harm to rats from GM potatoes, the disclosure led to trials of other kinds. The project leader, Arpad Pusztai, questioned the safety of GM foods on a television program. He was soon dismissed from his post and was then subjected to character assassination by other scientists. His experimental methods were criticized by a Royal Society report. International networks of scientists took opposite sides on that issue. Environmental NGOs put his employers and other persecutors symbolically on trial, by attributing their actions to political and commercial motives (Levidow and Carr 2010, pp. 100–102).

When a Swiss lab experiment found that an insecticidal Bt maize harmed a beneficial insect (lacewing), expert authority was put on trial. Criticizing the experiment, other scientists cast doubt on its methodological rigor and its relevance to commercial farming, as grounds to discount the results in the regulatory arena.

In response, agbiotech critics reversed the accusation: they raised similar doubts about the rigor of routine experiments that had supposedly demonstrated safety. Potential harm to nontarget insects remained a high-profile issue, attracting further research and expert disagreements. Citing scientific uncertainties, some regulatory authorities rejected Bt maize or demanded that its cultivation be subject to special monitoring requirements at the commercial stage, thus further testing safety claims and elaborating test protocols (Levidow and Carr 2010, pp. 182–83).

In the latter two risk issues, surprising experimental results were deployed to challenge safety claims, optimistic assumptions, and expert safety advice. When new evidence of risk was criticized for inadequate rigor or relevance to realistic commercial contexts, similar criticisms were raised against safety claims and their methodological basis. Regulatory authorities were put symbolically on trial for failure to develop adequate scientific knowledge for risk assessment, instead depending on companies for test data.

For the safety assessment of GM food, EU regulatory procedures and criteria likewise were put on trial. Under the EU's Novel Food Regulation, for example, GM products could be approved via a simplified procedure in cases where they had substantial equivalence with a non-GM counterpart. After such approval decisions about several foods derived from GM maize, Italy banned them partly on grounds that the decisions had inadequate scientific evidence to demonstrate substantial equivalence. The Commission sought to lift the ban and so requested support from the EU regulatory committee of member states in 2000, thus putting Italy on trial by its peers. But they instead sided with Italy while also criticizing the regulatory shortcut under the Novel Food Regulation.

After this role reversal, the Commission abandoned substantial equivalence as a statutory basis for easier approval of novel foods (EC 2003a). In risk-assessment procedures, substantial equivalence continued as a "comparative assessment"; this was broadened to encompass more methodological issues, scientific uncertainties, and types of scientific evidence (Levidow et al. 2007). Such comparison with conventional products has remained contentious among member states as well as civil society groups.

Globalization Versus Democratic Sovereignty

Given that agbiotech promoters emphasized globalization as an imperative for GM products, critics could portray them as a threat and agent of "globalization." Since the mid-1990s field trials have been meant to demonstrate the agronomic efficacy and safety of GM crops, as well as the diligent responsibility of the authorities in avoiding any environmental harm. However, the fields were turned into theatrical stages for protest. They used an "X" or biohazard symbol to cast agbiotech as pollutants and unknown dangers, thus justifying sabotage as environmental protection. When facing prosecution, activists used the opportunity to put the state symbolically on trial for inadequately evaluating or controlling GM crops, as a failure of responsibility.

Activists appealed to democratic sovereignty when carrying out and defending sabotage actions on field trials. The UK government implied that decisions about GM crops lay elsewhere, beyond its political control; this claim was denounced as an irresponsible, undemocratic surrender to globalization. As a response to deferential regulatory decisions, such as the UK government's above, opponents defended sabotage as democratic accountability. Further to the French example above, in 1998 the WTO approved higher US tariffs against several specialty foods including Roquefort cheese, as compensation for lost exports of US beef. *Paysan* activists attacked McDonalds as a symbol of WTO rules forcing the world to accept hazardous *malbouffe* such as hormone-treated beef and GM food. As defendants in court, *paysans* sought to put "globalization" on trial, represented by the French government as well as biotech companies.

Democratic sovereignty also became an explicit theme in judicial trials and regulatory procedures. When some EU member states explicitly refused to support authorization of any more GM products in 1999 onward, they were demanding precautionary reforms in EU rules and regulatory criteria. At the same time,

this defiance was turned into a public symbol of European sovereignty versus globalization driven by the USA.

Democratic sovereignty became general grounds to justify measures or actions restricting GM products at the national or regional level. By the late 1990s fewer member states were willing to support Commission proposals to approve new GM products. Some signed formal statements that they would refuse to do so. Lacking a qualified majority, in 1999 the EU Council effectively suspended the decision-making procedure for new GM products; this move was widely called the de facto moratorium. Meanwhile some member states also banned GM products that had gained EU-wide approval (Levidow et al. 2000).

"Globalization" also framed conflicts over GM labeling. The originator of GM soya, Monsanto, was denounced by various NGOs as a global bully "force-feeding us GM food." Before the European Commission approved GM soya in 1996, NGOs and some member states demanded mandatory labeling for all GM foods. However, this demand was rejected, with warnings that any such requirement would provoke a WTO case against the EU.

On this basis, the no-labeling policy became vulnerable to attack as globalization undermining consumer choice and democratic sovereignty. Local protests at supermarkets demanded GM labeling and non-GM alternatives, in campaigns linked with Europe-wide consumer and environmentalist groups. By 1998 European retail chains adopted voluntary labeling of their own-brand products with GM ingredients. Companies variously labeled their products as "contains GM" or as "GM-free," in compliance with different criteria established by EU member states. Meanwhile NGOs carried out surveillance of GM material in food products, some not labeled "GM," in order to protest against them and to warn consumers.

Together these regulatory inconsistencies and protests potentially destabilized the EU's internal market for processed food products. So the EU established more comprehensive standard criteria; these went beyond detectability and so required an audit trail of paper documentation. Eventually EU law required comprehensive GM labeling and traceability of GM material (EC 2003b), encompassing a broader range of products than before.

GM products also faced a commercial boycott. By the late 1990s, all European supermarket chains excluded GM ingredients from their own-brand products, rather than label them as "GM"; some mentioned precaution and/or consumer choice as reasons. By now GM ingredients were relegated to animal feed from two main sources: imported GM soya was still used in some animal feed, though some suppliers advertised "GM-free" meat or poultry. Bt insecticidal maize was (and still is) widely cultivated in Spain, where nearly all maize enters a common supply chain for animal feed.

Eco-efficiency Versus Agro-industrial Hazards

Agbiotech began with a cornucopian promise. With precisely controlled genetic changes, GM crops would provide smart seeds, as eco-efficient tools for sustainably intensifying industrial agriculture. These promises were extended by the "Life Sciences" project, featuring mergers between agro-supply and pharmaceutical companies, in search of synergies between their R&D efforts. Its narrative promised health and environmental benefits as solutions to general societal problems.

Critics turned agbiotech into a symbol of multiple threats (Levidow 1996). Productive efficiency was pejoratively linked with agro-industrial hazards; for example, the epithet "mad soja" drew analogies to the BSE epidemic. Biotech companies were accused of turning consumers into human guinea pigs.

Through politically constituted cultural meanings, agbiotech was put symbolically on trial as an unsustainable, dangerous, misguided path. In France, critics cast agbiotech as *malbouffe* (junk food), as threats to high-quality *produits du terroir*. In Italy GM crops were cast as agro-industrial competition and "uncontrolled genetic contamination," threatening diverse, local-quality agriculture. Using the term *Agrarfabriken* (factory farm), German critics linked agbiotech with intensive industrial methods, threatening

human health, the environment, and agroecological alternatives. Institutions faced greater pressure to test claims that GM crops would provide agro-environmental improvements as well as safety.

Those informal trials shaped conflicts over regulatory criteria from the mid-1990s onward. When EU procedures initially evaluated GM crops for cultivation purposes, they were deemed safe by accepting the normal hazards of intensive monoculture. This normative stance was portrayed as a scientific judgment while casting any criticism as irrelevant or political. Yet such hazards were being highlighted by critics, framing risks in successively broader ways. Their discourses emphasized three ominous metaphors: "superweeds" leading to a genetic treadmill, thus aggravating the familiar pesticide treadmill; broad-spectrum herbicides inflicting "sterility" upon farmland biodiversity; and pollen flow "contaminating" non-GM crops.

These ominous metaphors expanded the charge sheet of hazards for which GM products were kept on trial. Moreover, these broader hazards would depend on the behavior of agro-industrial operators, which consequently became a focus of prediction, discipline, and testing. Regulatory procedures came under pressure to translate the extra hazards into risk assessments. In its risk assessment for GM herbicide-tolerant oilseed rape, Bayer claimed that farmers would eliminate any resulting herbicide-tolerant weeds and so avoid weed-control problems, but Belgian experts questioned the feasibility of such measures. Citing that advice, the Belgian national authority rejected the proposal to authorize cultivation uses, rather than invite the company to test extra hazards. So a proposal went forward only for food and feed uses, gaining EU approval on that limited basis (EC 2007).

GM herbicide-tolerant crops had been promoted as a means to reduce herbicide usage and thus to protect the environment. But UK critics portrayed more efficient weed control as a hazard: broad-spectrum herbicides could readily extend the "sterility" of greenhouses to the wider countryside, which would be turned into "green concrete." The UK government was widely criticized for ignoring the agro-environmental implications. The Environment Ministry eventually took responsibility and funded large-scale field experiments, to simulate and thus predict farmer behavior in spraying herbicides. These trials were meant to facilitate the "managed development" of such crops. But experimental results indicated potentially greater harm from some GM crops than their conventional counterpart. These results led to a regulatory impasse for GM crops that could have been approved by the UK. Through a more precautionary regulatory procedure, agro-industrial efficiency was cast as an environmental threat to be investigated and avoided.

From the UK controversy in particular, the EU system underwent pressure to broaden the potential effects and their causes that warrant evaluation. The de facto EU moratorium led to a revised EC Directive, which broadened risk-assessment criteria to encompass any changes in agricultural management practices, such as in herbicide spraying, as well as indirect and long-term effects (EC 2001). This broader scope potentially accommodated dissent into regulatory procedures, but public and expert debate continuously questioned safety assumptions. Broader accounts of harm meant greater uncertainty about whether GM crops could generate such harm in the agro-food chain, so risk assessments needed to anticipate human practices as well as their environmental effects.

Coproduction of Biotechnologized Nature

Agbiotech had been originally promoted as a "clean technology" enhancing natural properties: through precise genetic changes, GM crops would efficiently use natural resources to combat plant pests and to minimize agrochemical usage, thus developing sustainable agriculture. Such beneficent claims were challenged along several lines: safety versus precaution, eco-efficiency versus agro-industrial hazards, and globalization versus democratic sovereignty. The entire development model – now called "GM food," or *OGM* in Romance languages or *Gen-Müll* (garbage) in German – was negatively associated with factory

farming, its health hazards, and unsustainable agriculture. The would-be new order was stigmatized as an abnormal, dangerous disorder.

Agbiotech was turned into a symbol, object, and catalyst for multiple overlapping trials. The defendant symbolically on trial was expanded from product safety to biotech companies, their innovation trajectory, regulatory decision-making, expert advisors, and government policy. Europe was told that it had no choice but to accept agbiotech, yet this imperative was turned into a test of democratic accountability for societal choices. In these ways, protest challenged the democratic legitimacy of a biotech-driven development pathway, as well as a European integration model for further commoditizing natural resources and redesigning agriculture accordingly.

Opposition activities criticized, used, and eventually reshaped EU regulations. These were originally meant to marginalize citizens' involvement or to accommodate public concerns, in ways facilitating an internal market for agbiotech products, but instead the regulatory framework itself became more contentious. By the late 1990s agbiotech was being coproduced with representations of biotechnologized nature as suspect, potentially abnormal and warranting continuous surveillance.

Summary

The Introduction posed these questions: How can the conflict be explained? What can be learned from this experience for other new technologies?

Commentators have drawn various lessons, including some dubious ones. For example, "The easiest way for the nanotechnology community to avoid the problems experienced in the deployment of biotechnology is to provide accurate information and encourage critical, informed analyses" (McHugen 2008, p. 51). This attributes the earlier public controversy to a deficit of publicly available information, yet its reliability and accuracy were contested, in a context where greater knowledge generally led to greater opposition.

Another lesson often heard was that the next novel technology could become "another GM" if the public is not adequately consulted at an early stage. Conversely, it is also said that greater public involvement or deliberation could help to avoid societal conflict over technological innovations. For example, "Given the opportunity to deliberate on such innovations, the public voice can be expected to be measured and moderate" (Gaskell 2008, p. 257).

Each in their own way, those two distinct lessons decontextualize technology from its political-economic agendas. From the 1990s agbiotech conflict, there are less comfortable lessons, namely, that:

- Technology always presupposes a specific form of the socio-natural order, thus preempting other choices of societal future.
- Societal conflict arises from such non-choices.
- Technology, information, and even deliberation cannot remain credibly neutral in relation to those choices.

In sum, Europe was told that it must accept agbiotech, whose design and policy context potentially naturalized a specific future society, as if objectively required. Yet this supposed imperative was turned into a test of democratic accountability for societal choices. Therefore, prospects for avoiding "another GM" controversy – or perhaps for creating one – depend upon how a technological innovation models the socio-natural order and how state bodies attempt to promote that order.

Cross-References

- ▶ Food and Agricultural Trade and National Sovereignty
- ▶ Food Legislation and Regulation: EU, UN, WTO and Private Regulation
- ▶ Herbicide-Resistant Crops

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European Cuisine: Ethical Considerations

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Synonyms

Cookery; Culinary art; Food culture; Foodways; Gastronomy

Introduction

First used in English in 1786, the word "cuisine" is a borrowing from French, but ultimately from the Latin verb *coquere*, to cook. In French (and in the other Romance languages), "cuisine" can mean simply "kitchen" as well as the collection of foods and food preparation techniques. A general definition of the word as used in English could be "the shared set of food and food-related traditions having to do with its preparation particular to a given era, region, or ethnic/national group."

Though all humans are biologically omnivorous and can theoretically eat an astounding variety of foods prepared with a wide range of cooking techniques, in practice, social groups – be they defined by nation, religion, class, or other factors – agree that certain theoretically edible foods are not acceptable as food in certain moments or by certain people. While the term "cuisine" is often used to refer to a more refined

way of cooking available only to those with a higher socioeconomic status (as distinct from the more mundane, everyday cooking of the majority of a group's members), the choices that define a culture's cuisine were and continue to be linked to ethical considerations.

These interlocking concepts can be represented graphically like this: inside of the set of all potentially edible foods, one can put a subset of a particular group's conception of "food": for Moslems, for example, cheese would be inside "food" and pork outside it, whereas for most Chinese, the two would be reversed. Within "food," however, can represent certain culinary traditions as a smaller subset or privileged foodways, cuisine. Ultimately, an even simpler definition would be "the sum of a number of choices that individuals in a group make about what is good to eat, and what is not."

The Neolithic and the Birth of Cuisine

Though there was certainly differentiation between groups, archeological and paleopathological research suggest that humans' hunter-gatherer ancestors likely did not have within-group differences in diet. Except in areas of exceptionally rich flora and fauna (e.g., estuaries), hunter-gatherers had to move frequently in order to follow game and avoid exhausting wild foods on which they relied. This nomadism meant enforced material simplicity: without ceramics and other tools, elaborate meal preparation was impossible. Thus we cannot speak of a "cuisine" before what has been perhaps euphemistically called the "Neolithic Revolution," the advent of agriculture. The same paleopathological studies that show the excellent health and varied diet of pre-Neolithic humans reveal a dramatic decline in the health of the common person thereafter (Diamond 1999). While arguments have been advanced for the fundamental role of cooked food in the development of modern humans (Wrangham 2010), it is difficult to reconstruct to what extent ethical-religious choices affected the Paleolithic human's diet.

Food historian Massimo Montanari argues that it is not simply fire and its application to food that creates cuisine, but rather civilization which invents the boundaries that define it. Montanari, while allowing that fire and cuisine do not always coincide perfectly (e.g., oysters on the raw), nevertheless summarizes the relation between these elements: "fire > cooking > kitchen > cuisine > civilization" (2006). Human society had become, in these early civilizations, remarkably stratified by, among other things, alimentary norms. A farmer's diet was based primarily on cereals, while the higher up the socioeconomic ladder one went, the more varied the fare was, and the more elaborate was the preparation. Jean Bottéro, discussing the cuisine of ancient Mesopotamia, notes that the recipes that have survived would have demanded not only expensive ingredients from the far corners of the empire, but also a trained, literate staff with access to a well-equipped kitchen, something beyond the means of the rural population; he cautions, though, that the agricultural workers perhaps enjoyed more varied fare than one would imagine, being able to draw on wild edibles to flavor their pottages (1985).

This gulf between what the mass of people in the ancient world ate and the foods enjoyed by the aristocratic, military, and commercial elite was not only a distinction based on variety or elaborate preparation, though these elements were fundamental: there was also distinction based on quality. Inhabitants of the Roman empire used a fish-based sauce called *garum* as a condiment. The rich enjoyed the best garum, which was the liquid ladled off the mass of macerated, salted fish innards used for production. The middle class used a pressing of what was left over, while the poor had to make do with the remains after pressing. While garum was used by the whole society, only the best garum was used in Roman patrician households' kitchens (Curtis 1983). Given the preponderance of writers from the upper class, it is hard to determine to what extent the Roman plebeians saw these culinary divisions as an acceptable part of the correct rules of behavior.

Religious and Culinary Boundaries

Dietary norms, both proscriptions and prescriptions, function as outer boundary markers for the range of behavior which was considered ethical; certain foods were either de rigueur in certain situations or taboo in others, specifying correct relationships between person and their peers, their god(s), and their rulers. Culinary do's and don'ts, though seemingly arbitrary, had the function of maintaining boundaries between one religious group and another, especially in areas like the eastern Mediterranean where the available foods were the same. By prescribing certain food practices – the use of unleavened bread for the Passover celebration – and proscribing others (like pork), Judaism was able to maintain its religious-cultural integrity in the face of competition from both polytheists and the other two major monotheistic religions, Islam and Christianity. As Rosenberger points out, religious injunctions on eating habits created artificial divisions between the realms of the licit and illicit, the pure and the impure (1999).

This religious delimiting of cuisine was both more important and more difficult as those that followed Islam, Christianity, and Judaism expanded their territorial range. How can one define, for example, "Arab cuisine" when the Arab empire was an extremely heterogeneous one, with dramatic differences in climate (and therefore flora and fauna)? Previous cultural traditions of conquered peoples also formed a substratum of foodways that the new imperial cuisine had to compete with, and ecological and other practical constraints forced compromises on "ethical food."

Are these culinary boundaries simply arbitrary or do they derive from more basic infrastructural limitations? Materialist anthropologist Marvin Harris saw food taboos and traditions as higher-order manifestations of environmental factors that affected the processes of food production. Discussing the shared Judeo-Islamic prohibition on pork, Harris suggests that it was the result of a very conscious cost-benefit analysis of zootechnical practices in the Middle East (1985). Whereas goats, cows, and sheep were ruminants and could transform high-cellulose plants into protein (meat and milk), pigs competed with humans for food, and in the deforested Eastern Mediterranean (home of both Islam and Judaism), the pig was not worth raising: to the contrary, it was a threat to a fragile ecosystem. Thus, culinary conventions – the taboo on pork – were simply the tip of the iceberg of ecological problems, a solution to an environmental risk. Whatever the ultimate cause of this taboo, the prohibition on eating swine is not seen as arbitrary, even by those Muslims and Jews who accept the materialist origin but continue to observe it. That even those who ascribe its origin to necessity accept the limitation demonstrates that this culinary proscription is an ethical boundary, one of the many that demarcate the category "cuisine."

The proscription and prescription of certain foods in Europe were also strongly influenced by medical theory; from the end of the eleventh century until well into the seventeenth, the humoral theories of Galen and Hippocrates dominated thinking about eating. Digestion was seen as a form of cooking, and proper digestion required the maintenance of humoral equilibrium. Hot, dry foods like cured meats had to be balanced with cold, wet foods like fruit. Class was another variable in this medical system: Cuisine was a contested cultural area where the upper class perennially sought to impose an ethical explanation for class-related dietary differences on the lower social orders. Foods that were higher up in the Great Chain of Being (birds of prey, fruit which hung from trees) were not only healthier for those higher up in the social hierarchy, but also more appropriate; "low" foods like beans and tubers were consistent with the more hardy stomachs of peasants (Grieco 1999), and it was quite literally cosmically "right" that they should eat them. Montanari (2010) describes an early seventeenth-century tale by Giulio Cesare Croce, in which a commoner, Bertolodo, switches places with the king. Bertolodo at first enjoys his new-found position and all the rich food that accompanies it, but the inappropriate food ultimately sickens him, and he dies asking his doctors for "a pot of beans and an onion, and

turnips cooked under the ashes." The message is clear: commoners should stay in their cosmically appointed place, culinarily speaking.

Nationalism and National Cuisines

Nationalism is a product of European thought, and therefore a discussion of national cuisines necessarily begins with Europe. Though there was a mixing of Mediterranean and northern European foodways after the fall of the Roman empire and the migration of the Germanic tribes into southern and western Europe, medieval Europe had a relatively homogenous food culture, barring certain foods that grew only in certain areas, such as rye in the north and grapes in the south (Montanari 1999). Spices, integral to the cuisine of the elite and used in amounts that would nauseate the modern diner, were a kind of conspicuous consumption used to show status. Schivelbusch gives the daily allowances of the king of Scotland when visiting Richard I of England: two pounds of pepper and four pounds of cinnamon (1992). The Roman church was an important culinary unifier: both the importance of the liturgical foods like wine, oil, and bread and injunctions about lean versus fat days provided a degree of continuity no matter where one traveled in Europe. This was, like the Muslim-Jewish taboo on pork, the culinary facet of a complex ethical system which included politics (the divine right of kings) and the market (the continuing ban, observed more in breach, on usury). More similar than different, cooking styles in Europe began to diverge from one another between the end of the Middle Ages and the middle of the nineteenth century, reflecting among other things the Catholic church's rapidly declining role in ethical decisions in Europe.

Among others, Mintz (1996) has argued that national cuisines were necessarily an invention, part of the same process of the invention of nations. Regional cuisines are defined by the ingredients available in a prescribed geographical area prepared in traditional ways. Haute cuisines – and by these Mintz means those available only to the social strata that have the means – are necessarily national and draw on regional cuisines. A haute cuisine is a complex field that draws on the dishes of a nation's regions and reveals itself by what it serves, especially ingredients that are out of season or otherwise difficult to come by, by the additional (and often quite elaborate) expert preparation required. This national cuisine depends on an elite to provide the demand for the trained cooks and expensive ingredients that it requires: in France, the site of one of the first codified "haute cuisines," it was the king and his court that created that demand. This is not to say, however, that because there is income stratification, there will necessarily be distinctions between "common food" and "cuisine." Goody's 1982 study of foodways in West Africa shows that, despite the existence of a socioeconomic hierarchy, food choices between businesspeople and day laborers can be almost identical.

The meaning of cuisine, the borders of the culinary territory that it delimits, has changed substantially since the end of World War II. This was partly due to an acceleration of the trend, which begun in the middle of the nineteenth century, whereby the development of large-scale food industries slowed and then reversed the differentiation of cuisines in Europe and around the world (Flandrin 1999). This was not a uniform process, however, as decolonialization created new nation-states, whose indigenous ruling elite then "invented" national cuisines, mainly drawing on formerly scorned local foods (Wilk 1999). In Wilk's example, the high ethical price put on supporting and in effect creating "Belizean cuisine" completely changes the semantic-moral value of indigenous foods. Patriotism (an ethical imperative during decolonialization) was equated in Belize with love for one's country as well as one's country's food.

As Priscilla Ferguson reminds us, despite the seeming naturalness of French cuisine as a kind of standard against which other cuisines are judged, it too is the result of culinary traditions being selected as a vehicle for national identity (2004). To paraphrase linguist Max Weinreich, if a language is a dialect with an army, perhaps

a cuisine is cookery with a cookbook. Perhaps far more than anything else, a source of codification and creation of national cuisines has been driven ahead by the printing press, the standardization of languages, and the expansion of the number of people who can then afford books (about cuisine) in these languages. Arjun Appadurai has suggested that the previously inexistent concept of "Indian cuisine" springs from a sudden explosion of "Indian" cookbooks, which appeared in response to a mobile and upwardly mobile middle class in India; this new middle class was eager to both replicate the cooking of its youth and show off high-status regional dishes (1988).

The Refined and the Raw

The post-WWII United States was the avatar of highly processed cuisines. Advanced chemical techniques used space-age technology to make cuisine not out of food but of food constituents: corn went from being an ingredient in soups to a raw material for insulation, batteries, and cosmetics as well as (almost incidentally) cake mixes, chewing gum, and margarine (Pollan 2006). Refined cuisine was based on refined food products, those that were processed, broken down, and recombined. 1968 was the beginning of the current reaction to this modernist cuisine.

Warren Belasco has ably collected all of the threads of ideology that contributed to the counterculture's attack on "corporate cuisine" (2007). The widespread student revolt of the late 1960s and early 1970s launched a new look at cuisine as well. Critiques of modern cuisine bemoaned the corporate nature of much food production and the consequent artificiality of the product. If the personal was political, nothing could be more of a statement against the establishment than three meals a day eaten "outside of the system." Belasco describes earnest food revolutionaries focusing on the production phase, seeking out products that were more "natural" and even attempting, during the back-to-the-land movement, to become autarchic. Despite the widespread failure of communal food production by hippies, the counterculture inspired new cuisines that for the first time rejected ethnic, religious, or national limits for cuisine, but instead tried to define the boundaries of the pure and impure with ethical standards.

While modern vegetarianism began in England in 1847 and vegetarianism has been a way of life for millions of people on the Indian subcontinent for centuries, its spread in the West began with the ethical counterculture revolt. Especially influential was the book *Diet For A Small Planet*, in which Francis Moore Lappé explained that the cause of hunger in the Third World was not a lack of food production, but rather maldistribution (1971). Whereas cattle and pigs, Americans' two main sources of animal protein, had previously been raised on grass or (in the case of the pigs) food scraps, new concentrated animal feeding operations (CAFOs) were replacing this feed with cereals, mainly mais. Lappé discovered that it took roughly seven pounds of corn to make a pound of meat, an incredible waste of energy and food. For the first time in America, in the 1970s, meat was pushed out of the circle of "cuisine," for vegetarians, not for religious reasons, but for ethical ones. In a twist on French gourmand Brillat-Savarin's famous aphorism, it was now possible to say, "Tell me what you *don't* eat, and I'll tell you who you are."

Ecological Cuisine

Many religious dietary laws have ethical components – Halal and Kosher laws insist on swift, painless slaughter of animals – but the new cuisines in the post-1968 world took this even further. The methods of food production were subjected to scrutiny to ensure the well-being not only of animals, but also of the people involved in production. Corporate farming was demonized even as it grew to be a larger and larger share of American food production as family farms declined in number. Whereas new varieties of seeds, combined with fossil fuel-derived pesticides and fertilizers, had been hailed as a revolution in the immediate postwar period (the so-called Green Revolution), organic production gained in popularity with consumers.

Eschewing artificial fertilizers and pesticides, organic producers used ancient techniques for fertility maintenance and pest control (Pollan 2006). While organic cannot be considered a cuisine in the strictest sense – few consumers use only organic foods in their cooking – it was an ideal whose goals were not only better health for the individual (dietetics, as we have seen, has long been part of cuisine) but also for the environment.

An interesting example of how this critique of corporate control of food production and subsequent environmental degradation has been used to delimit cuisine is the punk movement. Whereas French structuralist anthropologist Claude Lévi-Strauss had created a conceptual scheme for food which had three interrelated poles – raw, cooked, and rotten – for comparing cuisines in industrialized and traditional societies (1975), punks' anti-corporate, anti-mainstream stance reinterpreted the meanings of that triad. Raw food (organic, local, even wild) becomes the most civilized, the food for inclusion in their cuisine. "Rotten," here meaning not food gone bad but food that has been thrown out but subsequently "dumpster dived" by punks, is also included in punk cuisine; even "corporate food" can be transformed by time in a dumpster or even by the simple act of being stolen from for-profit supermarkets, especially upscale ones. This radical redefinition of cuisine (what is good to eat and what is not) is a marked break with pre-1968 systems which were based on more clearly defined religious, ethnic, and/or geographical markers (Clark 2004). Punk cuisine, which relies on an abstract ideology of "goodness," can be contrasted with so-called molecular gastronomy, which affirms the primacy of science and supposed natural affinities in food chemistry to determine which combinations of foods are desirable (This 2006).

Another recent redefinition of cuisine is provided by the local (or "locavore") movement. Again starting with a wider, ecological definition of "health" (of the planet as well as of the individual), locavores promote the consumption of food produced within a given geographical area, a "foodshed." Despite critiques of this approach to greater food sustainability – that "local" is not clearly defined and that transportation is a rather small energy cost in a food's total energetic budget (McWilliams 2010) – the local movement has led to a revaluation of forgotten local varieties and dishes as well as their appearance on menus in restaurants and tourist brochures promoting culinary tourism. This may, however, be yet another attempt to use food to create class distinction: with Wal-Mart making organic food available to the masses, local food (often more expensive) is simply an attempt to make up for the loss of distinction. Thus local becomes simply the most modern method for delimiting class boundaries by placing cuisine out of reach of "the commoners" (Potter 2010). The importance placed on local food seems to be inconsistent with the current enthusiasm for fair trade food products – primarily the former colonial goods like coffee, sugar, and tea – which are by definition from far away.

While haute cuisine – the complicated dishes of the French upper classes – sought social distance with distinction, the often-lauded cuisines of today seem to be more democratic, in keeping with contemporary society's rejection of the reinforcement of class divisions through ethical precepts. Indeed, local food or the cucina povera ("peasant fare") in its search for the food that the poor of the past ate seems to be a sort of atonement for centuries of upper-class culinary snobbishness. Careful examinations of these supposed peasant foods reveal, however, that rather than a culinary appeal to ecumenicism, they are often invented tradition and simply a new, more subtle means of distinction. The so-called Mediterranean diet contains foods like extra-virgin olive oil and feta cheese which are too expensive for many to enjoy regularly, and given their Mediterranean origin, pose questions about fossil fuel use in their voyages towards wealthy enthusiasts in East Asia, Australia, and the Americas.

What is correct and just food behavior? This essay has attempted to show that the rules social groups construct and impose on their members regarding foods and eating are often a complex interplay of environmental, socioeconomic, and religious factors. These rules help define "right behavior" for the group's members, thus forming and integral part of that group's ethical system.

An important goal of this entry is to describe the fluidity of these culinary-ethical norms across time and space.

Summary

This entry explores the cultural-material construction and social maintenance of the concept of "cuisine." It begins with the transition from hunting and gathering and the implications for differentiation between classes and then discusses cuisine in the classical world. Thereafter the entry traces religious proscriptions and their ethical (or materialistic) background, followed by a brief look at cuisine in the medieval period. European (and extra-European) nationalism and the redrawing of cuisines' boundaries along patriotic lines is the subject of the next section. The modernization of "industrial cuisine" and the ethical revolt against it, one which continues up to today, concludes the essay.

Cross-References

- ▶ American Cuisine, Existence Of
- ▶ Ancestral Cuisine and Cooking Rituals
- ▶ Christianity and Food
- ▶ Corporate Social Responsibility and Food
- ▶ Fair Trade in Food and Agricultural Products
- ▶ Food and Class
- ▶ Food Ethics and Policies
- ▶ Food Waste and Consumer Ethics
- ▶ Islam and Food and Agricultural Ethics
- ▶ Judaism and Food
- ▶ Public Institutional Foodservice
- ▶ Taste, Distaste, and Food
- ▶ Vegetarianism

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Expertise in Agriculture: Scientific and Ethical Issues

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Synonyms

Authority; Credibility; Expertise; Knowledge; Public trust; Social epistemology

Introduction

Agriculture, like many human enterprises, is a product of many varying overlapping knowledge practices: intensive and perceptive firsthand observations; personal experiences and communal memory; reliance on trusted interpersonal and institutional testimony, given keen discriminating assessment of credibility; and skill knowledge and tacit knowledge of all sorts alongside leading-edge science and engineering in botany and zoology, biochemistry, genetics, nutrition, land management, ecology, and oceanic and atmospheric sciences.

Agriculture, like many human enterprises, is a product of both considerable self-reliance and intellectual interdependence. This rich, complicated balance of epistemic autonomy and dependency in practice raises epistemic and ethical issues concerning the nature of agricultural expertise and, specifically, implications for how claims and renunciations of expert authority affect social relationships and knowledge practices among agronomists, corporations, farmers, and the varied nonexpert publics to whom they provide food, fuels, building materials, and many other products.

An Overview of Epistemologies of Expertise

Expertise can be understood as a kind of epistemic attainment or a kind of social authority. Accordingly, different analyses of the nature, power, and problems of expertise consider its epistemic and social senses. Epistemologists and many other philosophers tend to emphasize its veritism. For example, in debates on the epistemology of peer disagreement, "expert" is operationalized straightforwardly as someone to whose opinion regarding some proposition in their domain of expertise one should totally defer (Elga 2007) or as someone more talented and informed than relative nonexperts (Weatherson 2007).

Alvin Goldman (2001) defends a veritistic account of expertise that distinguishes *skill* experts, unusually accomplished at certain skills, from *cognitive* or intellectual experts, who have an exemplary quantity or level of propositional knowledge of a domain and propensity to generate new knowledge in that domain. Goldman further distinguishes *reputational* experts, those regarded as experts, from *objective* or genuine experts, those who actually have the expertise whether or not their reputations match. Also noteworthy is his distinction between *weak* and *strong* senses of expertise. Weak cognitive expertise requires extensive knowledge of what Goldman considers secondary questions in a domain of expertise, concerning the existing arguments, theories, evidence, and researcher assessments of evidence which bear on the primary questions of a field. Strong cognitive expertise, then, requires knowledge of both secondary and primary questions. So two practitioners well versed in the state of their field but defending divergent positions on the right answers to the primary questions in their field can both be experts in the weak sense, but at most only one can be an expert in the strong sense. Objective cognitive expertise for Goldman is largely but not entirely a matter of comparison: experts *as* experts must have more true and fewer false beliefs about their domains of expertise than most people do and, further, meet some noncomparative threshold of veritistic attainment. Goldman's third requirement is a propensity criterion, the capacity or disposition to correctly answer new questions emerging in one's field by drawing on the skill set and techniques constitutive of expertise. This propensity

involves the ability to successfully apply knowledge of the field (and use data banks, relevant apparatuses, etc.) to address new questions; as such, the propensity criterion would seem to require some skill expertise even for cognitive experts. (Solomon (2009) and Coady (2012) offer critique and variations on Goldman's epistemology of expertise.)

Critics of expertise such as Paul Feyerabend, Steve Fuller, and Raphael Sassower emphasize expertise as a matter of social reputation. For his part, Sassower (1993) associates expertise with postures of certainty and infallibility. The social role of modern scientists as experts is akin to ancient oracles, Sassower says: from their socially privileged position, experts tell the rest of us what to believe, and their lofty position allows the rest of us to believe certainty exists somewhere, and that we at least have indirect access to it. Feyerabend (1999), meanwhile, identifies experts with *specialists* who by their nature inhibit growth of scientific knowledge because they are ideologically wedded to conventional wisdom and so serve to keep unusual views from improving science. Feyerabend prefers generalists, *dilettantes*, who bring novelty or creativity into scientific conversations. (See Selinger (2003) for careful critique of Feyerabend's skepticism toward expertise.) Critics of expertise are also troubled by the privileging of institutionalized science over local or traditional agroecological knowledges, which are rarely accorded social reputations of epistemic authority in global market systems.

Sociologist of science Harry Collins writes extensively on expert/nonexpert relationships and the place of tacit knowledge in scientific expertise. In *The Golem* and *The Golem at Large*, Collins and Pinch (1993) characterize science as a kind of expertise and scientists as "craftspersons, the foremost experts in the ways of the natural world." Their aim is to articulate an alternative to the conception of science as certain knowledge; the portrait of scientists as experts with limited expertise is offered as a middle way between scientist as God and scientist as charlatan. Rather than trying to achieve some junior scientific expertise, Collins and Pinch advise nonexperts engaging with scientists to cultivate an *expertise of everyday life*, akin to what people use in dealing with other sorts of experts, as when hiring a plumber. Collins continues to explore expertise in collaborative interdisciplinary projects under the umbrella of Studies in Expertise and Experience (SEE). Collins and Evans (2007) are relatively positive about expertise, a stance that finds criticism from scholars such as Jasanoff (2003) and Wynne (2003) less sanguine about expert/nonexpert relations in modern life. Collins proposes *interactional* expertise as a middle epistemic way between that of nonexperts and *contributory* expertise of full practitioners of a domain. Interactional experts can speak the language but not fully play the game; what distinguishes interactional experts and contributory experts are the latter's skills and abilities not captured by the body of propositional knowledge distinctive of the domain, which interactional experts can acquire (Collins 2004). Yet contributory experts' tacit knowledge does not mean epistemic independence. The expertise comes *in the doing* – the performance of essential practices, whether in the laboratory or the field – but it cannot be done without extending epistemic trust. Collins finds that successful acquiring tacit knowledge characteristic of a field requires new practitioners to be socialized into the relevant community of practitioners. The social nature of science means that an expert does not operate without some degree of trust in other experts, whose agreement confirms that one has achieved competency in this expertise. (Selinger and Mix (2004) argue that Collins overemphasizes the importance of linguistic skill: contributory experts do not always describe their expert activities very well, and nonscientists can sometimes make original contributions too.)

The conceptions of expertise in terms of reliability and social authority have been reflected by the role of experts in law. American legal models of expertise take reliability to be an important factor as evidenced by recent US Supreme Court decisions on the admissibility of expert witness testimony. Differentiating expert testimony from other testimony is its status as an

admissible form of hearsay evidence; experts are witnesses who need not be eyewitnesses. Justice Blackmun argues for this, citing reliability. "Unlike an ordinary witness, see Rule 701, an expert is permitted wide latitude to offer opinions, including those not based on firsthand knowledge or observation. See Rules 702 and 703. Presumably, this relaxation of the usual requirement of firsthand knowledge. . .is premised on an assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline" (Daubert 1993). Precedents and rules guiding admissible expert testimony in the US court system do not require expert witnesses to be independent of nor confirmed by other experts. *Frye vs. United States* (1923), long the guiding precedent in these matters, deemed admissible expert testimony to be that consistent with those practices generally accepted by the relevant expert community. This changed with *Daubert v. Merrell Dow Pharmaceuticals* (1993), however: the court ruled that *Frye* had been supplanted by legislation establishing Federal Rules of Evidence. According to the court's interpretation in *Daubert* and subsequently in *Joiner* (1997) and *Kumho* (1999), the Rules admit all expert witness testimony that the trial judge deems to be reliable and relevant to the case at hand. The court allowed that reliability can be gauged by a variety of indicators: methodologies employed, error rates, peer review or journal publication of hypotheses testified to, as well as acceptance by a relevant expert community. (Borenstein (2002), Haack (2005), and Brewer (2006) provide further philosophical discussion of legal expertise.)

Worth special attention in reflecting on agricultural and food ethics is the murky status of moral expertise, of which both professional philosophers and the public tend to be wary. If expertise requires clear social authority, few if any secular figures enjoy unambiguous authority on morality. If the rational response to experts is deference, many are unsettled by such renouncement of moral autonomy. (Singer (1972), Driver (2004), and Archard (2011) offer contrasting arguments on the scope and possibility of ethics expertise.)

Ethical Issues in Agricultural Expertise Ascription

The conceptual slippage among veritistic, reputational, and social-epistemic hybrid accounts of expertise opens space for various ethical issues of respect and recognition concerning agricultural knowledge and practices. Lisa Heldke (2006) argues that, in contemporary urban- and suburban-dominated US American culture, knowing about farming and other rural things is too often conceived as *stupid-making* knowledge. Perversely, a person is taken to be less knowledgeable overall – or less knowledgeable of "what matters" – for knowing about agriculture; correspondingly, ignorance of farming and rural practices may be flaunted as signaling properly organized epistemic priorities. See Berry 2002 and Carr and Kafalas 2009 for further discussions of how rural practices can be dismissively framed as *anti-knowledge*.

Related to the problem of so-called stupid-making knowledge is neglected or devalued knowledge: fields in which the possibility of expertise (as a social or epistemic achievement or both) is not even recognized because the field and its practitioners are socially marginalized. Wynne's (1989) discussion of Cumbrian sheep farming after the Chernobyl disaster addresses just such an issue. The shepherds were assumed not to count as relevant experts, not because they were especially bad practitioners of their field, but because sheep farming was overlooked as something requiring genuine expertise. Baars (2011) argues for urgency in integrating farmers as experienced innovative practitioners in research projects on organic agriculture. In general, greater recognition of practitioners' *know-how* as a legitimate form of agricultural knowledge alongside *know-that* expertise can be an ethical corrective for historical devaluation of rural knowledge. Wohlforth (2005) explores how subsistence hunters' ecological knowledge complements, complicates, and challenges climate scientists' field work in coastal Alaska. Carolan (2006a, b) argues that Iowa farmers have local knowledge deserving greater voice in the development of sustainable agriculture,

applying the notions of contributory and interactional expertise to extend more credibility to small-scale farmers as marginalized knowers.

Failure to recognize expertise can constitute disrespect toward particular kinds of knowledge practices, but it can also constitute disrespect toward specific marginalized knowers, even in well-recognized fields of expertise. As Karen Jones (2002) aptly puts it, "testifiers who belong to 'suspect' social groups and who are bearers of strange tales can thus suffer a double disadvantage [. . .] being doubly deauthorized as knowers on account of who they are and what they claim to know." Miranda Fricker (1998, 2007) draws attention to credibility gaps between testifiers' actual rational authority in a field and the social power that recipients ascribe their testimony in that field. Testifiers enjoying more social power than their knowledge really warrant (perhaps due to accent, comportment, social privilege, or hyperextension of expertise) are said to enjoy *credibility excesses*. By contrast, testifiers whose rational authority warrants greater social power than others grant them (perhaps due to accent, comportment, or negative social stereotypes) suffer *credibility deficits*. In some cases, credibility deficits may be innocent, free of morally culpability, but in circumstances when credibility deficits derive from negative identity-prejudicial stereotypes, Fricker argues, a knower suffers a distinctive kind of wrong, *testimonial injustice*. The agricultural expertise of women is frequently subject to gender-based credibility deficits (cf. Code 1991; Feldman and Welsh 1995; Jewitt 2000). Testimonial injustice may also apply to aforementioned small-scale organic and sustainable farmers (Carolan 2006a; Baars 2011).

Social neglect of marginalized people's agricultural knowledge can be both disrespectful toward knowers and disadvantageous for (dis)trusting others by impeding social exchange of valuable knowledge. Another form of injustice in knowledge ascription arises when marginalized people's knowledge is valued, and so appropriated, and yet their expertise continues to be suppressed and ignored. In such cases, marginalized peoples' knowledge is incredibly beneficial (financially, nutritionally, etc.) for others, yet these knowers fail to receive the social-epistemic recognition they deserve. Vandana Shiva (1999, 2000) argues against "bio-piracy" as this sort of ethical-epistemic injustice. Traditional agroecological knowledge once wholly ignored or devalued by Western agribusiness is now eagerly taken up, while intellectual credit and socio-ecological context are denied or downplayed. Yet respect means recognition of agricultural practitioners *as knowers*, not just passive sources of agroecological information for expert co-optation.

Finally, one should not ignore ethical implications attendant to the problem of *unwarranted* or *unwanted* expertise ascription. Solomon (2009) explores how public participation in biological research alternately can be understood in terms of stakeholder participation or recognition of neglected lay expertise (see also Jordan et al. 2005). Some knowledgeable individuals and communities reject "expert" titles as misleading or silencing; some practitioners take pretension to expertise to involve claims of certainty, or epistemic independence, or articulated propositional knowledge that they may not ascribe themselves, though they may know quite a lot. Jewitt (2000) cautions against overestimating women's agroecological expertise in policy analyses of women's roles in development in rural India, on the grounds that claims of expertise do not actually precipitate their greater epistemic and social empowerment. Regarding the deep divide in contemporary American agriculture between industrial agribusiness and sustainable farming, Thompson (2001) argues against the assimilation of the latter as a specialized variety of the former. Such co-optation might make for savvy agribusiness, but on Thompson's agrarian philosophy, it would be a genuine loss, not a success in the recognition of sustainable farming as a kind of socially authoritative industrialized agricultural expertise.

Ethical Issues for Agricultural Expertise and Public Trust

Annette Baier (1986) offers a general moral test for healthy trust relationships applicable to

agricultural expert/public relations. Her *expressibility test* holds that "to the extent that what the trusted relies on for the continuance of the trust relation is something which, once realized by the truster, is likely to lead to (increased) abuse of trust, and eventually to destabilization and destruction of the relation, the trust is morally corrupt. . .A trust relationship is morally bad to the extent that either party relies on qualities in the other which would be weakened by the knowledge that the other relies on them" (Baier 1986). Here we might emphasize the potential for expert exploitation given epistemic asymmetry. When experts depend on public lack of expertise in order to promote their favored policies, they fail Baier's test. When experts rely on public ignorance of the range of expert opinions on a disputed issue or rely on public ignorance of their tenuous credibility among other experts, the attendant public trust is corrupted.

Assessments and assumption of risk raise specific ethical issues for agricultural expertise and public trust. Heather Douglas (2003) argues that scientists (like others) have general moral duties against *recklessness* and *negligence*, both of which involve wrong action in the face of risk to self and others. The moral issue here concerns not the assumption of risk itself, without which science and engineering are impossible, but the *level* of risk and the fact that nonexpert publics are exposed to risk without their awareness or consent. The use of pesticides and herbicides and the planting of transgenic crops (see Lacey 2005) are contexts in which farmers and other agricultural experts must consider the risks and rewards of practices that might affect communities locally, globally, and intergenerationally. Given such extensive vulnerability, experts also must consider whether and how they are socially and morally *authorized* to act on such communities' behalf.

So public trust and distrust in agribusiness raise serious challenges for agricultural experts. To that end, John Hardwig's ethics of expertise (1994) can be instructive. Hardwig outlines the problem in terms of ethical guidelines for four groups: individual experts, expert communities, nonexperts relying on experts, and society at large. The organizing priority is the recognition of epistemic and practical interdependency among experts and between experts and lay publics, remembering that those experts in one field are nonexperts in others. One notable maxim Hardwig identifies for experts is to tell the truth according to one's professional judgment, even when this is not what one's employers or others in power may want to hear. Scientists and engineers employed by multinational agribusinesses such as Monsanto or Cargill are likely to face this challenge of ethical expertise in specific and difficult ways. Attendant to this advice is the recognition of our inevitable propensity to rationalize: as such, reflective experts anticipate the temptation to believe and practice what employers and those in power prefer and work to counteract this tendency in themselves and fellow experts.

In doing their part to foster morally healthy public trust among farmers and consumers, agronomists and practitioners, agribusiness, and public, trustworthy agricultural experts offer testimony and do their work in ways that are not only reliable and transparent but also responsive to the fact of societal dependency on agriculture. Even experts are epistemically interdependent, and many farmers' and other practitioners' eco-agricultural knowledge fails to be accorded the social reputation of expertise: therefore, trustworthy agricultural experts must also actually recognize, engage, and partner with knowledgeable practitioners across cultures or traditions whose knowledge or credibility as knowers has been neglected. Interactional experts such as government officials and journalists for their part might attend to their duties of fostering public understanding and providing external constraint and validation to expert practitioners. Ethics of agricultural expertise also calls upon nonexpert publics to practice *responsible trust*: to appreciate the uncertainty inherent to actual scientific practice, for example, and not to ascribe expertise in unwarranted or unwanted ways, nor to extend undue deference. (See Shrader-Frechette (2011) on lay responsibilities in (dis)trusting scientists and Kitcher (2003) and Elliott (2011) for further general discussion of the ethics of scientific expertise.)

There is increasing recognition among agricultural and environmental ethicists of the value of nonexpert direct participation in eco-agricultural projects, which foster public understanding as well as public trust. Light (2006), for example, advocates for public-expert collaborations in environmental restoration work: "public participation does not mean that expertise should be abandoned in restorations; it just means that whenever possible, restorations are better when experts guide voluntary restorationists." Community-supported agriculture and community gardens likewise suggest a potential democratization of agricultural expertise in which agroecological intellectual and material labor is performed (and the fruits of that labor harvested) collaboratively across epistemic and social differences.

Summary

Agriculture is built on many kinds of knowledge and practices: some skill based, some theoretical, some tacit, some explicitly articulated, some recognized as expertise, and others not. Some people who work in agriculture are granted social authority as experts, and others not, due to various more and less justifiable (and ethically defensible) factors, such as lack of sufficient knowledge in the field, credibility gaps, social ignorance of their knowledge, social devaluation of their knowledge, or that "expert" fails to capture their specific agricultural knowledge. Given pervasive social dependence on farmers, agribusiness, and other producers of agricultural knowledge and crops, continued development of ethics of agricultural expertise is a matter of practical importance and certainly one in which people with contributory and interactional expertise of all kinds should have a voice.

Cross-References

- ▶ Agricultural Ethics
- ▶ Agricultural Science and Ethics
- ▶ Community-Supported Agriculture
- ▶ Farmer-Scientist Knowledge Exchange

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Extraterritorial Obligations of States and the Right to Food

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Introduction

Governments have extraterritorial obligations regarding the right to food. In an increasingly globalized world, activities of both state and non-state actors can have impacts well beyond national borders: hence, defining the parameters of extraterritorial obligations as a legal concept has become ever more important. Recent years have seen a growing consensus over the scope and substance of these obligations, including with respect to the right to food.

This contribution will define and discuss the concept of extraterritorial obligations and then apply it to the right to food in particular.

Extraterritorial Obligations of States

Definition and References in International Human Rights Law

Although the universal character of human rights, as well as the requirement of nondiscrimination attached to their realization, has always been clear, states traditionally have viewed their human rights obligations as limited to the people within their territories. This stance has led to a gap within human rights protection, apparent in a number of international processes. In effect, in times of globalization, the enjoyment of rights – especially economic, social, and cultural – is increasingly put at risk by the actions of transnational corporations, as well as of foreign states and intergovernmental organizations. Thus, focusing on the extraterritorial obligations of states can provide the missing link that will prevent such actors from escaping accountability for their unlawful actions or omissions that have negative impacts on human rights abroad, including those affecting people's access to food and other essential resources.

The extraterritorial obligations that international human rights law places on states require them to take certain actions, and refrain from taking others, either within or beyond their territories, that affect human rights beyond their borders. In addition, states must assist in the realization of human rights globally, through international assistance and cooperation. Thus, state obligations to respect, protect, and fulfill human rights have an extraterritorial dimension (ETO 2011, II 8–9).

Extraterritorial obligations are implied in a number of international human rights instruments. Dating back to the advent of the modern international human rights regime, the extraterritorial nature of state duties were incorporated into the Universal Declaration of Human Rights, which notes in article 22 that "[e]veryone (. . .) is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality." Subsequently, the International Covenant on Economic, Social and Cultural Rights (ICESCR 1966), a legally binding document, elaborated in article 2 on what such international cooperation entails: "Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures." The need for international cooperation in realizing specific human rights has been stated in other international instruments as well, including the Convention on the Rights of Persons with Disabilities (Art. 32) and the Convention on the Rights of the Child (Art. 4 and 24).

The Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights

Although human rights instruments explicitly mention international cooperation, the normative framework on human rights obligations that apply beyond national borders has been slow to emerge and consolidate. For many years, extraterritorial obligations were poorly developed, in part since they refer to obligations and responsibilities that extend to the sensitive political space situated beyond state boundaries (Langford et al. 2013).

However, as the international community witnessed the substantial impacts of state and non-state actors outside of their (home) territories, increased economic globalization and linkages lent growing importance to developing a more robust understanding of the parameters of extraterritorial obligations. In this context, a network of civil society organizations and academics set up the ETO Consortium with the aim of clarifying the extraterritorial obligations of states, in particular with respect to economic, social, and cultural rights. In September 2011, a group of 40 international law experts adopted a set of principles called the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights (ETO 2011).

The Maastricht Principles note that all states "have obligations to respect, protect and fulfill human rights, including civil, cultural, economic, political and social rights, both within their territories and extraterritorially." They describe two types of extraterritorial obligations: "obligations relating to the acts and omissions of a state, within or beyond its territory, that have effects on the enjoyment of human rights outside of that state's territory; and (. . .) obligations of a global character that are set out in the Charter of the United Nations and human rights instruments to take action, separately, and jointly through international cooperation, to realize human rights universally." These obligations do not mean that states are responsible for the realization of all human rights throughout the world. Rather, a state has extraterritorial human rights obligations in three situations: (i) when it exercises authority or effective control, regardless of whether such control is exercised in accordance with international law; (ii) when its acts or omissions cause foreseeable effects on the enjoyment of human rights, within or outside its territory; and (iii) when it is capable of exercising decisive influence or of taking measures through its executive, legislative, or judicial branches to realize these rights extraterritorially, in accordance with international law, be it acting separately or jointly (ETO 2011).

Therefore, extraterritoriality applies to the traditional obligations of states to respect, protect, and fulfill human rights. In this context, the obligation to respect requires that states refrain from any policy or action likely to hinder the realization of economic, social, and cultural rights in other countries. The obligation to protect compels states to ensure that third-party actors that are under its control, for example, domestically based transnational corporations, respect human rights abroad. The obligation to protect thus includes the obligation to regulate the behavior of such actors. Finally, states have the obligation to support other countries in their fulfillment of human rights obligations.

The Maastricht Principles are not legally binding and have not been adopted by governments. Yet they highlight a growing consensus that all states have extraterritorial obligations to respect, protect, and fulfill economic, social, and cultural rights (Langford et al. 2013). Since their release, extraterritorial obligations have been referenced in UN Special Procedures reports, such as the Guiding Principles on Extreme Poverty and Human Rights, which were prepared by the UN Special Rapporteur on Extreme Poverty, adopted by the UN Human Rights Council and noted with appreciation in a UN General Assembly resolution. Those guiding principles articulate extraterritorial obligations of international assistance and cooperation, as well as state duties to "prevent and protect against human rights abuse committed by non-state actors, including business enterprises, which they are in a position to regulate. (. . .)" (ETO 2011).

How Extraterritorial Obligations Apply to the Right to Food

The Right to Food and Extraterritorial Obligations in International Law

The extraterritorial obligations of states apply to the right to food. The right to food is codified in the International Covenant on Economic, Social and Cultural Rights, which also sets forth requirements for international cooperation. Similarly, the Rome Declaration on World Food Security also emphasized that the "multifaceted character of food security" required "concerted national action, and effective international efforts to supplement and reinforce national action" (World Food Summit 1996).

In 1999, the UN Committee on Economic, Social and Cultural Rights explicitly elaborated on this obligation, noting in its General Comment No. 12 on the right to food that "In the spirit of article 56 of the Charter of the United Nations, the specific provisions contained in articles 11, 2.1, and 23 of the Covenant and the Rome Declaration of the World Food Summit, states parties should recognize the essential role of international cooperation and comply with their commitment to take joint and separate action to achieve the full realization of the right to adequate food. In implementing this commitment, states parties should take steps to respect the enjoyment of the right to food in other countries, to protect that right, to facilitate access to food and to provide the necessary aid when required" (Committee on Economic, Social and Cultural Rights 1999).

More recently, a subsidiary body of the Committee on World Food Security drafted Voluntary Guidelines that provide further guidance on how to implement the right to food. The guidelines encourage policies fostering an enabling environment, assistance, and cooperation, and cover international measures, actions, and commitments (FAO, Committee on World Food Security 2005). These guidelines thus stress that programs of aid and technical assistance, as well as trade, finance, and investment policies, need to be aligned with human rights and the right to food.

The Right to Food and its Extraterritorial Dimensions: Illustrations

Illustrations of how extraterritorial obligations of states apply to the right to food abound, ranging from states' public policies to the activities of private parties.

For example, in order to comply with their obligation to respect the right to food in its extraterritorial dimensions, states should refrain "from food embargoes or similar measures which endanger conditions for food production and access to food in other countries" (Committee on Economic, Social and Cultural Rights 1999, para. 37) and from supporting states that use food as a political tool or that blockade food deliveries for political reasons (ibidem). In addition, states should avoid discriminatory practices when providing food aid in foreign states (Skogly 2007, p. 352).

Agricultural subsidies in the North aimed at the structural overproduction and exportation of raw agricultural products to the South may also violate states' obligations to respect the right to food. Thus, states should establish their policies of subsidies and market access in ways that do not threaten livelihoods of people in other countries, particularly in developing countries where alternative livelihoods for those affected are more limited than in wealthier countries and where systems of social protection are restricted or nonexistent (ibidem). Examples of harmful policies are the subsidies that were paid by the US government to a restricted number of cotton farms, particularly in the decade following 1995. They caused the world price of cotton to fall sharply, which in turn had negative consequences for West African producer countries, decreasing the market share for small-scale cotton farmers especially in Benin, Burkina Faso, Chad, and Mali. By reducing the income of the small-scale farmers and their national governments, the US subsidies undermined a series of rights, including the right to food, abroad (Skogly 2007, p. 353).

Another instance of potential state failure to respect and protect the right to food extraterritorially is found in transnational land deals, which have increased as countries and investors have sought to expand food and agro-fuels

production abroad. These deals are frequently for large tracts of land on which farmers or others previously relied for food production or access to productive resources. However, without protected land rights, land users may face evictions and loss of access to productive resources, thereby jeopardizing the realization of their right to food. When a foreign government or its related entity undertakes this type of transaction, it may result in the government's failure to respect the right to food in another territory. When these transactions are conducted by private actors, such as agribusinesses or investment companies, the deal may imply the home government's failure to protect the right to food by not regulating such actors appropriately.

One final example relates to financial speculation on food prices by the banking sector, a practice that is potentially harmful to the right to food at the global level. Since around 2005, markets for several agricultural commodities have witnessed rapid price increases and higher volatility, which severely affected the right to food in poor, net food-importing countries. While there are multiple reasons for these market trends, excessive speculation in agricultural commodities derivatives by investors may have significantly contributed to worsen market volatility. States, which already regulate the financial sector, should consider whether their obligation to protect the right to food extraterritorially requires stronger regulations that mitigate commodity price volatility, thereby helping to prevent future global food price crises.

With regard to these different examples, in accordance with Maastricht Principles 19–22, states should refrain from any action that would impede the enjoyment of economic, social, and cultural rights, including by those living outside of their borders. Moreover, the obligation of states to protect human rights includes their duties to regulate non-state actors, as required by Principles 23–27. Thus, they should regulate transnational companies involved in practices such as transnational land acquisitions or leases when they are implemented in ways that violate the human rights of the local communities. Finally, Principles 28–35 request states to create an environment that enables the fulfillment of human rights, including the right to food, through international cooperation.

Conclusion

In the context of globalization, the traditional view of territorial limitations on state obligations leads to significant gaps in human rights protection. These gaps can affect the enjoyment of the right to food and more generally access of people to essential resources. This is particularly true as challenges have grown, produced by factors such as the weak regulation of transnational corporations; the lack of accountability of intergovernmental organizations, including international financial institutions; the deficient application of human rights law to investment and trade treaties, policies, and disputes; and the insufficient implementation of obligations to protect and fulfill human rights abroad through international cooperation and development assistance (ETO 2011). A few of these obstacles were illustrated above in respect of the right to food, namely, harmful agricultural subsidies, transnational land deals, and financial speculation on agricultural products.

In recent years, increasing attention has been paid to the obligations that states have to protect, respect, and fulfill human rights beyond their own territories. The Maastricht Principles, adopted by a number of international legal experts, present a particularly useful effort to develop the normative content of the extraterritorial nature of human rights obligations, clarifying when extraterritorial obligations arise and what those obligations entail.

Moving forward, the development of direct human rights obligations of non-state actors – such as transnational companies and international organizations – could be further explored as an additional way to address accountability gaps. While the UN "Protect, Respect and Remedy" framework for business and human rights – which has been widely embraced by governments, corporations, and other stakeholders – asserts that businesses have responsibilities to respect human rights,

rather than obligations, there has been increasing consideration of whether businesses also have obligations regarding human rights; indeed, some scholars argue that such obligations already exist. Since corporations and other non-state actors have increasing influence and power, developing corresponding obligations could enhance their accountability, possibly by identifying them as duty-bearers and designing responsibility mechanisms at the international level.

Summary

States have extraterritorial obligations regarding the right to food. States must ensure that any of their acts or omissions, either within or beyond their borders, that may affect the enjoyment of the right to food beyond their own territories, are undertaken in a way that respects or protects that right. In addition, states must act proactively to assist in the progressive realization of the fulfillment of the right to food outside of their own territories.

Cross-References

- ▶ Access to Land and the Right to Food
- ▶ Food Security
- ▶ Right to Food in International Law

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