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## Absentee Landlords and Agriculture

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### Synonyms

Absentee landlords; Absentee landowners;  
Farmland ownership; Female landowners;  
Landlord-tenant relationship

### Introduction

Absentee landlords of agricultural land do not live on their land but lease it to others to farm. These can include retired farmers and ranchers, individuals who inherit land but live elsewhere, and those who buy land for recreational or investment purposes and reside elsewhere (Petrzelka et al. 2013).

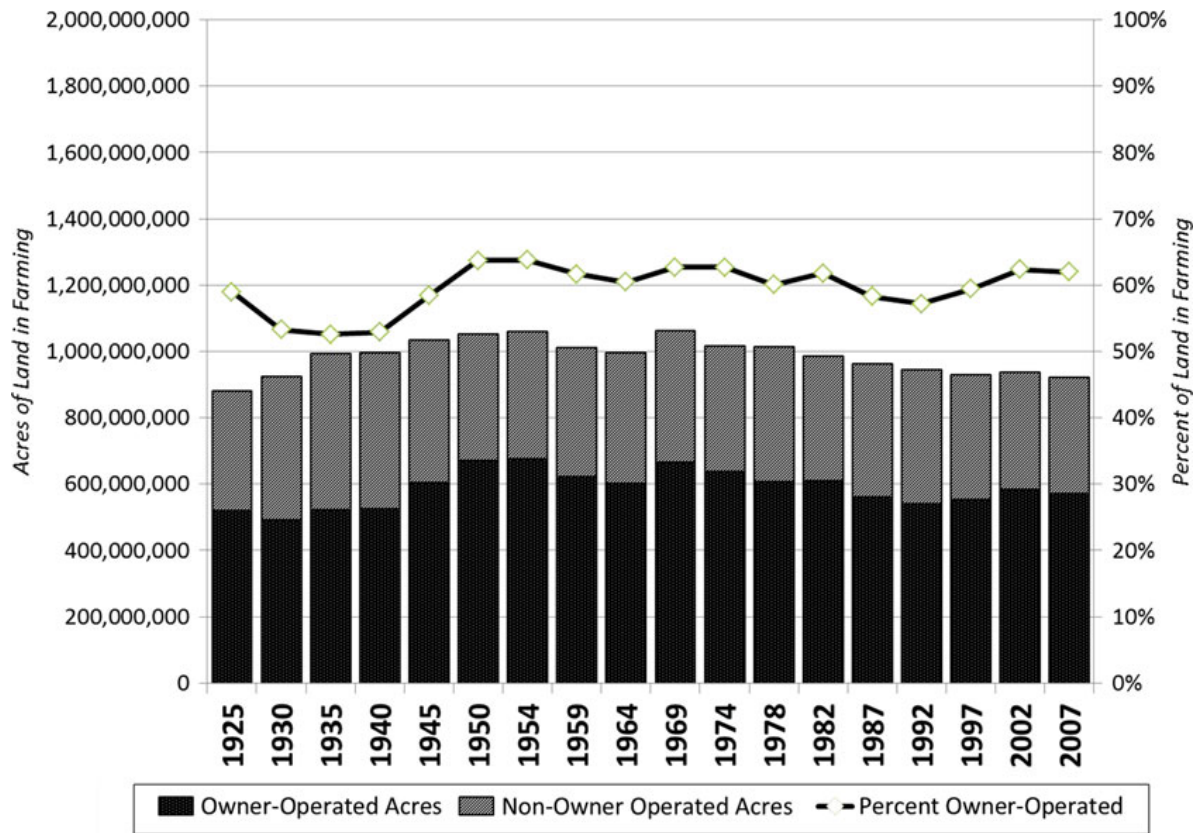
An “unprecedented level of absentee ownership” of rangelands has occurred in the US West (Haggerty and Travis 2006, p. 825); and in the Midwest, an increasing number of farmland owners are no longer living on their land or even in the state where their land is located (Duffy and Smith 2008). However, no nationwide data set exists on this growing group of agricultural landowners, and little research exists about differences between residential landlords (who reside on the land) and absentee landlords

(who reside elsewhere). Absentee ownership and absentee landlords of agricultural land are major issues that are poorly understood, yet have ethical, social, and environmental implications.

This entry discusses absentee landlords in the larger context of US agricultural land ownership. Trends in US agricultural and absentee landownership as they relate to rented farmland are first examined. Then, an overview of research on agricultural landlord-tenant operator relationships is presented, discussing both resident and absentee landlords and incorporating ethical, social, and environmental implications which may occur with the landlord-tenant relationship. The entry provides suggestions for future work on the topic of absentee landlords and concludes by providing information on organizations working with absentee landlords.

### Overview of US Agricultural Ownership

In the early twentieth century, most rented farmland in the United States was operated (i.e., farmed) by full tenants (who owned none of the land they operated), reflecting in large part the legacy of plantation agriculture in the south, with many former slaves working as sharecroppers for white landowners. The Great Depression and World War II brought the collapse of full tenancy and sharecropping. Since that time, a growing share of US farmers are part owners, who rent in addition to own land they farm (Jackson-Smith and Petrzelka, [forthcoming](#)).



**Absentee Landlords and Agriculture, Fig. 1** Total acres and percent of acres by operator tenure status (Source: US Census of Agriculture, Various Years)

Figure 1 illustrates that the overall proportion of land that is operated by the owner in the United States has not changed dramatically over time. What has changed is the proportion of land that is owned and operated by part owners. Approximately 922 million acres of US farmland (42 % of the Nation's land base) was operated in 2007 (U.S. Census of Agriculture 2012). Thirty-seven percent of this land was operated by full-owners (i.e., they own all the land they operate). Part owners comprised one-quarter of US farms, owned slightly less than half of the total land they operated, and dominated the market for rented farmland. Their importance in the US farm sector increased rapidly from the 1920s through the early 1980s and has remained relatively constant since then. Currently, full tenants comprise just 6 % of farms and operate 9 % of farmland.

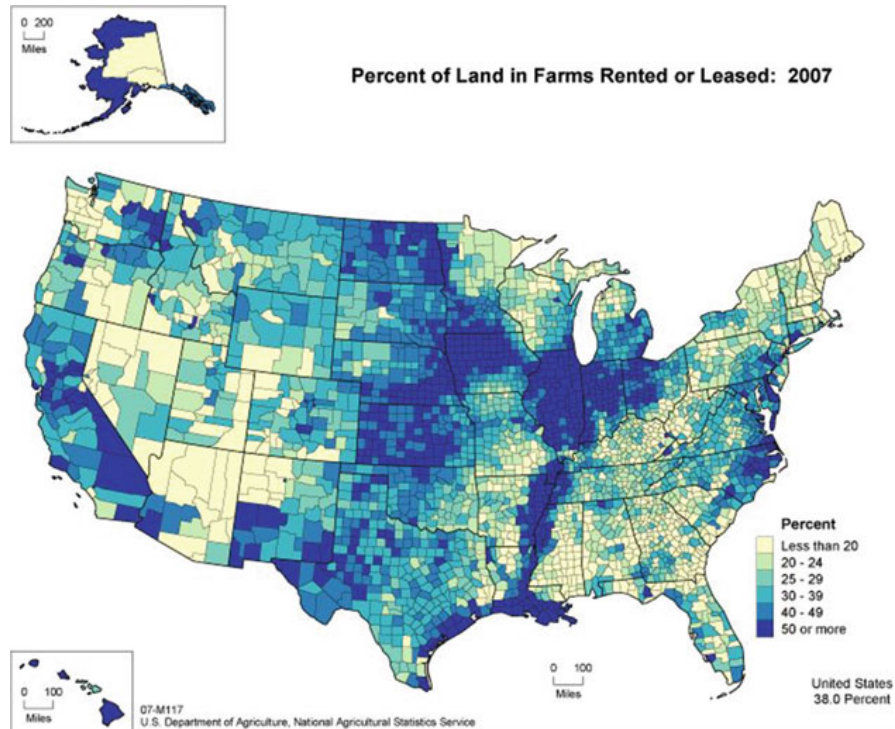
Figure 2 shows the proportion of US farmland rented or leased by county, according to the 2007

Census of Agriculture. There is a general tendency for many of the most commercially important agricultural areas to see higher rates of land leasing (Nickerson et al. 2012). As evidenced, several geographic regions (including the Midwestern corn belt, Great Plains wheat region, Central Valley in California, Lower Mississippi Delta, and Atlantic Seaboard) have a majority of farmland that was operated by someone other than the owner. These variations in rates have been explained in part by laws in some states that limit farmland ownership by corporations, nonfarmers, or non-US residents (Nickerson et al. 2012).

The US Census of Agriculture does not collect data from agricultural landlords. However, national trends on agricultural landlords have been collected by the Agricultural Economics and Land Ownership Survey (AELOS), conducted by the National Agricultural Statistics Service of the US Department of Agriculture (USDA).

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**Fig. 2** Percent of land in farms rented or leased in 2007 (Source: 2007 Census of Agriculture, Agricultural Atlas Maps; Available online at: [http://www.agcensus.usda.gov/Publications/2007/Online\\_Highlights/Ag\\_Atlas\\_Maps/Operators/Tenure/07-M117.php](http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Ag_Atlas_Maps/Operators/Tenure/07-M117.php))



AELOS collects information from both landowners and tenants and is the only nationwide source of information about agricultural landlords. The most recent AELOS survey was conducted in 1999. Findings show only 13 % of individual (or partnership) landlords lived on the farmland that they rented out (i.e., were resident landowners rather than absentee). While about a third of these landlords lived on some type of farm, the largest group reported residences in cities, towns, or urban areas. This urban group provided nearly 45 % of the total rented acreage reported in the 1999 AELOS. Demographically, most private farmland landlords were relatively older – over half were over 65 and these individuals provided 50 % of all leased farmland in the United States. Most private landlords also reported jointly owning their farmland, and female landlords were likely to lease out more of the land they own (Jackson-Smith and Petrzela, *forthcoming*).

The AELOS has been conducted only twice (in 1988 and 1999), and therefore, it is difficult to infer trends or derive information about current agricultural landlord patterns. More detailed and recent data come from smaller geographies. For example, the Iowa Land

Ownership Survey has collected panel data from a representative statewide sample of land parcels and landowners in Iowa since 1949 (Duffy and Smith 2008). (Data has been collected in 1949, 1958, 1970, 1976, 1982, 1992, 1997, and 2002.) While national trends suggest that the total proportion of farmland that is owner-operated land (thus not rented) has hovered near 60 % since World War II, the Iowa study shows a pronounced decline in the proportion of land under owner-operator status (dropping from 55 % in 1982 to 40 % in 2007). Scholars who have conducted research on absentee landowners in small geographic pockets speculate that this decline in owner-operator status is partly because of the aging of the farmland owner population. For example, in Iowa, the share of land owned by persons over 65 increased from 29 % in 1982 to 55 % in 2007 (Duffy and Smith 2008). This change is also reflected in the increased importance of older female agricultural landlords across the Midwest (Petrzela and Marquart-Pyatt 2011).

Based on the limited research and data on absentee landowners of agricultural land, it appears the majority of these landowners fall

under the category of nonoperator owners. These nonresident landowners, as compared to those living on the land, are much more likely to live in urban areas, less dependent financially upon the land, and much more likely to own land for amenity reasons (e.g., recreation, vacationing) than production purposes (Petrzelka et al. 2009; Petrzelka 2012).

### **Overview of Agricultural Landlords: Resident and Absentee**

With the large amount of farmland rented, the landlord-tenant relationship clearly plays a significant role in US agriculture. The few empirical studies on the landlord-tenant relationship in the United States mainly focus on resident landlords and show that tenants often have substantial managerial control over the land. For example, Gilbert and Beckley (1993) studied decision making in two Wisconsin townships and found landlords and tenants in agreement that the tenants were the primary decision makers for operational decisions on the farm such as types of commodities to grow, application of particular soil conservation practices, and participation in specific federal programs.

Effland et al. (1993) examined landlords' involvement in farm management decisions using the 1988 AELOS data and historical documents and found that female landlords were less likely to make farm management decisions than male landlords and were more dependent on the farmland for income. In addition, women were more likely to have inherited their farmland and tended to be older than male landlords. Also using the 1988 AELOS data, Rogers and Vandeman (1993) found those landlords who were more involved in decision making had past farming experience, lived closer to the land, and rented on a crop-share basis (wherein typically landlord and tenant share management decision making, risks, and benefits) rather than a cash rent basis (wherein tenant pays rent for use of the land, typically makes all management decisions, incurs all risk, obtains all benefits). Rogers and Vandeman (1993) also found that female

landlords were less likely than male landlords to participate in choices of fertilizer and chemical practices on leased land and that younger landlords, both male and female, were more involved in on-farm management decisions, as were those who identified themselves as farmers.

Constance et al. (1996) were the first to analyze both resident and absentee landlords in their Missouri study of landlords' involvement in decision making on rented agricultural land. Decision making focused on crops grown, tillage practices, types of pesticides, pesticide application, and participation in soil conservation and water quality programs. The researchers found resident and absentee landlords were most likely to be involved in conservation program decisions, least likely to be involved in pesticide decisions and overall, and less involved in all of the decision-making practices. Focusing more specifically on predictors of landlord involvement in pesticide selection, Constance et al. (1996) found among resident landlords that being male, having a higher dependence upon the farmland for income, and having a farming background were the most significant factors predicting involvement. For absentee landlords, the distance the landlord lived from the land was a predictor (where those living closer were more involved) as was a higher dependence upon the farmland for income and age; with younger landlords more involved, the researchers argued, possibly due to their increased environmental consciousness.

While many landlords and tenants in Gilbert and Beckley's 1993 study reported they were very satisfied with the landlord-tenant relationship, the researchers argue (1993, p. 578) that in some instances, the tenants appeared to be exploiting their landlords, who are often "retired farmers, small landowners, and widows."

This potential exploitation resulting from the landlord-tenant relationship is evidenced in studies from Iowa. In a study of resident and absentee landlords, Eells (2008) found deception of female landlords occurring with some tenant relationships. This deception occurred particularly in terms of potential soil conservation measures, which would be presented to the female landlord by the male tenant most often in "an authoritative



way as not being very practical or effective” (p. 67). Wells (2003) found maintaining peace in the family overrode preferences on conservation decisions for female resident and absentee landlords, particularly when ownership of the land was shared with family members and even more so when the tenant was also a family member. Female agricultural landlords interviewed noted the difficulty in sharing ownership with siblings as many decisions were made in order to keep peace in the family, and self-censorship by female landlords occurred with their male relatives and tenants. Carolan (2005, p. 396) also found self-censorship would occur by female landlords in Iowa who were reluctant to discuss implementing sustainable agricultural practices on their land with their tenants, fearing they would “scare away good tenants.” Carolan (2005, p. 402) stated, “all of the female landlords described inequitable power relations between themselves and their male tenants. Specifically, they expressed feelings of exclusion [and] alienation [from the farm decision making].”

Expanding this research beyond Iowa, a 2011 study of landlords in four Great Lakes counties (Petrzelka and Marquart-Pyatt 2011) found female absentee landlords are less likely to be involved in decision making on their land if they are older, when their financial reliance on the land is greater, if they are retired, if they inherited the land, when they co-owned the land with a sibling, and when a local farmer was their tenant. For male absentee landlords, involvement in decision making on their land is reduced only when a local farmer farms the land. Thus, the subordinate landlord-dominant tenant possibility suggested by Gilbert and Beckley in 1993 appears to be occurring most frequently with female landlords.

### Issues and Implications of Absentee Landownership

In 1993, Rural Sociologist Gene Wunderlich noted, “The change in the structural relationship between farming and land ownership implies potential changes in who bears risk, makes

production and investment decisions, protects the environment, and supports the community. Who, between farmer and landowners, decides whether farmland will go into a conservation reserve? Are non-operator owners less risk averse in production decisions than operator owners? Are absentee landowners as concerned about pesticide contamination of drinking water as resident owners? How are school budgets and community facilities affected by the level of absentee taxpayers?” (1993, p. 549).

The issues and implications Wunderlich posed in 1993 are even more relevant today. Those highlighted here include land management decision-making authority, agri-environmental behaviors, and impacts on local community well-being.

In general, the minimal research on resident and absentee landlords has consistently found that landlords of agricultural land allow their tenants to make operational decisions and that female landlords are less involved in decision making regarding land use compared with males. When looking specifically at involvement in conservation decision making, female landlords were much more likely to censor themselves, particularly when they co-owned the land and their tenants were family members. While a growing share of farmland owners are women, primarily widows (Duffy and Smith 2008), female landlords may still find themselves in a disadvantaged position because of patriarchal structures in rural communities.

The handful of studies which exist consistently suggest a power relationship between landlords and tenants. Contemporary research that explores how this power relationship is mediated by social relationships (gender, families, race or ethnic identity, and other direct social ties) and geography could both assist organizations working with absentee (and resident) agricultural landlords, as well as help advance social theories of ownership, rent, and power (Jackson-Smith and Petrzelka, *forthcoming*).

A second power issue is based on changes in the structure of agriculture and the relative availability of agricultural land. As demand for farmland increases because of rising global

commodity prices, and where available prime land required for commercial agriculture in the U.S. is in short supply, farm operators are forced to compete with one another to gain access to farmland. In areas with declining populations and increased consolidation of farming operations, landlords may have few options to rent out their land, which places tenants in a stronger position. In both cases, the actual relative power of the landlord and tenant is likely to be mediated by gender, family ties, and other social relationships (Jackson-Smith and Petrzalka, [forthcoming](#)).

Regarding environmental implications, scholars studying the adoption of conservation practices in agriculture have often assumed that farm operators are more likely to make investments in conservation practices (particularly control of soil erosion) when they have secure long-term access to and personal ownership interests in their farmland (e.g., Featherstone and Goodwin [1993](#); Caswell et al. [2001](#)). Nonoperator owners are less likely to be enrolled in USDA conservation programs such as Conservation Reserve Program (CRP) or the Wetlands Reserve Program (WRP) (Nickerson et al. [2012](#)) consistent with research that found that tenants were less likely than owner operators to adopt conservation practices that provide benefits over the longer term (Soule et al. [2000](#)).

In part, this can be explained by distance from the land. The farther removed physically absentee landowners are from their land, the more isolated they are from local social networks and contacts, both of which are well-established criteria for promoting recommended land management practices. In comparison to resident landowners, absentee owners are much less likely to have personal contact with local extension and natural resource agency program staff, leading to lower levels of scientific and traditional management knowledge about local environmental conditions (Redmon et al. [2004](#); Petrzalka et al. [2009](#)). Further, they are less familiar with the traditional land/farming culture and less attuned to conventional sources of information and agency.

Additionally, farmland owners without social ties to the local community may be less aware of

(and perhaps care less about) the effects of land management on neighboring property owners. Yung and Belsky ([2007](#)) found that absentee owners' goals for their land, such as increased wildlife, have resulted in detrimental environmental impacts on neighboring lands, and subsequent social issues, as the economic livelihood for those depending on the land is damaged.

One of the challenges is how to engage absentee owners in the community(ies) nearest where their land is located and provide education on the collective impact of their behavior. Some local conservation groups have attempted to pair new absentee landlords and experienced ranch managers in an informal effort to facilitate exchange of information and ideas (Yung and Belsky [2007](#)). It would be beneficial to conduct specific case studies to examine how these matchmaking efforts are working, both in terms of logistic and administrative mechanisms but also subsequent community impacts and longitudinal conservation effects on the landscape.

Additionally, there is little research on the role of absentee ownership on social issues such as community well-being, yet as absentee ownership increases, social relations in the community increasingly transcend locality. Theoretically, absentee landowners may be expected to be less engaged in community activities (because of the distance they live from the land and/or lack of strong social ties). This idea, though, has received relatively little empirical research.

It has been suggested that since some farm program payments are paid directly to landlords of agricultural land, when a large percentage of these landlords live in urban areas, it raises questions about whether farm program payments benefit rural community economies as intended (Drabenstott [2005](#); Nickerson et al. [2012](#)). One study examined the impact of absenteeism on rural community property tax revenues and found the benefits of Alabama's low property tax rates benefit absentee owners more than the local community, limiting the ability of local governments to meet citizen needs (Majumdar [2011](#)). More studies looking at the community impacts of absentee ownership are needed.

## Summary

In summary, agricultural landlords are an understudied group, absentee farm landlords even more so. At present, no nationwide data set exists on this growing group of agricultural landowners. Yet, given the changing patterns of agricultural land ownership, the power issues occurring within decision making on the land, and ethical, social, and environmental implications of absentee landownership, absentee landlords are a group we can no longer neglect.

Various organizations have begun working with these landlords. For example, the Women Caring for the Land program ([http://www.wfan.org/Women\\_Caring.html](http://www.wfan.org/Women_Caring.html)) provides a manual for female landlords (resident and absentee) that assists women in “learning more about their rights as landowners, about best management practices, about communicating effectively with their tenants, and about state and federal cost-share and loan programs available to help them.” The report can be found here: [http://www.wfan.org/Women\\_Caring\\_files/WCLManualForWeb3-12.pdf](http://www.wfan.org/Women_Caring_files/WCLManualForWeb3-12.pdf). The Conservation Connect program in Iowa (<http://www.absenteelandowners.org/>) provides information to absentee landowners who are interested in natural resources conservation and who want to gain more information about available conservation programs, resources, and support. And Drake University’s Sustainable Farm Lease program provides landowners a tool kit of information that, among other things, introduces “landowners to the principle issues regarding the use of a lease agreement to promote a sustainable farm operation” and promotes “creative lease contracts that take landowner and tenant needs into consideration while enabling tenant’s to conserve farm resources” (<http://sustainablefarmlease.org/>).

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## Access to Land and the Right to Food

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### Introduction

Examining the relationship between access to land and the right to food requires that we first define what we mean by access to land on the one hand—thus, both land and access—and the right to food on the other. We will then briefly draw the complex relationship existing between access to land and the right to food. Finally, we will

propose a short analysis of the issue against the current international backdrop of rising commercial pressures on land and then conclude.

### Access to Land

Land is, in a first definition, “the part of the earth’s surface that is not covered by water” (*Oxford English Dictionary*). It is not simply “everything but water” but bears certain features that make it a particularly complex resource. Land does not move; it is heterogeneous and indispensable to almost all human activities; land is inherently linked to notions of identity and authority as well as territory, and it distinguishes itself by the power and depth of the sense of belonging people feel to it (Hall 2013). In this article, we will not consider the role of land as space and territory but solely as a resource, given our focus on food. The relationship between land and food will be examined below after a brief account of the right to food.

Access entails “the ability to benefit from things – including material objects, persons, institutions, and symbols” (Ribot and Peluso 2003, p. 154). Property is one of several possible (institutional) means toward achieving access. It is “a right in the sense of an enforceable claim to some use or benefit of something,” an enforceable claim being “one that is acknowledged and supported by society through law, custom, or convention” (Macpherson 1978, p. 3). Property refers only to claims that are sanctioned by socially legitimate politicolegal institutions—these institutions being effectively legitimized if their interpretation of social norms is heeded (Lund 2011; Sikor and Lund 2009).

We take the opposite of access to be exclusion, defined as “the ways in which people are prevented from benefiting from things” (Hall et al. 2011, p. 7). A good or resource is excludable insofar as it is feasible to exclude others from access to and use of the good or the resource (Ostrom 2003). While it has been convincingly argued that inclusion is intrinsic to property (Dagan 2011), the ability to exclude is generally regarded as a defining feature of property rights (Rose 1994).



## Right to Food

The right to food protects the right of all human beings to feed themselves in dignity, either by producing their food or by purchasing it. As authoritatively defined by the Committee on Economic, Social and Cultural Rights (CESCR) “The right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement” (General Comment No. 12, para. 6).

The legal basis for the right to food in international law lies in Article 25 of the Universal Declaration of Human Rights, which recognizes the right of everyone “to a standard of living adequate for the health and well-being of himself and of his family, including food” (Universal Declaration of Human Rights, Art. 25). This right is also protected by the International Covenant on Economic, Social and Cultural Rights (ICESCR), which stipulates that states “recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions” and requires them to “take appropriate steps to ensure the realization of this right” (ICESCR, Art. 11.1). Finally, the right to food is recognized in the Convention on the Rights of the Child in Articles 24.2(c) and 27.3, as well as in a number of other international and regional instruments. The CESCR provides an authoritative interpretation of the content of the right to food and guidelines for its progressive realization in the abovementioned General Comment No. 12, and the Voluntary Guidelines adopted in 2004 under the auspices of the FAO complement it with recommendations.

Three key elements form the core content of the right to food: availability, accessibility, and adequacy. First, availability requires that food should be available from natural resources and/or in markets and shops, which means that there exist mechanisms to move food from the site of production to where it is needed in accordance with demand. Second, accessibility requires economic and physical access to food to be guaranteed, meaning that

food must be affordable (without compromising any other basic needs, such as school fees, medicines, or rent) and accessible to all, including to the physically vulnerable, such as children, the sick, persons with disabilities, or the elderly, for whom direct access to food may be difficult. Third, adequacy means that the food must be safe and satisfy dietary needs, taking into account the individual’s age, living conditions, health, occupation, sex, etc.

The right to food, like other economic, social, and cultural rights, places three forms of domestic obligations on States. First, the obligation to respect existing access to adequate food requires State parties not to take any measures that result in preventing such access. Second, the obligation to protect requires measures by the State to ensure that companies or individuals do not deprive other individuals of their access to adequate food. Third, the obligation to fulfill (facilitate) means the State must proactively engage in activities intended to strengthen people’s access to and utilization of resources and means to ensure their livelihood, including food security. Whenever an individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal, States have the obligation to fulfill (provide) that right directly.

The Food and Agriculture Organization of the United Nations developed the so-called PANTHER framework, deriving from human rights treaties a number of principles—namely, Participation, Accountability, Nondiscrimination, Transparency, Human dignity, Empowerment, and Rule of law (FAO 2009). States ought to follow these in order to create monitoring mechanisms, both judicial and nonjudicial, of decision-making processes to advance the right to food. Participation means that everyone should have the right to subscribe to decisions that affect them; accountability requires that elected representatives and government officials be held accountable for their actions through elections, judicial procedures, or other mechanisms; nondiscrimination prohibits arbitrary differences of treatment in decision-making; transparency entails that people be able to know processes, decisions, and outcomes; human dignity requires

that people be treated in a dignified way; empowerment requires that they are in a position to exert control over decisions affecting their lives; and rule of law, that every member of society, including decision-makers, must comply with the law (Cotula et al. 2008).

### **Access to Land and the Right to Food: Drawing the Relationship**

The relationship between access to land and the right to food is not obvious, nor ubiquitous. In many cases, the right to food can entirely be fulfilled without access to land being provided through means such as formal employment with high-enough wages or off-farm business activities. However, for rural households in the global South, land is the strongest and oftentimes the only guarantee of relative food security (Cotula et al. 2008, esp. pp. 23 and 59). More generally, it is estimated that 80 % of the billion people suffering from hunger today—mostly smallholders as well as agricultural workers, herders, artisanal fisherfolk, and members of indigenous communities—depend on land for their livelihood (De Schutter 2010). Among them, many farmers can only cultivate plots of land that are too small or not irrigated enough to ensure subsistence. In addition, peasants are usually poorly protected by law, which makes them vulnerable to various limitations on their activities including, in extreme cases, evictions.

Insofar as land rights ensure access to productive resources and are key for realizing the right to food—that is, when there exists no alternative means of producing or purchasing food that is sufficient, adequate, and culturally acceptable—they are of paramount importance. But land ownership and use are often subject to confused and intertwined regulation, combining, for example, customary law (i.e., administered in accordance with the customs of indigenous groups) and statutory tenure (usually introduced during colonial periods)—not to mention the array of laws and codes at the international scale.

In addition, realizing access to land is extremely complex. First, one needs to

distinguish property rights and effective access since rural households can have either one without the other (Hall 2013). Property alone does not ensure that rural households will be able to derive benefit from the land (to “access” it) but needs to be complemented with “structural and relational mechanisms of access” such as technology, capital, and markets (Ribot and Peluso 2003, p. 160). By contrast, people can have access to land (“benefit from it”) without property rights—through agricultural labor, for example.

Second, having in mind the focus on land as a resource, exclusion (i.e., nonaccess) from a specific piece of land (as opposed to any land at all) is essential to virtually every productive use of land by anyone (Hall et al. 2011, p. 4). Aspirations for land access necessarily include the wish for some degree of exclusionary power (Hall et al. 2011, p. 7). This key dilemma causes manifold tensions, which are particularly complex when it comes to the recognition and implementation of a positive right to land for land-dependent rural households (as distinct from a negative right not to be evicted from land already held) through land reforms or similar programs of land redistribution (Hall 2013). Thus, exclusion is inevitable and goes hand in hand with access, engendering dynamics that involve a wide range of actors, powers, and legitimizing narratives.

Beyond local and national tensions affecting access to land, the issue takes on new dimensions within the current wave of international land transactions, which can also be analyzed according to the benchmark of the right to food. The land, water, and other resources that have supported local groups’ livelihoods for generations are now increasingly being subtracted from their access and control and converted into large-scale agro-industrial plantations, aimed to a considerable extent at nonfood production (see the data available at <http://www.landmatrix.org/>). This transformation from small-scale farming for personal and/or local production to large agrobusinesses can threaten food security inasmuch as agricultural products are generally sent abroad, bypassing domestic markets. Moreover, the deals provide few or no guarantees for

small landholders and are therefore likely to negatively impact the most vulnerable groups. Besides, although small-scale farmers sometimes resort to techniques that are detrimental to the environment, these large monocultures with intensive use of pesticides and mineral fertilizers aggravate in a much more powerful fashion soil erosion, groundwater contamination, and climate change, through the significant amount of greenhouse gases they entail. In the mid- to long run, this is expected to considerably diminish both the quality and the availability of natural productive resources, hence to reduce the ability of rural communities to feed themselves. Thus these large-scale land leases and acquisitions are likely to pose considerable challenges to the realization of the right to food by bringing about changes regarding access to land, choice of products to be cultivated, and where these products are sold (i.e., international or domestic markets) (Cotula et al. 2009).

## Conclusion

The access to land of rural farming households in the global South is jeopardized by a variety of dynamics, spanning from local to international dimensions. It is an extremely complex issue especially in its positive side (to be granted access), but it is also under fire in its negative component (not to be deprived from current access) due to growing commercial pressures on land worldwide.

In this context, to borrow Amartya Sen's formulation, "the law stands between food availability and food entitlement" (Sen 1981, p. 166). This statement highlights the central role of legal entitlements in ensuring that the most vulnerable have access to the necessary resources to either produce enough food or have a purchasing power sufficient to acquire food in the market. Since hunger does not result so much from a lack of food production as from institutional bottlenecks and deficient economic and political empowerment (Cruz 2010), the place of human rights in the design of strategies and mechanisms to combat hunger becomes fully meaningful.

In particular, public policies aimed at improving access to food, and to land when it appears as a necessary means to this end, should target the most marginalized, enable and foster participation, enhance accountability and monitoring, and engage in individual and community empowerment. These touchstones are no silver bullet, yet they are conditions to improve entitlement to land and ultimately to food as a resource indispensable to life.

## Summary

The right to food does not necessarily translate into a right to land. Yet, for most of the world's hungry, access to land is a condition to guarantee their livelihood and to achieve a decent standard of living. Thus, the relationship between these notions is far from simple. Moreover, given the various layers of significance attached to land as well as its many dimensions, realizing access to it is fraught with complexities as well. Nonetheless, the issue has to be explored, even more so in the current context of rising commercial pressures on land worldwide and the far-reaching transformations they entail.

## Cross-References

- [Land Acquisitions for Food and Fuel](#)
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## Aesthetic Value, Art, and Food

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### Synonyms

Aesthetics; Art; Cuisines; Ethical eating;  
Gustatory pleasure; Taste

## Introduction

Can a meal be a work of art? Do eating and drinking afford experiences that qualify as “aesthetic”? If so, how do the artistic or aesthetic aspects of foods relate to ethical issues? While moral questions about eating have been under philosophical discussion for a long time, its place in aesthetics is more recent, and the relationship between ethical and aesthetic value is as contentious with food as it is with art.

Eating is both a biological necessity and a cultural practice. Every living creature must nourish itself; however, necessary sustenance often comes at the expense of the life of some other living thing. This fact alone opens ethical questions if one considers eating another sentient creature a practice with moral standing. What is more, habits of eating reflect upon character – for eating can be greedy or abstemious, convivial or solitary, enthusiastic or inattentive. Questions about the tastiest things to eat merge with ethical questions about what is appropriate to eat and whether there are potential foods that should be off-limits, for cultural and religious traditions forbid eating just anything that might nourish a human body.

Quite apart from nourishment, eating can afford intense and immediate enjoyment. Food appeals to the senses – most immediately to the senses of taste and smell but also to vision, touch, and even hearing. With the development of different cuisines, one also finds norms of presentation and standards for quality of preparation. Such factors suggest that foods also possess aesthetic value, though this claim requires some defense given traditional concepts of the aesthetic, which usually exclude physical satisfaction. Similarly, the status of food as an art form is more complicated than at first it might appear, for some of the most influential philosophical traditions that have produced aesthetic theories and philosophies of art have not welcomed cuisines into their purview. The reasons for this rejection are closely related to the ethical values that are accorded to food, the body, and the necessity of eating.

Recent philosophy has become more receptive than in the past about acknowledging the aesthetic significance of the literal sense of taste



and of its objects: food and drink (Kaplan 2012). This change of perspective needs to be understood against the backdrop of centuries of assumptions about the nature of beauty, art, and the human body. Preliminary historical orientation is needed to place the issues in context – or contexts in the plural, for these topics have been treated variously over time by philosophers of different theoretical orientations. The history that follows chiefly concerns the traditions of Europe and the so-called Western philosophies that trace their origins to classical Greece. This discussion prepares the way for some recent approaches to the aesthetics of food and drink and the ethical complexities that they disclose. Comparison with other philosophical traditions would reveal additional contexts that bestow meanings and values on food and eating.

### **Food and the Body: Some Enduring Concerns**

In the works of two of the founding philosophers of the West, one finds conflicting attitudes toward food and eating, attitudes that represent recurring perspectives on the body and its frailties. In his influential dialogues, Plato takes a notoriously hard line on anything that indulges the body and leads the mind to dwell on its physical vehicle rather than on abstract thinking. His particular type of dualism values timeless spiritual and intellectual existence over physical natures of any sort. Human bodies and the material world in general are temporary and unstable; devoting attention to them poses epistemic dangers, inhibiting the ability to grasp the nature of timeless Truth, and moral dangers – for it deflects the attempt to learn of the Good. This is especially evident with the temptation to pursue bodily pleasures, which the senses of touch and taste present with special force. As Socrates famously pronounced on his deathbed, a philosopher should be concerned with neither food and drink nor sex.

Plato's younger contemporary, Aristotle, takes a more moderate approach to eating and its enjoyment. His attitudes about food are also integrated into his ethical theory, which

recommends that one seek a mean between extremes when learning to exercise both the emotions and the senses. One of the central virtues of Greek ethics is moderation or temperance, the characteristic that pertains to the way we handle pleasures. Aristotle is no ascetic, and he regards taking pleasure in bodily activities such as eating to be part of a good life. It is the extremes of eating that a virtuous person must avoid: neither deprivation to the point of malnourishment nor overindulgence to the point of gluttony represents virtue.

Plato's general attitude to the body can be found in many other traditions as well. This sort of approach worries that sensuous pleasures can capture attention so powerfully that they lead to both thoughts and actions that violate the prescriptions formed by rational deliberation. Employing the sense of taste for the pleasures it affords might exercise the body at the expense of the soul, and overindulgence in eating and drinking has consequences for health as well as morals. If the food is especially tasty, so much the worse, for the temptation is all the stronger.

Similar sets of values can be discerned in the many religious traditions that prescribe fasting. Depriving the body of sensory satisfaction is a time-honored means to feed the spirit and direct attention away from quotidian needs. Fasting can take on a variety of meanings, from acknowledging the frailty of the body and its physical demands to prompting thoughts of the importance of fleeting pleasures, all the sweeter when restored and the fast is broken. The many and varied practices of fasting indicate how the values ascribed to eating always entail perspectives on our bodily nature. The idea that overindulgence in sensuous pleasure does not represent a good life is captured not only in Aristotle's doctrine of moderation but also in the cardinal sin of gluttony in traditional Christianity, in ancient sumptuary laws that forestall excessive displays of wealth that may be evident in lavish tables, and in contemporary controversies over the causes and meanings of obesity and eating disorders. Thus far, recognition of ethical considerations attached to food and drink concerns the eater: how to promote health and prevent misuse of bodies and minds. Attention is directed

to the human being and his or her sustenance rather than to the moral standing of creatures treated as foods, a topic to be addressed shortly.

The putative ethical and epistemic shortcomings of tasting and eating lay the foundation for parallel shortcomings of an aesthetic nature. While there are more or less attractive ways to present food, terms such as “beautiful” are usually reserved for objects that we see or hear, whether in encounters with nature or with art (Sweeney 2007). Because eating satisfies bodily needs, its pleasures are also bodily. What later generations recognized as a distinction between the “aesthetic senses” of vision and hearing and the “nonaesthetic senses” of taste, touch, and smell is already present in venerable worries about bodily pleasures. The aesthetic-nonaesthetic distinction receives fuller treatment in the philosophies of taste that emerged in European Enlightenment philosophy.

## Aesthetics and Theories of Taste

The term “taste” is used as a foundational metaphor in modern aesthetic theory, for the gustatory sense provides a model for understanding the ability to discern the subtle qualities of objects. The metaphor is founded on several characteristics of literal taste, including the fact that it is only by actually sampling a dish that one can determine its quality – e.g., if the seasonings are in balance or the cooking complete. This sort of firsthand acquaintance also obtains with the good judge of art who determines if a work is beautiful. Gustatory taste, like aesthetic sensibility, is also educable, requiring experience and education in order to become fully discerning. For these reasons, taste represents a facility for making aesthetic judgments that indicate expertise or connoisseurship.

(The sense of taste plays a robust aesthetic role in at least one other philosophical tradition as well, the classical Indian theory of *rasa*, which describes a complex range of sensory and emotional responses to different qualities in art. The two philosophical contexts are quite different, but both note the immediacy and intimacy of

aesthetic response when one tastes flavors and is moved by the experience of a work of art.)

With taste playing such a central conceptual role in modern aesthetic theories, one might expect that food would have been accorded aesthetic value readily and automatically. However, this was not the case, for taste and smell – the coordinating gustatory senses – present difficulties that hamper the formulation of an important philosophical objective. In particular, they make it difficult to figure out a “standard” of taste, a necessary normative goal if one wants to avoid a free-for-all regarding the merits of art and aesthetic judgments. Taste and smell were – and often still are – considered highly “subjective” senses. The senses of sight and hearing provide information about the world around that grounds the development of knowledge, and touch acts as an anchor to assure a perceiver that he or she experiences material reality rather than illusion. But taste and smell appear to furnish little information about anything other than individual responses to substances. By severing aesthetic pleasure from the satisfactions of the body, theorists strove to escape the damaging subjectivism that supposedly prevents literal taste from achieving standards. The putative subjectivity of taste dogs the heels of aesthetics, and in debates about how to locate a standard of taste for judgments about art, contrasts are regularly made to food. About taste there is no disputing, according to the old adage, so it does not matter if tastes for food and drink differ. But genuinely *aesthetic* taste requires some kind of normative standards, for clearly some art is better than others. Thus food enters the philosophical discourse of this time as a point of contrast. The aesthetic senses were identified as vision and hearing, and the old distinction between bodily and intellectual senses was reinforced in the burgeoning literature of early modern aesthetics (Sweeney 2012; Korsmeyer 1999, Ch. 2).

## Cuisine: Art, Aesthetic Value, and Ethics

The rise of modern gastronomy in Europe fostered a body of literature that was attentive to the development of philosophies of taste and that

sought to elevate gustatory pleasures into aesthetic regions and food and drink into the arts. Writers such as Jean Anthelme Brillat-Savarin and Grimod de La Reynière wrote about the pleasures of the table, the development of discerning taste for food and drink, and the importance of fine preparation of meals (Gigante 2005). These authors promoted the idea that elegantly prepared foods, far from merely assuaging hunger, are gustatory entries into the world of fine art (Sweeney 2012).

The emphasis of the gastronomical writers was invariably on the fine dining of a relatively elite class of people. They focused on the special feasts of those with sufficient leisure to spend time savoring a lengthy sequence of foods. This sort of meal preparation seemed to offer the best candidates for food as an art form, an assumption that is continued in the contemporary notion that it is fine, gourmet food that especially demonstrates aesthetic accomplishment and artistic merit. Such an approach is reasonable in order to separate well-prepared meals from junk food and dining from gobbling. But it comes with a price: the zone of attention for aesthetic merit is purely the enjoyment of the taste experience. That is, the aesthetic dimension of food is more or less limited to sensory pleasure. The comparison with fine art is accomplished because of the parallels between the discerning perception that is demanded by both art and food, but the profound meanings that art can achieve are omitted from consideration. Literature, painting, and music are all art forms that convey expressive meanings, whether propositional or affective. They are also forms that are appreciated by means of the senses of vision and hearing, along with the imagination. Whether the sense of taste is capable of discerning meaning of similar breadth and complexity is a matter of debate and will be addressed again shortly. But it is widely believed that food, however tasty, does not convey or express meanings with propositional content (Telfer 1996).

Emphasizing immediate taste experience and the pleasures it affords also retains a fairly strong distinction between aesthetic quality (flavor and taste pleasure) and ethical implications (judgments about what is eaten, how it is prepared

and consumed). As a result, moral meaning remains separable from aesthetic assessment. However, a closer look at the links between sensation and cognition will narrow the distance between the aesthetics and the ethics of eating.

## Uniting Aesthetics and Ethics

The concept of the aesthetic has undergone many revisions in the last decades, as has the concept of art, both in philosophy and in the art world itself. Generally speaking, the parameters that were formulated to distinguish aesthetic from other values have become more porous than previously. In addition, as more is discovered about the science of the sense of taste, its hoary reputation as “merely subjective” has been revisited and revised. A reassessment of taste is required before the relationships among aesthetic qualities of foods, the knowledge they presume, and the ethics of eating can be fully considered.

So long as the sense of taste is believed to refer only to personal responses, it has little traction to command philosophical interest. And the idea that taste is merely relative is ancient and tenacious. The fact is, however, taste is a frequent topic of dispute, and increasing scientific understanding of the machinery of sensation supports the idea that there are many common foundations for taste experiences, no matter how diverse preferences can become. Indeed, taste has a double direction, as it were, for it can refer to the properties of objects (and as such be “objective”) as well as to subjects (whose experience is “subjective”) (Smith 2007; Shaffer 2007). Gustatory taste thus admits of normative standards – as cooks and winemakers throughout the ages have understood. Unless one retains a restriction on bodily pleasures such that they never qualify as aesthetic in principle, taste rather easily joins the other senses with an aesthetic function. Are these seasonings balanced to perfection? Does this bottle of wine need another year before it is drunk? These are questions that are quite like those raised about whether a film, a piece of music, or a painting is satisfactory in its completion.

Does this mean that food should be included among forms of art? Some distinctions are required even to address this question. In recent decades some artists have begun to use food substances in their gallery works. Sometimes these works are meant to be eaten, other times they serve as a critique of and departure from traditional artistic media (Smith 2013). However, the question that is germane here does not refer to foods within the established institutions of the art world, but food that appears on the tables of homes and restaurants. Are these sorts of meals – at least those that are prepared with care – well understood as art? In a relatively loose sense, the answer can be “yes,” especially if we think of decorative presentations of carefully concocted dishes. There is little to preclude food from the category of the practical or applied arts (Telfer 1996). The similarity between food and fine art can be pursued by noting certain parallels with performance arts, since both are appreciated over a period of time in which they alter and disappear (Monroe 2007).

The degree to which the category of fine art suits foods and their preparation is a more complicated matter, however. The fine arts, a category arguably arising in the early modern period (Shiner 2000), are also the arts for which aesthetic value is considered paramount (as opposed to functional, moral, or religious uses, for arts are produced in all these venues). The appreciation of fine art is analyzed as a kind of aesthetic pleasure. But as already noted, if sensuous taste pleasure is food’s sole aesthetic measure, then connoisseurship is more or less the only parallel with the appreciation of art forms such as music and poetry. To go further requires a much stronger case qualifying food and drink as the bearers of the sorts of expressive meaning for which the arts are additionally valued.

In fact, the denial of propositional and expressive meaning to the experience of food and drink is disputable. As anthropologists and sociologists have long observed, social practices of eating bestow meaning on foods, and in the act of eating, we understand both what is being eaten and the importance of the contexts of meals. Once one notices the significant roles of eating not only in

daily life but also in civic and religious ceremonies, the meanings of food are evident. (For examples, see Fletcher 2004.) Recognizing that food has not only aesthetic value in a narrow sense but also cognitive significance establishes that the aesthetic dimensions of foods are not limited to the enjoyments of a connoisseur (Korsmeyer 1999; Heldke 2011). Acknowledging the cognitive significance of food is important independent of the question of whether food ought to be considered an art form.

However, even if one grants that foods can take on meanings in their contexts of serving and consumption, a counterposition can be advanced with the observation that it is only those *contexts* that impart meaning, not the food itself. The source of understanding remains *external* to the eating experience because information that is independent of the act of eating is required to supply cognitive content, as the tastes of food alone will not do the job. If this were the case, then the aesthetic dimension of taste would still remain separable from its moral valence. That is, the aesthetic quality could be excellent (yum!) but the moral quality negative (too bad!). A final set of considerations unifies aesthetic and ethical values in eating, making this separation difficult to maintain.

Some would argue that knowledge about what we ingest does not affect taste experience (Bach 2007). But can this be true? Many tastes are ambiguous without context, and identifying them brings the flavor into focus (Korsmeyer 2011). Unless we know we are eating blue cheese, for instance, its flavor may present as rotten. Sometimes detection of the identity of what is in our mouths entirely changes the valence of the experience, as when one discovers that one has eaten something considered taboo. Retrospective nausea can ensue from this disclosure, and what had seemed a pleasant taste now appears revolting. Separating aesthetic from ethical value in eating would require that there be two distinguishable mental events here: a good taste experience and a judgment that what tastes good is bad to eat. However, recall that “taste” has two directions of reference: the sensation and the substance. Knowledge of the substance is not irrelevant to the presentation of the sensation.



A large zone of ethical value opens when one acknowledges that knowing what one is eating, including how it was cultivated and prepared, can affect one's taste experience. One such context occurs with the now-popular practice of food adventurism, such as cooking dishes from unfamiliar traditions, patronizing restaurants opened by immigrants to one's community, or traveling to sample "exotic" cuisines. These tasting experiences may be respectful and admiring, but if one considers the circumstances that have placed, say, an Ethiopian restaurant in downtown Los Angeles, the possibility of such eating leads one to consider wars, famines, and population displacements (Heldke 2003).

It must be granted that sometimes the foods we eat have ethical valence that must be discovered by means that are indeed external to its aesthetic presentation. Whether a tuna fish sandwich can be linked to the incidental drowning of dolphins in long tuna nets, for example, would not be manifest in the taste of lunch. However, at other times the very suffering of a sentient being is required for a certain taste to be present. Jeremy Strong identifies a category of "cruel food," in which the very taste of the food depends upon a mode of preparation that causes suffering (Strong 2011). Overstuffing a goose for foie gras and depriving a calf of nutrients to impart a pale color to its meat are two familiar examples of cruel food. In cases such as these, moral valence is present in flavor itself, and ethical and aesthetic properties are inseparable (Korsmeyer 2012). The gourmet intent only on the flavor produced might try to detach the aesthetic and the ethical values of cruel foods, such that aesthetic value remains positive while a moral squeamishness intrudes. But the permeability of cognition and sensation renders this separation at least disputable and possibly untenable.

Recent technology has brought a new eating possibility into the moral arena: artificially grown meats that were never part of the body of sentient beings (Wellin et al. 2012). This scientific innovation holds out the possibility of re-separating aesthetic from moral values. If laboratory scientists were able to produce

flavors that previously were properties of cruel foods, would the tastes of such flavors escape moral worries? Perhaps, for example, one could retain the silken smoothness of foie gras without compromising the comforts of goose or duck. This solution is not without problems, however, considering the fact that tastes are always tastes *of* something or other. That is, there is always a cognitive dimension to flavor inasmuch as one at least recognizes or presumes the identity of what is tasted. If laboratory-grown meats are enjoyable insofar as they mimic the original source and fool the palate, then the character problem of eating cruel foods has not disappeared. The eater is happily deceived but is still enjoying a substance with a flavor that connotes cruelty. In the far more distant future, it is possible that food production will have developed to the point where eaters taste only essence-of-laboratory. But that possibility veers into the speculative realm of thought experiment, where one can only guess at what future moral intuitions might be.

## Summary

Historically, philosophical theories often separate aesthetic and ethical value into different zones of experience. With food and eating, this separation would divide flavor and enjoyment from moral approval or disapproval of what is eaten. However, taste experience is rarely wholly detachable from concepts of the substance that produces flavor, so ethical valence can be discovered in taste itself, uniting aesthetic and ethical qualities in eating experiences.

## Cross-References

- [Authenticity in Food](#)
- [Brillat-Savarin and Food](#)
- [European Cuisine: Ethical Considerations](#)
- [Fasting](#)
- [Gustatory Pleasure and Food](#)
- [In Vitro Meat](#)
- [Taste, Distaste, and Food](#)

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## Africa, Food, and Agriculture

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## Introduction

African food security depends largely on agriculture. Agriculture supports the livelihoods of 80 % of the population and employs approximately 60 % of the economically active population, including some 70 % of the poorest people on the planet. The continent has the largest agricultural area per person in the developing world and contains about 11 % of both the world's arable land and the world's population (Bank 2008). Plantation and corporate farming exist, but smallholder, family-owned subsistence agriculture, using simple implements like hoes and cutlasses, is the dominant system, with some commercial activity in local trading. Subsistence farming is “a livelihood strategy where the main output is consumed directly, where there are few if any purchased inputs and where only a minor proportion of output is marketed.”

Agricultural inputs commonly include water through irrigation and fertilizers to increase yield. Only 3.7 % of Africa is irrigated, however, and fertilizer consumption is the lowest globally at only 1 % of the world's fertilizers. Average use in developing countries is 109 kilograms per hectare

of arable land (kg/ha), but in Africa the average is only 12.6 kg/ha. Many farmers fertilize only through collection of animal dung (Glazebrook 2011). Though 70 % of the world's farmers are women (Women for Women International), in parts of Africa, women contribute 80 % of food production. African farmers are thus predominantly women smallholders using methods that are neither capital nor technology intensive to grow subsistence crops.

A main characteristic of subsistence use for farming land is “the centrality of the social” in that food production activities are grounded in social relations within households (particularly gender relations) and between households that affect the negotiation of production decisions, knowledge management, and marketing. For example, families commonly take decisions together concerning crop selection and when to plant and harvest.

Agriculture and food production are part of everyday lived experience for many Africans in contrast to life in the “fast food nations” of the global North where typically less than 20 % of the population are rural dwellers and most people are widely separated from their food source in terms of both production and processing. Rarely do more than 50 % of African populations live in cities. Half of the countries with greater than 80 % rural dwelling are in Africa, with Burundi topping the global chart at 89 %. Issues in food ethics like locavorism; the slow food movement, organic production, processing, and storage; low meat intake; and family or communal gathering for meals are not active choices so much as common practices arising from the field-to-table production-preparation-consumption patterns of subsistence economies. Food traditions are deeply embedded in cultural practice, ethnicity, and ethnic identity, such that food is at the heart of community ethos.

African issues in food and agricultural ethics are thus different from those in the global North. Issues in agricultural ethics include labor, gender, environmental justice, and climate justice. Since agriculture is the main food source, issues in agricultural ethics and food ethics are inherently linked. The most pressing issues are increasing

food insecurity and the current food crisis that is quickly getting worse.

Research into African agricultural and food ethics is limited and mostly confined to debates over genetically modified crops, e.g., the response to MacDonald (2006) in Powers (2006). Concerning agricultural ethics, van Niekerk (2010) also addresses the ethics of genetically modified crops, but also animals, in assessing agricultural biotechnology, and he delves further into issues of HIV/AIDS, land reform, biodiversity conservation, medicinal plants, animal rights and welfare, and agricultural science. Yet subsistence agriculture, the most common form of agricultural practice in Africa that affects the most people and presses for analysis from environmental, distributive, intergenerational, gender, climate, and recognition justice, does not appear as a thematic entry or an entry in the index. Van Niekerk's work warrants reading as an account of the ethics of commercial agriculture in Africa. This entry serves as a complement to his work that prioritizes instead subsistence agriculture in order to indicate the growing humanitarian food crisis in Africa.

## Agricultural Ethics

### Agricultural Labor

Sub-Saharan African agriculture can be subsistence or commercial. In subsistence farming, the farm provides the family's principal source of income and typically involves some small-scale selling in local markets, mostly to buy schoolbooks or uniforms and sometimes cloth for making clothes or pharmaceuticals where traditional medicine has failed. Subsistence farming in Africa depends on family labor (Cornish 1998). Labor is an issue when children are kept out of school sporadically to assist in subsistence farming. Educational impacts can be long term and preclude completion and affect literacy rates. Given that most farmers are women, the practice of taking daughters out of school to work in the fields during planting and harvest, especially of a parent has fallen ill, exacerbates gender inequities and reinforces the well-documented

“gender gap.” This use of young female labor is hard to counter because the family’s food security and whatever limited income they can generate depends on a successful crop. One resolution, practiced, for example, at the Center for Sustainable Development Initiatives in Bolgatanga, Ghana, is to provide the family with money to hire labor in place of the daughter so she can complete the school year.

In commercial production, cash crops are intended for the market. Fertilizers and pesticides are commonly used to increase yield, so ethical issues include health impacts for laborers. Use of mechanized equipment introduces safety issues. These issues are especially important in contexts of weak or nonexistent government regulation or of corruption. Female workers in particular can be exposed to unwanted sexual advances. Minimum wage standards are nonexistent or inadequate, so labor can easily be exploited.

In large-scale, plantation-style agriculture, child labor is a pressing ethical issue. Indentured labor of children reproduces slavery conditions. Nutrition is an expense and thus usually inadequate; there is no education, minimal concern for health, and lack of protection from abuse. In Ghana’s cocoa industry, for example, ten of thousands of children are forced into hard labor in hazardous condition with no pay.

### **African Gender Issues in Agriculture**

Throughout Africa, women continue to face social inequalities, complete less formal education than men, and have lower literacy rates. They often have a longer workday than male counterparts, yet their agricultural labor is largely overlooked by policy makers because traditional economic indices cannot account for nonmarketed yields. Even more recent measures such as the Genuine Progress Index fail to account for the crucial contribution women make to national food baskets, without which governments in Africa could not function (Glazebrook 2011). Women farmers also face limited access to credit, machinery, labor, fertilizer and agricultural extension services, and exclusion from agroforestry. Weak land tenure rights are especially a problem. Africa’s declines in agricultural production have been attributed in

large part to large-scale land acquisitions that result in local people losing access to the resources on which they depend for their food security and livelihoods (Cotula et al. 2009). If women depend on access to land over which they have no claim of ownership, family food security can be threatened at any time. Agricultural ethics thus intersect with gender on distributive justice issues of workload parity and resource allocation and recognition of justice issues concerning women’s role as food providers and nontraditional economic agents.

### **Environmental Justice**

Environmental injustice in Africa is rampant in the agricultural sector where most farmers have few resources or political and social tools and empowerment to respond. Land grabbing displaces smallholders and subsistence farmers from traditional growing areas, to permit instead large-scale, mechanized, capital-intensive, monoculture production of cash crops for export or of crops to be processed into biofuels. These production approaches not only leave local farmers landless; they also deplete local water resources and can contaminate nearby land and water with runoff chemical fertilizers, pesticides, or genetically modified organisms that outcompete local crops. Moreover, well-intentioned development projects that never come to fruition can deny appropriated land to locals while lying frustratingly empty.

Pollution also compromises environmental justice. Resource extraction industries, e.g., mining and oil development, cause environmental damage to neighboring land by dumping mining tailings and leaving oil spills unattended to. Profits accrue to the polluters, while locals’ livelihood losses often go uncompensated. In Nigeria, 60 years of resistance to oil development and its impacts on agricultural livelihoods, as well as other negative impacts, resulted in the hanging of Ken Saro-Wiwa and the Ogoni 9 for their leadership in protesting Shell’s activities in the Niger Delta but has made little difference to environmental degradation in affected areas.

Control of water can also be a source of environmental injustice. In 2007, when floods were wreaking havoc in Burkina Faso, the dams were opened to relieve local impacts. The ensuing



swell exacerbated flooding in Ghana, Burkina Faso's downstream neighbor, where more than 50 died, over 300,000 were displaced, and many suffered the loss of their entire annual crop. The majority of farmers impacted were women supporting various dependents in extended families separated by urban migration and devastated by AIDS deaths; that is, the most vulnerable community members with the least resources to bounce back were strongly affected.

Elsewhere, transboundary water issues are drivers of war, conflict, and confrontation, e.g., between Egypt and Ethiopia, as upstream dam development reduces flows downstream across the border. Subsistence farmers who depend solely on rains experience less impact on their production from transboundary water control than corporate farmers whose water use in agriculture includes irrigation, though their lives may be affected in other ways, e.g., water availability for daily family needs.

### Climate Justice

The factor most likely to impact agricultural production in Africa is global climate change, which intersects with the issues detailed above and is predicted to exacerbate and accelerate all negative influences on agriculture. According to the Intergovernmental Panel on Climate Change's 4th Assessment Report (2007), Africa is "a continent already under pressure from climate stresses and highly vulnerable to the impacts of climate change." These impacts include longer, hotter dry periods, decreased rainfall, unpredictable rainfall patterns, increased temperature, desertification, loss of coastal land to sea-level rise, and severe weather events like heat waves, drought, and floods. Insidious changes in the seasons, i.e., the longer, hotter dry periods, shorter growing seasons, and unpredictable rainfall patterns caused by the consequences to climate of anthropogenic greenhouse gas emissions, are bewildering farmers by making it harder to know when best to sow, cultivate, and harvest (Jennings and Magrath 2009). Impacts if changing weather patterns on water resources are especially threatening to agriculture. A third of Africans already living in drought-prone areas

and 220 million are exposed to drought every year, while 250 million are predicted to experience water stress. Water stress and drought lead to decreased yield that has been directly correlated to the global temperature increases of climate change. Rice, for example, undergoes 10 % decline for each 1 °C rise; global estimates of temperature increase caused by current production levels of greenhouse gases estimate increases as high as 5 °C by 2050.

Women and children are extremely vulnerable to the incremental impacts of climate change on food and agriculture, though they have the least amount of political, economic, and social resources to recover (Peacock et al. 1997; Morrow 1999; Bang 2008). Because they are politically and economically marginalized, women lack access to government or other aid in the form of loans and grants. Nor can women simply move elsewhere when growing conditions deteriorate if they do not have the resources to do so, and they may be constrained by other barriers. Women head 30 % of households in Ghana, for example (Lloyd and Gage-Brandon 1993), but a woman heading a Fra Fra family in a small village in Northern Ghana may speak only Fra Fra, so language is a huge barrier to relocation.

Women also are the primary medical caregivers in the family, so diseases like malaria or other water-vector, insect-carried sicknesses that thrive in standing water left behind by floods increase women's workload while decreasing the capacity of other family members to contribute labor to the family's agricultural projects, as well as increasing the probability that the woman will herself suffer health impacts of climate change. Children whose food security is threatened by climate change can suffer nutritional deficiencies that have developmental as well as lifelong health impacts that impair brain, bone, and organ function. Climate change accordingly has differential impacts across groups with varying vulnerability. Climate justice issues in agricultural and food ethics intersect with issues of gender and children's right to an equitable chance for survival and long-term health.

Agricultural production in Africa in consequence of climate change is indeed expected to

experience catastrophic declines in grain number, size, and quality of 20–30 % by 2080, with declines as high as 50 % in Sudan and Senegal (Cline 2007). 60 % of sub-Saharan Africans depend for survival on livestock that provide dung for fertilizer, occasional protein in the diet, and other resources for various uses. Climate change impacts will bring less forage and feed crops and less water for animals. African agricultural communities will thus suffer severe damage from climate change that affects their livestock and their crop.

At the same time, African production of the greenhouse gases causing global climate change is negligible in comparison with heavy emissions from industrialized countries where inhabitants also live carbon-intensive lifestyles.

Principles of distributive justice are thus doubly breached when those making the least contribution to climate change reap few of the benefits but bear the costs disproportionately heavily. Agricultural impacts of climate change in Africa accordingly breach principles of climate justice. Impacts are and will continue to be heavy in the agricultural and food sector where there are economic consequences for corporate agriculture but also food security consequences that increase human suffering. Climate change impacts are inescapable for many Africans and constitute a massive humanitarian crisis that has already begun and continues to grow through both extreme weather events and the less dramatic but more insidious variability and unpredictability of climate patterns that were previously relatively stable.

## Food Security

According to the United Nations, of 36 countries worldwide currently facing food insecurity, 21 are African. The number of undernourished in sub-Saharan Africa rose from 169 million in 1990–1992 to 212 million in 2003–2005 (Biavaschi 2008). Over this period, the proportion of the world's hungry living in Africa rose from 1/5 to 1/4 (FAO 2008). The UN Food and Agriculture Organization also identified four Africa

countries (Lesotho, Somalia, Swaziland, and Zimbabwe) as in acute food crisis, i.e., “facing an exceptional shortfall in aggregate food production/supplies as result of crop failure, natural disasters interruption of imports, disruption of distribution, excessive post-harvest losses or other supply bottlenecks.” A further four (Eritrea, Liberia, Mauritania, and Sierra Leone) were experiencing widespread lack of access to food, i.e., “a majority of the population is considered to be unable to procure food from local markets, due to very low incomes, exceptionally high food prices or the inability to circulate within the country.” Thirteen (Burundi, Central African Republic, Chad, Democratic Republic of Congo, Republic of Congo, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Guinea-Bissau, Kenya, Sudan, and Uganda) had “severe localized food insecurity due to the influx of refugees, a concentration of internally displaced persons or areas with combinations of crop failure and deep poverty.” And Ethiopia, Kenya, Somalia, and Zimbabwe also had unfavorable prospects for that growing season, i.e., “a shortfall in production of current crops as a result of a reduction of the area planted and/or adverse weather conditions, plant pests, diseases and other calamities.”

The following year, 2009, the United Nations identified 235 million sub-Saharan Africans as “chronically hungry” (Kabasa and Sage 2009). By 2050, Africa is predicted to experience a 10–20 % increase in the number of people at risk of hunger, a 21 % increase in the number of children at risk of hunger, and a 26 % increase in malnourished children. These percentages mean that 24 million more children are expected to be at risk of hunger in 2050 than in 2012 and 10 million more are expected to be malnourished. These predictions are especially worrisome concerning children, given long-term health consequences of poor nutrition discussed above as issues in climate justice and the breach in intergenerational justice malnutrition entails. By 2080, the anticipation is that 75 % of everyone at risk of hunger globally will reside in Africa. In 2012, 24 % of the world's undernourished (a classification less severe than “malnourished”) were in Africa, but by 2080, 40–50 % will be.

Oniang'o (2009) traced food insecurity and hunger in Africa to its beginning in the mid-1980s, when it was recognized as a cyclical issue that could be predicted as coming approximately every 5 years, particularly in East Africa, where some arid and semiarid areas can go for as long as 4 years without a drop of rain. Although the concept of global climate change is fairly recent, Oniang'o's timeline is consistent with current scientific analyses from the Intergovernmental Panel on Climate Change that released its most recent Assessment Report in November of 2013, so cyclical variability may have deeper roots in larger, noncyclical global patterns. Whether cyclical or global, the changing African climate is clearly a significant factor in food insecurity.

Lack of adequate nutrition has many impacts on human well-being. Health, mortality, and survival consequences are worst for the more vulnerable, i.e., the young and the old; women subject to the bodily demands and stresses of pregnancy, breast-feeding, menstruation, and menopause; and the sick, who in Africa commonly battle malaria, tuberculosis, AIDS, or a combination. Historically, food insecurity and hunger have gone hand in hand with conflict, to the extent that it is difficult to determine the cause-effect relationship of the two with any degree of certainty.

Food insecurity is a consequence of exceeding carrying capacity, which is a relation between population size and agricultural output. When populations increase, more food is needed to support the increased population, but land on which to grow food is a finite resource. Africa is experiencing both population increase and decrease in agricultural yield. The 2005 population in Africa of 0.9 billion people is predicted by the UN Development Programme to experience 81 % growth by 2035 and to have more than doubled in 2050 by reaching nearly two billion.

Africa is the only region of the world where per capita food production has been declining for the past three decades. By 2003, cereal yields, for example, were only a quarter of the global average (Jones and Thornton 2003). Models

anticipate that countries in Africa are likely to experience catastrophic declines in yield of 20–30 % by 2080, rising as high as 50 % in Sudan and Senegal (Cline 2007). This crisis in agriculture means a decrease in food accessibility that will be especially harmful for groups like women and children that are vulnerable because of pregnancy and childcare in the case of women and developmental impacts of poor nutrition in the case of children but also because of their marginalization and economic invisibility.

Observed declines in agricultural yield are the result of multilayered problems including climate issues of temperature, rainfall and weather events, decline in soil fertility, increases in pests and diseases, changes and delays in cropping practices, decline and poor adoption of external production inputs and productivity-enhancing measures, and limited individual property rights – all of which are major impediments against investment in African agriculture (Amponsah 2009).

The International Institute for Tropical Agriculture also points to lack of microcredit to support small-scale farmers, minimal value addition in processing crops to increase their market value, poor storage facilities, poor food preservation techniques, poor pricing policies, the high poverty level of farmers, and inconsistent agricultural policies (IITA 2007). Holt-Giménez (2008 cited in Vivas 2010) argues that economic “development” policies driven by the global North that began in the 1960s, i.e., the Green Revolution projects, structural adjustment programs, regional free trade treaties, the World Trade Organization, and agricultural subsidies in developed countries, have all contributed to the destruction of food systems in Africa (Vivas 2010).

Beyond short-term causative elements, Vivas (2010) argues further that underlying reasons explaining the current deep food crisis include neoliberal policies such as trade liberalization, payment of foreign debt, 30 years of indiscriminate privatization of public services and goods, and the logic of capital at work in agriculture and food models. All these factors are exacerbated by climate change, which is also the consequence of

uncontrolled environmental degradation from the industrialized countries of the North.

Food insecurity in Africa thus has multiple drivers: some are environmental, but others are rooted in postcolonial, global issues that are political and economic. The justice and ethical issues can accordingly not be assessed without analysis from political economy and political ecology that examine equity, parity, and global North–south relations. Ironically, food security needs of populations in the developed countries of the global North have also created a situation where commercial crops on African farms, especially large-scale, mechanized production systems, now grow food intended for dinner tables and restaurants in the global North, while local workers and neighboring communities in Africa are starving.

An extreme version of this gross breach of global ethics is documented in Director Hubert Sauper's film *Darwin's Nightmare* that shows how livelihood loss from displacement of traditional fish stocks by introduced, invasive pickerel in Lake Victoria has forced starving locals into exploitative employment by the corporate fishing industry to process catches for consumption in Europe. Corporate farms that displace locals, often women, from lands that have historically been used to grow subsistence crops are scattered across Africa. For example, cassava flakes exported to China are derived from cassava, a starch source widely consumed across Africa. Africans thus experience increasing food crisis as crops diminish, while a staple is exported elsewhere. The high incidence of poverty in Africa means, however, that Africans themselves are in large part unable to afford to buy food when their crops fail to last to the next harvest.

In response to food insecurity, Africans have at the community level developed various adaptation strategies. A recommended strategy is alternative income generation (Glazebrook 2011), but this often requires capital investment, education in business management, marketing skills, and other knowledge and resources to which the most vulnerable, i.e., marginally literate women subsistence farmers who live in poverty greater than what the World Bank calls

“abject,” have no access. An on-the-ground strategy is crop selection, in which farmers shift from millet, for example, to rice that is less dependent on steady rains and more successful in variable conditions. Rice is, however, more labor intensive and so difficult for the most vulnerable who are less capable of meeting the physical demands. Moreover, rice is significantly less nutritional than millet that is high in minerals, protein, and calcium and thus a far superior food source than rice for pregnant and lactating women and growing children.

Food and poverty are deeply entangled because poverty is a substantial factor in food insecurity that affects Africans' ability to remediate environmental damage, increase productivity by extending outputs, or purchase food to compensate for inadequate yield. Yet in Africa, 1 % increase in crop yield reduces the number of poor by 0.72 %, i.e., by 200 million people. To increase food security, there is need for an environmentally and socially responsive agricultural system, based on smallholders' needs. It is critical to close the inequality gap and give poor people (especially women) a chance to better care for themselves, their families, and their communities.

## Summary

Food and agriculture are at the heart of every culture, and the celebration of food and agriculture is common across African countries, religions, and cultures due to its importance in historical and intergenerational continuity (Shah 2010) and its role in ethnicity and ethnic identity. Food consumption practices in developed countries have become distanced from agricultural sources and alienated by large-scale industrial food production and processing, resulting in intentional practice in organic, local, and slow food movements. In Africa, food production is a significant livelihood strategy; most agriculture is subsistence, largely practiced by women who manage the process from planting to harvest with minimal inputs and do their own processing from field to table. Thus, organic farming, locavorism,



and slow food consumption belong to the subsistence practice itself and do not need to be artificially introduced.

Culturally rich and distinctive food traditions in Africa have been undermined by postcolonial, neoliberal global politics and economics that have disrupted Africa's resource base and introduced large-scale, industrialized, monoculture-favoring, capital- and technology-intensive corporate agricultural models. Perhaps well-intentioned but nonetheless ill-conceived development programs have thus lead to poorly managed agricultural production that has damaged local environments. Global climate change increasingly exacerbates environmental damage, and Africa at present is in a state of agricultural and food crisis that is unlikely to improve and extremely likely rather to erupt in the next 35 years into humanitarian emergency that is globally unprecedented in scale and severity.

Most of Africa's farmers are women rendered vulnerable to food insecurity and agricultural crisis by lack of education and access to resources, economic invisibility, weak land tenure rights, and increasingly difficult growing conditions in fragile ecosystems. Children are also especially vulnerable to health impacts when nutritional needs are not met.

African issues in agricultural ethics involve labor, including child labor; gender issues, including social inequalities, weak land tenure, and limited access to resources; environmental justice issues including distributive, recognition, and intergenerational justice; and climate justice as Africa suffers disproportionate impacts from climate change while generating comparatively small amounts of the greenhouse gases that are causing it. Concerning food ethics, increasing population size in African countries coupled with decreasing agricultural yields has already begun to place African countries on a spectrum ranging from food insecurity to full-blown crisis.

Oxfam (2011), "Growing a Better Future," points to the buckling nature of the global food system from a combination of factors including climate change, ecological degradation, population growth, rising energy prices, rising demand for meat and dairy products, and competition for

land from biofuels, industry, and urbanization. Each of these factors exacerbates the pressure on distribution systems. The report warns that present systems of production and distribution will continue to create millions of hungry people unless there is a redistribution of power from a handful of multinationals to the billions of people who actually produce and consume the world's food (Bailey 2011). Evidence clearly indicates that Africa is the first continent to exhibit this buckling of global food systems. Sub-Saharan Africa is already and will continue overwhelmingly also to suffer the loss of its historically rich, plentiful agricultural base from environmental degradation, climate change impacts, and poorly conceived development approaches and programs. The most pressing issue in ethical assessments of African food and agriculture is mass starvation.

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## African Food Security Urban Network (AFSUN)

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### History of the Organization

AFSUN was founded in 2008 to generate knowledge on the dimensions of food insecurity among Africa's urban poor, to propose practical solutions on how to feed Africa's hungry cities, and to build the capacity of African researchers, policy-makers, and civil society organizations to develop solutions to the urgent but complex problems of urban food insecurity on the

continent (<http://www.afsun.org>). AFSUN began as a partnership between the University of Cape Town's African Centre for Cities and Queen's University's Southern African Research Centre funded by the Canadian International Development Agency (CIDA). These two organizations now lead an extensive international collaboration involving five Canadian universities as well as institutions in nine African countries (Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe). The network also has partners in the governmental and nongovernmental sectors. All AFSUN activities are guided by a multi-partner Steering Committee and working committees on research, policy, training, and community engagement.

### Major Areas

The Global South, and Africa in particular, is undergoing an irreversible transition to a predominantly urban society. The UN projects that Africa will be 50 % urban by 2035 and nearly 60 % urban by 2050. The food riots witnessed in cities around the world and in Africa during the global food price hikes of 2008 are a sobering reminder of the consequences if we do not acquire a better grasp of the dimensions of urban food insecurity (Berazneva and Lee 2013). However, there is a serious absence of knowledge about the crisis of urban food insecurity in Africa and a major lack of human capacity and training to develop policies that enhance the food security of urban populations (Crush et al. 2012). After a period of intense interest in urban food insecurity in the 1990s, the issue has increasingly fallen off the global development agenda. The international food security agenda is now increasingly rural and smallholder focused (Crush and Frayne 2011a). At the national level, responsibility for food security policy and planning usually rests with Departments of Agriculture; a rural focus is the inevitable consequence. AFSUN was established as a corrective to the antiurban bias of the current food security agenda.

## Major Activities

AFSUN's activities on urban food security fall under four main headings: knowledge creation, policy advice, training, and community engagement.

### Knowledge Creation

AFSUN's primary goal is to generate new applied knowledge on the dimensions and determinants of food insecurity in Africa's rapidly growing towns and cities. In 2008–2011, it undertook a major scoping exercise of all existing research literature on urban food issues in Africa to identify the state of knowledge and any knowledge gaps. These reports, published in the AFSUN Urban Food Security Series, cover a wide variety of themes including the implications for food security of the regional expansion of supermarkets, the relationship between food security and urban agriculture, the impact of HIV and AIDS on food security and nutrition at the individual and household level, the rise of food banking in Southern Africa, the impact of climate change on cities and urban food security, the nutrition transition in African cities and the growth of overnutrition or obesity, the linkages between food security and migration and development, and the impacts of gender discrimination on food security. Many are now being published in leading peer-reviewed development and food studies journals in revised form (Frayne 2010; Battersby 2011, 2012; Crush 2013; Crush and Frayne 2011b; Crush et al. 2011a, b; Lane et al. 2012; Tawodzera 2011, 2012). In addition, a number of AFSUN authors have contributed to a recent book on climate change and urban food security in which many of the chapters draw on the baseline survey (Frayne et al. 2012).

To address the knowledge gaps, AFSUN undertook a baseline survey of the food security situation of poor urban neighborhoods in 11 African cities (Blantyre, Cape Town, Gaborone, Harare, Johannesburg, Lusaka, Maputo, Manzini, Maseru, Msunduzi, and Windhoek) in 2008–2009. The survey used a standardized questionnaire to ensure comparability between cities. To measure levels of food insecurity, the survey

used the four quantitative food insecurity (access) scales developed by the Food and Nutrition Technical Assistance Project (FANTA). The survey was administered to 6,453 households comprising 28,771 individuals and represents the largest regional database on urban food security yet collected in Africa. AFSUN conducted a follow-up survey in Harare in 2012 to ascertain if there had been improvements since the height of Zimbabwe's economic and food crisis in 2008.

The AFSUN baseline survey provides unprecedented insights into the state of urban food insecurity in the Southern African region. The results are being published in a series of city-specific studies. Each of these studies identifies how and why each city conforms to or differs from the regional picture. What is clear is that the analysis of food insecurity, even in cities with similar prevalence levels, needs to take into account the particular local circumstances of each urban area.

The AFSUN baseline survey has also identified a number of key knowledge gaps for further research. For example, the relationship between migration and food security and the integration of migrants into urban food systems require much further investigation. In this connection, AFSUN is implementing a study examining the food security status and strategies of Zimbabwean and Mozambican migrants in the South African cities of Cape Town and Johannesburg. In addition, the AFSUN survey showed that the informal food economy is critical to the food security of many poor urban households. AFSUN is therefore currently undertaking a major study of the interface between formal and informal food retailing in the cities of Cape Town and Johannesburg.

### Policy Advice

AFSUN has specifically targeted the municipal level of governance, working closely with city planners as well as local government networks such as the Municipal Development Partnership of Eastern and Southern Africa (MDP-ESA) and the South African Cities Network (SACN). In partnership with these policy networks as well as regional and global research and policy networks such as SAMP, International Metropolis,

and the International Migration Research Centre, AFSUN has convened three major policy conferences to discuss its research results with policy-makers. These include a conference on “Urban Food Security: Strategic Policy Directions” (in Ekurhuleni, South Africa in 2010), “The Urban Food Security and HIV” (in Durban in 2011), and “Migration, Urbanization and Food Security in Cities of the Global South” (in Cape Town in 2012). AFSUN also convenes workshops in individual cities to work with city officials on the challenge of food insecurity in their cities. In 2012, AFSUN collaborated with Reos Partners in the delivery of training workshops for city officials and planners which focus on exposing officials in an experiential learning manner to all facets of the urban food system. In 2013, AFSUN was contracted to work on a food security strategy for the City of Cape Town.

### Training

One key aspect of the AFSUN program is building the capacity of network partners to undertake policy-relevant research. AFSUN offers an annual graduate urban food security course as well as modules for undergraduate students and summer school courses with the African Centre for Cities and the Department of Environmental and Geographical Science at University of Cape Town. The general lack of capacity in advanced urban food security research and analysis has prompted AFSUN to offer funding and fellowships to both Master’s and Doctoral students.

### Community Engagement

The final component of the AFSUN program is its work with urban community change agents to increase their knowledge of the urban food system as a whole and to build interagency partnerships to influence the accessibility of food in poor urban neighborhoods. To this end, AFSUN runs regular workshops for NGOs and CBOs in partnership with Reos Partners. AFSUN is also involved in media work to raise the level of consciousness about the urban food security challenges facing communities in partnership with the NGO Community Media for Development. The two have produced a major radio

documentary and drama series on food issues for broadcast on community radio stations. To raise general public awareness and the quality of print, radio, and TV reporting on urban food security issues, AFSUN runs educational workshops for journalists and broadcasters.

### Landmark Contributions

Publication of 20 major reports in the AFSUN Urban Food Security Series (downloadable at [www.afsun.org](http://www.afsun.org)).

Three major policy conferences on urban food security convened in Southern Africa.

Over 200 undergraduate students in 11 cities specifically trained in fieldwork methods to undertake the AFSUN baseline survey.

Over 40 graduate students trained in urban food security analysis including five PhD theses on Harare, Kitwe, Blantyre, Gaborone, and Windhoek.

### Cross-References

- [Food Security](#)
- [Urban Agriculture](#)

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## Agrarianism and the Ethics of Eating

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### Synonyms

Agricultural ethics; Aquaculture; Ecoregions; Environmentalism; Food ethics; Foodsheds; Small farm; Sustainability ethics; Traditional farming

### Introduction

“Agrarianism” refers to certain schools of thought and forms of life which regard farming and related vocations as exceptional in that farmers are independent, self-sufficient, and self-determining and work in step with nature, the local ecology, the seasons, etc. Independent yet attuned to their ecological setting, agrarian farmers think and act

holistically. Working in and with nature, agrarian farmers view themselves as stewards of their ecological setting and who keep an eye on the environmental health of the area. To agrarians, city folks lead dependent, other-directed lives, artificial and out of step with nature. The agrarian life is built on trust, neighborliness, and cooperation, unlike the alienation and distrust of city life. Dwelling in stable communities, rural agrarians nurture a sense of personal identity that is rooted in place and local history and color. Moreover, Agrarianism regards tilling the soil, cultivating crops, raising livestock, producing food stuffs, etc., as transformative toils and virtue-engendering endeavors. Yes, farming is toilsome; however, agrarians deem that this very hardship engenders the farmer's traits of determination, perseverance, and know-how. Agrarianism holds that such virtues are nurtured in farmers via their interactions with nature as they work to forge fecund order out of wilderness.

Why the continued relevance of Agrarianism? Humanity's connection with terra firma is breaking up as people flock to the cities worldwide and increasingly lead artificial, disconnected lives. In the developed nations, the few remaining family farmers feel caught between global agribusiness and big food processors. Meanwhile, city dwellers have slight awareness of the source of their food, which they know as the packaged products on supermarket shelves. In the last half century, industrialized agriculture has rapidly introduced economies of scale and cheap food for consumers; however, this productive efficiency comes at a high cost to the environment. Synthetic chemicals, such as those used as pesticides and fertilizers, can certainly improve agricultural productivity – at least in the short term – but they can also have deleterious impacts on surrounding environments as pollutants of soil, water, and the atmosphere. They can also contaminate farm products too. The widespread use of antibiotics in intensive animal production has resulted in their loss of effectiveness for disease control not only in animals but also in humans. And then there is the matter of an often reduced attention to the welfare of the animals in the production units of industrial farms.



The ubiquitous rise of these phenomena is fueling new calls for Agrarianism and agrarian values. In recent decades, people have been returning to rural lifestyles or at least greening their urban settings.

### Age-Old Agrarian Views and Virtues: Classical Antiquity

The agrarian life and virtues were esteemed in classical Greece and Rome. In *Works and Days*, the Greek bard Hesiod depicted the rural life. *Works and Days* celebrates the dignity, toil, and generosity of the farmer and teaches prudential morality. Toil steadfastly, incessantly! Grow your bounty step by step! Cooperate and share with thy neighbor; thy kindness shall be returned in kind! (Robinson 1968, pp. 20–21). Xenophon and Aristotle lent support to Hesiod's agrarian virtues. In classical Rome, such writers as Cato, Pliny, and Cicero and poets as Horace and Virgil celebrated the agrarian life and values. Horace wrote poems set on his Sabine Farm or in a country town, which express the farm's bounty, beauty, and proximity to nature. Virgil's *Georgics* celebrates the piety of country life in sections on field crops, trees, livestock, and bees. Virgil offers didactic teachings about farming but with wider horizons. In the *Georgics*, he affirms moral tenets and philosophic views of wide import. Virgil's farmer stands for broader humanity. For him, farming is the premier human activity across the world. Virgil laments the disappearing solitary farmer who worked his own land as a falling away of humanity from its core vocation.

### Classical China

In classical China, the Confucian virtues reflected the agrarian society but were the virtues of the feudal landlords rather than of those who tilled the soil. Thus, in Confucius' *Analects*, rural folk question his wisdom and quixotic ideals. And, in the *Mencius*, followers of the school of Tillers (*Nongjia*) question Mencius' separation of ruler

and ruled, advocating a rural egalitarianism. The Tillers held that society was born with the development of farming and that healthy societies were grounded in humanity's propensity to till the soil together.

The Tillers' ideal of rulership was adopted from the agrarian sage, Shennong, renowned for identifying herbs, crop plants, and medicinal and poisonous plants and for teaching people how to farm. Hence, Tiller kings worked the fields alongside the people, while their queens wove fabrics and performed domestic tasks with the other women. The Tiller kings did not receive state funds but earned money from working their own fields. The Tillers disputed the Confucian notions of administrative elites and division of labor, arguing that egalitarianism and self-sufficiency were the proper grounds of a stable society. Disputing also the idea of stratified prices of basic goods, they insisted that food staples, regardless of quality or demand, should be sold at fixed prices to ensure fair distribution. A follower of the school of Tillers once told Duke Teng, "A worthy ruler feeds himself by plowing side by side with the people, and rules while cooking his own meals. Now Teng, to the contrary, possesses granaries and treasuries, so the ruler is in effect supporting himself by oppressing the people" (Lau 1970 100f; Graham 1979).

### European Echoes

Physiocracy, an early economic theory that stressed land and agriculture, arose in the eighteenth-century France. Its leaders, Francois Quesnay and Anne-Robert-Jacques Turgot, were influenced by Chinese agricultural policy. Quesnay advocated such a *laissez-faire* agrarian policy for France. The Physiocrats stressed rural labor and extractive industry, including grasslands, pastures, forests, mines, and fishing, as sources of national wealth. They saw the consumption of farm surplus as the basis of trade and industry, which themselves produce no net product. Naturalists, the Physiocrats believed that if the human order were brought into attunement with the natural order, society would be healthier. They not

only stressed agriculture in economics but rejected the shallowness and artifice of urban life and praised natural living, especially as farmers.

Modern Western Agrarianism too held that wealth originates from the land and that farming is the foundation of other vocations. Modern Agrarianism drew on John Locke, who asserted that those who work the land should be its rightful owners in *Second Treatise of Civil Government* (1690). This labor theory of value influenced Thomas Jefferson who shaped how nineteenth-century American homesteaders viewed the ownership of their farms. In a letter to John Jay, Jefferson wrote, “Cultivators of the earth are the most valuable citizens. They are the most vigorous, the most independent, the most virtuous, & they are tied to their country & wedded to its liberty & interests by the most lasting bonds” (1785; Jager 2004, 12).

Agrarianism was a leading theme in the eighteenth-century British georgic poetry. The poets Stephen Duck, Mary Collier, and Thomas Gray sang of the hardships as well as the virtues of farm life. They followed Horace in exploring the themes of town vs. country and the happy man, but Virgil’s *Georgics* held center stage for them as a model for expressing agrarian life and virtues poetically. In the late eighteenth and early nineteenth centuries, European Romantics stressed the individual and viewed nature as a spiritual force. At a time when the wilderness was vanishing across Europe, they identified “nature” with the remaining mitigated wilderness of farm fields and woodlots. To the Romantics, farmers lived in touch with nature – positioned to experience moments of transcendence from the mundane world.

## American Echoes

In eighteenth-century America, Agrarianism was espoused by Benjamin Franklin, Thomas Jefferson, John Taylor of Carolina, and others. Mid-nineteenth-century voices included the transcendentalists Ralph Waldo Emerson and Henry David Thoreau. The next wave featured

philosopher Josiah Royce, land reformer Henry George, botanist Liberty Hyde Bailey, writer Hamlin Garland, followed by the Southern Agrarians of the 1920s and 1930s, and novelist John Steinbeck. Volumes 3 and 5 of *The Economic History of the United States* cover the conditions and practices of agriculture in nineteenth-century America: *The Farmer’s Age: Agriculture 1815–1860* by Paul W. Gates and *The Farmer’s Last Frontier: Agriculture 1860–1897* by Fred A. Shannon.

In 1930, the Southern Agrarians published “A Statement of Principles” asserting:

a Southern way of life against... the prevailing way; and ... agree[ing] that the best terms in which to represent the distinction are... Agrarian versus Industrial. ... Opposed to the industrial society is the Agrarian. ... Technically, ... an agrarian society is one in which agriculture is the leading vocation, whether for wealth, for pleasure, or for prestige—a form of labor that is pursued with intelligence and leisure, and that becomes the model to which the other forms approach as well as they may. But an agrarian regime will be secured readily enough where the superfluous industries are not allowed to rise against it. The theory of Agrarianism is that the culture of the soil is the best and most sensitive of vocations and that therefore it should have the economic preference and enlist the maximum number of workers. (Davidson et al. 2006)

Prominent agrarian voices in the mid-twentieth century include Aldo Leopold (1887–1944) and Rachel Carson (1907–1964). Leopold saw the farm ethically as a place of conservation. He believed that harm was done to ecosystems out of the farmer’s misguided sense of private ownership, which had eclipsed the idea of rural community. Following Thoreau, he expanded the idea of community to include the environment and the farm. Leopold wrote several essays and *A Sand County Almanac* (1949). Carson alerted the world to the environmental threat posed by DDT and other pesticides in *Silent Spring* (1962). She proposed using biological and ecological means of pest control. *Silent Spring* provoked debate over environmental ethics, government regulation of industry, and the appropriate uses of technology. Carson extended some of Leopold’s ideas about land ethics, such as human duties to the natural ecology.

## American Neo-Agrarians

Recent agrarian thinkers are dubbed “neo-Agrarians.” Prominent among them are Wendell Berry, J. Baird Callicott, Paul B. Thompson, Gene Logsdon, Eric Freyfogle, and others. They view the world through green tinted glasses. They espouse the old agrarian views while tackling new fields, such as biotechnology, environmental studies, and new technologies on the farm. Wendell Berry has written books, essays, and poems on farm life, rural community, connection to place, sustainable agriculture, etc. He is a public defender of agrarian values. J. Baird Callicott applies a Leopoldian ethic to the problem of global climate change. He advocates a multifaceted non-homocentric environmental ethic that accords with Leopold’s assertion that “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). In Callicott’s view, an effective environmental ethic must address real-life ecological concerns in a holistic way. Paul B. Thompson brings the tools of philosophic analysis and ethics to bear in examining the environmental significance of farming in books and articles, such as *The Spirit of the Soil* (1995). In *The Agrarian Vision* (Thompson 2012), he focuses on sustainability ethics and agrarian philosophy. In several books, Eric Freyfogle explores ways for humanity to live sustainably by responsibly attuning human activities and communities to the environment.

Neo-Agrarianism attempts to incorporate the agrarian values of other traditions, as well as new knowledge to deepen and broaden its view. The past offers lessons, but in the global village today, neo-Agrarians must adopt an inclusive vision for the future. In planning the new rural community, they must register twenty-first-century global trends and society yet stay committed to sustainable living. As humanity is a part of nature, neo-Agrarians constantly remind humanity of the need to integrate human activities with natural processes.

## Signs of New Life

Despite the environmental challenges posed by industrial and corporate agriculture, there are signs of new and deepening agrarian awareness. In the developed world, there are biodynamic agriculture, permaculture, and growing demand for organic food sourcing, and in the developing world, there is an upsurge of peasant labor, rural women, youth, and indigenous peoples’ movements, which are autonomous, multicultural, and free of divisive ideological, political, and economic commitments. Such movements were inspired by the Chicano farm worker organizer César Chávez of the 1960s. The new farm labor movements emphasize peasant or family farming based on sustainable practices using local resources and following local traditions. Such peasant farmers draw on their heritage, utilize local resources, and produce organic food stuffs with few external inputs. Their production tends to be aimed locally for family and community consumption and domestic markets.

Biodynamic agriculture is inspired by the work of Rudolf Steiner, especially his insistence on maintaining (1) sustainable soil fertility and (2) the relationship between plant growth and cosmic rhythms. Biodynamic agriculture stresses a holistic, spiritual understanding of nature and human life and thus aims at self-sufficiency in compost, manure, and animal feed, with little minimal external and nonnatural input. The keynote of biodynamic landscaping is preservation of ecological diversity. Biodynamic methods are being adopted worldwide. For example, tea plantations in Darjeeling are retiring chemical fertilizers and returning to traditional worm compost, manure, and biodynamic floral preparations.

Permaculture involves the construction of sustainable human living spaces in keeping with local topography. It draws upon the diversity, stability, and resilience of natural ecosystems in developing sustainable solutions to the problems of one’s living environment. It stresses cooperation with nature and care for the earth and people. Its holistic, integrated approach emphasizes contemplation and minimal impact. Permaculture

regards human beings as nature's kin, related to all life in the biosphere. It encourages people to revere the mystery of existence and approach nature with humility. Permaculturists propound ethical action principles, such as (1) conserve, use only what is needed; (2) stack functions, get multiple outputs from each element in the system; (3) repeat functions, meet each need variously; (4) reciprocate, use outputs of one element to meet needs of other elements in the system; (5) appropriate scale, make output match need scale; (6) diversify, use multiple elements to increase resilience; and (7) donate surplus, do not hoard.

### Rural Trends in East Asia

In Postwar East Asia, land reform and land to the Tiller movements led to a resurgence of the independent farmer. In the 1950s, agriculturists from the United States visited various East Asian countries to teach the latest farming methods and introduce efficient, fair marketing. Following Thomas Jefferson, the Neo-Confucian thinker Xu Fuguan (1902–1982) argued that such independent farmers could serve as the pillar of democratic development in East Asia. However, following the success of land reform, cash-strapped regional governments took advantage of the surpluses created by the farmers to prime the well for industrialization, which in turn drew national attention and funds away from the farming sector. In consequence, the hearts of the next generation were set on elegant city life in modern industrial society. In recent decades, regional governments have started to realize the importance of the agriculture and food sector. Moreover, some people are beginning to return to the countryside for respite from the ubiquitous crowds, traffic, noise, and pollution of city life in East Asia.

Throughout East Asia, the age-old peasant societies have vanished, and rural societies have become less dependent on farming. Economic challenges have been pressing rural societies to diversify their economies. Dedicated farmers are

increasingly in the minority. Even rural farm labor is in short supply. Though farm labor was abundant in the recent past, it is no longer easy to recruit farm hands. Rural occupations have diversified because farming cannot support the rural population. Additionally, rising farm operating costs are spearheaded by expensive farm machines, advanced seed, fertilizers, and pesticides as well as by the training and education needed for advanced farming. Living costs have risen, as well, due to new lifestyle trends introduced by globalization. Industrialization also pushes these changes in rural society, and urbanization is penetrating rural society through regional urban centers that relay global trends. To survive, regional rural communities have to be made more attractive to the youth. Local community leaders and boosters brainstorm not only about developing industries but about attracting new businesses to create work opportunities. Still, agriculture remains a key factor.

In Taiwan, joining the WTO caused several crises in the agricultural sector, primarily from the curtailment of rice subsidies and other price supports. Some farmers turned to raising niche and value-added crops to make up for higher overhead. A major innovation has been organic rice production. Over time, the organic farmers in Taiwan have come to appreciate the ethical dimension of their activity and now practice sustainable farming just because “it is the right thing.” In addition, enterprising farmers are sidestepping the traditional food marketing system, which favors the middleman, to establish their own brand names, even to deliver their products directly to consumers. Some even distribute catalogs; survey consumer satisfaction, needs, and requests; and inform customers about harvest and processing schedules. Japanese and South Korean farmers are being similarly proactive and innovative.

In China, while organic crop and range livestock production are being introduced, this development is fueled more by entrepreneurs with an eye to the bottom line than by dedicated farmers who love their vocation. The entrepreneurs' mixed motives undermine consumer acceptance

of Chinese organic certifications. Moreover, the ubiquitous soil and water contamination in China makes the organic crop and range livestock quests quixotic there.

## The Green and Blue Revolutions

“Blue” has joined “green” as an environmental red button word. The idea of “blue revolution” recalls the green revolution of the 1960s and 1970s but refers to water in terms of fresh water supply and aquaculture. Fresh water supplies are dwindling due to a host of factors, such as melting glaciers, reduced rainfall, chemical and biological contamination of ground water as well as of lakes and rivers, accelerated desertification, etc. Fresh water supplies are dwindling just as human populations are soaring, and experts predict a huge impact to humanity and to the biosphere during the present century. Recent reports of the United Nations Environment Programme (UNEP) warn that as fresh water supplies dwindle, the world will face massive human suffering in the forms of starvation, famine, migration, violence, and possibly warfare as nations fight to secure life-sustaining fresh water resources for their populations. In this respect, the blue revolution will include projects to increase world supplies of fresh water by a wide variety of means.

In recent decades, Indians have realized the importance of the green revolution for increasing agricultural output to overcome starvation, feed a soaring population, and improve the standard of living of rural people. Over time, it was found, however, that the green revolution had a serious impact on fresh water supplies. The experts had led the farmers to concentrate just on crop issues, especially crop output, and did not take a holistic approach and take into account local ecosystems. They took piecemeal approaches to specific problems and completely neglected such collateral issues as the quality of fresh water supplies and the health of the environment. Many farmers still utilize this blinkered approach to farming, though it may erode the fertility of the land they farm. As people realize the danger posed by the dwindling

fresh water supply, farmers are increasingly encouraged to take off their blinkers and think about their crop issues holistically in terms of the water/food/energy connection. The time has come to initiate a blue-green “turquoise revolution” that takes a holistic approach to challenges and risks of water as well as of land.

Fish and shrimp aquaculture have arisen as another key facet of the blue revolution – that is, the effort to farm an array of aquatic species. As in the case of the green revolution, the blue revolution is touted as a way to feed the world’s hungry; however, blue revolution producers to date mostly aim at high-end seafood production for the affluent consumers rather than at mass seafood production to feed the poor.

While salmon and shrimp farms are most prominent forms of aquaculture, aquaculture includes a wide variety of operations, aquatic species, and management systems. Aquaculture is not limited to just one form of industry or set of operations, so it is difficult to manage or regulate. While there is constant interest in expanding aquaculture operations and production, new models of aquaculture development are needed which would be ecologically attuned, incorporate technical ecosystem design and ecological principles, and be adaptable to local environmental settings. Aquaculture on any scale makes a significant environmental impact, as does land agriculture. Future aquaculture operations must be ecologically friendly, that is, enhance natural fisheries, reclaim broken ecosystems and habitats, and offer a holistic vision of the coastal areas. With new forms of aquaculture development that incorporate environmental planning, humanity could become stewards rather than destroyers of the world’s coastal aquatic ecosystems. In short, to succeed, the blue revolution must be greened and turn turquoise.

## Some Problems with the Blue Revolution

Aquaculture is often touted as offering the promise of a blue revolution in fish production. Like agriculture’s successful green revolution,



aquaculture is promoted as a way to increase food production from the sea. To date, however, industrial aquaculture has wrought serious environmental and social problems. As local ecosystems and species have been adversely impacted, indigenous coastal peoples have lost their food supplies, livelihoods, even their homes and cultures, to industrial aquaculture. Meanwhile, the affluent consumers of the fish products are unaware of the negative effects of farming the sea.

In recent decades, shrimp aquaculture has spawned long-term environmental and social problems, including degradation and loss of coastal resources, tainting of waters from nearby estuaries and coastal bays, and loss of fish breeding and nursery grounds to shrimp farm operations. The shrimp aquaculture farms disrupt coastal ecology. Precious mangrove forests and diverse ecosystems are cleared to make way for the farms. Crucial coastal habitats, including mudflats, sea grass beds, and coral reefs, are degraded or despoiled. And waterways and underground aquifers are increasingly contaminated due to the farms. Ironically, shrimp farming uses clean fresh water but causes water pollution, often fouling its own nest. The use of antibiotics, pesticides, and water additives, combined with pond residues of unused feed and waste, leads to disease and pond closures. Shrimp farms, like other forms of aquaculture, create risks of genetic contamination and reduced biodiversity. Accidental release of farm shrimp or fish can negatively impact the native species. Moreover, a key factor impacting local fisheries is selective catching of wild shrimp larvae to restock the shrimp farm ponds. As global fisheries decline, the shrimp fry fishery for aquaculture has a high bycatch rate of up to 20 lb of fish lost per pound of shrimp larvae caught. Vital habitats have been lost for fish, mollusks, and crustaceans, as well as for birds, migratory species, and endangered species near the shrimp farms.

In Asia, the average aquaculture farm lasts for only a few years before pollution and disease problems cause pond closures. Overstocking and overuse of feeds and water additives are practiced. The key problem is that shrimp

farming is being conducted even though the technology is still in the R&D phase. Serious problems remain to be solved. The shrimp product itself contains health risks. The farmers' use of antibiotics, pesticides, and feed additives raises serious questions for consumers. Some of the antibiotics used in shrimp farms are close to antibiotics used to treat human diseases. Due to public concern over health risks, Japan has identified over fifteen antibiotics used in shrimp farms and has banned shrimp products with these antibiotics.

## The Ethics of Eating

People the world over are increasingly concerned about the rapidly expanding degradation of the environment and biosphere. And they are becoming aware of the environmental implications of farming operations and practices and, by extension, of their eating choices. Farming activities occupy up to 50 % of the earth's land surface and exert serious impacts on the environment. Additionally, vast numbers of the world's poor people farm marginal lands and waterways and in hard times turn to global charities to carry on. Global hunger and environmental ethics concerns thus intersect, as environmental degradation erodes the livelihood of the poor.

The sustainable agriculture movement took shape during the 1980s in the United States, connecting the rural economic crisis with the environmental problems of agrichemicals and soil pollution. Sustainable agriculture promotes farming practices that sustain local ecosystems and topsoil as a necessary alternative to the industrial farm model. It embraces not only environmental protection but social fairness by arguing for sustainable farming methods and for the well-being of farm hands and consumers. Social fairness includes economic equity for farm hands as well as access to basic food stuffs for the poor. A popular way to practice sustainability ethics is to buy locally grown food in season from the producer, for example, at farmer's markets.

The local food movement advocates setting up locally based food economies that encourage

sustainable food production to enhance the environmental and public health of a locale. It defends local economies by buying locally produced food products and services rather than those delivered by distant giant food companies. In short, the local food movement encourages consumption of local food stuffs and use of reliable short supply chains.

Local food systems are the key to implementing local food values. The concept of local food systems covers how food is produced and reaches consumers, as well as consumer food options. It includes the notions of food chain and food economy. Local food systems stand in stark contrast to the industrial corporate model of food systems wherein producers and consumers are often widely separated. Local food systems reflect close relationships between producers, retailers, and consumers in particular locales. The local food systems are nuclei working to ensure the ecological and social sustainability of local communities. "Local" in this discourse is measured in geographic distance but is also understood in terms of basic ecological units demarcated by climate, soil, watershed species, and local agriculture practices. These units are called ecoregions or foodsheds, that is, locales where food is produced and consumed.

Why should people eat locally? A community supported agriculture system enables consumers to support local farmers; obtain fresher, healthier food; and better understand how the food is grown. Local eating also fosters relationships between farmers and consumers. Shopping at farmers markets often features health sessions, dissemination of information, and a space for community engagement. Local farmers' markets build community sociability and maintain local traditions while creating unique senses of community. Locally grown goods do not need to be transported cross-country or constantly cooled in large refrigeration units. Besides, locally grown foods are better because of the farms' smaller size. Local farms produce far less waste in quantity and concentration than do factory farms, which seriously pollute the surrounding air, land, and waterways. Locally grown foods support free-range or pasture-grazing farming

methods, decreasing the need for factory farms, with the accompanying waste and its effects on surrounding areas.

With the rapidly increasing world population, efficiency is crucial to reducing the widespread malnutrition today. In this respect, the questionable effectiveness of a local food system is challenged for reduced productivity per farmer that might result in decreased food supply as well as the need for agricultural expansion into new lands. Such expansion, a major contributor to global deforestation, is a huge problem, especially in regard to greenhouse gases and biodiversity. Further research on the difficulties of implementing local food systems is needed to find ways to avoid these side effects associated with small farm production.

## Summary

In closing, the question arises, why Agrarianism today? Humanity's connection with the living earth is breaking up as people flock to the cities to lead artificial, disconnected lives. In the developed nations, the few remaining family farmers feel caught between giant global agribusiness and big food processors and retailers. Meanwhile, city dwellers have passing awareness of the source of their food, which they recognize as the packaged products on supermarket shelves. In the last half century, industrialized agriculture introduced economies of scale and delivered cheap food for consumers; however, this productive efficiency comes at a high cost to the environment. Moreover, industrial farm operators often neglect livestock welfare and depend on dangerous chemicals, which damage ecosystems and contaminate soil, water, and even food. The ubiquitous rise of such phenomena is fueling new calls for Agrarianism and agrarian values. And, in recent decades, people have begun to rediscover rural lifestyles or at least green their urban settings. This is important, for the survival of humanity will depend on people's acceptance of sustainable agrarian values and practices to reduce climate change and restore the health and well-being of Mother Nature on whom human life depends.

## Cross-References

- [Agricultural Ethics](#)
- [Agriculture and Ethical Change](#)
- [Biodynamic Agriculture](#)
- [Buddhist Perspectives on Food and Agricultural Ethics](#)
- [Farmers' Markets](#)
- [Farms: Small Versus Large](#)
- [Jefferson's Moral Agrarianism](#)
- [Permaculture](#)
- [Sustainability of Food Production and Consumption](#)
- [Water, Food, and Agriculture](#)

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## Agricultural and Food Products in Preferential Trade Agreements

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### Synonyms

Agricultural and food products in regional and bilateral trade agreements; Preferential market access for agricultural and food products; Reciprocal and unilateral preferential access for agricultural and food trade

### Introduction

The primary agricultural sector has been generally characterized by considerable governmental interventions through domestic support and international trade policies (Schmitz et al. 2010). Such governmental interventions are often extended to cover selected processed food products, particularly those that are deemed to be sensitive. The sensitivity of the primary agricultural sector is mainly associated with food security issues. It also stems from the influence of farmers'

organizations that persuade governments through lobbying activities to implement protectionist policies vis-à-vis foreign products and to adopt price and income support schemes. Although these policies are expected to affect consumers and taxpayers, they are normally justified by ethical arguments regarding the well-being and competitiveness of domestic agricultural producers. These arguments are often countered by questioning the ethical validity of various protectionist policies in the first place. In this context, there are two evident ethical questions that can be addressed when comparing the outcomes from trade liberalization schemes and those from protectionist policies. First, to what extent is the reallocation of benefits between few producers (gains from protectionism) and lots of consumers (gains from trade liberalization) ethical? Second, is it ethical to weigh the welfare of one group more than the welfare of another group when total welfare goes up with free trade policies or goes down with protectionist policies? These ethical questions are relevant through various trade liberalization policies, including preferential and multilateral trade agreements.

Preferential trade agreements (PTAs) are preferential market access agreements for international trade between two or more member countries relative to nonmember countries. Preferential market access policies are normally expressed through reductions or eliminations of tariff barriers and also through various types of nontariff trade preferences such as trade facilitation practices over customs administrations for imports originating from member countries. PTAs often comprise regulations that manage trade between member countries such as Sanitary and Phytosanitary (SPS) provisions, safeguard measures, Technical Barriers to Trade (TBT), and provisions on domestic support and export subsidies. In some cases, PTAs encompass common regional sector-specific policies, such as the Common Agricultural Policy (CAP) of the European Union (EU).

Policy barriers applied on agricultural and food trade remain generally higher than those applied on manufactured products' trade. Consequently, the implications of PTAs for agricultural and

food trade are expected to be different compared to those prevailing for manufactured products' trade. For example, the implementation of a comprehensive regional free trade agreement is expected to have a higher impact on intra-regional agricultural and food trade compared to trade in manufactured products. Many PTAs have more limited degrees of market access preferences for sensitive agricultural and food trade compared to trade in manufactured products. The vertical linkages between the primary agricultural sector and the food processing sector generate diverse implications of PTAs for the patterns of trade and industrial growth. Also, PTAs' treatment of domestic agricultural support policies, the prevalence of various SPS and TBT measures, and the regularity of provisions on nontariff trade policies further distinguish the implications of PTAs for agricultural and food trade.

There are several types of PTAs that are determined according to the number of member countries, geographic location, and the implementation of reciprocal versus unilateral preferences. One prominent type of PTAs is plurilateral, involving several countries. Most of these plurilateral PTAs cover countries located in geographic proximities. Such agreements are commonly termed regional trade agreements (RTAs). Prominent examples of RTAs include North American Free Trade Agreement (NAFTA) in North America, *Comunidad Andina* (CAN) or the Andean Community and *Mercado Común del Sur* (MERCOSUR) or the Common Market of the South in South America, *Mercado Común Centroamericano* (MCCA) or the Central American Common Market in Central America, Association of Southeast Asian Nations (ASEAN) in Asia, EU and the European Free Trade Association (EFTA) in Europe, Common Market for Eastern and Southern Africa (COMESA) and Southern African Development Community (SADC) in sub-Saharan Africa, Greater Arab Free Trade Area (GAFTA) and Gulf Cooperation Council (GCC) in the Middle East and North Africa, and the Caribbean Community (CARICOM) in the Caribbean region.

Many PTAs are bilateral trade agreements (BTAs), which are trade agreements between

two distant or two neighboring countries. Examples of BTAs include the United States-Chile Free Trade Agreement and Egypt-Turkey Free Trade Agreement. BTAs are often realized between one regional trading bloc and one country. Examples of such BTAs include the EU-Chile Free Trade Agreement and ASEAN-China Free Trade Agreement. RTAs and BTAs are normally characterized by reciprocal preferences in the sense that member countries offer each other preferential market access. There are some PTAs that are unilateral in nature and are mainly intended to enhance the market accessibility of various products, particularly primary agricultural commodities, from developing countries and Least Developed Countries (LDCs) to the markets of developed countries. The EU's Generalized System of Preferences (GSP) and the Development Cooperation between the EU and the African, Caribbean, and Pacific Group of States (ACP) are prominent examples of such PTAs.

There are also several types of RTAs that are classified according to the extent of market integration. Free trade areas depict the basic stage of market integration. Member countries offer each other preferential market access, but maintain their own external tariff schedules vis-à-vis imports from nonmember countries (e.g., NAFTA). Customs unions represent the next stage of market integration where member countries adopt common external tariff schedules vis-à-vis imports from nonmember countries (e.g., MERCOSUR). The extent of market integration is further promoted through Common Markets where factors of production have free intra-regional mobility (e.g., the former European Economic Community). Market integration culminates at Economic Unions where member countries harmonize their macroeconomic policies. The EU is often considered as one prominent example.

## Preferential and Multilateral Trade Agreements

The sensitivity of the primary agricultural sector has resulted in slow progress in multilateral



agricultural trade negotiations through the World Trade Organization (WTO), which was formed in 1995 as the successor to the General Agreement on Tariffs and Trade (GATT). Multilateral negotiations over global liberalization schemes for agricultural trade were initiated through the GATT's Uruguay Round of multilateral negotiations (1986–1994) and resulted in the Uruguay Round's Agreement on Agriculture (URAA). The subsequent negotiation rounds over the draft modalities of the Doha Development Agenda (DDA) for agriculture have been difficult. The resulting sluggish progress in multilateral trade negotiations over agricultural and food trade have further emphasized the role of PTAs as alternative international market access policies for agricultural and food trade. PTAs often include countries that share many common economic interests, and hence, they are easier to realize compared to multilateral trade agreements.

The proliferation of PTAs could be associated with some ethical concerns when some countries are being “left out” from major influential PTAs. These countries could be then forced to ride the waves and make significant concessions when engaging in preferential agreements. PTAs are sometimes considered stumbling blocks since they can diffuse the pressure on the global trading system to reach multilateral trade agreements which could be beneficial to many groups in many countries. Consequently, PTAs could contribute in delaying the realization of multilateral agreements for agricultural and food trade through the current WTO's DDA and could adversely or favorably affect the agricultural and food sector and national welfare in many countries. Alternatively, PTAs could be perceived as building blocks toward a globally liberalized trading system which parallel the WTO's attempts through multilateral negotiations. Thus, progress in PTAs could ultimately lead to freer global trading systems and would arguably enhance global welfare in the long run. This outcome is consistent with many ethical considerations when it ultimately improves the well-being of many groups in many countries. However, some ethical concerns could be also

addressed since a freer global trading system could unfavorably impact a wide range of agricultural and food producers who could incur significant losses from increases in foreign competition and could face adversity through the process of adaptation to a globally liberalized market.

There could be some supplementary ethical considerations associated with membership in PTAs when carrying out multilateral trade negotiations. RTAs are expected to strengthen the negotiation positions of member countries through the WTO's DDA multilateral negotiations. A member country that does not individually have a strong position through these negotiations can better voice its interests through a regional trading bloc. However, the dominant negotiating positions of major regional trading blocs could occur at the expense of the interests of other (mainly developing) countries that are left out. This outcome could negatively affect many groups in these countries.

### Characteristics of PTAs

The depth and breadth of trade preferences exhibit a wide variation across different PTAs. Some PTAs cover trade in virtually all products and grant free market access. Other PTAs cover some products and/or offer reduced preferential trade barriers to member countries relative to nonmember countries. Members of the WTO are required to maintain nondiscriminatory trade policies vis-à-vis all other members. These nondiscriminatory policies are expressed through the principle of Most-Favored Nation (MFN) treatment, where a preference given to one country should be extended to all other countries, and through the principle of national treatment of imported products. However, there is an exception through Article XXIV of the GATT where countries are allowed to form PTAs, provided that they do not increase barriers on imports from other WTO member countries. This Article also requires the elimination of trade barriers on “substantially all trade” between PTA member countries. The ambiguity of “substantially all

trade” has often led to various interpretations. In some cases, limited depth of trade preferences and incomplete product coverage of PTAs could be viewed as being inconsistent with the requirements outlined in this Article.

There are many agricultural products that are deemed to be sensitive because of lobbying activities (supply-managed products in Canada and the United States), cultural reasons (e.g., rice in Indonesia and Japan), or food security reasons (e.g., wheat in Middle Eastern countries). Some PTAs set limitations on preferential access for several sensitive agricultural and food products. For example, supply-managed products in Canada, such as dairy products, eggs, and poultry products, remain protected vis-à-vis imports from other NAFTA member countries. Meanwhile, several sensitive agricultural products in the United States (e.g., cotton, dairy products, and peanuts) are shielded against competition from other NAFTA member countries. Member countries of SADC implement trade barriers on intra-regional trade flows in many sensitive agricultural products, namely, cereals, cotton, and dairy products. Member countries of MERCOSUR have individual lists of sensitive agricultural products that are exempt from duty-free market access and from the implementation of common external tariffs. Also, ASEAN member countries exclude rice and other sensitive agricultural products from preferential access through the exceptions granted under the Common Effective Preferential Tariff (CEPT) scheme. Some PTAs comprise Tariff Rate Quotas (TRQs) applied on trade among member countries for sensitive agricultural products. TRQs have a two-tier tariff structure where a maximum level of imports is taxed at a low in-quota tariff rate and additional imports are subject to an over-quota tariff rate. For example, the United States-Chile Free Trade Agreement contains TRQs applied on imports of several agricultural commodities (e.g., beef, cotton, and dairy products). These limitations could favor domestic producers’ well-being. However, they could come at the expense of efficient allocation of resources and foreign producers’ and consumers’ benefits.

The extent of trade preferences of PTAs for member countries can be examined by contrasting trade barriers applied on trade flows between member countries (e.g., preferential tariffs) to trade barriers applied on imports from nonmember countries (e.g., MFN tariffs). For example, the applied MFN tariff barrier of the EU bloc on beef imports from nonmember countries is estimated to be equivalent to an ad valorem rate of 77 % in 2005, while imports from member countries have a duty-free market access (Ghazalian et al. 2011). Mexico applied an MFN tariff rate of around 20 % on beef imports compared to a duty-free market access for beef imported from NAFTA member countries (Ghazalian et al. 2011). Also, the common external applied MFN tariff rates of MERCOSUR on imports of maize (excluding seed imports) and on imports of common and durum wheat were 8 % and 10 %, respectively, compared to a duty-free intra-regional market access (United Nations Conference on Trade and Development 2012). Naturally, some ethical issues could be addressed when larger tariff gaps between MFN and preferential access rates prevent efficient producers in nonmember countries from reaching markets of regional blocs and give advantage to less efficient producers in member countries.

PTAs often apply Rules of Origin (ROO) when conferring preferences for agricultural and food trade between member countries. As discussed in Fulponi et al. (2011), there are variations in ROO criteria for products to be considered having originated from member countries. ROO requirements could include a stringent criterion that agricultural and food products should be wholly produced in member countries to benefit from preferential access. They could also include de minimis criteria which allow certain percentages of agricultural and food products to be produced in nonmember countries. The ROO policies are commonly associated with free trade areas where nonmember countries have incentives to access the regional bloc through the member country that has the lowest tariff rate. Such practices are often termed “trade deflection.” Consequently, ROO policies could be justified since they are applied by member countries

as preventive measures to trade deflection practices. However, stringent applications of ROO measures could raise concerns for some. This is because they could be implicitly used as TBT against efficient producers in nonmember countries along the supply chain, favoring domestic producers in member countries. There are some supplementary deadweight losses that are associated with complex systems of ROO. In this context, the “spaghetti bowl” phenomenon could prevail for agricultural and food trade where ROO policies of overlapping PTAs distort trade patterns and generate important transaction costs (Bhagwati 1995).

The implementation of the mandatory Country of Origin Labeling (COOL) program in the United States, which took effect on March 16 of 2009, has disturbed Canada’s and Mexico’s exports of many agricultural products to the United States (Carlberg et al. 2009). It has arguably lessened the magnitude of preferential market access provisions of NAFTA for these products. COOL regulations require retailers to provide mandatory labels on certain agricultural products (e.g., beef, chicken, lamb, pork, and fresh and frozen fruits and vegetables) indicating the source country. For meat commodities, these labels should indicate the countries where the animals are born, raised, and slaughtered. The labels indicate product of the United States when all three stages take place in the United States. For the proponents of this program, these labels are ethically defensible since they are intended to have better informed consumers regarding the attributes of the purchased products and to enhance food safety along the supply chain. However, COOL programs are perceived by some as an implicit TBT which confers an advantage to domestic producers. This mandatory labeling requirement has particularly impacted the Canadian meat industry. In many cases, producers and processors in the United States along the supply chain would incur significant costs in establishing separate lines of production to segregate primary products according to their countries of origin. Consequently, an integrated supply chain where all stages of production occurring in the United States

would circumvent these segregation costs (Carlberg et al. 2009).

The extent of nontariff preferences is generally more difficult to evaluate without empirical analysis. One of NAFTA’s nontariff preferences for Canadian beef and pork exports was the recognition of Canada’s inspection certificates by the United States (Veeman 1994). Nontariff preferences can be also implicitly generated when restrictive nontariff trade policies are applied on imports from nonmember countries. For example, the EU import restrictions on hormone-treated beef and genetically modified organisms (GMOs), which are common features in agricultural production of many major exporting countries (e.g., Australia, Canada, and the United States), have indirectly magnified the value of regional preferences for EU producers. Promoting food safety and conveying information on the process of production and on products’ attributes to consumers conform arguably well to various ethical standards expressing consumers’ rights to food information and safety. However, these policies are controversial since they are often believed to act as disguised supplementary TBT vis-à-vis foreign producers.

Many PTAs have SPS and TBT provisions that oversee trade between member countries. They often include harmonization or recognition of standards for agricultural and food products. These provisions could potentially act as implicit nontariff preferences for member countries vis-à-vis nonmember countries which have their conventional standards unrecognized or different than those accepted within the preferential trading bloc. Failing to recognize foreign standards could be incompatible with ethical norms when purposely used as implicit TBT against nonmember countries. In some other cases, SPS and TBT provisions of PTAs are associated with restrictive measures that could lessen or even eliminate the significance of trade preferences between member countries. For example, the United States implemented restrictive SPS measures on cattle and bovine meat imports from Canada following the discovery of Bovine Spongiform Encephalopathy (BSE) in Canadian cattle farms in 2003. Such intra-regional SPS and

TBT measures often operate as food safety policies. However, in some other cases, they could be considered as implicit barriers favoring domestic producers by lessening import competition from other member countries.

## Implications of PTAs

Free trade policies are often associated with increases in trade flows and positive overall welfare implications. They could, however, adversely impact some groups through the process of adjustment and could bring about some ethical issues. In this context, Palmetier (2005) discussed the general aspect of free trade through various ethical theories, underscoring the costs of protectionist policies vis-à-vis losses incurred in some segments from free trade.

The evaluation of the implications of PTAs for agricultural and food trade is commonly carried out within the conventional analytical framework that describes the effects of PTAs through the trade creation and trade diversion effects (Viner 1950). The trade creation effect implies that trade preferences induce an increase in trade levels between member countries. This effect has positive welfare implications because inefficient (higher cost) production in one member country is replaced by imports produced by more efficient (lower cost) producers in another member country. Nevertheless, many higher-cost domestic producers facing a more intense import competition from lower-cost producers in other member countries would incur losses and would ultimately exit the market. The theoretical analysis suggests that these domestic resources would be eventually reallocated into other comparatively advantaged sectors. The process of labor reallocation could be cumbersome and many producers would be harmed by PTAs, at least in the short run. The trade diversion effect of PTAs indicates that trade is diverted from more efficient producers in nonmember countries to less efficient producers in member countries. In this context, trade diversion is associated with negative welfare implications. Furthermore, many producers in nonmember countries would be

disadvantaged and could face adversity through the process of adjustment and transition from their current sector to another more competitive sector.

The net welfare implications of PTAs can be arguably assessed based on the relative magnitude of trade creation and trade diversion effects. However, such additive assessment could miss some detailed ethical issues regarding the well-being of adversely affected groups. It is commonly argued that PTAs between “natural” trading partners, which are normally located in close geographic proximity, are welfare-enhancing agreements given that trade diversion effects become less significant (Wonnacott and Lutz 1989). Various policies that facilitate (or compensate for) the reallocation of producers who are adversely affected by PTAs could enhance the case for PTAs. This is particularly relevant when trade agreements are realized between natural trading partners with limited trade diversion effects.

Preferential access schemes intended to facilitate agricultural and food exports from developing countries and LDCs to the markets of developed countries (e.g., EU’s GSP, EU-ACP Development Cooperation, and many BTAs) are often favorably regarded through the development lens. They are expected to impact the well-being of domestic producers in the beneficiary developing countries and LDCs and to enhance the growth of the agricultural and food sector in these countries. However, there are concerns that such unilateral preferential agreements are not stemming from a pure goodwill adherence to ethical perspectives. Many unilateral preferential agreements arguably consist of binding procedures mainly intended to secure specific primary agricultural commodities that are scarce in developed countries (e.g., cocoa), and they do not always cover a wide range of agricultural products. Such agreements could force these countries into an undiversified production pattern.

There is a significant empirical literature that examines the implications of PTAs for agricultural and food trade. This empirical literature has estimated the trade creation and trade diversion effects on trade flows. However, it has not conducted comprehensive welfare assessments

in general. Many empirical studies examined the implications of various RTAs for aggregate agricultural and food trade (e.g., Grant and Lambert 2008; Korinek and Melatos 2009; Lambert and McKoy 2009; Sun and Reed 2010). Several other empirical studies carried out the analyses of the effects of RTAs on agricultural and food trade at disaggregated levels (Sarker and Jayasinghe 2007; Jayasinghe and Sarker 2008; Ghazalian et al. 2011). The empirical literature has reported significant trade creation effects for several RTAs at aggregate and disaggregated levels, but it has also detected considerable trade diversion effects for some RTAs.

Several PTAs, particularly those signed between developing and developed countries, include provisions to upgrade labor and environmental standards or enforce existing ones. Adherence to these provisions could conform to labor and environmental ethical standards. For example, developing countries should satisfy many basic labor and environmental conventions to benefit from an upgraded GSP system and gain improved access to the EU market. Some preferential systems could arguably generate a “race to the bottom” when they do not include labor and environmental provisions. There are ethical concerns when the formation of RTAs leads to the deterioration of domestic labor regulations due to increases in market competition levels (Häberli et al. 2012). Also, competition from lower-wage member countries could create various ethical considerations for the labor market within the regional trading bloc.

Lastly, RTAs could enhance regional food security by reducing fluctuations in output available in the market and by stabilizing prices (Josling 2011). This positive outcome is ethically relevant especially in the case of RTAs composed of developing countries (e.g., COMESA) where food security remains a major issue for a large proportion of the population. Also, PTAs could result in dynamic gains through the occurrence of flows of knowledge and information between member countries (Josling 2011), particularly from highly competitive agricultural and food sectors in some member countries to agricultural and food sectors in other member countries.

## Summary

Membership in a PTA can affect national economic interests in different ways. It can strengthen countries’ positions in international negotiations. Alternatively, it can overshadow their individual economic interests, particularly when their influence is limited within the PTA compared to other member countries. Furthermore, countries which are left outside major influential PTAs could be unfavorably impacted and could be forced to make significant concessions. Several segments in such countries could be negatively affected, raising ethical concerns.

The characteristics and implications of PTAs for agricultural and food trade encompass several economic and ethical considerations. The use of SPS and ROO measures and the implementation of various agricultural and food standard policies through PTAs could be favorably regarded when associated with the declared food safety concerns along the supply chain and with the rights of consumers to product and process information. Hence, they can be perceived as being ethically consistent with the rights of consumers to food safety and food information. However, these measures could be arguably used as implicit TBT to favor domestic producers and could eventually affect the well-being of producers in other member and nonmember countries.

Trade creation effects of PTAs are expected to promote efficiency since lower-cost production replaces higher-cost production within the preferential trading bloc. However, trade creation effects also mean that higher-cost producers would incur losses and would eventually exit the market and that the adjustment procedure could be accompanied with adversity for these producers. Equivalent description applies to producers in nonmember countries who incur losses and exit the market due to trade diversion effects. These adjustment procedures could generate some significant ethical concerns.

In theory, some of the gains realized through PTAs could be redistributed to the adversely affected producers through relevant policies. This would alleviate the ethical concerns about the economic distress faced by these producers.



In practice, such policies may be difficult to implement and could generate considerable dead-weight losses to the economy. Hence, some attempts to correct one ethical issue could generate another one.

Finally, PTAs could lead to improvements in labor and environmental standards. They could also promote spillover effects expressed through the flow of knowledge and technology from a competitive sector in one member country to another member country. These events could arguably contribute in supporting the case for PTAs.

## Cross-References

- [Agricultural Ethics](#)
- [Economy of Agriculture and Food](#)
- [Food and Agricultural Trade and National Sovereignty](#)
- [Food Labeling](#)
- [Food Security and International Trade](#)
- [Free Trade and Protectionism in Food and Agriculture](#)
- [International Food Quality Standards](#)
- [Multilateral Trade Organizations, Food, and Agriculture](#)
- [NAFTA and the Food and Agricultural Industries](#)
- [Trade and Development in the Food and Agricultural Sectors](#)

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## Agricultural Cooperatives

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### Synonyms

Agrarian social movement organizations; Farm organizations; Farmer cooperatives; Farmer empowerment strategies; Peasant organizations

### Introduction

Cooperatives are formal social movements utilized around the globe often in reaction to various social-economic injustices and/or market failures. Their formation in the USA has been influenced by a legacy inherited from farmers and agricultural cooperatives developed first in Germany, Switzerland, Denmark, Ireland, and Iceland and from labor and consumer cooperatives in the UK, France, Sweden, Finland, Norway, and Italy. Historically disadvantaged farmers and/or workers have spearheaded their development both in Europe and the USA. They have also been used in a formal development context throughout the developing world, often driven with a similar impetus to address social justice issues, though with mixed results. This entry focuses on agricultural cooperatives in the USA only, though the tensions specified here highlight the kinds of challenges and trade-offs faced by cooperatives elsewhere.

### Agricultural Cooperatives in the USA

Agricultural cooperatives began to appear in the USA in significant numbers in the 1800s, though organizing efforts existed back into the colonial era. The period from 1890 to 1920 was particularly active, with as many as 14,000 farmer cooperatives operating by 1920. Much of this activity was triggered by a severely depressed farm

economy of the 1890s, as well as the emergence of large corporate bodies that could exercise monopoly (seller) and monopsony (buyer) power over farmers. Cooperatives were organized to accommodate to the severity of economic conditions and to help empower farmers relative to the market power of much larger firms.

Cooperatives were controversial however in that they raised questions concerning collusion among farmers, price fixing, and violations of antitrust legislation. Hard fought political action prevailed in favor of farmers in 1922 with passage of the Capper-Volstead Act. Capper-Volstead provided farmers the legal right to market their output collectively. Currently there are 2,285 agricultural cooperatives in the USA with an overall gross business volume of \$213.5 billion (Ali et al. 2011). Historically, they have accounted for approximately one third market share of all agriculture marketings and one quarter of supply purchases. Radical declines in numbers have occurred over time, due to the industrialization of farm production, globalization of competition, and organizational consolidations through mergers and acquisitions, as well as bankruptcies.

Most of the scholarly literature on agricultural cooperatives exists within two academic disciplines, agricultural economics, and rural sociology; and of these two, agricultural economics predominates by sheer volume of work. The agricultural economics lens tends to resolve within a neoclassical perspective, with much of the writing (though not all) conflating to questions of efficiency, with important subtopics of study on finance, market concentration, market structure, life cycle of firms, value-added, and new generation cooperatives among others. Sociological research tends to resolve to issues of power, democracy, and social justice as viewed within three conceptual lenses, i.e., micro, mezzo, and macro. Microlevel research focuses on social-psychological and demographic determinants of participation. Participation is understood both as economic patronage and involvement in democratic governance. The mezzo level of analysis examines the design of organizations to achieve such governance provisions as member

oversight, policy making, as well as participation. Macro levels have focused on such issues as women's involvement in decision-making, market concentration, conversion of cooperatives to investment firms, choice of cooperative structure, impacts of technological change on cooperatives, and cooperative functions in alternative food systems. Both economic and sociologically relevant literature can be found in the *Journal of Cooperatives* and its predecessor the *Journal of Agricultural Cooperation*, *Rural Sociology*, *Sociologia Ruralis*, *Journal of Rural Cooperation*, *Journal of Co-operative Studies*, *Journal of Agriculture, Food Systems, and Community Development*, *Annals of Public and Cooperative Economics*, *Agribusiness*, and the *American Journal of Agricultural Economics*. There are significant libraries online at the University of Wisconsin Center for Cooperatives, the Center for Cooperative Studies at the University of Saskatchewan, and the USDA, Rural Development-Cooperative Programs web page.

Much of this literature is unidimensional, however, in the sense that it does not present cooperatives' intrinsic design and history as full of opposing tensions and contradictions. It tends to be strictly economic or sociological without a more holistic detailing of various trade-offs and dilemmas. In introducing agricultural cooperatives for this entry, their organizing principles as designed to be distinct from investment-oriented firms (IOFs) will be reviewed, as well as their traditional role as providing countervailing power for farmers, and as conditioned by the development of integrated "dirt to plate" value chains since the turn of the last century. These aspects of cooperatives, i.e., their design and role, themselves generate additional tensions internally within the organization and externally in relation to a dynamic socioeconomic and highly competitive environment. Mooney (2004) and Gray et al. (2001) have specified several of these tensions and dilemmas in various publications; to include complex expertise/grass roots needs, efficiency/equality, bureaucracy/participation, and authoritarian logic/democratic logic. Three iconic tensions will be highlighted here, (1) capitalism/democracy, (2) local/global, and (3) production/consumption.

Examination of these tensions will be used to highlight how cooperative institutionalization (i.e., diminution of original democratic commitments, embeddedness and power) has occurred over time, but also how, as organizations, they continue to hold promise for addressing larger contextual challenges.

## Organizational Design and Cooperative Difference

### Cooperative Principles

Cooperatives are organized around a set of guiding principles, variously formulated and presented by the International Cooperative Alliance (2013) and as referenced in Zeulie and Cropp (2004) among others. These principles were first formally codified by the Rochdale weavers of England in the mid-1800s and Schulze and Delitzsch of the German credit union movement during the same period.

Central to all formulations is an emphasis on member/owner/patron **use** of the activity of the organization. "Use" can involve, among many functions, assembling of a commodity, grading, processing and manufacturing, and wholesaling and retailing. Products might include, among others, milk, fruits and vegetable, grains, livestock meat, as well as supply purchases. This use aspect of cooperatives is perhaps best captured by Dunn (1988) in three cooperative principles as:

1. The user-owner principle: Those who own and finance the cooperative are those who use the cooperative.
2. The user-control principle: Those who control the cooperative are those who use the cooperative.
3. The user-benefits principle: The cooperative's sole purpose is to provide and distribute benefits to its users on the basis of their use.

While other versions exist, this set of principles best highlights the use aspects of cooperatives. Designed for use is perhaps one of the most distinctive features of cooperatives, particularly when compared to their organizational rivals, investment firms. The following section provides

greater detail on cooperative to IOF differences, in order to emphasize what they are, by also reviewing what they are not.

### **IOFs and Cooperatives Differences**

**Investment-Oriented Firms:** In linear logic, investors with money seek to make a return on their money by investing in an activity that will return a profit, thereby ending up with more money. Investors-owners have little connection to the business activity of the firm. If use is made of the activity, it is only on an incidental basis. Governance is, in part, organized by shares owned. Typically shareholders have one vote per share held, i.e., votes are tied to shares owned. They are no organizational limits on the amount of shares any one investor can own. Since votes are attached to shares, this allows for concentrations of influence and power in ownership. These concentrations are not discouraged since it is understood that those with the most ownership capital have the most at risk.

A board of directors, elected by the shareholders, provides policy making and strategic planning, as well as long-term oversight and direction of the firm. A Corporate Executive Officer (CEO) is hired by the directorship to assemble a complement management team to handle the daily decision-making and activities of the firm. It is not unusual for the firm CEO to be a major stockholder of the firm, also permitting additional concentrations of power in cross board/management relations. These concentrations are encouraged, since managers with ownership are seen as increasingly vetted to firm success. Firm success ultimately translates as profits. The fundamental and organizing logic of the firm, as with all investment firms, the dominant business form globally, is to make a return on investment (roi) for its shareholders.

**Cooperatives** are distinct from IOFs in use, ownership, and governance. In a cooperative, members (or potential members) of a cooperative may need a service or a product and collectively organize in order to provide it or obtain it at a more reasonable price. The organization must achieve some financial margin over costs, to continue to finance, and provide for

a flow of services through time. They are not organized to make a return on investment. For cooperative patrons, the activity of the organization (and their use of that activity) is central to their relationship with the firm. Ownership is based on use rather than on shares purchased. Members own the cooperative in proportion to the use they make of it. The more they use the organization, the larger their contribution to its funding and ownership, as well as the greater the benefits received. Generally, no matter how much each member owns, they still have only one vote in elections, i.e., one-member, one-vote, though proportional voting is utilized in a small percentage of cooperatives. In proportional voting, the more a member uses the cooperative, the greater the volume accounted for by their patronage, the more votes held. However, the predominant voting/governance system used in the cooperative community generally is based on one-member, one-vote. Members elect a governing board either directly or through an elected delegate system. The elected board provides policy making, strategic planning, long-term oversight, and direction of the firm. A Cooperative Executive Officer (CEO) is hired by the board to assemble a complement management team and to handle daily decision-making and activities of the firm. In a cooperative, while the CEO may also be a farmer and a member, farmer-member status does not entitle a manager voting rights any different from any other farmer-member.

For cooperative patrons, the activity of the organization (and their use of that activity) is central to their relationship with the organization. Ownership, governance, and use of the activity are contained within the same group of people in an internal relationship of membership; the fundamental and organizing logic being to provide service (broadly defined) through time to members. The multiple functions of cooperatives as patronage (use), ownership, democratic governance, and equality are organizationally designed for and emphasized.

### **Traditional Role as Countervailing Power**

Cooperatives are often formed when “overproduction” results in low prices (relative

to costs) and/or when “holdup” situations occur, such that a monopsonist (single buyer) or a oligopsonist (few buyers with a large market share) can dictate prices to independent producers. By aggregating, farmers are able to coordinate sales, gain some market power, and improve incomes. Similar dynamics can occur upstream when purchasing from a single seller (monopoly) or oligopolist (few sellers with large market share). By organizing, members can assemble their own input-supply orders and services without having to rely upon monopoly and/or oligopoly firms. Agricultural cooperatives have integrated into value chains as well, processing their output, giving themselves scale and product niche for capturing value, rather than turning their output over to commodity traders and private processors.

### Modification of Countervailing Role

Beginning with the emergence of what some have termed “the new agriculture” (Boehlje and Schrader 1998; Gray 2000) at the turn of the last century, various technological developments, e.g., information monitoring and biotechnology, have permitted very tight vertical integrations of food chains from “dirt to plate” in some sectors of the agricultural economy. Large agribusiness multinationals, e.g., ConAgra, Cargill, and ADM, developed these chains, while holding large market shares across several commodities. These chains are solidified with contracts between firm and farmer, such that the firm controls many of the production decisions, while limiting farmer control over their own output. Where production contracts are used, farmer empowerment is often diminished.

Cooperatives are caught by the limits of their own structure. Large IOFs can offer a diversity of products, produced in different locations, with set limits on amounts of product accepted from farmers. They can control their supply. Cooperatives, as vehicles for their farmer-member-owners, are obligated to accept, with some few exceptions, the entire product their members bring for marketing/processing. They guarantee a market, no matter how much product members seek to market. Farmers are embedded in

location, by the location of their farms, and as such cooperatives are embedded locationally by of their membership. Farmer-owner-members generally are committed not only to the activity of farming but to specific products of production. These aspects of quantity, location, and product represent rigidity relative to large IOF multinationals with their multiple locations, multiple products, and the capacity to limit acceptance of product from suppliers.

Continuing technological developments, firm flexibility, and access to resources facilitate IOF development of a diversity of differentiated products, and segmented markets that are integral to the formation of tightly controlled value chains. This presence as a market force allows IOFs to forgo price competition (a possible cooperative leverage) in favor of competing with brands, advertising campaigns, research and development, and expansion in plant capacities (Gray et al. 2001).

Under these conditions gaining market access for farmers can become a problem, let alone being able to countervail IOF power. The strategy taken by some cooperatives, e.g., Land O’Lakes, Cenex-Harvest States, Profac, has been to partner and to form joint ventures and strategic alliances with IOFs. IOFs can integrate into IOF-owned value chains, the core competencies of cooperatives, i.e., the ability to handle massive quantities of primary commodities in a regulated and predictable fashion, with direct links with farmers. Farmers in return obtain access to markets for their products.

However, when these cooperative to IOF relationships occur, they do mix organizational logics and tend to place “use” in a subordinate position relative to “roi” and the profit interests of stockholders. Very few if any agricultural cooperatives can approach the scope and market presence of such deep pocket firms as Cargill, ADM, ConAgra, or Dean Foods. Possibly Cenex-Harvest States, Land O’Lakes, Dairy Farmers of America (DFA,) Ocean Spray, some of the largest agricultural cooperatives in the USA, are positioned in terms of scale and scope to challenge IOFs in the interests of their farmer-members. However and paradoxically, to the extent



cooperatives take this path, they also put various democratic-member responsive aspects of the organization at risk.

### Socioeconomic Tensions

Cooperatives must operate with the multiple functions of farmer use (governance, ownership, benefits,) with organizational commitments to equality and democracy, in a context primarily dominated by investment firms and IOF logic. These relationships among members, cooperative firms, and competitive context can act as tipping points to the character of the cooperative organization. Consideration of these tensions and shifts integral to them can help explain cooperative institutionalization (i.e., loss of democratic commitments and embeddedness, as well as loss of power) though it can also highlight some of the continued promise of cooperatives.

### Democracy/Capitalism

While cooperatives are democratic organizations of members that emphasize use, they must also realize earnings to survive over time. They must function as a democracy in a context that emphasizes share, roi capitalism. The cooperative-democracy/capitalism tension is perhaps better understood with some greater detail as “person-use-democratic-organization/capital-return on investment (roi)-share-organization.” Cooperatives privilege personhood, IOFs privilege capital. Cooperatives privilege person-use, IOFs privilege capital-return on investment; and cooperatives privilege democracy and equality, IOFs privilege share-voting and proportional governance.

Earnings must be made in competition with a predominant business form that emphasizes short-term return on investment. IOFs as the dominant business form in the larger sociopolitical economy create a context of pressure that pulls on cooperatives to adapt to the needs of capital rather than the needs in use. Needs of capital are often translated as the need to be unencumbered for efficiency reasons and due to a return equivalent to the size of

investment – argued as “investment will not occur otherwise.” The tension, “person-use-democratic-organization/capital-return on investment (roi)-share-organization,” becomes very real with considerable pressure from within the competitive context, to simplify it toward a “capital-roi-organization.” From a neoclassical economics perspective, to do otherwise is not to be efficient.

There are then, frequent threats to the “one-person, one vote” principle in terms of modifying it, eliminating it, or de-vitalizing it due to the unintended consequences of other dynamics. Direct threats can often come out of the theoretical agency of neoclassical economics. From this position, arguments are made to shift one-member, one-vote to proportional voting, i.e., aligning votes held to volume transacted with the cooperative. It is a general practice in cooperatives that as “use” is made of the cooperative, equity contributions are assessed according to “use” made of the organization. The greater the volume transacted by a member, the more equity, and in proportional voting, the more votes. However, when proportional voting is used, it de-privileges equality of member and personhood and in turn weights organizational rationality toward the needs of capital, and in particular toward the selective needs of larger farmers. Larger farms, in general, account for greater level of volume committed. With proportional voting, equality fades.

At other times there is pressure for the wholesale restructuring of cooperatives to IOFs (e.g., California Olive Growers, Calavao Avocados, GoldKist, Capital Milk, American Rice, Saskatchewan, Manitoba, and Alberta Wheat Pools). Conversion to IOFs simplifies cooperatives away from the multiple values of “use” and the potentialities of democratic voice and reorganizes them to a singular logic of roi and exchange value. Conversion eliminates the democracy/capitalism tension entirely and shifts the organization to a capital-roi rationality.

There are secondary pressures that serve to devitalize democratic principles. As mentioned previously, there has been considerable concentration of ag-markets such that large agribusiness IOFs often hold commanding market shares

(e.g., Cargill, ADM, and ConAgra). These firms set the competitive context for cooperatives in many sectors. To accommodate to this competition (as well as to the decline in farm numbers due to farm industrialization), many cooperatives have merged, made acquisitions, and formed joint ventures creating complex bureaucracies in their own right. These structures create distance between farmers and the decision-making points of the organization, thereby muting democratic dynamics, even if one-person, one-vote principles are followed (Fairbarin 2004). These distances are even more elongated, and in fact there can be a near complete fracture of member voice in cooperative/IOF joint ventures. Boards of directors continue to be elected from farmers, though the complexity of these organizations and expertise required to function on boards can be well beyond the skills of individual farmer-members.

This distance is complicated by a management that frequently holds more information about, for example, law, finance, and marketing than directors. Fulton and Larson (2012) refer to this dynamic as a problem in “asymmetry of information” between agents and principal, agents being a management, hired by directors, and directors acting as the principals of the organization (ultimately serving at the behest of the members). Fulton and Larson (2012) suggest the agent/principal problem is more complicated by CEOs who come with different agendas, often based in inflating their own marketability and exchange value in the larger national and global market. They tend to conceive and manage organizations in a manner congruent with the management of IOFs. Their performance expectations may be based in “grand visions” for the organization and such personal goals as high salaries, perks, and job security (Souza and Herman 2012). Under these circumstances the board may come to be in a near dependent relationship to management, rather than in a position as strategic decision-maker.

To continue through time in providing service to members organized around use values, the cooperatives must retain the use/financial returns tension. Earnings are necessary to maintain the

financial needs of the organization. However, vigilance must be exercised to prevent a dominant tipping toward ROI imperatives (in spite of the considerable pressures to do so, as articulated above). To do otherwise is to render impotent the use-democracy aspects of the organization (Gray and Stofferahn 2014).

### Local/Global Tension

In pursuing growth and profitability, some cooperatives have developed global locations (e.g., Cenex-Harvest, Land O'Lakes) to compete with investor-oriented transnational corporations (TNCs). This adds another layer of distance (i.e., physical distance) between members, member governance, and cooperative decision-making. This distance can then tip a member/management tension toward management prerogatives (the agent) as well as the needs of capital.

Globalization, along with bureaucratization, tends to demand standardization and often a resulting subordination of unique local qualities. Cooperatives, given their unique user-owner character, have a strong tendency to be locally embedded. Equity-capital resides with the user-owners and in the case of farming, where user-owners live, i.e., on the farm. This is quite different from investment-oriented capital that seeks fluidity and freedom (as opposed to freedom of the person). Local embeddedness from the standpoint of capital and from the agency of neoclassical economics is an unnecessary constraint that interferes with mobility and the efficient application of capital resources. However, from a person-centered understanding, geographic embeddedness prevents capital flight. Mooney (2004, p. 88) suggests that, from a historical perspective, “geographic embeddedness serves a long-term functional adaptation (an efficiency of a different sort) that shields cooperatives and communities to which they are [embedded] from . . . recession that would drive capital from the region.”

While cooperative character results in a natural embeddedness, the demands of a neoclassical efficiency and the mobility of capital, IOF competition, organizational complexity, globalization, and CEO managerial culture, call for a “freeing-up” and disencumbering of capital

from locally “constrained” attachments. Like the person-use/capital-investment tension, cooperatives need some degree of both in terms of market development, but an overemphasis can result in a loss of local identity as well as a differentiated uniqueness that only embeddedness can provide (Gray and Stofferahn 2014).

### Production/Consumption Tension

There is little acknowledgment in either the cooperative literature or in cooperative practice, of the importance of deliberately linking production with consumption. However, it is of central importance in the context of challenges from the larger socio-political economy; and it is here that agriculture cooperatives hold the most promise. The current organization of agriculture tends to treat various environmental and human costs as externalities. There is little opportunity, beyond direct government regulation, to bring these costs inside business decision-making, particularly as organized around IOF logic and rationality. This is in part due to the severe market separation of production and consumption. Production and consumption interests tend to be understood at antagonistic poles. Yet they presuppose each other, one requires the other. Production anticipates consumption, consumption anticipates production.

As a potentiality and as articulated from an earlier tradition of cooperative development, Voorhis (1961, p. 150) suggests the development of a cooperative commonwealth: “. . .if a considerable proportion of farm crops [and food] could be sold directly by farmer-owned enterprises to consumer-owned ones, the spread between what farmers receive and what consumers pay would amount simply to the costs of processing, transportation and sale” (as cited in Mooney 2004, p. 85). This would raise the possibility of better returns to farmers and lower prices to consumer. Perhaps more importantly, “member-users” of the respective services of agricultural and consumer cooperatives could provide, through democratic process (and through the use values of governance, ownership, and benefits) a basis for internalizing what has been externalized (Mooney 2004). Health, environmental, and land-use concerns would no

longer need to be as external as they are with the roi logic of investment firms. With membership and use values of democratic governance and ownership, what exists in a member’s life world (e.g., environmental and social costs among many other things) could be internalized.

The potential of cooperative organizations to internalize externalities with use values, and through their respective democratic process, provides a potentiality for addressing these problems. In a relative sense, this potential is much greater than the singular rationality inherent in IOFs, given their characteristic external and disconnected relations among production, investment, ownership, benefit, and consumption. The emergence of community-supported agriculture (CSAs), farm to school and institutional agriculture, farmers’ markets, cooperative farm stores, and produce auctions, though yet on an incipient level, demonstrates the viability of this linking (Gray 2005). Many of these initiatives are organized either formally or informally along the guidelines of cooperative principles (Gray and Stofferahn 2014).

### Summary

Agricultural cooperatives’ distinct form and role in countervailing investment-oriented firms in the marketplace has generated a series of socioeconomic tensions, both internally and in relation to the external environment. Three iconic tensions addressed here were democracy/capitalism, local/global, and production/consumption. To varying degrees, both aspects of these tensions are needed to preserve cooperative character. While cooperatives are democratic organizations of members that emphasize use, earnings must be realized to continue to provide use value over time. However, an overemphasis on earnings can result in loss of its democratic voice aspects. Cooperatives need both local embeddedness plus some degree of geographic expansiveness for market development; however, an overemphasis in expansion can result in a loss of local identity, product uniqueness, as well as member voice. Historically it has been difficult to retain the tensions in a balance that preserves cooperative democratic character. Various technological and

industrial developments, organizational consolidations, as well as the globalization of IOF competition have shifted firm shape and behaviors toward an investment model and away from the local and toward the global.

LeHeron and Roche (1997) suggest more energy be spent from a civic legacy perspective, on sorting out and bequeathing institutions to future generations that are structured for democratic voice opportunities. As economic entities, agricultural cooperatives may be among one of the few institutions in rural areas that retain a semblance of democratic governance (Mooney 2004). Those cooperatives, in intense struggles with large multinational corporations, have surely lost some democratic vitality as discussed above; though from a comparative perspective, they continue to account for greater local ownership than IOFs.

Both Alperovitz (2013) and Wolf (2012) highlight cooperatives as a possible alternative solution to the current systemic problems of economic stagnation, unemployment, and environmental degradation. Alperovitz in particular, speaks of alternative forms of ownership, cooperatives, and credit unions, among others, as representing a possible “prehistory.” He posits that while some alternative forms of ownership and production may be in a weak or early stage of development, they may gain much greater ascendance if the objective conditions of everyday living continue to worsen. The current incipient but rapidly growing nature of community-supported agriculture, farm to school and farm to institution agriculture, farmers’ markets, and cooperative farm stores may be a methodology that brings production and consumption together in a more collaborative way and in a manner that currently is oftentimes facilitated with the democratic voice opportunities of cooperatives. By internalizing into an organization with democratic voice and use opportunities, i.e., governance, ownership, and benefits, various environmental social and economic costs might be more holistically addressed (The views expressed in this entry are those of the author and do not necessarily reflect those of any associated program, department, administration, or university (Gray and Stofferahn 2014)).

## Cross-References

- [Agriculture of the Middle](#)
- [Civic Agriculture](#)
- [Community-Supported Agriculture](#)
- [Farmers’ Markets](#)

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## Agricultural Ethics

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### Synonyms

Farming Ethics

### Introduction

Agricultural ethics is a form of practical ethics that addresses ethical issues or questions that arise in conjunction with the production and distribution of food and fiber goods. The scope of agricultural ethics is, in one sense, delimited by the scope of agriculture. Conceived narrowly, agriculture is the use of technology to cultivate crops or the practice of animal husbandry: A narrow scope would exclude the various forms of scavenging, hunting, or fishing that have contributed to human food needs for centuries. It might also exclude activities that occur after food crops or animals leave the premises of a farming operation, including transport, milling or slaughter, further processing, food manufacturing, food or fiber distribution, and retail sales. Defined more broadly, the scope of agriculture might include all of these activities and might further be extended to include a variety of natural resource management practices such as forestry, game management, and water resource conservation. An even broader definition might

follow from the scope of research institutions and government ministries organized around the idea of agriculture, which might include all of food safety, veterinary medicine, parks and tourism, or any of the applied biological science activities that support these more practical activities. In its broadest definition, agricultural ethics would thus encompass all the subject matter contained in the *Encyclopedia of Food and Agricultural Ethics*, though common parlance would probably deploy an implied distinction between agriculture and cooking, on the one hand, or dietetics and nutrition, on the other.

Given that many if not most of the other articles in this volume are dedicated to substantive topics falling under the general heading of agricultural ethics, this article will make no further attempt to survey, list, or categorize the topics that would be included under the heading of agricultural ethics. A quick look at the *Encyclopedia* index will provide an overview. However, there are a number of philosophical and methodological questions that arise in connection with the content and approach in agricultural ethics: Is agricultural ethics best thought of as an application of more general ethical theories? Does a non-theory-driven approach to practice speak to ethical issues in agriculture? Is there anything unique or special (other than general subject matter) that would distinguish agricultural ethics from other forms of practical ethics, including business ethics, medical ethics, environmental ethics, journalistic ethics, or research ethics? What is the relationship between agricultural ethics and these other fields, and especially environmental ethics, given the latter's concern for environmental impacts of human practice and the ethical norms that should apply to our treatment of nonhumans, including animals, species, and ecosystems? How does agricultural ethics intersect with classical approaches in philosophical ethics such as consequentialism, deontology, or virtue ethics? What is the relationship between agricultural ethics and the broader tradition of philosophical inquiry and writing? The balance of this essay will take up each of these questions in turn.



## Agricultural Ethics and Ethical Theory

Many philosophical problems within agricultural ethics are, in fact, typical of practical ethics in general. Practical ethics is the division of ethics in which arguments or analyses are expected to bear directly on human practice or action. An inquiry in practical ethics addresses the general question “How should we act?” in reference to specific circumstances faced by individuals or groups. Practical ethics can be distinguished from *meta-ethics*, where the focus of the inquiry is to provide a general account of the nature and logic of ethical conduct or decision making, and from *ethical theory* where the focus is to articulate a broadly – often universally – applicable theory of right conduct. Some theorists in practical ethics (including agricultural ethics) presume that arguments addressed toward steering or evaluating human conduct in specific cases should *apply* ethical theories. For them, the task of practical ethics is to specify empirical details that would make general norms or principles supported by ethical theory (e.g., act so as to produce the greatest good for the greatest number) meaningful and action guiding in a particular situation. Hence, some theorists characterize agricultural ethics as a form of *applied ethics*. Other theorists have questioned this model and see practical ethics as a process of moral reasoning in which individuals and groups indeed bring judgment to bear on human conduct, but not in a manner that can be accurately described as the application of a moral theory. Thus, for example, one might think of ethical theory as a way to generate arguments and systematize reasoning so that many different possible reasons could be considered at the moment of evaluation or practical decision making, rather than as an activity prior to practical decision making where general principals of moral correctness are adjudicated.

Some authors writing in agricultural ethics seem clearly to explore the implications of a particular theoretical approach for problems that arise in the production and distribution of food and fiber. The most prominent example in contemporary times may be Peter Singer. Singer

is widely known for work on two key problems in agricultural ethics, global hunger, and the treatment of livestock. In both cases, his practical conclusions derive from a general moral principle: If one can do something that alleviates great harm to one party at very small cost (or harm) to oneself, one is morally obligated to do it. Singer has argued on the one hand that this principle is so general that it would be endorsed by everyone, without regard to their commitments to a systematic and consistent view of morality (e.g., an ethical theory) (Singer 1972). On the other that the principle is strongly supported by a sophisticated version of utilitarianism, and Singer’s book *Practical Ethics* makes this connection explicit (Singer 1979a). Either argument can be seen as strategy for establishing a general principle that can then be applied to specific cases so as to generate action-guiding recommendations in practical ethics.

In the case of hunger, Singer’s application of the principle has been to support arguments that comparatively better-off people (such as any middle-class person from an industrial economy) are morally obligated to divert some portion of their income to help hungry people. In early versions of this argument, Singer focused specifically on the obligation to support efforts at famine relief. He argued in favor of food aid, first and foremost as personal obligation that individuals would fulfill through donations to organizations (such as CARE or Oxfam) dedicated to the relief of hunger but also as a political obligation to support actions by governments that would also be organized around feeding hungry people. In later work, the argument was formulated more generally as an obligation to help people in extreme poverty, without specifying that the target of assistance is necessarily tied to relief from hunger and the delivery of food aid. Singer’s modification of this argument may have reflected his growing awareness that food aid can have deleterious effects on poor farmers; hence, a prescription too narrowly focused on food may support forms of action that, in fact, *fail* to satisfy the terms of his general principle.

With respect to animals, Singer has argued that the suffering endured by livestock in modern production systems is very great in comparison to the pleasure that human beings derive from consuming meat and other animal products. Thus again in a fairly straightforward application of his general principle, Singer argues that individuals are obligated to desist from consumption of animal products that have been derived from conditions in which livestock suffer (Singer 1975). Singer has shown awareness that this position does not prescribe vegetarianism in all cases. Certainly in cases where consumption of meat, milk, or eggs is necessary for survival, eating animal products would be morally justified. More subtly, if animals can be raised under humane conditions and slaughtered painlessly, Singer's general principle might not entail any form of vegetarianism. Humane dairy and egg production, for example, might be compatible with Singer's principle; hence, veganism would not strictly be implied. What is more, Singer has at one juncture argued that the painless death of a nonhuman animal is not a deeply significant form of harm to them; hence, there may be circumstances where eating meat would be justifiable, as well (Singer 1979b).

In both hunger and animal ethics, Singer's arguments reflect an approach that can be accurately characterized as an application of ethical theory to a specific problem in agricultural ethics. His approach to practical ethics is to first assert and argue for a principle or rule, then to explore the implications of that principle with respect to key issues arising in connection with agriculture and food. Singer's work is thus a particularly apt illustration of the applied approach, but others who see agricultural ethics as a form of applied ethics would reject his commitment to utilitarianism and consequentialism. Several philosophers who have written on the two problems of most interest to Singer – animal use and global hunger – exemplify the application of deontological or neo-Kantian ethical theory. Tom Regan's book *The Case for Animal Rights* was an explicit attempt to develop an approach to the ethics of animal use that draws on Immanuel Kant's philosophy. Regan argues that many nonhuman

animals – including all livestock species – are “subjects of a life.” They exhibit the features that we associate with mentality or mental life. They are conscious and sentient – features noted by Singer in connection to their ability to feel pain – but they are more than simple receptacles or vessels that, like an empty glass, get filled up with painful or pleasurable sensations (Regan 1980).

Regan's work is more characteristic of an applied approach than Singer's in one important respect. Regan's strategy is to first refute ethical theories such as utilitarianism, arguing that they fail to show adequate respect for the individual dignity of beings that have sense of their own individual identity as subjects. Indeed, Regan finds fault with Kant's own theory, arguing that it fails to recognize animal subjectivity. Once other theoretical approaches have been shown to be lacking, Regan offers his own theoretical alternative. In Regan's view, *any* relationship defined by instrumental use of a creature who possesses subjectivity fails to respect that creature's dignity. Theories that are not based on respect for subjects of a life are, given Regan's arguments, going to fail with respect to animals and also with respect to many human beings, including children and adults with severely compromised cognitive capacities. It is on these philosophical grounds that he finds animal production in general, and certainly any use that involves the death of the animal, to be strictly forbidden on moral grounds.

Philosophers including Onora O'Neill and Henry Shue developed deontological approaches to the question of global hunger. In *Faces of Hunger*, O'Neill argues that global hunger places human beings into positions of abject need, a position that is totally incompatible with Kant's master principle of ethics, the Categorical Imperative. It is impossible to will that people should occupy such positions of abject need and vulnerability as a universalizable principle of morality; hence, those social and political practices that create circumstances of hunger are inconsistent with the most basic demands of morality (O'Neill 1986). Shue developed a general theory of rights in his book *Basic Rights*

such that basic needs of health and bodily integrity have priority over political rights such as freedom of speech, assembly, and the right to pursue economic endeavors in a market economy. A global order in which some are hungry violates the basic principles of a just society and cannot be rationalized on moral grounds (Shue 1980). Deontological arguments such as those developed by O'Neill and Shue have been generalized by philosophers working in development ethics, where the specific emphasis on hunger is often underplayed in favor of a more general discussion of poverty, deprivation, and subsistence needs.

Although the details of these arguments are worthy of attention in their own right, the point to stress in the present context is that Singer, Regan, O'Neill, and Shue can all be seen as following a philosophical approach in which key philosophical matters are decided on purely theoretical and abstract grounds. Subsequent to *this* philosophical debate at the theoretical level, the concepts, rules, and reasoning characteristic of the given theoretical approach are then applied to a particular case. Animal use and hunger are considered to be cases to which the theoretical apparatus of a deontological or consequentialist theory can be applied, but cases do not bear on the question of which theory to adopt except in so far as the application of a theory suggests a result that is viewed as so profoundly curious and inappropriate as to be found absurd. The use of cases to refute or challenge applied results brings up the problem of intuitions in ethics.

### Practical Ethics and the Problems of Agriculture

The applied strategy in ethics was sharply criticized by philosophers such as Alasdair MacIntyre and Bernard Williams, both of whom suggested that the moral significance of outcomes, the basis of rights, and the application of concepts such as dignity, virtue, character, and vice are better understood and utilized when one does *not* presume that they can be configured in terms of general theory of morality or moral decision

making (MacIntyre 1984; Williams 1985). Broadly sketched, MacIntyre and Williams represent a tradition in ethics which presumes that moral concepts provide a basis for moral inquiry and moral discourse, for conversations, debates, and deliberations about what is right and what should be done. They hold that there is no general theory that explains how conversation, debate, and deliberation should determine ethical correctness for every conceivable circumstance. If that were the case, one could dispense with the conversation, the debate, and the deliberation and simply hand the problem over to an expert schooled in the details of moral theory. In contrast to those who develop detailed theories of ethics, this school of thought in practical ethics presumes that there is no substitute for actually engaging in an inquiry or moral discourse. They hold that one should not presume in advance some set of prior considerations about what kind of arguments or considerations will be deemed relevant to participants in a moral discourse or inquiry. Furthermore, advocates of this approach would argue that *having* these conversations, debates, and deliberations is precisely what philosophers have always done. In contrast to an approach that stresses the application of theory, this approach stresses the process or procedure for conducting an ethical inquiry.

Anyone advancing a point of view on a topic of relevance to agriculture and the food system might take themselves to be participating in a conversation with others who can be expected to have contrary opinions. Any collaborative exchange of views that is dedicated toward improving judgment or understanding the basis for action fulfills the most basic procedural requirement for ethical inquiry. An argument that appeals to concepts and principles associated with prominent ethical theories (such as utilitarianism or deontology) can be advanced as a reason or rationale pertinent to a given topic without this also implying an overarching commitment to that theory or to the belief that ethical questions must ultimately be settled by arriving at a comprehensive and internally consistent theoretical outlook. One can assert that something should be done because it promotes the greatest

good for the greatest number without also asserting that *every* ethical question can be settled by appeal to this utilitarian principle. Although a procedural approach is open to reasons that apply the familiar arguments of ethical theory, it does not presume that the philosophical debate among advocates of competing theories is particularly relevant to determining right action or conduct in a particular case.

Procedural approaches do require that argumentation be sincere. Participants in an ethical conversation, deliberation, or debate must be dedicated to actually getting the ethics right, as opposed to simply prevailing over other perspectives. This simple requirement has profound implications. Firstly, it presumes that the debate is truly open: There is a genuine question at stake as to what the outcome of an ethical deliberation should be. It also implies that participants in an ethical debate must take their own views to be fallible – potentially capable of being shown wrong, mistaken, or in some other way inadequate. It implies that perspectives should be viewed as subject to revision in light of comment or critique by others. All of these characteristics distinguish a genuine ethical inquiry from frequently encountered real-world settings where people offer arguments primarily to create difficulty or trouble for enemies or antagonists who have different interests or political objectives. Although persuasion is an important component of ethical inquiry, the fundamental spirit of ethical inquiry is violated when persuasion is attempted by people who are not also willing to be persuaded.

There is thus a structure or system of practice that shapes ethical discourse. To the extent that this system can be characterized in terms of rules, it might be said to govern ethical discourse. Such rules could be said to form a basis on which ethical discourse could be distinguished from other forms of thinking, symbolic practice, or communicative exchange. Some philosophers have dedicated themselves toward a general description of this structure and to stipulation of basic rules. In the twentieth century, both John Rawls and Jürgen Habermas undertook this task. Habermas's "discourse ethics" can be understood

as a theoretical project intended to place a general philosophical framework around constructive ethical disagreements, without also stipulating specific ethical principles that indicate the outcome of a debate in a particular case (Habermas 1990). Discourse ethics has been characterized as a form of ethical pragmatism by some authors writing in agricultural or environmental ethics (Thompson 2002; Norton 2005). However, philosophical debate over the nature or specifics of the rule structure for ethical discourse quickly becomes just another approach to ethical theory. What distinguishes *practical* application of discourse ethics in agricultural contexts is the practice of debating ethical issues directly, without prior development of an ethical theory whose tenets are being explicitly applied.

Procedural or discourse approaches are especially attractive in agricultural contexts because they encourage nonspecialists to participate directly in ethical debates. Anyone who is willing to offer reasons for a prescriptive claim can do ethics. But nonspecialists may be more willing to participate if they are given a rubric for guiding them toward key ethical questions or topics. Tom Beauchamp and James Childress developed a rubric for initiating ethical discussions or debates in medical bioethics that features four key principles that can be discussed and evaluated with respect to any proposed activity: autonomy, beneficence, non-maleficence, and justice (Beauchamp and Childress 1979). Consideration of autonomy will direct discussants to consider how the activity encourages or possibly violates the freedom or agency of stakeholders. Discussion of beneficence involves a consideration of the benefits of the activity, while non-maleficence is a restatement of Hippocrates (c.460 BCE–379 BCE) master principle for physicians: First, do no harm. Justice is a principle that encourages participants in an ethical discourse to consider how the benefits and burdens of a biomedical activity or policy are distributed across various types of social groups (e.g., by income, gender, racial, ethnic, or other relevant social grouping).

Ben Mepham introduced a similar heuristic device in agricultural ethics which he called

“the ethical matrix.” Mepham’s approach involved an  $n \times n$  matrix in which principles much like autonomy and beneficence define one axis, while various types of agent or affected party defines the other (Mepham 2000) (► [Ethical Matrix and Agriculture](#)). This augments the discussion that might be generated by a Beauchamp and Childress rubric by directing discussants to consider how living human beings, unborn future generations, nonhuman animals, and finally entities such as species or ecosystems might be affected by an activity. The matrix thus is especially relevant for activities where it is important for an ethical discussion to consider environmental impacts of various kinds. Using the matrix approach does not necessarily imply that every cell defined by the grid will be ethically significant, only that discussants should at least ask themselves whether they might be. So, for example, a matrix with “autonomy,” “benefits and costs,” “social justice,” and “virtue” defining the rows and “living humans,” “future generations,” “animals,” and “ecosystems” defining the columns will generate 16 cells. Discussants might conclude that there is nothing interesting to say about the intersection of “autonomy” and “ecosystems,” though they might also find something very significant to discuss. The point is simply that the matrix provides an order to the discussion so that opportunities to introduce key topics can be raised.

Although it is clear that Beauchamp and Childress introduced their four principles purely as a heuristic device for helping nonspecialists think and discuss ethical issues in a somewhat less haphazard fashion than they otherwise might have, the four principles have acquired a theory-like status of their own. As a result, philosophers and other scholars of bioethics now discuss and debate “principlism” as if this rubric were itself intended to be a comprehensive ethical theory. There is thus a risk that any procedural, discourse, or matrix-style approach to practical ethics will be derailed into a theoretical discussion. In this connection it is important that both Beauchamp and Childress, on the one hand, and the developers of the ethical matrix, on the other, have understood these rubrics to be somewhat flexible

and have recognized that a rubric developed for one set of ethical questions (or one group of ethical discussants) might not be particularly useful or appropriate for another. For example, a discussion of genetic engineering applied to plants might well include “plant genomes” as a potentially affected type of entity, though it is less clear that plant genomes should be included in a discussion of alternatives for farm finance. Such flexibility is a strength of procedural or discourse approaches, but it does not lend itself to detailed theorization.

## The Uniqueness of Agricultural Ethics

The last half century has witnessed the emergence of bioethics, environmental ethics, and business ethics as subfields in practical philosophy. Agricultural ethics has emerged more recently, along with numerous other contenders including research ethics, journalistic ethics, computer ethics, and climate ethics. There is an obvious sense in which each of these fields reflects a vague demarcation of a certain subject matter. But it is also obvious that each of these fields can be defined more and less broadly. Van Rensselaer Potter (1911–2001) coined the term “bioethics” in 1970 with a stated intention that it include environmental as well as biomedical themes (Potter 1971). Within little more than a decade, common practice limited the term to biomedical issues, and very few people interested in the ethical dimensions of environmental topics were calling themselves bioethicists. In his 1995 book *The Spirit of the Soil*, Paul Thompson characterized agricultural ethics as a subfield of environmental ethics, though he also argued that agricultural questions were being neglected by the community of environmental philosophers (Thompson 1995). Many scholars working in agricultural or food ethics today would not associate their activity with the subfield of environmental philosophy.

One reason for claiming that an emergent domain of practical ethics is unique or special is that the questions it asks are new or have little precedent in the 3,000-year history of



philosophical ethics. For example, Holmes Rolston argued that environmental ethics was unique because it raised questions about the moral standing or status of nonhuman and even nonliving entities such as wilderness, endangered species, or ecosystems (Rolston 1975). No one has yet argued that agricultural ethics is novel or unique in this specific sense. On the one hand, some of the key questions in agricultural ethics, such as the sustainability of a production system, do have precedents even in the ancient world. On the other hand, even this age-old question is unlikely to be considered by specialists in many fields of practical ethics – including environmental ethics. In short, although there do not appear to be philosophical reasons for regarding agricultural ethics as a unique type of inquiry, the current disciplinary practice within philosophy and the various areas of practical ethics ensures that important questions relating to agriculture will *not* receive scholarly attention in the absence of agricultural ethics being defined and recognized as a distinct subfield.

The discussion of Singer and O'Neill given above shows that it is possible to see agriculture as a particular area in which classical approaches to philosophical ethics (such as consequentialism or deontology) are applied. However, some topics in agricultural ethics challenge the applied model. Since the earliest years of the twentieth century, philosophers working in ethics have recognized that intuitions – deeply held and seemingly involuntary reactions that people have toward specific cases – may conflict deeply with what a given ethical theory might say about proper action in a particular case. One area where intuitions have been discussed in agricultural ethics concerns the use of genetic engineering to address problems in animal welfare by making deep changes in the organisms that provide animal products such as meat, milk, and eggs. From the 1980s, Bernard Rollin has written a series of articles arguing that while a sound ethic for animal use requires respect for an animals' *telos* – the genetically based drives that give rise to needs, interests, and typical behavior on a species by species basis – there would be nothing wrong with using genetic engineering to

change an animal's *telos* (Rollin 1995, 1998). But numerous philosophers have noted that the idea of using genetic engineering to create hens or pigs more tolerant of the crowded conditions on industrial livestock farms strikes most people as profoundly wrong (Bovenkirk and coauthors 2002; Fiester 2008). Even those who end up supporting such technology agree that there is something troubling about it, but because such a change would improve both aggregate and individual welfare, neither consequentialist nor deontological theory has an easy time explaining the source of this intuition.

There continue to be heated debates about the prevalence, meaning, and significance of intuitions among general ethicists, and the response to such intuitions often leads authors in agricultural ethics to evoke concepts from virtue theory – the third major tradition in ethical theory. Here, the claim is that actions such as genetic engineering to change animals (or even to improve crops) are morally suspect not so much because they harm or disrespect a moral subject, but because the profit motive or disregard for common decency shows that the agent in question (the genetic engineer) has a defect of moral character. The ethical problem is not occasioned by an outcome (consequentialism) or by the violation of a right (deontology) but by some flaw in the motivations, habits, temperament, or mentality of the agent (Sandler 2005). Thus, here again a problem in agricultural ethics can be seen to be resolved by appealing to some more general theory – again an *application* of ethical theory. It is thus likely that many scholars working in agricultural ethics will continue to see their work as a form of applied ethical theory.

It is also possible to find discussions of agricultural topics distributed throughout the history of philosophy. Thus, someone knowledgeable about English land tenure disputes will see echoes of them in John Locke's development of the social contract, and scholars of John Stuart Mill will discover that he wrote a number of significant essays on the English Corn Laws, governing agricultural trade. Treatises on agriculture were written by Virgil and Xenophon, and Hegel's lectures on the philosophy of history begin with

extended (if also somewhat imaginary) discussions of food production in Africa, Asia, and the Peloponnesian Peninsula. More recently, Michel Foucault weaves a discussion of Hesiod's discussion of agriculture into his analysis of Aristotle's formulation of "the will to know." As such, there is a wealth of material in the history of philosophy that might be included under the heading of agricultural ethics. To date, relatively few practitioners of contemporary agricultural ethics have seen fit to draw upon these historical precedents.

## Summary

The definition or characterization of agricultural ethics is itself a metaphilosophical problem: One's answer to it will depend on what one takes ethics and/or philosophy to be. Discussion and debate among people holding different views or perspectives on the nature of ethics rapidly becomes a philosophical debate unto itself. This essay has attempted to sketch some of the most prominent threads that might characterize such a debate. Certainly some philosophers writing on agricultural topics take themselves to be applying well-recognized approaches in ethical theory. However, it is noteworthy that many of the most frequent contributors of scholarly work in agricultural ethics seem to work from a more pragmatic or procedural orientation to their field. In either case, direct engagement with the metaphilosophical questions that arise in attempting to define or theoretically circumscribe the field of agricultural ethics are quite rare. This is in distinct contrast to environmental philosophy, where many have noted that the field does not seem able to move beyond highly theoretical debates about the nature of intrinsic vs. instrumental valuation in order to take up the ethical dimension of substantive environmental issues.

In conclusion, the field of agricultural ethics is perhaps best defined ostensibly, that is, by indicating the work of its practitioners. In that, we return to the observation with which this essay began. It is the entire *Encyclopedia of Food and Agricultural Ethics* that best delimits and indicates the scope and nature of the field. Observing

and analyzing the diverse activities of practitioners will yield the most perceptive and accurate account of what agricultural ethics is.

## Cross-References

► [Ethical Matrix and Agriculture](#)

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## Agricultural Science and Ethics

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### Synonyms

Animal welfare; Ethics of nature; Sustainability; Values in science

### Introduction

Humans live in constant interaction with nature. That is part and parcel of being a biological creature on this planet. On one hand, humans exploit the available resources to survive, and at the same time, humans are deeply dependent on the continued capacity of nature to sustain their lives and the lives of their children and future generations. But something has changed over the past 50 years: Never before in human history have so many animal and plant species been made extinct so fast – in the last few hundred years about 1,000 times as much as in the planet's history – and 10–30 % of mammal, bird, and amphibian species are currently threatened with extinction; freshwater ecosystems are particularly at risk.

Never before has humankind been so destructive and exploitative in relation to ecosystems and vital resources as now. Just as an example, in the last decades of the twentieth century, about 20 % of the world's coral reefs and 35 % of the mangrove areas were lost (Millennium Ecosystem Assessment 2005).

In the following, the development of agricultural science will be sketched out and the role of ethics in agricultural science will be discussed. Then different views of nature that have shaped agriculture and the role of science in agriculture will be discussed by analyzing some of the presumptions behind the concept of ecosystem services and the way animals are viewed. Finally, the concepts of animal welfare and sustainability will be explored to show how they make vivid the connection between agricultural science and ethics.

### The Development of Agricultural Science

Although the first traces of agricultural research can be traced back to the thirteenth and fourteenth century, organized agricultural sciences emerged from the mid-1800s, primarily with increased mechanization and organization of agricultural production and the possibilities to make agriculture “rational” and use different technological inventions to increase productivity in agriculture and food production. In the late eighteenth century, chemical compositions of soil and systematic measures of the growth conditions of different crops started the chemical intervention in farming, and hence the development of agronomy. The introduction of chemical and genetic control increased in late 1800s and early 1900s. The development of scientific approaches to agricultural development can be seen as a contrast to the previous centuries' practical development of farming, where knowledge and skills were passed on between generations on local context-specific levels. However, more systematic collection of information from farmers and dissemination of “best practice” in agricultural schools or published texts, e.g., initiated by progressive

landowners, was also increasingly practiced from seventeenth to eighteenth century and improved production or knowledge in relation to agricultural challenges (Jones and Garforth 1997).

A boom in the development of agricultural production happened in the Northwestern world in the post-Second World War era, where mechanization of agriculture increased dramatically and the Western European agenda was to ensure food security for the population, as increased welfare was seen as one way to avoid wars and conflicts in the future. In this phase, agricultural research stations and institutions grew and were viewed as necessary instruments to an increased production through a “rational growth agenda.” In the following decades, subsidized farming in parts of Europe and North America became increasingly specialized and industrialized and continued to increase in productivity, and international trade grew and larger. In other parts of the world, e.g., India and Mexico, so-called Green Revolutions of agriculture involving hybrid seeds, mineral fertilizer, and pesticide use introduced mainly at the larger farms resulted in major increases in agricultural productivity and at the same time had severe long-term impacts on soil degradation and environment (Cullather 2010). In the past decades, agricultural and food systems have been influenced by an enormous growth of transnational food corporations, liberalization of international food trade and foreign direct investments, and increased globalization of the diet (Hawkes et al. 2009). The food and agricultural industry has supported research which influences this development (Lesser et al. 2007), both through establishment of own research units as well as funding to universities and other research institutions through various channels. Out of this, at least two major trends in agricultural research are developed: (1) research which is more or less guided and controlled by large private companies like Monsanto (Robin 2010) that seeks to develop products such as agrochemicals and patented seeds to agricultural and food systems which meet the demand for huge amounts of cheap food products and (2) research which focuses on critical issues in relation to the industrialized

agriculture and food systems and have the potential to inspire changes of farming practices toward a more environmentally and socially responsible agricultural sector. This is, for example, research in climate change, biodiversity, social aspects of farming, and governance of food chains that has led to a value-based critique of, e.g., growing reliance on experts and increased vulnerability of farmers, science-techno-based farming, intellectual property rights, and labor conditions (Beus and Dunlap 2010; Thompson and Stout 1991).

## The Role of Ethics in Agricultural Science

The understanding of agricultural science developed above makes it obvious that there is a strong link between agricultural science and ethics, since the goals of agriculture and the choice of strategies of how to obtain them are not themselves only scientific questions but also questions that require answers based on value. These are questions as what kind of foods to produce (animal products or vegetarian), which methods to use (organic, conventional, extensive, intensive, biodynamic), what consequences of human action to accept (landscape, animal welfare, wild life, environment), and what conditions to provide for farmers, farm workers, and all others working on the land and in the food producing sector (health, social status, rights). These questions can only be answered through ethical considerations and reflections and not through natural sciences. The ethical discussions include a discussion of who can legitimately answer these questions. Or, in other words, who should govern the land? Is it a political task, should it be market driven, should it be through participation from civil society actors, or should it be left to the market and thus be decided through the often silent negotiation between producers and consumers? In the latter scenario, there is a risk that decisions are shaped in the space between a commercialized market and individual consumers left to fight for their values with their wallets. This is not unproblematic as the outcome of this negotiation is also of obvious interest for

those who are not part of it and have no voice: the poor, future generations, animals, plants, and ecosystems.

Such questions reach into the area of political and societal structures and are thus often not seen as part of agricultural sciences, despite the fact that the structure and governance of agriculture itself strongly influence the way in which we ask scientific questions, and vice versa. This is not surprising, since the perceptions and goals of scientists are just as full of value assumptions as the goals of politicians. Objectivity in science does not cover the goals of science but only the methodologies, where, e.g., data can be described in terms of repeatability and reliability, but the choice of how and which data to collect, focus on, and analyze is still a choice of each researcher or research team and should be communicated as such. Further along these tracks lie the questions of how risks are understood and communicated and how the interpretation of scientific uncertainty influences the way that scientific results are presented (Webster 2003).

Describing the relationship between agricultural science and ethics entails recognizing the ways in which values penetrate agricultural sciences and determine goals and methodologies. The classic notion of an objective science that develops technologies, which the civil society then choose from, is replaced with an understanding where science is seen as embedded within the social framework through which complicated interactions shape the more-than-human lifeworld. Thus, from a moral and social point of view, agricultural scientists have an obligation to be transparent about the assumptions underlying their work as their results and advice are expressions not only of knowledge but also of values.

Agricultural science can enhance understanding of important aspects of the soil and ecosystems on which humans are dependent for food and – to a growing extent – energy. Agricultural sciences participate in collecting, systematizing, and transforming practical knowledge and skills of farmers and agricultural professionals into more time- and/or cost-efficient practices and technologies and in inventing new technologies and machines which can increase efficiency in

different ways (Tilman et al. 2002). As long as this is not connected to funds for inventing tools or patents that only benefit few, or distort power relationships etc., and it is clear and transparent, then it is quite simply a generally accepted feature of scientific approaches.

It becomes problematic, however, when there is a move from *methodological reductionism* and into *ontological reductionism*. Methodological reduction is a necessary prerequisite of science, by which certain aspects of the phenomena being examined are excluded/deliberately ignored to achieve objectivity or at least intersubjectivity in a group or community of science. Ontological reductionism occurs when the results from a specific scientific inquiry are viewed as the only valid knowledge about a given phenomena, no matter of the context. The context in a complex world (e.g., a farm) can be very different – and hence influence and interact in a different way – from the quite controlled environment in which the phenomenon was studied. In such a case, the world itself is reduced and every part is seen as a simple sum of smaller parts, which can be studied independent of their context (Fang 2011). This could, for example, be a study of how certain plants grow and thrive being provided with different levels of a certain type of nutrient under controlled conditions in a laboratory. The results of these studies are valid under similar conditions, but plants of the same species and variety may turn out completely different in relation to the same type of nutrient under different on-farm conditions, where they are not only influenced by these studied nutrients but also by, e.g., temperature, seasons, other trees, plants, and management practices which were not present in the laboratory.

The same move can be seen within agricultural science when the basic ethical relationship between humans and nature is denied on the basis of the results of an agricultural science that from the outset looks away from this relationship to enable a scientific inquiry. How agricultural science is done both from a teleological and methodological perspective is thus very dependent upon the view of nature presupposed in the scientific work.



## Views of Nature

Humans have lived with, in, and from nature for thousands of years and increasingly transformed what formerly was “living on the mercy of nature” into “taking control and forming agricultural systems.” This has happened in different ways: In some cases, it has been based on a rather interaction-based view and practical approach, such as forming systems which build on or mimic the mechanisms of natural ecosystems, e.g., permaculture and certain agroforestry systems. In other cases, it has been based on a more control-based view, where humans aim at getting the full control over land, plants, animals, and agriculture and use the resources around them. These different approaches are built on different views and values related to “what nature is” and how the relationship between humans and nature should be seen.

A dichotomy between “nature” and “culture” is often taken as granted. However, “nature” and “culture” are mixed into new forms as new hybrids are produced in agriculture and agricultural sciences. For example, in the meeting between the farming landscape and nature, “nature” is guided and restricted by agricultural activities. Yet, the existence of a “nature” which can be distinguished from “culture” is often emphasized.

Within environmental philosophy, a distinction between views that are mainly anthropocentric, pathocentric, biocentric, and ecocentric has been developed – the latter also sometimes religiously inspired from especially animistic traditions (Abram 1996; Griffiths 2006). Each viewpoint describes the kind of entities that are seen as members of the ethical community (Krebs 1999). These basic views influence the ways farmed landscapes and animals are perceived and shape the understanding of which responsibilities humans have and how to act and interact in relation to nature. “Nature” is a complex concept with many layers of meaning. Some of the qualities linked to nature are, for example, described: (a) wilderness, the quality of natural processes not disturbed by human interference including pollution; (b) continuity, e.g., that

a habitat is allowed to exist over long time; (c) authenticity, meaning that “nature” is not constructed or planned; and (d) originality, understood as nature with native species and habitats (Tybirk et al. 2004). Different basic views on nature can be described, for example, a “naturalist view” (where all four described dimensions are present and humans should protect natural areas and manage seminatural areas very carefully); an “ecologist view” in which humankind can interact, structure, and “enhance” natural processes also in relation to agricultural activities; and a “cultivist view,” where nature is only found outside farmed land areas.

The concept of ecosystem services vividly illustrates how farmed and nonfarmed land is viewed within an anthropocentric framework. If humans do not interact with or “use the services” of nature, then it is basically without interest, as it is of no “service.” The microbiological life in the soil can be viewed as such an ecosystem service: Without this life – which consists of “natural microorganisms” – cultivated plants cannot grow well. The goal from an anthropocentric point of view therefore becomes to control and preferably improve the microbiological life in the soil to enhance the ecosystem services that it provides. This can be seen as a contrast to the deep ecology philosophy, which insists on the inherent value and worth of every living organism in their own right.

Pollination is another example of an ecosystem service, on which agriculture is deeply dependent – about 70 % of the global plant production relies on pollination, so if the bees die, food production will be gravely challenged. Scarily enough this has been the case since the beginning of this century. The phenomena – labeled as colony collapse disorder (CCD) – was first reported in the USA and then spread to Europe. The reasons behind the vanishing of bees are still not entirely understood, but human actions, especially the use of pesticides and herbicides, are suspected as major factors (Suryanarayanan and Kleinman 2013). One response to the increasing threat to bees has been a suggestion to invent “robot bees” (Anonymous 2012; Steadman 2012). Such an

attempt to “repair” a problem that is most likely created by human action clearly comes from the anthropocentric and cultivist side of the value landscape. The role of science (agricultural, biological, and engineer sciences) is seen as inventing such robot bees, and the role of the industry is to market something which before was an “ecosystem service.” From a more ecocentric view on agricultural sciences, solutions would aim at creating agricultural systems which respect animals and the living communities that they are embedded in and help create conditions, allowing and supporting the pollinators to work and live as part of an organically sustainable system.

### Views of Animals

Through domestication and breeding, humans have for thousands of years increasingly shaped animals to more efficiently produce meat and animal products. This development has escalated since the intensification of animal production in the 1950s and raises a range of ethical issues. In intensive animal production systems, animals have been bred to grow faster and produce more, leading to a range of production-based welfare problems (Gamborg and Sandøe 2005). Discussions of sustainability within animal breeding clearly show that the narrow focus of production efficiency has been a mistake – although the long-term goal of breeding is still to ensure the economic sustainability of the production. Thus, economic concerns and not environmental or welfare concerns rule the day. Only to the extent that environmental considerations or animal welfare concerns are compatible with this overall goal, a growing interest in the environment or welfare of the animals can be expected.

Besides breeding the animals to fit the production facilities better, the animals are also “shaped” by more direct methods: They are cut and shaped so as to allow farmers to keep them under very restrictive conditions – cows are dehorned, pigs have their teeth, tail and testicles are cut, and poultry have their beaks trimmed. All this is done to ameliorate the physical damage

which they can make on themselves and each other – often as a result of the stress caused by the inability to perform their species-specific behavior: The animals still have basic needs such as need for a certain space around them, for territories, for foraging, for a hierarchy, and for sexuality, just to mention some. Agricultural animal research has to a large degree been directed toward developing animals that fit into predefined production systems and at the same time yield and grow at a maximum rate. “Farms” have turned into production facilities and the understanding of the animals changed so that they are seen as production units and described in terms of kilograms rather than living individuals (Anneberg 2013). This process has been most visible within the poultry, egg, and swine industry, but the production of milk and beef is following the same tracks.

Farm animals, even though they have been selected and bred during many generations to fit as smoothly into the production systems as possible, still have species-specific behaviors that are not possible to perform in the intensive production systems. They compensate by showing stereotypical behavior. An example is a sow’s needs to build a nest before farrowing: She shows this behavior even when completely restricted between iron bars on concrete floor, where she does not have the physical material to build this nest. The compromises between the needs of the animals and the degree to which these are met in production systems are thus partly guided and informed scientifically through a wealth of studies on animal diseases, production, behavior, and other things. Agricultural sciences have participated in the development of the concept of animal welfare and have developed a number of different schools and definitions of animal welfare (Haynes 2008). This science can be characterized as a mandated science, meaning science with the purpose of informing political debates and decision making (Fraser 2008). Scientific studies have also participated in the development of so-called animal welfare assessments, which is part of the development of the current animal production systems. The concept of animal welfare is thereby shaped, used, and interpreted both

by a huge number of different actors in the agricultural industry, as marketing arguments for products, and by authorities and governments to formulate detailed regulations on animal production systems and in the public debate (Anneberg 2013).

### Animal Welfare as an Example of an Agricultural Scientific Field

The concept “animal welfare” can be viewed as an example of a scientific approach to handle the increased industrialization of animal production and the increased concerns about this production and the well-being of the animals. “Justice” to animals was discussed already back in the ancient Greece, and animals have been “subjects for protection” in legislation for a couple of centuries, mostly in terms of “unnecessary cruelty to animals,” e.g., beating horses. However, the type of suffering linked to restrictions in not meeting the animals’ natural needs and allowing them natural behavior, access to space, and systematic mutilations such as beak trimming, tail docking, and dehorning has become an issue both in the public debate and in science from the 1950s and onward. One of the first books on the effects on animals of intensive farming that lit the spark to the debate was *Animal Machines: The New Factory Farming Industry* by Ruth Harrison in 1964 (Harrison, 1964), which among other things led to the so-called Brambell Report, on which some of the animal welfare principles were built.

The concept of “animal welfare” is an interesting example of a mandated science, where scientific factorial knowledge, e.g., about animal behavior or the presence of disease, is constantly intertwined with ethical considerations and understandings of “what is good or bad for the animals.” This is obviously perceived differently in different historic and cultural contexts.

Within the “animal welfare science,” different animal welfare assessment systems are developed. The choice of focus and detailed parameters in such assessment systems are made with scientific studies as background. This scientific knowledge can be “delivered” to inform and give

arguments for ethical considerations and decisions of what is acceptable for animal farming and to create certain norms within the context in which the systems are being used. However, this does not remove the choices of the scientists: These choices are inevitably taken partly on background of their perceptions of what animal welfare is. Studies have been made to develop “animal welfare assessment” in caged hens systems focusing on advantages and disadvantages of different cage systems, where some researchers will study feather coats and egg production and relate “animal welfare” to such parameters and other actors will claim that it is not possible to talk about “animal welfare” in a system which restricts natural behavior and ask whether it would not make more sense from an animal welfare point of view to question whether caged systems are “fair” to living animals at all. Here the question also becomes what the relationship is between the fields of “animal welfare” and “animal ethics” (Yeates et al. 2011).

The welfare of farm animals must be understood as both a normative ethical concept and a scientific field of inquiry. It is a clear example of a field where the methodological choices made before the research can be done are strongly dependent on the ethical values of the researcher (Fraser 2008). Some have claimed that “animal welfare” can be seen as a social technology, which participate in a basic “scientific legitimization” of industrialized farming systems, and that a focus on “animal welfare” among the involved professionals can help create trust among non-professionals (consumers/citizens) that “animal welfare is taken care of” (Anneberg 2013).

### Sustainability

The concept of “sustainability” has been more or less intuitively understood and practiced during centuries by people who were living closely in and dependent from the surrounding nature, as “the responsibility to act so that the seventh generation from now could still sustain itself.” The concept of “sustainability” as used today arose in the forestry industry more than 200 years ago and

has since grown almost organically into a multifaceted and complex concept (Wiersum 1995). In 1987 the United Nations placed the concept in the middle of discussions on environmental management through the Brundtland Report. Here sustainability is understood as "...a development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (United Nations 1987).

Since then the concept of sustainability has been developed and discussed, scientifically and in societal debates as a response to the challenge of feeding an increasing population of humans in an ecologically responsible and just way at the same time significantly reducing our short- and long-term environmental impact. Clearly, this debate is closely interlinked with how food is produced and distributed. To an increasing degree, this happens in the light of the changing climate that is both a threat to current production – and to a large extent a result of it (Steinfeld et al. 2006).

In most currently used definitions of sustainability, at least three pillars are acknowledged as constituting the concept of sustainability: an economical aspect, an ecological (environmental) aspect, and a social aspect. Recently, a fourth distinct pillar has been included by some authors, namely, the institutional aspect. The understanding of the concept – including the pillars and their interconnectedness – is nevertheless hugely disputed because different actors and organizations can define, understand, and use it in different ways and place weight on the pillars differently and in accordance with specific interests (Valentin and Spangenberg 2000).

The whole issue of designing agricultural and food systems to be sustainable is extremely complex and involves many players – in the end everybody, because everyone eats food, and all humans can be considered citizens. Agricultural sciences typically focus on the production aspects, based on the argument that there is a need to feed nine billion people in few decades. This has, however, been criticized as too narrow a view of the issue as it seemingly ignores that food production per capita has never been higher

and issues of distribution, the complex picture of food trade systems, food waste, ethical considerations related to industrialized agriculture, land rights, and a steadily increasing consumption of animal products are not seen as part of the context of the problem (Mephram 1996). What sustainability is and how to balance the emphasis on the four pillars in a given context thus need to be decided on an ethical and political basis, before agricultural science can begin to provide answers. Science is a tool, but before using it, it needs to be decided what it is to be used for.

## Summary

Discussing sustainability and animal welfare within the context of agricultural science entails a lot of ethical reflection as many of the assumptions about what the concepts cover, how they should be scientifically examined, and what goals they should be directed against are based on values. Agricultural science is, as any other science, performed in a social and cultural context and therefore embedded in values. Agricultural science is a very important factor in the current situation where a growing population, increased pressure on resources, climate change, genetically modified plants for human consumption, production of plant-based biofuels, and further intensification of animal production with growing welfare problems as a likely result challenge societies. But it is important to realize that the way these issues are approached and the solutions that are suggested by scientists are part not only of a scientific inquiry but also a societal and ethical discussion on how human beings should relate to animals and the rest of nature.

## Cross-References

- [Agricultural Sciences and Ethical Controversies of Biofuels](#)
- [Farmer-Scientist Knowledge Exchange](#)
- [Industrial Food Animal Production Ethics](#)
- [Sustainability of Food Production and Consumption](#)

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## Agricultural Sciences and Ethical Controversies of Biofuels

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## Synonyms

Bioenergy; Biomass; Energy crops; Food versus fuel; Land use change

## Introduction

The non-food sector has always been an important part of agriculture providing fuel, fiber,



building materials, and medicine among other resources. Agricultural sciences have focused on the non-food sector in recent years as a means for societies to replace fossil fuels with more sustainable alternatives. This entry will give a brief history of agricultural sciences and non-food production, highlighting the recent increased production of biofuels and the “bio-based economy.” It will focus on the use of agricultural biomass (any organic matter that is living or was once living) as a transport fuel, what is commonly referred to as biofuels. These will be considered under the headings of energy crops and crop residues. The term “agricultural sciences” is used to refer to the application of natural, social, and economic sciences to the further development and understanding of agriculture. Thus, natural, social, and economic sciences have been involved in attempts to develop non-food agricultural products to address societal needs and in highlighting and analyzing controversies, developments, and trends within this sector.

Biofuels have been a particularly controversial area from the mid-2000 that has focused attention on the ethical aspects of non-food production. They incurred significant environmental impacts and were seen to compete with food production. Agricultural research on “first-generation” food-based biofuel was within what de Lattre-Gasquet et al. call the “productivist ethos” of increasing production and stabilizing prices (2010, p. 309). Science then also played a role in questioning the environmental and social credentials of biofuels. These biofuels not only faced issues of inequality and environmental destruction in line with other conventional, industrial-agricultural production of food but also undermined the productivist ethos of producing more food, by being seen to divert food from the food market to the fuel market (Thompson 2008a).

The increased demand for non-food agricultural products is seen by many as a challenge, given previous controversies around biofuels and ever increasing resource constraints. It is also seen as an opportunity for further development of agriculture, with a move away from using food

crops towards non-food crops and residues and coproducts. Some view this opportunity as calling for agricultural scientific research within an industrial, intensive model that promotes efficiency. Others see it as an opportunity to tackle environmental issues and inequality by moving agriculture towards an agroecological model.

## **History of Agricultural Sciences and Non-food Crops and the Growth of the Bio-based Economy**

Humans have been dependent on agriculture to supply non-food products for millennia. In pre-historic times people used plants and animals for fiber; obtained fuel from wood, vegetable oils, and animal fats; and obtained medicine from a variety of plants (Fuller et al. 1996). Agricultural technology changed little between 1000 BC and 1500 AD, although certain non-food crops such as tobacco were introduced to the west (Fuller et al. 1996). The onset of the industrial revolution in the nineteenth century in the global north saw an expansion in scientific development within agriculture and the potential to produce far more non-food goods. This can be seen in the early twentieth century when Henry Ford produced his new V-8 car featuring plastic components and paint made from soybeans. Plant fuels could be used to power vehicles; the diesel engine unveiled by Rudolf Diesel in 1900 ran on peanut oil. The industrial revolution also meant the availability of cheap and abundant fossil fuels and agricultural products often found it difficult to compete. Fossil fuels became the dominant supplier of transport fuels.

The 1973/1974 oil crisis focused attention on fossil fuel dependence and created some renewed interest in biofuels. Brazil was one of the earliest countries to respond to this concern and establish a national biofuel policy producing bioethanol from sugarcane. During the first decade of the twenty-first century, many other countries, including the USA and EU countries, followed suit and developed biofuel targets. There was much initial optimism about biofuel’s potential,

with many seeing them as a way science and technology could be used to address the issues of climate change mitigation, energy security and independence, and rural development (Landeweerd et al. 2009). Biomass was initially seen as a carbon neutral alternative to fossil fuels because it stores carbon as it grows, which is then released into the atmosphere when the biomass is burned; it can be grown in the country of use and also can provide an additional source of income for farmers. Government subsidies and incentives created a market for biofuels and production increased significantly during the 2000s. The USA and Brazil are currently the largest producers of bioethanol with the majority of biodiesel produced in the EU, Malaysia, and Indonesia. Biofuels from food crops currently make up a small proportion of transport fuels, for example, among the EU 27 2.5 % of transport fuels are biofuels (Nuffield Council on Bioethics 2011).

The increased production of fuel from agricultural produce can be seen in the wider context of replacing fossil fuels with “greener” agricultural produce, what has been termed the “bio-based economy.” Work is underway within the agricultural sciences to develop further agricultural applications in energy, chemicals, and advanced materials from food and non-food crops for industries such as construction and manufacturing (FAO 2012). These are promoted as having lower greenhouse gas emissions and higher energy efficiency than fossil fuels, as well as being biodegradable. The concept of the oil refinery is transferred to agriculture, with the “biorefinery” proposed as a way to extract every ounce of value from agricultural produce.

The above story is not equally true for all parts of the world, however, as many areas are still awaiting or in the midst of an industrial revolution. 90 % of the biomass for energy used globally consists of charcoal, dung, residues, and waste combustion in the global South in conditions of energy poverty (Schubert et al. 2008). Countries in the global South do play a role in the global non-food sector; however, they currently dominate the production of natural fibers from jute, sisal, and hemp (FAO 2012).

## Energy Crops

### Biofuels from Food Crops

This section will focus on energy crops used as biofuels in order to illustrate some of the ethical issues raised by non-food crop production and the role of agricultural sciences. The agricultural science these crops are based on is not new; the technologies have long been in existence: starch from crops such as sugarcane, wheat, or corn is fermented into ethanol and used instead of petrol, or oil crops such as rapeseed oil, palm oil, and vegetable are used in diesel engines with only minor alterations. Research and development (R&D) into energy crops was undertaken within universities and private companies, incentivized by the need to meet government targets. Multinational agribusiness, biotechnology, car manufacturing, and dedicated biofuel companies have undertaken work on biofuels, as well as large oil companies such as Shell and BP.

Some contend that the ethos behind the agricultural science was also not new. De Lattre-Gasquet et al. (2010) state that in France the ethos was that of productivism based on the post-war time principles of increasing production, stabilizing prices, and ensuring supply. Thompson (2008b) also states that in the USA corn-based ethanol was developed within the industrial, productivist model of agriculture which emphasizes efficiency. This story is similar in other countries, with the majority of Brazilian sugarcane ethanol being produced within an industrial model of agriculture and government incentives in many African countries promoting large-scale production systems (Amigun et al. 2011).

The initial optimism over biofuels and the prospects of a win-win-win outcome gave way to controversy and criticism as it was claimed that biofuels competed with food production, were very environmentally damaging, and were produced in conditions of social inequality and injustice.

### Ethical Issues: Food Versus Fuel

2007 and 2008 saw food riots in numerous countries because of a sudden increase in food prices.

Many commentators blamed this price spike partly or wholly on the diversion of staple food crops such as corn and wheat from the food market to the biofuel market, what has been dubbed the “food versus fuel” controversy. In October 2007 Jean Ziegler the UN special rapporteur on the right to food stated, “It is a crime against humanity to divert arable land to the production of crops which are then burned for fuel” (BBC 2007). Many NGOs made biofuel an important campaigning issue and linked up with food companies to press governments for the removal of biofuel targets. The issue became increasingly controversial with the right to food of the poorest contrasted with the desire of the rich to drive their cars and biofuels generally framed as an unethical, unacceptable technology (Nuffield Council on Bioethics 2011).

The role biofuels played in raising food prices has been disputed. There were many causes attributed to the price spike such as speculation on agricultural markets, poor harvests, low grain stocks, and rising fossil fuel prices, with different estimates of the exact responsibility of biofuels (FAO 2008). Some maintain that the food versus fuel controversy oversimplifies the debate, contending that the food crisis had been building for decades, with vulnerable countries becoming net food importers and the problem is not only one of supply and demand but also of a political-economic problem of access to food (Thompson 2008a).

Others have taken a different view of the issue and frame biofuels as a potential opportunity for agriculture, and even food production, in the global South (FAO 2008). They state that biofuels could prompt the research and investment needed to develop struggling agricultural markets. The global South could leapfrog the “dirty” fossil fuel-based technologies used in the global North and concentrate on bio-based alternatives. Ewing and Msangi (2009) state that there are numerous examples of small-scale bioenergy production in developing countries to benefit the poorest. They state, however, that barriers exist to their further development such as access to capital, technology, and secure land tenure. They also state that the benefits of

large-scale developments can bypass the small-scale producers who make up the majority in these countries.

### Environmental Controversies

While biofuels were initially promoted as a scientific solution to environmental issues, science also played a role in highlighting biofuel’s hidden environmental impacts. Since current biofuels are made from food crops, they have followed the same industrial trajectory as other food crops produced in the global North (Thompson 2008b). Industrial production requires large amount of inputs in the form of fossil fuels, pesticides, herbicides, and fertilizer which result in local environmental impacts. The large embedded fossil fuel footprint has meant the resulting energy produced: the balance of energy input to energy output achieved can be minimal, depending on the crop in question (FAO 2008). Embedded carbon emissions and nitrogen oxide emissions from fertilizer use have also significantly reduced biofuel’s greenhouse gas savings.

It has also been reported that some biofuel crops are grown on deforested land, such as palm oil production in Malaysia, resulting in more biodiversity loss and carbon emissions – a problem termed direct land use change (dLUC) (Nuffield Council on Bioethics 2011). A number of studies also emerged modeling the problem of what is called “indirect land use change” (iLUC). This is the phenomenon whereby biofuel production replaces food production, causing land with high biodiversity or carbon stocks elsewhere in the world to be converted to food production to make up the shortfall. If the resulting carbon emissions from land conversion are attributed to biofuels, then total greenhouse gas emissions can be far *higher* than those of fossil fuels.

Doornbosch and Steenblik (2007) state that the sheer scale of agricultural resources involved in production means there are “permanent physical limits to the extent to which biofuels can replace fossil fuels” (p. 5).

### Social Justice

Biofuels have also been linked to numerous human rights violations. Reports of slave-like

conditions for workers in Brazil have come to light and reports of people dying from overwork (Nuffield Council on Bioethics 2011). There is also evidence of the forced eviction of indigenous people from their lands to make way for biofuel production as well as fears about large tracts of land being legally bought for biofuel production, making it then unavailable for local food production in the global South – so-called land grabbing (Franco et al. 2010).

### Biofuels from Non-food Crops

While biofuels were initially proposed as an agricultural technology that could solve several issues simultaneously, they have proven to be very controversial. There have been different responses to these controversies. Many NGOs see the technology and policies that promote it as too problematic calling for biofuel targets to be ended. Others see it as an opportunity for agricultural sciences to address these issues through innovation within the university-industrial complex.

One common way forward suggested for biofuels is the production of “lignocellulosic” non-food crops such as grasses like miscanthus and switchgrass and trees such as willow and poplar. These could produce what are called “second-generation biofuels” and also be used in stationary energy applications. The sugar in non-food biomass is more difficult to access than in food biomass, making their conversion into ethanol more problematic. There are a small number of commercial applications of this technology. Other non-food crops have also been proposed, such as the oil-producing plant *jatropha* which has been grown, with limited success thus far, in the global South.

There are many perceived benefits to these feedstocks that some claim will mitigate the negative effects of first-generation biofuels. They would not divert food from the food market. In contrast to food crops, all of the plant can be used for energy resulting in higher yields of biomass/hectare. Trees are perennial and so lock more carbon into the soil than annuals; in some cases willow has been used to rehabilitate depleted soils. They are also considered to be more favorable for biodiversity and require fewer inputs.

Because crops such as willow are currently used a little in energy production, some see this as an exciting and promising area for agricultural sciences. It is claimed the plants can potentially be bred to achieve higher yields and increase their suitability to certain habitats and uses, using techniques such as genetic modification. Many have also claimed that these crops could be grown on “marginal lands” unsuitable for food production (Nuffield Council on Bioethics 2011).

There is also agricultural research underway on alternative models of bioenergy production within what might be called an agroecological framework. These also emphasize the possibility of obtaining different types of products from the land and moving towards a bio-based economy but eschew monocultural agri-industrial production. Instead the multifunctionality of a piece of land or a landscape is emphasized, and the possibility of synergies between food, animal, energy, and other types of production is explored within a low-input, often small-scale model (Harden et al. 2013). For instance, agroforestry involves allowing chickens and pigs to circulate in a willow plantation grown for bioenergy production.

### Potential Ethical Issues

Work from the social sciences has highlighted potential ethical issues raised by the development of these technologies, however. Gamborg et al. (2012) point out that it is the use of *land* rather than food crops that is the ethically important issue because the use of any land for energy crops excludes the possibility of growing food on that land. Production on marginal land has often proved to result in marginal yields, and indeed the term can serve to “marginalize” the people who previously used that land and downplay their claims to it (Franco et al. 2010).

De Lattre-Gasquet et al. (2010) state that research in agricultural sciences is now responding to the issue of agricultural scarcity. This could be seen to be true of the move to lower input non-food crops. They state that the dominant ethos behind agricultural science research is currently technological and economic: “Whether they like it or not, public research institutions are being propelled to the crossroads of science and markets as a result of

unprecedented hybridisation of scientific and economic rationality which leads stalwartly into a knowledge economy.” (p. 310). Thompson (2008a) states that future biofuels may continue to be viewed as a technology that is in opposition to nature and will meet resistance from the same groups who oppose industrial agriculture. Levidow and Paul view non-food energy crops as promoting the same model of industrial agriculture as first generation: “Current R&D priorities for GM crops are designed to sustain agri-industrial monoculture systems, operating economies of scale and producing uniform products for industrial processing. R&D specifically for bioenergy aims to make crops more flexible, efficient sources of energy as a global commodity.” (2008, p. 28). Thus, large-scale production of non-food energy crops may also prove controversial.

### Agricultural Coproducts

Agricultural “coproducts,” “residues,” or “wastes” are seen as another potential feedstock for second-generation biofuel production that would overcome the controversies faced by food-based biofuels (Nuffield Council on Bioethics 2011). Residues such as straw, sugarcane bagasse, and palm kernels are also currently used in the global North and South for stationary energy production. These are by-products of food production and so will not take up land of their own, as some see it, overcoming the “food versus fuel” controversy and requiring no additional inputs. Research on use of residues and coproducts could be seen to be within industrial or agroecological models, depending on the scale and other specifics. An example of industrial production is use of grain to produce animal feed and fuel within a biorefinery. The protein for the grain is extracted for feed, while the carbohydrates are used in biofuel production. Animal manure is another source for energy production: dung is burned currently in the global South for energy and can also be used in other high-tech applications such as anaerobic digestion that produce biogas.

### Potential Ethical Issues

Use of coproducts presents their own ethical issues, however. Gomiero et al. (2009) question whether or not there is such a thing as “waste” in nature. Returning residues and dung to soils is essential to soil health, increasing carbon and nutrient content. Removal of these residues can result in soil degradation and erosion. The quantity of crop residues that can be removed from soil without depleting the soil fertility is a complex question within agricultural sciences as it is dependent on many factors including the type of soil and the use of the land, making generalizations difficult. The application of post-combustion ash to the soil can return some of the nutrients, but little of the carbon. Residues also have other uses in the livestock sector for animal bedding and feed, creating potential competition with the energy sector.

Gomiero et al. (2009) point out that humans have already appropriated a huge volume of the earth’s primary productivity and these resources are still limited. Karafyllis (2003) maintains that there are two views of nature at work here – nature as intrinsically productive allowing humanity to siphon off its surplus or nature as frugal, letting nothing go to waste: everything in nature is needed by nature. Some question the logic burning precious agricultural resources for energy, each time we burn plants we are burning valuable nutrients.

The idea of incorporating food and feed production within a biorefinery is based on the concept of efficiency and the need to extract maximum value from the resources at hand. Levidow and Paul (2008) raise objections to the ethos behind this step as were raised against food and non-food energy crops: it provides incentives for a shift towards large agribusiness and a strengthening of ties between industrial food and industrial fuel production. Others see this as a viable move representing the most efficient way to use scarce resources.

### Summary

Non-food produce has always been an important part of agriculture. Fossil fuels came to replace



many non-food applications of agricultural produce in the industrialized global North. Industrialized society's desire to move away from fossil fuel use and the need to provide the global South with a clean alternative have created more interest in non-food produce within agricultural sciences. Energy crops for biofuels have been a particularly high profile and controversial non-food output. The majority of food-based biofuels were developed within an industrial, productivist ethos and not only incurred similar environmental impacts and issues of inequality as other industrial agriculture but also believed to compete with food production. Much current research within agricultural science focuses on the use of agricultural coproducts and non-food crops in response to these controversies. Some research is also taking place on promoting small-scale, local, and low-input agroecological models of bioenergy production, although this area is not widely researched within ethics and the social sciences.

Some are optimistic about the prospects of advanced technologies to reduce input requirements and lower and mitigate negative environmental impacts. Some are more cautious, making the point that any use of resources, whether "marginal land" or "wastes and residues," is likely to incur some environmental or social cost. Commentators state that many of the barriers in place to reaping the supposed rewards of these technologies are structural rather than purely technological. Others who are opposed to industrial, productivist agriculture see these developments as more of the same and indeed a further consolidation of power in the hands of agribusiness. It is likely that the non-food uses of agricultural produce will expand in the future as well as work within the natural, social, and economic agricultural sciences to achieve desired outcomes and negotiate resource constraints.

## Cross-References

- [Access to Land and the Right to Food](#)
- [Biofuels: Ethical Aspects](#)
- [Climate Change, Ethics, and Food Production](#)

- [Land Acquisitions for Food and Fuel](#)
- [Resource Conflict, Food, and Agriculture](#)
- [Synthetic Biology and Biofuels](#)

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## Agriculture and Ethical Change

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### Synonyms

Agrarian empires; Feudalism and agriculture; Market agriculture; Subsistence agriculture; The great transformation

### Introduction

Agriculture has been at the heart of the human ethical systems since 9000 BCE when plants and animals were first domesticated. The “invention” of agriculture meant that humans changed the way they looked at land, food, sharing, home life, family, gender, age, technology, and property.

Such massive changes have happened twice in human history. The first change was after 9000 BCE when hunter-gatherers settled down in farms in different parts of the world. New ethical systems emerging included new systems of social stratification, rural and urban, and professions. Many of these relations were rooted in ties of

personal loyalty and fealty between unequal people. Such systems even included large agricultural empires like those of Rome, China, and the Maya. These systems were often “feudal” in nature, because personal loyalties were at the heart of social interaction. In these worlds, agricultural production and food were central to the meaning of social life even though farm families were often poor and oppressed.

However, beginning about 1500 CE, new ways of organizing food production using globe straddling agricultural markets emerged. For this to work, though, new ethics about the production and sharing of food emerged. Most importantly, food became a commodity in the market, just like any other. Food, land, and labor became exchangeable for cash in a marketplace where economic advantage was more important than personal loyalty. Food was also the same as any other commodity and could be bought and sold at market prices. This is the globalized market system, which continues to extend its tentacles into remote farming areas, even in recent years.

### From the Beginning

In the beginning, all humans were hunter-gatherers. Humans subsisted by following food sources – whether they were seals in the Arctic tundra, ripening berries and herds of deer in the temperate regions, fish that runs along rivers and coasts, roots dug in the desert, or the animals and fruits of the tropical forests.

Such subsistence strategies required extensive territories to support a family or clan that moved frequently. As a result the land supported very few people per square kilometer. This is because little of the natural biomass is suitable for human consumption in the form of fruits, vegetables, fish, grains, or game. Even in the tropical forests with their towering tree canopies, much of the biomass was woody or leafy and unfit for human consumption.

With such an irregular food supply, there were times of hunger and of feast. For example, the felling of a large animal, fish run, or even a termite swarm could mean that a clan ate well

for a few days before the meat spoiled or was stolen by scavenging animals. But this feast could be followed by days or even weeks of food shortage when the band might eat little. A particular type of ethical structure emerged which reflected this type of subsistence. In such societies, there is little wealth and hierarchy, and the basic unit is the clan of at most a few tens or a hundred people who shared food and worshipped a symbolic god or “totem.” Such societies were relatively egalitarian, and the only type of social stratification was that of age and gender, in which the surviving older men would receive some deference – though they still needed to walk with everyone else (Collins 1992, pp. 47–48).

Frequent movement also meant that people owned only what they carried. Strangers were rarely encountered and often perceived as potential threats. There was no fixed place of residence – rather there was a territory in which the band or clan wandered. Most important from a latter-day perspective, there was no way to store food, and what was collected, hunted, or caught was consumed quickly. The one domesticated animal the wandering bands had was the dog, which warned the group of approaching nocturnal predators (including at times other humans) and was also helpful with hunting. Constructed shelters were temporary and typically used for a few days or weeks.

Women in such bands had on average 4–5 children in a lifetime, and life expectancy among hunter-gatherers was typically pretty short – perhaps 20–25 years, largely as a result of the frequent deaths of infants, small children, and older adults during the stressful times when food was scarce. An injury also meant that if a person could not walk, they would likely die – anyone older than an infant who could not walk with the group to the next food source risked abandonment.

## The First Great Transformation

About 9000 BCE a few of the wandering humans began to settle down into small villages, cultivate grains, and domesticate animals. They did this

first in the Middle East, though other areas of the world soon followed. In effect, these humans stopped following the edible crops and animals and instead developed plants which produced a great deal of food suitable for humans on land which was within walking distance of a “house.” This piece of land, instead of growing woods and leaves which humans could not eat, was cleared and covered with crop-like wheat, maize, vines, fruit trees, or other crops, which were edible by humans.

Also, beginning about 9000 BCE, the farmers domesticated animals like sheep, goats, cows, and chickens. Domestication had big advantages over hunting for humans; with hunting, humans hunt animals that hide. But with domesticated animals, the “meat” follows the humans who tend them. Slaughtering (or milking) one of the animals was much easier than chasing wild animals in the forest. The most important meat could be slaughtered when it was needed. Instead of wandering in the forest searching for animals to snare, trap, or spear, the “hunter” could simply slaughter one of the chickens when it came to roost at the farm in the evening!

In other words, farming and the domestication of plants and animals meant that the old order was reversed. Instead of searching nature for food and subsistence, humans bent nature to produce the food products they needed where they lived and no longer needed to follow the harvests that nature provided. Settling down meant that humans accumulated more goods than they could carry and in particular meant that food supplies could be stored, eliminating the terrible hungry periods.

With such changes, new ethics framed by the nature of agriculture emerged. The most important were ideas about the ownership of food stores and other properties. For example, who had rights to ownership, who lived in a home and hamlet, and who inherited the wealth of those who died? New ethics about the unequal distribution of property and the rights and responsibilities to protect property were created too. Who would be responsible for sharing in times of famine? What did it mean to be invited to eat at a stranger’s house? How would raiding parties

be organized when there was hunger and the only food available was in a neighboring field? And who would decide how to erect defenses against raiders? Finally, who was required to work in which fields and when, and what did this assistance mean for the sharing of the harvest?

A strongly gendered division of labor in which women cared for the house and children while the patriarch was the “public” face of the family also emerged in most such societies. Patriarchy emerged to assert control over the resources that the family or clan produced.

There were more implications for social life, particularly with the development of permanent housing made from local materials (e.g., mud, sticks, stone, reeds, hides, etc.). Birth rates also increased as the time between pregnancies decreased, since it was no longer necessary to carry children until they walked. Women became pregnant more often and, as a result, more focused on child rearing; a typical average birth rate was 7–8 children per woman. Finally, a simple injury was no longer necessarily fatal since a leg wound could be tended at home and the injured person fed from the ripening fields of their family, even if they did not work.

Permanent dwellings meant also that clans began living near each other and socializing with a larger group that came to be thought of as kin-based ethnic group or what is known by the archaic term “tribe.” Such groups were organized into a homesteads, hamlets, and series of hamlets. Such groups grew quickly, because of rising birth rates, and the fact that the young and elderly survived hungry periods and simple accidents did not lead to abandonment. Older people – grandparents – became more common and honored.

It was in this first Great Transformation from a sparsely populated hunting and gathering world in which life was focused on migration to a farming world focused on the cultivation and harvest of crops that the arts, trade, law, philosophy, music, religion, and literature could be cultivated. Such new culture eventually became the basis for the wealth, power, and ethics of great agriculturally based empires like Ancient Rome, Ancient China, and Mesopotamia.

But making all this work required shifts in what was viewed as right, wrong, good, and bad, i.e., what was *moral*. To reinforce this, densely populated areas began to tie themselves together with shared cultural rituals. By about 5000 BCE, they began to create cities centered on a government. Such governments were controlled by powerful political figures such as kings and their courts and even emperors.

### **Ethics and Early Farming Communities**

Starting about 9000 BCE, farming communities in places like Mesopotamia, the Indus River valley, China, and Egypt began emerging. Annual rituals marked planting, arrival of annual floods or rains, and harvest. These rituals reminded people of the centrality of agriculture to subsistence. Such rituals connected the group to the spirits that were often identified with the landmarks near where they lived and the animals the group respected. Supernatural forces were associated with weather because of the importance of timely rains for a good harvest. Specialists, i.e., shamans, who could divine or control the rains, became important figures. Concepts defining gift giving and trade also emerged, with personal gift giving regarded as the most honorable form of “exchange.” And a few people began to specialize – and become very good at – the tending of animals, horticulture, ritual, trade, rainmaking rituals, and even fighting.

Nevertheless the overall organization of each community was not like the complex economy of today, in which every family is dependent on the functioning market to survive. Rather it was what the classical sociologist Emile Durkheim (1973, pp. 64–69) called “segmented.” To illustrate, when a clump of seaweed grows on the floor of the sea, each individual leaf moves together with the waves and seems very alike. But what looks one single plant is not. Any single leaf does just fine if separated out and planted elsewhere on the sea floor. In the same way, Durkheim wrote, each independent peasant household provided for itself independently of its own needs by growing its own grain, building similar housing, and wearing similar clothing.

Or as Karl Marx described the French peasantry in the nineteenth century using an even more vivid metaphor, that of a bag of potatoes:

The small peasants form a vast mass, the members of which live in similar conditions, but without entering into manifold relations with one another... The field of production, the smallholding, admits of no division of labour in its cultivation, no application of science and, therefore, no multiplicity of development, no diversity of talents, no wealth of social relationship. Each individual peasant family is almost self-sufficient.... The smallholding, the peasant and his family; alongside them another smallholding, another peasant and another family. A few score of these make up a village, and a few score of villages make up a [province]. In this way, the great mass of French nation is formed ... much as potatoes in a sack form a sackful of potatoes. (Quoted in Waters 2007, p. 9)

French peasantry in other words produced what it itself needed, without reference to larger markets. Families planted enough wheat for their own bread, barley for their own beer, raised their own vegetables, and tended the livestock they needed to feed their family. Little food was grown for the market.

But this was not all. Often farmers were dominated by a chief or king who sought tribute from them which might be 5–20 % of their crop; so as a rule of thumb, a peasant family might plant 90 % to feed themselves and then an extra 10 % in order to satisfy their tribute obligations to the local nobles. In turn, the noble was responsible for “his” peasants in the event of famine, pestilence, invasion, or impoverishment. The relationship was a sentimental but unequal relationship, not one where labor was bought and sold. It was a *moral* relationship that had a past, present, and future between noble families and the peasantry.

### The Ethics of the Great Agrarian Empires

Daniel Chirot (2011, p. 141) calls the implicit compromise between the relatively independent peasants on the countryside and the luxury-loving elite a “terrible dilemma,” because the peasantry gave up individual freedom, in exchange for being part of a state which provides protection from invasion and famine. The dilemma was that the subsistence peasantry became ever more

productive; they became attractive to raiders and brigands seeking to steal the wealth their lands and herds produced. The first response of the farmers was to band together under the leadership of a great fighter. At first, this warrior chief was only “in charge” during times of military threat. When there was no threat, he would return to his fields and be the patriarch of his own clan. But, by about 5000 BCE, a few of these villages developed into cities that supported a permanent “court” of officials. In an implicit exchange for organizing military protection, these new “nobles” required the peasantry to surrender not only the crops but the freedom to leave the “kingdom.”

The right of the king to “his” peasants was legitimated via ideologies emphasizing the divinely ordained power of the king vis-a-vis the peasantry. Thus, even though the health of the kingdom ultimately rested on the success of the low-status peasantry, ideologies emerged that insisted that the nobility was higher and more important. The kings were even considered to be deities. In this way, farmers became “tied” to the land, i.e., they were “inalienably” connected to a particular place in a manner which meant that they could not abandon their ruler but also their ruler could not expel them from their farm.

Wherever agricultural wealth accumulated, such systems of inequality between the rulers and ruled emerged. Such systems were focused by the personal loyalties of feudalism. Typically the peasantry owed the particular king’s court a share of their crops and service in his army. In exchange the feudal lord extended protection from famine and invasion specifically to the peasants for whom he inherited responsibility. Farmers all over the world encountered this terrible dilemma in places as diverse as Ancient Mexico, Peru, China, Rome, Egypt, Mesopotamia, and the Indus River valleys. But what was lost and gained in this trade?

The peasants of course lost their freedoms to travel and criticize rulers, and the sons of the peasantry were drafted into battle. Tax loads could be heavy, too. But, this loss of liberty also protected for the peasantry from other threats,



especially attack by enemies, and periodic famine. The nobility protected “their” peasantry from attack and starvation by maintaining fortresses or castles, where food was stored to distribute during famine or military siege.

Such rights and responsibilities were embedded in feudal society via ritual and religion. Rituals celebrated the connection between the peasants and their king, who was a father figure to whom the mysteries of religious faith demanded obedience. From today’s perspective, such tie seems fantastical; but they worked to tie kingdoms and even empires as large as Rome together in unequal kinship-like loyalties.

### **The Ecology of Feudalism: Elites and “Their” Countrysides**

Historian William McNeill (1978) described well the ecological relationships of what became the great agricultural empires between about 4000 BCE and 1500 CE. What these agricultural empires had in common was that they had rich farm areas, which McNeill called the “engines” of demographic and economic growth, centered on a city.

Cities had three things essential to such empires: the court of the king or emperor, a priestly caste who controlled religion, and the markets with their traders. Unlike today, the cities were not centers of manufacturing and production, and the wealth of the kingdom came from the rural areas.

But still the nobility, priests, and traders had two problems. First, they could not produce enough food to feed their population and so relied on the existing countryside to send them the foodstuffs they needed to live and become wealthy. But there was a second problem, too, which was that the premodern city was dirty and had high rates of disease so more people died than were born. As a result, a continual influx of new people from the countryside was needed so that the king’s court, the priestly caste, and the marketplace could be staffed. The engine of growth – the settled rural areas – provided a solution to both problems. They had surplus population as a result of their high birth rates and sent food as a symbol of their obeisance.

### **The Ethics of Food and Agriculture in Feudalism**

Food was the center of ethical life in feudalism whether sending tribute to the king, offering food to the spirits or gods, feeding a family member, or hosting honored guests. Food defined love, responsibility, and friendship. Those who were the “us” group supped together. “Come and eat, this is my grain, that I grew with my sweat, and it is given to you.” The food the farmer grew had special meaning beyond its role in nourishment – it was produced through the farmer’s own work and sweat and was created because the farmer gave of himself. The sweat was turned into food, which was used to nourish children, and those who the farmer loved. Or it went to guests, who were invited to eat of the rice, maize, beans, or bread that the farmer created; guests were told to “come and eat, this food is created personally by me, and I give it to you as a mark of my respect for you.” Or perhaps, “because I have grown this (rice or maize) myself, it tastes far better than what money buys!” (Waters 2007, pp. 10–12).

In agrarian societies, the agricultural cycle of planting, tilling, and harvesting structured the year. And everywhere rituals marked shifts in the weather and cropping cycles. In the temperate zones, spring festivals signaled planting. There were also special ceremonies associated with the winter and summer solstices and especially harvest festivals. The priestly caste emerged, which claimed control over dangers that threatened the crop cycle. Songs, dances, altars, religion, and artwork were created to appease gods who controlled the weather, the harvest, crop diseases, and particularly rain cycles.

Loyalty to the group was a primary ethic in traditional horticultural societies. Work groups, military groups, occupational groups, ancestor cults, and many other types of groups were organized. Ancestors buried on the land in places like China, Africa, and Europe were important too, representing the connection between the ancestors, the land, and the future. Holy days were timed to reconstitute the group; indeed, these agriculturally derived holidays are still important rituals for extended families, even in the modern world. For example, in the modern United States

and Canada, this happens during the Thanksgiving holidays. In China today, this happens in the context of the spring and fall festivals when factory workers return home.

The primary unit of loyalty in subsistence societies is the extended family, i.e., what Durkheim called the “segment” and Marx sarcastically compared to a potato in a bag. As Marx and Durkheim described, tasks were delegated within this family, and the growth (or shrinkage) of the family unit was key to the family’s well-being, not the cleverness of a particular individual entrepreneur.

This also led to an ethic emphasizing that if one member of the family was fortunate and became rich or powerful, the rest of the family could call on that person to share. Modern writers sometimes call this “amoral familism” because it means that when a person does have the capacity to favor others in decisions about hiring, purchasing, and so forth, they tend to look to family first, not the “best financial deal” or the interest of a larger corporation. To call such a situation amoral or corrupt, though, belies the centrality of family loyalty in traditional agricultural communities. In such communities, ethical behavior is to serve one’s own kin first and not that of a distant modern bureaucracy.

## The Second Great Transformation

The first Great Transformation gave birth to the type of agricultural society described above. There were villages, extended families, nuclear families, “tribes,” feudal systems, and the agricultural empires. Relations between the nobility and the peasantry were exploitative, but also sentimental. But then something began happening about 1500 CE in Europe to end this long era. Values and ethics shifted toward something new: Markets, money, and economic efficiency came to be a new source of both values and ethics. This of course is the world familiar to the modern readers of encyclopedias like this one; it is the world of the global marketplace in which we sell our labor to the highest bidder, in exchange for the hard cold cash needed to buy our subsistence.

Or as “Ma Wilder” complained in the nostalgic *Little House on the Prairie* children’s books written by daughter-in-law Laura Ingalls Wilder:

“There’s not ‘but’ about!” Mother said. “Oh, it’s bad enough to see [our son] Royal come down to being nothing but a shopkeeper! Maybe he’ll make money, but he’ll never be the man [a farmer is]. Truckling to other people for his living, all his days. . . .”

A farmer depends on himself, and the land and the weather. If you’re a farmer, you raise what you eat, you raise what you wear, and you keep warm with wood out of your own timber. You work hard, but you work as you please. You’ll be free and independent son, on a farm. (Wilder 1935, pp. 367, 370, quoted in Waters 2007, p. 5)

As Ma Wilder knows, the older ethic of family loyalty is turned on its head in the new world, and cash becomes the ethical imperative for our capacity to eat. Land and labor become “alienable” in the new world, meaning that each can be sold separately. You must become a person who values time as money and opportunity to “truckle,” rather than relationships and independence. Land becomes defined in terms of market productivity, separate from the people who may or may not live there. You come to define good in the way Benjamin Franklin did:

Remember that time is money. The man that can earn ten shillings a day by his labor, and . . . sits idle, on half of that day, though he spends but sixpence during his diversion or idleness, ought not to reckon that the only expense; he has really spent, or rather thrown away, five shillings besides. (Weber and Kalberg 2002, pp. 13–16)

So how did the ethic of cold hard impersonal cash described by Franklin become so important in the older farming world, where sentimental relationships were so central? After all, to create this new world, the older ethics of personalism, paternalism, feudalism, and tributary payments need to disappear and be replaced by the new ethic. How did this happen?

## The Rebellion of the Rich Against the Poor

The classical sociologist Karl Polanyi (1944) describes the second Great Transformation, when traditional agricultural society became the modern market economy. Polanyi describes the second Great Transformation as beginning in

England in about 1500 CE, when the rural areas began to be transformed. Polanyi writes that traditional peasant farmers were changed from being decent farmers taking care of their own families to being labor, which could be bought and sold on the open market, particularly in the new industrializing cities. Polanyi calls this a “revolution” because it upended the old unequal relationship between the feudal lord and peasant and replaced it with a world where cash, labor, land, and product could be bought and sold. He blames this change on the nobility who profited when they abandoned their responsibilities to protect “their” peasants and sold the land the peasants had considered theirs since “time immemorial” to the highest bidder. Polanyi wrote about The Great Transformation, which he called the “revolution of the rich against the poor” (1944, p. 35):

The lords and nobles were upsetting the social order breaking down ancient law and custom, sometimes by means of violence, often by pressure and intimidation. . . . The fabric of society was being disrupted; desolate villages and the ruins of human dwellings testified to the fierceness with which the revolution raged, . . . wasting its towns, decimating its population, turning its overburdened soil into dust, harassing its people and turning them from decent husbandmen into a mob of [urban] beggars and thieves. (1944, p. 36)

A new type of severe urban poverty emerged in the nineteenth century from this dispossession, even as the world became richer as a result of the Industrial Revolution. Farmers who had feudal rights to farmland since “time immemorial” were pushed off the land that produced food and into the cities where they became urban factory workers. Planting decisions were determined by the needs of the marketplace for food, raw wool, cotton, and linen needed by the textile mills. The final word was with the price-setting commodity brokers, not the farmers.

In nineteenth-century Europe, this change often meant the land was shifted to raising sheep for the wool needed in the factories of the Industrial Revolution. In India and the southern United States, vast tracts were planted to cotton. In other places, and at other times, central

governments and capitalist farmers created farms for wheat, maize, and other grains which were sold into markets and purchased by the wageworkers in the rapidly growing industrial cities. The point Polanyi made was that peasants who had had rights vis-a-vis old feudal lords in the “terrible dilemma” lost much in a world torn asunder, where the old ethics were traded for new ones. The old subsistence peasantry suffered being decent but poor farmers, but the new urban wage laborer lived or died at the whim of the industrial labor market described by writers like Polanyi (and Charles Dickens) who saw them become “a mob of beggars and thieves,” in cities like nineteenth-century London.

In feudalism, land, and the food it produced since “time immemorial,” was *inalienable* from the peasants who lived on it – meaning that feudal landlords could not kick the peasants off when they sold the land. There also was no such thing as “title.” As a result the peasants could also not sell “their” land rights nor borrow money from a bank using the land as collateral. In the older system of feudalism, the peasantry and the land were the same inalienable unit. And indeed the king might “sell” the lands (complete with peasants) to another noble, or the land might be captured in a war, but irrespective of this, the older morality of feudalism prevailed, i.e., the peasants and their heirs remained on the land, alive and producing for their own consumption and payment of tribute.

But the advent of capitalism with the separation of subsistence peasants from their farms introduced new incentives to the nobles who held legal title to the land, to move the “landless” peasants off. And indeed, this was the “Great Transformation” and “revolution of the rich against the poor” that Polanyi wrote about. For example, when cotton, flax, and wool in great quantities were demanded at the textile mills, peasants were foreclosed on. For example, in nineteenth-century Scotland, peasant land was given to the production of single cash crops, for example, sheep for wool, flax for linen, or wheat to make the bread sold to factory workers. Similar programs that required the alienation of land

from the subsistence peasants occurred around the world and, indeed, continue today in parts of Africa, Latin America, and Asia where subsistence peasantries persist (Waters 2007, pp. 155–214).

But this new ethic means that land is a commodity, which is bought and sold, and produces what the market demands, rather than what farm families need to eat during the following year. What is more, the peasants who moved into the urban labor market must rethink what work means. Is it work to independently feed you and your family? Or is it work for the generation of money? Benjamin Franklin's ethic said that money was important for its own sake, and human labor was money as measured with a stopwatch. Labor no longer meant producing personally to feed family, neighbors, nobility, or guests either. It meant truckling to other people to make a living – and as much cash as possible. “Subsistence” means buying food from the box or bin of a middleman who does not grow anything, but squeezes profit out of what others produced by “truckling” to other people rather than laboring in the earth, that most honorable of profession!

Thus, the new ethical system emerging after 1500 CE in Europe assumed that land, labor, capital, and commodity were bought and sold in the open marketplace for cash. A “spirit of capitalism” emerged, and food became only one element in a global economy, in which farms were simply capitalist factories in the field.

Watching this transformation in 1787, Thomas Jefferson framed this term in explicitly moral terms:

Those who labour in the earth are the chosen people of God. . .Corruption of morals in the mass of cultivators is a phenomenon of which no age nor nation has furnished an example. [Corruption of morals] is the mark set on those, who. . .depend . . .on the casualties and caprice of customers. . . (Jefferson 1787, pp. 164–165 quoted in Waters 2007, p. 4)

Most importantly, farming and all other economic activity were no longer like that uncomplicated seaweed growing on the floor of the sea,

or a bag of potatoes, but a finely tuned watch in which many elements were key. As for the old nobility, the new markets asked them to remove the peasantry from the land so it could be put to the most efficient economic use. They did this through evictions and foreclosure using bankers, the sheriff, and the army. In the process the old nobility and their capitalist successors no longer saw itself as benevolent patriarchal figures, but as hard-nosed businessmen for whom time, land, and production were cash. Former nobles came to see themselves as plantation owners with an interest in squeezing capitalist profit out of their investment in the land and labor.

So the new ethic is the marketplace Jefferson and Ma Wilder disdained as immoral. Food is no longer seen as the stuff of life, and farms sell their entire crop to a local grain or cotton dealer. Food is just another commodity, interchangeable with any other. This is fundamentally different from the older subsistence ethic, which valued food production on a farm above all others and in which food was assumed to be essential to social, psychological, and physiological sustenance.

The American writer Mark Twain described this change in ethical outlook most succinctly, when he described his protagonist Huckleberry Finn, the ne'er do well son of the town drunk, in the following way:

Huck was always willing to take a hand in any enterprise that offered entertainment and required no capital, for he had a troublesome superabundance of that sort of time which is not money. (Mark Twain, *The Adventures of Tom Sawyer*)

### The Emergence of the Modern Capitalist Middle Class

But this complex marketplace also permitted the emergence of the middle class which seeks its meals not from hunting and gathering, as did all of our remote ancestors before about 9000 BCE, or by farming as our more recent ancestors did until recently, but from the vast global marketplace. People still need food, but few grow much themselves, and they instead happily “truckle” for jobs in the labor market and for food at a nearby supermarket. As Polanyi put it, the

ethical transformation is as great as when a caterpillar metamorphoses into a butterfly. Farmers and consumers become reliant on the price setting undertaken at the Chicago Board of Trade, where global grain prices are set. This market system is very successful in its own way; where before about 90 % of the people produced food for everyone living in countryside and city, in the modern United States, farmers make up less than 2 % of the population and are able to produce enough for the other 98 % to eat and even more for export into world markets.

In this vast global marketplace, almost everyone (except Huck Finn) sells his or her labor for cash, not for love of family, or even a local noble. Today's farmers grow food and receive cash back to purchase their own food from the local supermarket, just like the rest of us. In this new world the ethics of the marketplace where "time is money" dominate. This applies equally to the modern capitalist farm, the modern capitalist consumer, and the modern capitalist grocery store, which all negotiate for market advantage, rather than appealing to the romantic, agriculturally based ethics Thomas Jefferson and Ma Ingalls asserted. In this vast market system, people who are strangers to each other work and produce in a fashion which benefits and feeds a vast network of people. And again, this market has advantages: The new system is extraordinarily productive, far more than the farmers like Ma Wilder who only raised what they ate, raised what they wore, and kept wood for their own warmth, and little else.

### **Food, Agriculture, and the Spirit of Capitalism**

The ethic of the underlying metamorphosis is the spirit of capitalism which sociologist Max Weber described in his book *The Protestant Ethic and the Spirit of Capitalism*. Weber's spirit of capitalism reflects the view that money and cash trumps all other considerations in modern social life – particularly those of the traditional farm where there was a close personal connection

between the producer of food and those who ate. Instead, time is money and vice versa – work is not about family loyalty, sentiment, or love. Ethics are about business and profit where a close connection between work and cash is mediated by the modern businessman and where spreadsheets describing cash flow drive patterns of consumption, production, and distribution. Ironically, in the new world, only a layabout like Huck Finn can anymore afford the luxury of "a superabundance of that sort of time that has no money." In such a world, food, even with all its cultural and ritual significance, becomes just another alienable commodity. It no longer matters who produced the grain, just that it is grain, in the same way the production of a computer is just an anonymous computer. The person who grew the grain is as irrelevant to the final user, as the person who assembled an iPad.

So the modern capitalist farm is a factory in the field, with the same ethical imperative for profit-making a textile or iPad factory has. From an ethical perspective, today's farmer is a businessman, not the romantic figure Jefferson wrote about. And yet Jefferson's romance still holds a place in the modern imagination; food production is still often privileged with special legal protections. Such protections often draw on nostalgia for the old days when farm work was sacred and more honorable than that of a truckling shopkeeper. Ultimately such ethical reasoning is still closely connected to the personalistic and paternalistic logic of feudalism, in which the role of the food-producing farmer as the base of society is honored. In this context there are continuing political demands for agricultural crop supports supplied as cash to support vast corporate-owned "family" farms, and aid for the poor is provided in the form of "food" stamps rather than cash. This reflects an ethic drawing on nostalgia for Jefferson's idealized farmer and the responsibilities of the king to provide succor to "his" peasants in times of food shortages and especially famine.

Thus, food aid for the poor is still protected in special ways in modern capitalist countries. For example, in the United States, to assist the poor,



the federal government issues “food stamps” in the form of ATM cards. In African refugee camps, surplus food harvested and bagged in the United States and Europe is personalized by stamping it with the flag of the donor and then shipped at great expense around the world, even when cheap food stocks are often available in nearby markets.

The special place the modern farmer plays in the popular imagination was illustrated, in a strange place, when the most popular television commercial played during the 2013 Super Bowl football game in the United States advertised a Dodge Ram pickup truck. The truck, made in the factories of Detroit, and sold for about \$30,000, was praised by having the popular broadcaster Paul Harvey read a poem in the commercial asserting “So on the Eighth Day, God Made a Farmer,” reflecting the special place that farmers have in America’s cultural imagination, even in suburbs and cities where the Super Bowl is watched. Ironically the four-door air-conditioned pickup truck was almost incidental to the commercial – which described the multitude of tasks that a subsistence farmer would do with horses, cows, fields, and machinery. The implication of the commercial was that, as Jefferson wrote, the farmer is indeed still the most exalted creature of God.

## Summary

Since the Agricultural Revolution began about 9000 BCE, food and agriculture have ordered relations between human beings. This entry is about the role that farming and food plays in ordering ethical behavior, with respect to issues like loyalty, sharing of food, the allocation of land, social hierarchy, and markets. Most critically, food and agriculture help define who is the “us” of the group who will be fed and who is the “them” for whom there is no obligation to feed. This entry explains how these needs changed during the two Great Transformations of human history, i.e., the transition from hunting and gathering societies to farming communities, which

began about 9000 BCE, and the second, which began only about 500 years ago, when most humans began abandoning farms, for the modern market-oriented society of today.

## Cross-References

- [Agricultural Ethics](#)
- [Economy of Agriculture and Food](#)
- [Farmer Types and Motivation](#)
- [Food and Life Chances](#)
- [Homesteading](#)
- [Human Ecology and Food](#)
- [Hunting](#)
- [Jefferson’s Moral Agrarianism](#)
- [Population Growth](#)

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## Agriculture and Finance

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### Synonyms

Agricultural finance; Commodity exchanges;  
Credit; Debt; Financialization; Lending;  
Speculation

### Introduction

The agricultural and financial sectors have long intersected with one another in various interrelated forms. These include financing for agricultural production, financial backing for trades on agricultural commodity exchanges, and financial investment in agriculture-based derivatives. Within each of these forms of financial sector interaction with the agricultural sector, the roles of states and private financial investors have shifted over time. Governments have created institutions to financially support farmers and have put in place regulations to reign in “excessive” speculation and to limit financial actor’s influence over agricultural commodity markets. In the last few decades, governments have removed many of the protections and institutions that supported farmers and relaxed regulations on financial actors. Today, the balance seems to rest firmly with private actors. These shifts have important implications for farmers, consumers, and the environment.

Agricultural finance refers to the provision of capital and credit and describes how farming, and to a lesser extent agribusiness, acquires, manages, and invests capital. Agricultural financing is unique because farming is unique. Farms are often small, family-sized enterprises, which are geographically dispersed and are dependent on

uncertain factors such as weather and access to water. Private capital is reluctant to invest in farming because it is risky in comparison to other sectors such as manufacturing or services. Consequently, governments have provided financial support for farmers in the form of loans, such as mortgages, price supports, export trade financing, and other subsidies. The term agricultural finance is also used to describe rural financing systems, which include new forms of financing based on risk management such as weather insurance.

Agricultural commodity marketing and trade are areas where private speculative capital has been very active and as a result they are contested sites. In the nineteenth century, US commodity exchanges created fungible agricultural commodities through a combination of technological innovation and market regulation (Cronon 1992). Commodity exchanges emerged from cash markets to centralize trade and facilitate commodity exports and depend on speculation to operate. Speculation is a trade based on the prediction of price movements with the uncertain possibility of a reward. As a result, speculation is risky, and trades are usually made with no intention of taking physical delivery but with the intention of resale. The US government regulated commodity exchanges in the early twentieth century in order to reduce chances for market manipulation by private actors and restrict excessive speculation.

Agriculture-based derivatives have traditionally referred to futures, a commodity exchange contract based on the future delivery of a specific type and amount of a commodity. Futures contracts are “derived” from an underlying physical commodity. Contemporary derivatives also refer to financial products, typically sold by banks and other financial investment firms that are further removed from actual commodities and commodity trade. These financial products often track agricultural commodity prices in an index, referred to as a commodity index fund, and bundled in many instances with nonagricultural commodities such as minerals and oil. In addition, some index products also include agricultural land. Most of these financial products developed in the wake of financial market deregulation in the 1980s–1990s.

Historically, the state has played an important role in creating institutions to support agriculture and to regulate finance over the past century. In the USA, financial market regulations, as noted above, included measures to keep agricultural commodity markets stable. While the activities of banks were restricted in commodity markets, legislation supporting credit unions and other cooperative endeavors were encouraged. In Europe, agrarian interests established cooperatives and credit unions to finance and support farmers. In Canada and Australia, governments established marketing boards to manage commodity trade of grains, in part to restrict the manipulation of grain markets and to provide stable prices and orderly marketing for exports.

Recent decades have seen a systematic reduction in the role of the state in these functions. Financial market regulation has been relaxed in the USA, while government marketing boards have been reformed and privatized in Canada and Australia. While the vast majority of US farm credit is held by state agencies, commercial banks' share of credit is increasing (Briggeman 2011). This move away from state involvement in financial aspects of the sector has had important implications for agriculture and farmers. Whereas farmers and agriculture shaped financial regulation in the past, there are indications that finance is now shaping agriculture and agricultural commodity markets. The implications of these changes include food price volatility, increased speculative activity in agricultural commodities, including land, increased farm debt, and declining farm incomes.

The increased visibility and intensification of these trends contributes to what many refer to as the "financialization of food." Financialization generally refers to the "(I)ncreasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international levels" (Epstein 2005, 3). Financialization is expanding into areas beyond traditional agricultural export nations such as Canada, the USA, and the EU as international organizations promote "financial inclusion" in many developing countries as

a tool for agricultural development and growth. Financialization is being extended, albeit unevenly, to new global sites, and it is accompanied by new financial actors and new kinds of financial tools.

## Agricultural Finance

Agricultural finance in a formal sense is a fairly recent development. Although there were (and are) forms of credit associated with subsistence agriculture, such as traditional money lenders, agricultural credit institutions arose with the commercialization of agriculture in the nineteenth century. Scientific agriculture arrived with a new production system that required capital for the purchase of inputs and the selling of outputs by farmers. While not unheard of, in the early part of the century, agricultural finance was of little interest to private banks (Wolff 1910). Instead, the state stepped in at this point to provide agricultural credit to support the industrial agricultural model and became the lender of last resort. Farmers organized to form cooperative agricultural banks backed by the state, and state-owned institutions such as the Canadian Farm Loan Board in 1927 were established. The US government enacted the Federal Farm Loan Act of 1916 and created Federal Land Banks. The focus of state intervention was to provide farmers with credit and to prevent farm foreclosures (Coleman and Grant 1998).

Agricultural financing continued to be supported by developed countries after the Second World War. Agricultural commodity trade expanded as exporting countries marketed grain surpluses around the globe through export financing and subsidies. Canada and Australia supported grain marketing boards which guaranteed domestic farmers' income and extended credit to importing countries. While the farmers of exporting nations benefitted from the supports, farmers in developing countries had to compete with "dumped" commodities. At the same time, many of these countries, as they gained the independence, established state marketing boards that followed on from colonial marketing agencies (Laan 1987; Bates 2005).

Government backed institutions to support agriculture dominated in the late nineteenth and early twentieth centuries, but these supports became politically unpopular in the wake of free trade and structural adjustment programs in the late twentieth century. By the 1970s, it was no longer seen to be in the public interest for governments to support and bear agricultural risk. The structural adjustment programs and free trade agreements of the 1980s and 1990s delegitimized state institutions by describing them as inefficient, anticompetitive, and too expensive (Baveria and Bello 2009). A coalition of agricultural producers, commercial banks, and federal ministry officials pushed for the dissolution of state agencies (Coleman and Grant 1998). For example, in Canada, the crown corporation Farm Credit Canada was restructured to align with private credit in the 1980s and began to extend credit to agribusiness and processors. A similar pattern occurred in Brazil. Structural reforms in the early 1990s displaced domestic credit agencies and encouraged foreign direct investment by agri-food corporations (Kumar and World Bank 2005).

As a result of these changes, agricultural credit shifted from being primarily state supported to the private domain and increasingly global capital (Coleman 2004). In the USA, state-supported agricultural credit has been declining and private financing is increasing. The farm credit system holds a significant amount of debt, but since the 1990s private credit has been increasingly funding farm operations (Briggeman 2011). In addition, new sources of credit are being offered to farmers, for example, machinery suppliers are providing loans, and grain corporations are providing loans and forward contracts to secure supplies.

While there are indications that private financial institutions and actors are providing credit to farmers in OECD countries, there has been less success in low income countries. Economists have long linked access to credit with the adoption of agricultural technology and innovation. In addition, some economists have highlighted how the lack of agricultural finance reinforces “poverty traps” and advocate for risk-based finance

programs (Sachs et al. 2004; Dercon 2005; Barnett et al. 2007). As a result, international development agencies and banks have developed a number of programs to encourage private finance to support agriculture and boost “financial inclusion” (Aitken 2013, e.g., [www.gpfi.org](http://www.gpfi.org)). These projects include structured trade and value chain financing (Miller 2011; McMichael 2013), programs to encourage the reform of collateral laws and land titling (World Bank 2012) and microfinance (Aitken 2013). Importantly, all these development programs are premised on debt (Shipton 2010).

## Commodity Exchanges

The link between financial investors and trade in agricultural commodities has a long history. Futures exchanges for agricultural commodities were established in London in the eighteenth century and in the USA in the nineteenth century, as an outcome of globalized trade. These markets provided a means by which buyers and sellers of contracts could purchase and sell agricultural commodities for delivery at a date in the future and could hedge their risks against the uncertainty of trade. In addition, the contracts established quality, delivery dates, and ownership. By the mid-nineteenth century, the practice of commodities futures trading became widespread.

Commodity exchanges centralize and organize markets, commercialize agriculture, and provide important services such as price information and risk protection. Furthermore, as government support has waned for agriculture, proponents of commodity exchanges state that these services can and should be extended to farmers. In particular, farmers who have difficulty accessing credit can use the services of commodity exchanges to manage risk and raise capital. However, commodity exchanges also have critics.

Historically, farmers and farmer organizations have been distrustful of commodity exchanges, and agrarians were the first and primary critics of large-scale markets speculation. Although many

states had outright banned futures in the USA, by the late nineteenth century, the fictitious or paper trade of futures contracts had overwhelmed the physical trade of commodities in centers such as Chicago (Cowing 1957). For example, a contract would be written on a bale of cotton or a bushel of corn that had not yet been harvested, but a contract representing that corn could be traded many times over with multiple bets on price movements. Financial speculators benefitted from credit that enabled them to buy contracts with less than 10 % of the value of contract.

The debate on whether commodity exchanges are necessary for agricultural commodity marketing and financing pivots on who one thinks should benefit from futures trading. Early commodity exchanges were initially developed by grain traders and large grain farmers and included grain elevator operators, railway companies, and food processors such as millers. Proponents of commodity exchanges argue that trades are based on probability and science and require expertise to understand how futures work and that futures can provide insurance for these operators (Mathieson 1942; Berg 2011). For example, hedging can be used to manage risk and insure against unexpected commodity price swings. Although there have been many efforts to make commodity exchanges more attractive to smaller farmers and other agricultural producers, only the largest producers are regularly active on the exchanges, and activity is mediated by brokers. The utility of commodity exchanges is open for debate, and the debate often revolves around the role of the financial speculators who provide the needed capital to keep agricultural commodity trade liquid.

Agrarian movements were critical to developing unique forms of financial regulation and legislation in the USA and Canada (Prasad 2012; Sanders 1999; Carney 2011; Winson 1992). The US Grain Futures Act of 1922 and the 1936 Commodity Exchange Act sought to limit manipulation. These regulations required all futures trading take place on approved exchanges, mandated daily reporting by traders on their activities, and implemented “position limits” on financial speculators operating in these markets which

controlled the number of futures contracts they were legally allowed to hold at any time. In addition, the 1933 Glass-Steagall Act regulated banking and speculation by banks. The aim of the legislation was not to outlaw financial speculation on these markets, but rather to prevent “excessive” speculation that might result in market manipulation and sudden sharp price shifts (Clapp and Helleiner 2012). Since 1974, the Commodity Futures Trading Commission (CFTC) has been the regulatory body overseeing these regulations in the USA.

The liberalization of financial markets in the 1980s–1990s resulted structural shifts in agricultural commodity markets. For example, the 2000 Commodity Futures Modernization Act (CFMA) brought in changes to rules that relaxed position limit and reporting rules. Commodity exchanges also underwent significant organizational and technological changes in recent decades. Exchanges have shifted from discreet, voluntary self-governed associations, to multinational, publicly traded corporate models with a responsibility to shareholders and profits. The trend among the exchanges toward consolidation occurred alongside investments in new exchanges in Asia, Africa, and Eastern Europe. The new exchanges are supported and promoted by international organizations as development programs and as a support to farmers. In addition, deregulation has facilitated new financial tools and actors.

## Agriculture-Based Financial Derivatives

Although tight regulations on the agricultural commodity futures trade had been in place for over 50 years, the relaxation of those rules in the 1980s and 1990s enabled banks to sell new financial products linked to agricultural commodities (Ghosh 2010). The combination of relaxed position limits and exemption of off-exchange (over-the-counter, or OTC) derivatives from reporting, in particular, fuelled the creation of new financial products that burst onto the scene without regulators being aware of its size and scope. Finance and specifically derivatives growth are increasing in emerging markets. Importantly, commodity



exchanges in the industrialized countries are dominated by financial products, but Southern exchanges are dominated by agricultural contracts.

A common agriculture-based financial derivative product that banks began to sell is known as a “commodity index fund” (CIF). CIFs track changes in the prices of a bundle of different types of commodities as an index. The index is made up of the prices of agricultural commodities, minerals, livestock, and petroleum products. Typically, agricultural products account for around one third of the value of these indices. CIFs enable investors to gain exposure to commodity markets without being required to purchase the actual commodities on exchanges. The Standard and Poor’s Goldman Sachs Index and the Dow Jones-AIG Index are some of the more popular CIF products on the market (IATP 2012; De Schutter 2010). The sale of these financial products poses real financial risks for banks that sell them, because they must pay out to investors if prices rise. To hedge these new financial risks, the banks began to purchase commodity futures contracts on commodity exchanges – which they became able to do with a relaxation of position limits. The ability to enter the commodity markets enabled them to gain financially if prices rose and thus to be able to make the payments to investors.

Around this time, banks and investment houses also began to offer other kinds of financial derivative products linked to the agricultural sector, including funds in commodities as well as farmland and agriculture-based firms (Burch and Lawrence 2009, 271–2; McMichael 2012, 988–91). BlackRock, the world’s largest manager of assets, for example, established its Agriculture Fund in 2007 that invests in a range of agriculture-based assets, including commodity futures, farmland, agricultural input firms, and food processing and trading companies. General agricultural funds typically bundle these investments into an index in which retail and institutional investors can purchase shares. Some of the new agriculture funds specialize specifically in farmland acquisition. Some 66 funds now include land in their investment portfolios (Buxton et al. 2012).

Large agricultural commodity trading firms have also begun to sell agriculture-based financial derivatives. The largest grain trading companies – Archer Daniels Midland, Bunge, Cargill, and Louis Dreyfus – are heavily engaged in the agricultural derivatives market (Murphy et al. 2012). Commodity trading firms tend to have an information advantage in the futures markets because they are often the first to know of impending crop shortages or other interruptions to agricultural trade (Meyer 2011).

The increased activity of financial actors after the passage of the CMFA in 2000 is reflected in the growth of agriculture-based derivatives. The total assets of financial speculators in agricultural commodity markets increased from US \$65 billion in 2006 to some US \$126 billion by early 2011 (Worthy 2011, 13). Similar to the late nineteenth century, fictitious or paper trade of future contracts has exceeded the physical trade of commodities by many times. In the US wheat future market, for example, financial speculators’ share of the trade increased from 12 % in the mid-1990s to 61 % in 2011 (Worthy 2011, 13). In the coffee market it is estimated that 1 kg coffee is traded 8,000 times over in speculative trade (Breger Bush 2012, 40).

The main investors in these new agricultural commodity derivatives products are large-scale institutional investment funds that are seeking to gain exposure to commodity markets. Previously, the commodity markets in the USA restricted investment by banks, but the combined relaxation of banking regulations in the 1990s by the CFMA opened agricultural commodity investment and speculation to a whole new set of financial actors. Institutional investors include insurance companies, pension funds, mutual funds, hedge funds, sovereign wealth funds, and university and foundation endowments. These investment funds pool their resources, which enables them to expand and diversify their investment options while sharing transaction costs (Burch and Lawrence 2009, 272–3; Clapp 2014). Large-scale investors tend to make long-term passive investment decisions that do not require active management and do not always have detailed knowledge of their own investments. Some estimates put agricultural

investments of pension funds at around US \$320 billion, which is up significantly from the US \$6 billion they held in investments in this sector in 2002 (Buxton et al. 2012, 2).

### Implications of a Reduced Role for the State

Whereas the state took a strong role in providing institutions and regulation at the intersection of the financial and agricultural sectors in the past, in recent decades we have seen private actors take a front seat in agricultural finance. Private financial investments linked to agriculture have direct consequences for the physical commodity markets – production, pricing, storage, and trade – and in turn these changes have important consequences for farmers, consumers, and the environment.

Agricultural financing is increasingly being directed to agribusinesses and other “industrial” targets. At the same time, industrial farming requires an increased amount of capital to fund day-to-day operations, medium-term credit for major equipment purchases, and long-term credit for land purchases and development. In turn, farmers are signatories to contracts linked to these companies for inputs, machineries, and lines of credit. While access to credit is said to lead to the adoption of agricultural technology and innovation, an additional implication of credit is debt. Farm debt is on the rise in Canada and the USA. Whereas some economists have suggested lack of credit leads to “poverty traps,” there are also indications that rising levels of debt are also a kind of “poverty trap.” The dependence on agribusiness for inputs and financing can restrict farmers’ ability to determine farming methods independently. Instead, agricultural finance is flowing to less risky corporations and private industry. Farm corporations (Magnan 2011) and large-scale land acquisitions (McMichael 2012) are linked directly to international capital and markets. The volatility of those markets is making it very difficult for independent farmers to operate.

The financialization in the food system has also been widely seen as a factor in volatile

commodity prices, as agricultural and food prices tend to react and follow trends in financial markets. As more money was invested in commodities after 2000, food prices began to climb rapidly. In the 2006–2008 period, average world prices for rice rose by 217 %, wheat by 136 %, maize by 125 %, and soybeans by 107 % (Cassara et al. 2008). Although some analysts see no link between rising financial speculation and food prices (Irwin and Sanders 2011), others are concerned that speculation rather than supply and demand is shaping prices (IATP 2012; Clapp 2009). There is now growing recognition among international organizations that speculation in agricultural commodity markets exacerbates price trends. The Bank for International Settlements noted, for example, that financialization influences commodity prices, especially in the short term (2011). Several UN reports have also recently come to a similar conclusion (De Schutter 2010; UNCTAD 2011). This volatility has important implications for consumers, especially in developing countries that are increasingly reliant on imported foodstuffs. As food prices rose in 2007–2008 and again in 2010–2011, hunger and social unrest became key concerns for governments.

Financialization in the agricultural sector has also been associated with the global land rush. Financial investors have been identified as major actors in the rise in large-scale agricultural land acquisitions (McMichael 2012; Daniel 2012). Paradoxically, financialization has made investments in agricultural production appear to be both more secure than financial investments and provides a way to minimize risks associated with volatile agricultural commodity prices. The development of new financial instruments has also made the involvement of financial investors in land much easier. Investors can invest financially in new kinds of land-based derivatives such as agricultural index funds and land index funds without taking the risk of owning the land directly and individually (Burch and Lawrence 2009; McMichael 2012). They acquire exposure to the productivity of the land through intermediaries such as large investment banks, and hedge funds (GRAIN 2008). Investor acquisition of

large tracts of land is associated with both social and ecological consequences. Smallholders are often displaced from lands that they have traditionally occupied and land is often cleared of forests for large-scale industrial production of both food and biofuel crops which have implications for climate change, soil erosion, and biodiversity loss (White et al. 2012; Cotula 2012).

## Summary

The risks associated with agriculture remain. In fact, it could be argued with climate change that the risks of agriculture have increased with severe and unpredictable weather events. What has changed is that agricultural finance has shifted from state support for farmers to support for financial actors and international capital. The dominance of financial actors is expected to increase as capital has become essential to modern agricultural production. In turn this will encourage intensive agriculture that is reliant on chemical and petrochemical inputs over low-input sustainable practices.

The combination of a balanced public and private interest in agriculture provided a long period of commodity price stability during a good part of the twentieth century; however, recent price volatility has benefitted the speculators, but there is less evidence that producers have benefitted. The best that producers can hope for is to “hedge” against price swings often at considerable costs. For smallholders, alternative financing models such as microcredit are becoming more entangled in global financial markets (Aitken 2013), and there is little evidence that derivatives are beneficial (Breger Bush 2012).

## Cross-References

- [Agricultural Cooperatives](#)
- [Farm Management](#)
- [Vertical Integration and Concentration in US Agriculture](#)

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## Agriculture of the Middle

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## Synonyms

Collective marketing; Disappearing middle;  
Emerging markets; Farmers of the middle; Mid-  
sized farms; Values-based food supply chains

## Introduction

This entry focuses on ethical issues associated with the decline and potential renewal of mid-sized farms and ranches in the USA. The “disappearing middle” was first identified in the 1980s. Contemporary attention to the dynamics of this declining farm sector is accompanied by strategies for renewing an “agriculture of the middle.” A national agriculture of the middle initiative posits a threefold approach to rebuilding the middle sector of the US farm and ranch structure through new business and marketing strategies, particularly those identified as

“values-based” food supply chains, public policy changes, and research and education support.

Ethical considerations focus on five areas: (1) diversity, resilience, competition, and opportunity in agriculture; (2) fairness and equity through the supply chain; (3) consumer choice and control; (4) environmental stewardship and ecological health; and (5) rural vitality.

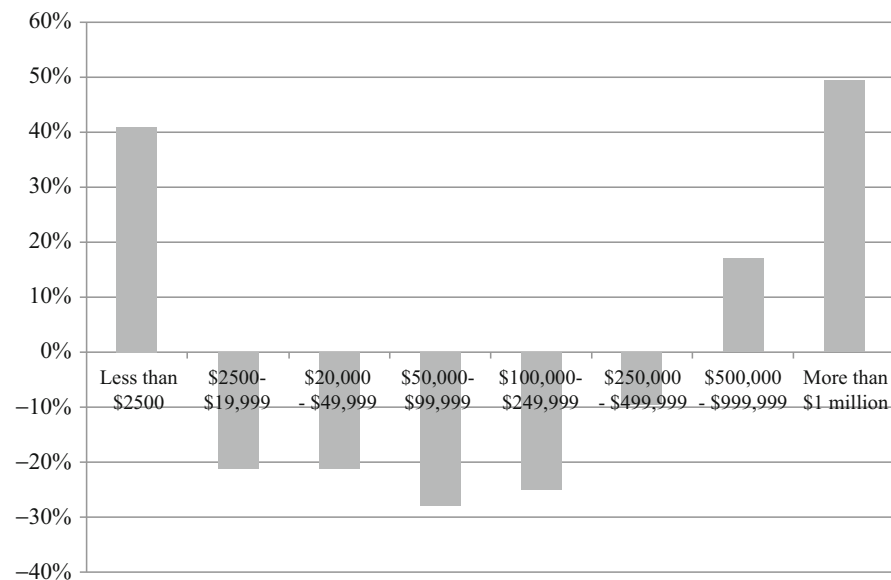
## The Disappearing Middle of the US Farm Structure

The origin of the concern about mid-sized farms is the “disappearing middle” hypothesis which arose in the early 1980s following the release of a US Department of Agriculture (USDA) report. This report clearly delineated three categories of farms: small (gross annual sales between \$5,000 and \$40,000 in 1981), large (sales over \$250,000), and medium sized (sales between \$40,000 and \$250,000). The hypothesis stated that mid-sized, full-time family farms in the USA were declining in numbers and in the percentage of total number of farms. The decline in competitiveness of medium-sized farms had many causes such as government policy, changing patterns in agriculture – especially shifts to large-scale farming based on wage labor – and global economic changes. More specifically the structural change was attributed to off-farm work and part-time farming, a decline in the impetus to hold onto family farms and an increase in the concentration and centralization of capital.

What experts found interesting at the time was the continuation of family farming despite all the elements working against it and despite the fact that classic family-type farms typically were not in the position to enjoy either the advantages of bigness or of smallness (Buttel and La Ramee 1991). Since the analysis in the 1980s was that large farms produced most of the food and were more efficient and that small farms did not need farm programs, the primary policy issue was how to help medium-sized farms. Those addressing this dilemma however, according to Strange, needed to recognize that size and scale are less important than fair competition, economic



**Agriculture of the Middle, Fig. 1** Change in farm numbers by sales category, 1997–2007 (\*All farm sales categories adjusted for inflation using the Consumer Price Index. Source: USDA 1997 and 2007 Census of Agriculture)



opportunity, growth and expansion, and the exercise of economic power (Strange 1988).

Farms and ranches that have historically formed the backbone of US agriculture continue to disappear. Categorized by sales (as in the 1980s), today's disappearing farms have gross annual sales between \$2,500 and \$500,000. This sector includes many "farming occupation" farms where the farm operator considers farming as his or her primary occupation. In contrast, large family and nonfamily farms with annual sales above \$500,000 and small part-time operations with annual sales below \$2,500 have increased. Figure 1 shows the national profile of these disappearing farms between 1997 and 2007.

Knowledgeable observers attribute many of the current difficulties these farms face to their increasing inability as individual enterprises to effectively compete in increasingly concentrated and globalized markets for generic agricultural commodities. For example, increased concentration in the food retail sector puts pressure on food processors to reduce their "transaction costs" by giving larger farmers market preference. It is cheaper for them to buy 10,000 hogs from one farmer than it is to buy 1,000 hogs from ten farmers.

At the same time, these farms often cannot market directly to consumers because they are too large (volume of product), not suitably

located geographically, or not producing products that can be directly marketed (Kirschenmann et al. 2008). Most of the farms and ranches that fall into this "market access gap" are in the \$50,000–\$500,000 sales category. The term "farms of the middle" will be used in this entry to describe this marketing middle. As mentioned above, historically farms of the middle have been the mainstays of the agricultural sector in many areas of the country. These farms and ranches remain important for a number of reasons. As of 2007, farms with sales between \$50,000 and \$500,000 constituted nearly 17 % of all farms and generated 22 % percent of total US farm sales. Farms of the middle are particularly important environmentally because they manage 40 % of all land in farms (USDA 2009). In addition these farms and related agribusinesses provide important economic contributions to many rural and peri-urban communities and represent a key component in maintaining a diverse, decentralized, and resilient structure of agriculture (Goldschmidt 1978; Strange 1988; Walker and Salt 2006).

### Renewing an Agriculture of the Middle

Recognizing the need to create strategies that support farms of the middle, farmers, academics,

businesspersons, leaders of nonprofit organizations, and USDA employees convened a 22-member task force in 2003. The task force formulated a threefold approach to rebuilding this middle sector: (1) new business and marketing strategies, (2) public policy changes, and (3) research and education support. The following year, the task force became the national agriculture of the middle (AOTM) initiative. (For a detailed discussion of the national task force's approach and the composition of the AOTM initiative's coordinating committee, see the AOTM initiative's website at <http://www.agofthemiddle.org/>.)

The founders of the AOTM initiative believed that shifts occurring in the consumption sector of the food supply chain could provide significant marketing opportunities for renewing farms of the middle. AOTM initiative participants agreed that a broad approach and new business models were needed to revitalize this declining farm sector (Lyson et al. 2008). It was decided to engage the farms-of-the-middle dilemma through a food supply chain framework. A *food supply chain* is a network of food-related business enterprises in which food products move from production through consumption, including preproduction and post-consumption activities. Typical links in a supply chain are as follows: input suppliers, producers, processors, distributors, wholesalers, retailers, consumers, waste removal, and recycling. A *values-based food supply chain model* was adopted in which farms of the middle and other agri-food enterprises in the supply chain develop strategic business alliances based on particular values. The developers of the model drew from the business literature of other sectors such as automobile and consumer electronics. In these sectors, values-based supply chains are defined as long-term networks of partnering business enterprises working together to maximize value for the partners and end customers of a particular product or service (Stevenson and Pirog 2008). In the business literature, these long-term inter-organizational relationships are also called "strategic alliances," "integrated value systems," and "value-added partnerships" (Handfield and Nichols 2002).

In the agri-food arena, these supply chains (a) handle significant volumes of high-quality, differentiated food products; (b) treat farmers as strategic partners, not as interchangeable (and exploitable) input suppliers; (c) operate effectively at regional (multistate) levels; and (d) distribute rewards equitably among the strategic partners. The model places emphasis on *both* the values associated with the food *and* on the values associated with the business relationships within the food supply chain. The chains rely on organizational structures that achieve the necessary volumes of high-quality, differentiated food by aggregating product from multiple farms or ranches and may operate at a regional rather than local or national level. Scale is achieved through collective action rather than by increasing the size of individual farms. Another important characteristic of values-based food supply chains is an emphasis on shared vision, shared information (transparency), and shared decision making among the strategic partners. These represent commitments to the welfare of all partners in the supply chain, including fair profits, fair wages, and business agreements of appropriate extended duration. Also critical is the achievement of efficient supply chain management and logistics, including product marketing, aggregation, processing, distribution, and accounting. A result is that farmers in these strategic business alliances regularly function as "price negotiators," as distinct from "price setters" in direct marketing, and "price takers" in commodity marketing systems.

### Emerging Market Opportunities

From the 1970s consumers have expressed increased interest in purchasing food that is unique and differentiated from conventional products. Products may be differentiated by attributes such as organic, grass fed, or regionally sourced (Painter 2008) or, following Europe's lead in the concept of fair trade, by emphasizing social justice and environmental responsibility (Jafee et al. 2004). Restaurants and cafeterias of public and private institutions such as healthcare facilities, schools, universities, and corporations are particularly receptive to these types of food

products, as are regional supermarkets and some national retail chains.

AOTM proponents recognize that farms of the middle have a potential comparative advantage in these emerging markets. Individual direct-marketing farms are not designed to produce the necessary volumes required for these new markets, and commodity farms are not designed to produce the necessary quality and differentiation. Farms of the middle, on the other hand, have both the capacity and flexibility to cooperate with each other and collaborate with other supply chain partners to respond to these expanding markets. In this context, the agriculture-of-the-middle strategy can best be understood as a “marketing middle” or as a third tier between direct and commodity marketing (Stevenson et al. 2011). It is important to point out that middle marketing strategies can productively involve farms and ranches that are both smaller and larger than the statistical sales range used above to define “farms of the middle.” In other words, this “marketing middle” is scale related but not scale determined.

### Research and Policy

It was understood that these emerging enterprises had to be supported by relevant research and changed policies. Researchers associated with the AOTM initiative began in-depth case studies of several on-the-ground food supply chains that were testing new business and marketing models. (See the AOTM website for case studies of successful values-based food supply chains in the meat, dairy, grain, and vegetable sectors.) In summary, the research suggests (Stevenson et al. 2011) that successful values-based food supply chains are built on a foundation consisting of the three elements described earlier: (1) appropriate volumes of high-quality, differentiated products with engaging stories; (2) strategic business partnerships based on trusting, transparent relationships; and (3) effective supply chain management and logistics across the supply chain.

Researchers also discovered that to be successful, values-based food supply chains must overcome some unique challenges such as finding appropriate value chain partners; developing

mechanisms for supply chain decision making, transparency, and trust; and determining appropriate strategies for pricing products based on understanding the costs of production and other factors. They also must do what other businesses do in determining effective strategies for product differentiation, branding, and regional identity. They must acquire adequate capitalization, competent management, and effective leadership succession strategies; develop, monitor, and document consistent environmental standards throughout the supply chain; and develop effective quality control and logistical systems.

For over 10 years the research component of the AOTM initiative has been organized around a USDA-sponsored, multistate project composed of approximately 20 researchers from land-grant universities, other institutions, and research organizations. A full description of the current multistate project is available (USDA 2012), as is a high priority agriculture-of-the-middle research agenda developed through interviews of 50 researchers around the country (see Clancy and Lehrer 2010).

The need for policy change was also evident at the beginning of the AOTM initiative. Working through the National Sustainable Agriculture Coalition, language bringing attention to mid-scale farms was inserted into several USDA research and grant programs, and there has been more attention to regional farms and food systems across the Department of Agriculture.

### Ethical Considerations

Ethical issues were raised about the “disappearing middle” in 1987 in a collection of essays titled “Is there a moral obligation to save the family farm?” (Comstock 1987). The greatest concerns were the loss of a way of life and an important American tradition, and the fact that many economic sectors tied to family farms would also suffer. The AOTM initiative was not begun out of ethical concerns, but rather out of market concerns. However, numerous ethical considerations have developed as the AOTM business models evolve. In addition, emerging

AOTM marketing strategies manifest new paradigms that have ethical considerations.

Values-based supply chains veer from the trajectory of US agriculture along practical as well as ethical dimensions. Much of the behavior in US agriculture since its industrialization in the twentieth century has been determined by an implicit goal – namely, maximum, efficient production for short-term economic return. The achievement of that goal was largely accomplished by pursuing three strategies: specialization, management simplification, and economies of scale. Operating by this single mandate, business enterprises (including farming) were encouraged to “externalize” related negative consequences such as, in the case of farming, soil erosion, contaminated water, and loss of biodiversity. If some unintended negative consequence resulted from the commitment to this singular goal, it was simply set aside and ignored. Consequently the predominant ethic that emerged among farmers who were forced to operate by this singular mandate was a utilitarian one – that is to “produce as much as possible, regardless of the cost” (Thompson 1995).

This approach has become increasingly dysfunctional in agriculture. Farms are biological organisms. Externalized costs ultimately can affect the biological functions of farms with negative economic results. For example, eroded soils ultimately require more fertilizer input to achieve maximum production, resulting in a negative effect on the economic performance of the farm as well as damage to the environment. Some leading economists and investment advisors have, in fact, begun to recognize the need to examine these unintended consequences. They suggest an alternative value set for the marketplace, not just in agriculture but in all aspects of the industrial economy. Porter and Kramer (2011), for example, have argued for a paradigm shift in the way business is conducted. They write that the USA has reached a point where social and environmental capitals have been degraded to an extent that they can no longer be externalized. Consequently a new kind of capitalism must now be considered, one that is based on what they call

“shared value.” The “new capitalism” incorporates societal and environmental needs (not just economic needs) into its business model, where environmental and social health is integral to economic health.

Such a shared value perspective, or ethic, especially relates to agriculture in that it emphasizes improved growing techniques and seeks to strengthen local and regional suppliers and other support institutions to increase farmers’ efficiency, yields, product quality, and overall sustainability. This leads to more revenue and profits for both farmers and the companies that buy from them (Porter and Kramer 2011). In a similar vein, continuing to manage our agriculture and food system in ways that marginalize labor and raw materials in order to reap huge profits farther up the food chain is no longer sustainable (Grantham 2011). Given the depletion of essential natural resources (especially fertilizers and water), unstable climates, and the erosion of soil, it now will be essential to invest in farms, soil, and other essential resources in order to achieve successful investment returns.

Five ethical considerations are embedded in the agriculture-of-the-middle ideal. The first two are elaborated in the above text and summarized here.

### **Fairness and Equity Throughout the Supply Chain**

The fair treatment of supply chain partners is certainly a new ethical approach to business. Values-based supply chains place emphasis on such considerations as prices based on margins above farmers’ production costs and longer-term and stable contracts with producers, as well as other fairness- and equity-based transactions. Examples of these arrangements include the following: Shepard’s Grain, Country Natural Beef, and Red Tomato (see AOTM website, as noted above).

### **Consumer Choice and Control**

In the AOTM model farmers and other supply chain partners are not the only beneficiaries. Preliminary research suggests that citizens can and do reap rewards from this new approach. AOTM

provides food buyers – whether the end consumer or intermediary purchaser – with additional options to act on their values. As with other food product differentiation frameworks such as organic and “local,” successful values-based supply chains provide customers and consumers with information regarding food qualities, farming practices, and business values through in-store messaging, on-farm visits, and user-friendly websites.

Three additional ethical dimensions of the agriculture-of-the-middle ideal concern the vitality and resilience of farms, communities, and the environment as elaborated here.

### **Diversity, Resilience, Competition, and Opportunity in Agriculture**

Marketing clusters of farmers linked together based on shared values foster conditions that promote new ethical goals. First, these new clusters create economies of scale that can lessen the economic advantages of large farms over mid-sized farms with regard to transaction costs such as for transportation, accounting, or advertising. At the same time such clusters retain the advantage of smaller farms that have greater flexibility to adapt to changes, making them more resilient. For example, Country Natural Beef recently sought animal welfare certification because of increased consumer interest in certified meat.

As noted, concern for farms of the middle emanated from the dramatic decline in the number and vitality of these farms. While the initial impulse was largely market driven, the broader context embraced concern for the structure of agriculture as a whole. A farm structure comprised of only very large and very small farms is less diverse. Experts have shown that diversity in farm structure fosters resilience, competition, and opportunity. Farms of all sizes are needed – particularly those that can respond to the other value considerations articulated here. Finally, healthy competition by aggregations of midsize farms can offset trends toward consolidation and away from competition. As Strange (1988) suggested was necessary 25 years ago, farms of the middle can aggregate economic power to compete in the marketplace.

### **Environmental Stewardship and Ecological Health**

The ideal AOTM farm should foster ecological resilience, although research shows no evidence at present that mid-scale farmers are more ethical than small- or large-scale producers in their approaches to stewardship and marketing (James and Hendrickson 2010; George 1991). Ecosystems are constantly changing and so the biological functions within them, including farming, constantly change. In fact, as resilience thinkers are now pointing out, all systems – economic, social, and biological – always go through adaptive cycles (Walker and Salt 2006). Given such changing environments, adaptive management rather than control management is critical to sustainability, and midsize farms integrated into values-based supply chains may demonstrate this flexibility.

### **Rural Vitality**

In a review of 70 years of research on farming and rural community well-being, social scientists found consistent support for the argument that midsize, family-organized farms and ranches are strongly associated with positive measures of community economic development, quality of life, civic participation, and environmental outcomes (Lobao and Stofferahn 2008). Measures of community well-being included population and employment growth, family incomes, poverty rates, quality of schools and public services, and number of churches, civic organizations, and retail establishments. These positive associations suggest that farms of the middle tend to buy and sell locally and regionally, which increases the circulation of dollars within communities and regions. They also suggest that family members of farms of the middle provide support and leadership for community-based organizations such as schools, churches, and business associations.

### **Trends and Challenges**

This new way of doing business in agriculture, as elsewhere, may eventually create a new culture



based on a “generative economy” that is dedicated to a flourishing of life for all individuals in a community, rather than an “extractive economy” which only seeks to extract as much individual wealth as possible from one’s social and ecological neighborhood. Within US agriculture there are promising trends such as the rise in interest in alternative and regional supply chains, networked systems for producers, and aggregating “food hubs” that target midsize farmers (Barham 2012). To date, most studied values-based chains are in fact hybrids in that one or more of the partners are “conventional.” For example, Archer Daniels Midland is a milling partner in the Shepherds Grain food supply chain. This underscores the contention that developing these new models is a complex and iterative process.

There are other challenges and unsolved problems. Conventional agriculture and traditional business supply chain models are firmly entrenched. Policy tools to leverage changes that would foster favorable conditions for these new models are so far inadequate. The logistics around pulling together and sustaining successful values-based supply chains are formidable and in the early stages of development.

It is not known whether the trends described in this entry will continue on a positive or negative trajectory. New surveys will show whether the rate of decline in mid-sized farms has eased, whether the numbers of values-based food supply chains continues to grow, and whether the demand for these types of products will increase. Purchases of organic foods continue to rise, but only a few organic enterprises have adopted a transparent business model. Markets very likely will grow as a result of the development of food hubs. They will probably grow if more attention is paid to regional food systems which operate at a larger scale than local food systems. They are more likely to contain numbers of mid-sized farms that can supply larger volumes of food and support more values-based supply chains (Ruhf and Clancy 2010).

The economics of the situation are also hard to predict. In a time of high commodity prices to farmers some will leave values-based supply chains, but it is unclear what will happen when

the prices inevitably drop. Energy prices may remain high enough that national and global food transport is reconsidered and more regional food supplies demanded.

## Summary

There are five important ethical areas associated with the decline and potential renewal of “the middle” of the US farm structure. Renewal prospects are based on emerging markets for significant volumes of high-quality differentiated food products for which farms of the middle appear to have a comparative advantage if organized effectively. Values-based food supply chains offer promising business strategies and organizational structures to engage these new markets. Case studies demonstrate successful values-based supply chains in the meat, dairy, grain, and vegetable sectors. Public policy changes as well as research and education are needed to support these alternative business structures. There are challenges associated with the continued growth of values-based supply chains.

## Cross-References

- [Farmer Types and Motivation](#)
- [Farms: Small Versus Large](#)
- [Local and Regional Food Systems](#)

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## Alcohol Abstinence and Sobriety

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## Synonyms

Alcoholism; Recovery; Temperance; Teetotalism

## Introduction

In its most basic form, alcohol is the product of the natural fermentation of sugars by yeast. The first time a human ate fermented berries or honey is not known. What is known is that mead, which is fermented honey, is one of the oldest alcoholic beverages. Ale and wine also made very early appearances on the beverage scene. Alcohol has been both an ingredient in the cooking and preparation of food and an accompaniment or complement to food.

Alcohol abstinence is the categorical refusal to consume alcohol as a beverage or as an ingredient in food preparation.

Sobriety is a term that people use who have changed their consumption of and relation to alcohol. Most often, the term is used by those who previously had consumed alcohol in troubling, harmful, or unhealthy ways.

People abstain or practice sobriety for a variety of reasons. The most commonly cited

reasons for not drinking include concerns about the effects of alcohol on physical health, religious prescriptions against alcohol's consumption, and moral and social concerns about alcohol's effects on self and others. Alcohol is a disinhibitor. That is to say, alcohol lessens or lowers a person's inhibitions. She may find herself saying or doing things that she normally would not. It may cause her to take physical risks (health) and engage in behaviors that are regarded as sinful (religious) and that affect her character (moral) or damage her relations with others (social). While some of the reasons against the consumption of alcohol are free-standing and independent, in many cases that intertwine in complicated ways.

This entry first briefly examines the positions of five prevalent faith traditions (Islam, Hinduism, Judaism, Christianity, and Mormonism). Then the temperance and teetotaling movements that began in the early nineteenth century will be explored, highlighting the confluence of religious, moral, and scientific concerns about the consumption of alcohol. Temperance and teetotalism functioned on local and national levels. Some of the immediate- and longer-term effects of alcohol on health will be discussed. The World Health Organization has identified harmful alcohol use as a global problem. While the use of alcohol presents significant public health concerns, it is individuals who make the decision to change their relationship to alcohol. One may practice abstinence while others practice harm reduction or moderation. Some people choose sobriety, which may or may not involve abstinence. The final section explores some personal decisions individuals make about the consumption of "nonalcoholic" beverages and the use of alcohol in food preparation.

## Religious Views of Alcohol Consumption

### Islam

The use of alcohol and participation in gambling are two activities that are expressly prohibited in the Qur'an 5:90. In this passage, alcohol and gaming are identified as the handiwork of Satan that will cause a person to turn away from God.

### Hinduism

There is no specific ban on the consumption of alcohol in the Hindu tradition. There is, however, a large recognition that alcohol can be powerful and significantly alter one's dharma, which is the upholding of the proper order of one's self, one's place in society, and the universe as a whole. The consumption of alcohol can upset that order and balance (Dasa 2007).

### Judaism

Wine is used in many Jewish rituals and holidays. Some interpreters of the Talmud argue that the "tree" of knowledge from which Eve is purported to have eaten the apple was really a grapevine. It was the consumption of this fruit that led to the fall of Adam and Eve. For Judaism, alcohol can be both used as a holy beverage and used in times as celebration. Judaism also recognizes the destructive capacity of alcohol (Posner 2009).

### Christianity

Like Judaism, wine plays a particular role in religious observance. In Catholic masses, for example, the wine is taken as the blood of Jesus Christ, the son of God. In other Christian denominations such as Lutheranism, the wine is a symbol of the blood of Jesus. As is the case with Judaism, wine and other alcoholic beverages have a great capacity for destructive behavior and suffering, some of which might be deemed sinful.

### Mormonism

Jesus Christ of the Latter-Day Saints, more commonly known as Mormons, believe that God gave a commandment known as the "Word of Wisdom" to Joseph Smith in 1833. In the Doctrine and Covenants 89, this commandment affirms that humans' bodies are a precious gift from God and therefore the use of tobacco, alcohol, coffee, tea, and illegal drugs is prohibited.

While some of these religious traditions have an outright ban on the consumption of alcohol and others not, there is a common thread that alcohol's consumption might bring about sinful behavior or be very morally destructive to the individual and harmful to the social order. These concerns converged in the temperance

and teetotalism movements of the nineteenth century. This is also the first time that science- or medical-based concerns are woven into religious and moral arguments against the consumption of alcohol.

### **The Temperance and Teetotalism Movements of the Nineteenth Century**

In the early nineteenth century in England and the United States, a significant and concerted effort began to curb the consumption of alcohol. The temperance movements advocated for the use of alcohol in moderation, while the teetotalism movement advocated from all abstinence from alcohol. The word, “teetotal” has very unclear origins and there is no agreed upon etymology. Over time, the distinction between temperance and teetotalism blurred, with the demand for abstinence ringing more loudly.

Temperance and teetotalism movements were often alliances between religious groups, social reformers, politicians, and physicians. The concern was the moral and physical hazards posed by the consumption of alcoholic beverages. At this time, “drunkenness” or being a “drunkard” was seen as a fundamental moral failing of an individual; a person was seen as lacking in will power or character. In England, there was a clear concern for the rapid increase of the availability of distilled spirits and gin houses, which boasted that one could be “drunk for a penny, dead drunk for a tuppence.” The concerns often focused on the wellbeing of women and children in homes of “drunkenness.” There were also class dimensions to the concerns about drinking: while the upper classes mostly consumed alcohol in their homes, working class people tended to congregate in public places. There was also concern about the economic implications of working people being drunkards that was coupled with political and social concerns of working people as citizens (Zieger 2002).

The temperance and teetotalism movements in the United States reflect the same sort of moral, physical, social, and political concerns about drunkenness. Drunkenness was seen as

a malady of an individual but as raising grave concerns for what is now called “public health.” Public health is concerned with the wellbeing and health of communities as opposed to the health of particular individuals.

The public health concerns were so graphically and persuasively made that the movements were able to garner enough political support to succeed in the creation of a national ban on the production, distribution, sale, and transportation of alcohol from 1920 to 1933. Ratified as the 18th Amendment to the United States Constitution and commonly referred to as “Prohibition,” it was repealed in the 21st Amendment to the Constitution in 1933.

While the Amendment banned the production, distribution, transportation, and sale of alcohol, it did not ban the possession or consumption of alcohol. Enterprising individuals quickly took advantage of this in many ways. Pharmacists were allowed to prescribe whiskey for various medical ailments. The number of pharmacists tripled in the state of New York, for example, during the Prohibition era. Since wine was used in many religious services, enrollments in churches and synagogues increased dramatically.

The repeal of Prohibition was due in large part to the public health crisis that had developed as a consequence of the unregulated (and illegal) production of alcohol. On average, 1,000 Americans died each year Prohibition was in effect (Okrent 2011).

The effects of alcohol’s consumption on the health of individuals and the community as a whole or social body are now the dominant way that concerns about alcohol are framed. Discussions are no longer limited to the local or national level but are happening on a global level.

### **Health Concerns About the Consumption of Alcohol**

The Centers for Disease Control and Prevention in the United States (CDC 2012) chronicles many health concerns associated with the consumption of alcohol. Even drinking in moderation may present risks for people in certain populations

such as pregnant women, those who take certain prescription drugs, and those who have medical conditions such as diabetes. The most harmful effects follow from the excessive consumption of alcohol. Some of the effects are immediate. Since alcohol is a disinhibitor, people may engage in riskier physical and sexual behaviors that result in injury or harm to themselves or others. Alcohol poisoning is particularly dangerous; excessive consumption overwhelms the central nervous system and particularly acute cases result in death.

Certain chronic conditions can also develop over the course of longer-term consumption. The excessive consumption of alcohol over time contributes to neurological problems (stroke and dementia), psychiatric problems (anxiety and depression), liver problems, and cardiovascular problems.

*The Global status report on alcohol and health* published by the World Health Organization (WHO 2011) provides some of the most accurate statistics from over 100 individual country profiles. The document focuses on alcohol consumption, its consequences, and potential policy interventions on local, national, and global levels. Some of the findings include:

The harmful use of alcohol results in the death of 2.5 million people annually;

Nearly 4 % of all deaths globally are related to alcohol. Alcohol is a factor in deaths from injury, cancer, cardiovascular disease, and cirrhosis of the liver;

Globally, 6.2 % of all male deaths are related to alcohol compared to 1.1 % of women; and

One in five men in the Russian Federation and neighboring nations dies from alcohol-related causes.

In light of these realities, the WHO recommends that certain legal, political, and economic strategies be adopted. These include greater taxation of alcohol, reducing the number of venues where alcohol can be sold, raising the age limit for buying alcohol, and greater measures for reducing drunk driving. Additionally, the WHO recommends greater screening and assessment tools and policies for identifying individuals who are engaged in high-risk drinking and more effective treatment options for alcohol use

disorders. The issue of treatment raises the questions whether alcohol abstinence is necessary for addressing the health concerns identified by the WHO and whether the goal of treatment is abstinence or sobriety.

## Relationship Between Alcohol Abstinence and Sobriety

There is no standard definition of sobriety, though this word is often used in the context of Alcoholics Anonymous (AA) and other programs related to recovery for addiction. Originally founded in the United States in the 1930s, AA now has a presence in 170 countries with a membership close to two million people. The book, *Alcoholics Anonymous* (2002, 4th edition), has sold more than 30 million copies and has been translated into more than 67 languages.

In the context of AA, sobriety involves total abstinence from alcohol. That is to say, abstinence is a necessary condition for sobriety. Abstinence is a commitment to not drinking, while many see sobriety as a commitment to a way of living.

While Alcoholics Anonymous has been one of the most recognized approaches to the treatment of alcoholism and its 12-step method is the preferred protocol in both in- and outpatient treatment programs, there are competing models that suggest or allow moderate or controlled consumption. A program such as Harm Reduction for Alcohol focuses on reducing the harms that follow from problem drinking. These moderation or harm reduction programs stress behavioral changes so that one is in a better position to make informed and safe choices about their alcohol use. Many choose moderation and then may later decide to choose abstinence. With these approaches, when a person no longer drinks in harmful or troubling ways, one has achieved sobriety (Anderson et al. 2010).

Regardless of how one defines sobriety and whether total abstinence is required, sobriety is seen as a personal choice and commitment. In other words, one comes to adopt a very circumspect and proactive stance toward her



consumption or nonconsumption of alcohol. A person who identifies as sober will maintain a very regulated relationship to alcohol. This is absolutely crucial for people who want to avoid a relapse. A relapse is commonly understood as consuming any alcohol when one was attempting abstinence or consuming alcohol in troubling or problem ways when one has been practicing moderation or harm reduction.

### **Decisions Individuals Make About “Nonalcoholic” Beverages and the Use of Alcohol in Food Preparation**

For those practicing abstinence or sobriety, alcohol may seem ubiquitous and social occasions particularly vexing. It is vital that the presence of alcohol always be clearly indicated. Some people previously enjoyed the taste of alcohol and not just its effects. Others may have enjoyed the ritual of opening a bottle and pouring a glass of wine. For these people, consuming nonalcoholic beers and wines may bring them pleasure. “Nonalcoholic” in this context is containing less than 0.5 % (one half of 1 %) alcohol content. The choice to consume nonalcoholic beverages is personal. For some, it brings great pleasure, for some others it may trigger a desire for “the real thing,” and for some, even that very low percentage of alcohol may be seen as too much. For them, their abstinence is absolute.

Alcohol may be an important ingredient in many prepared foods. Wine and sherry are commonly used in many dishes, as are various “hard” liquors such as brandy and vodka. These alcoholic beverages are used for their complex flavors. Alcohol also appears in various extracts as well, such as vanilla. There is a common belief that alcohol “cooks off,” so that there is no alcohol content that remains.

For those faith traditions that prohibit the consumption of alcohol, this prohibition seemingly would extend to the use of alcohol in cooking. Those who are sober and practice abstinence would also tend to avoid the use of alcohol in cooking.

Studies, however, disprove the belief that alcohol “cooks off.” The New York State Office of Alcoholism and Substance Abuse Services (2013) cites the results of United States Department of Agriculture in conjunction with two universities found even after 2.5 h of baking, 5 % of alcohol remained. This is ten times higher than what is considered nonalcoholic. Given the high percentage of alcohol that remains, those who practice abstinence or sobriety may find themselves unknowing consuming alcohol. Regardless of the reasons one chooses alcohol abstinence or sobriety, disclosure of alcohol as an ingredient is important.

### **Summary**

This entry has defined alcohol abstinence and sobriety and their relationship to each other. There are various sets of reasons why a person may choose not to consume any alcohol or choose to consume in a very intentional and well-informed manner. Religious reasons often focus on the possible sinful nature of the consumption of alcohol itself or the sinful behaviors that are caused by consuming alcohol. Health concerns are immediate and long term affecting individuals and the social body. The moral and social reasons for not drinking center on the harm or damage that can be done to one’s self and her relation to others. These sets of reasons converged in the temperance and teetotalism movements of the nineteenth century, culminating in the ban on the production, distribution, transportation, and sale in the United States from 1920 to 1933. Concerns about the consumption of alcohol are now a global matter, with the World Health Organization making recommendations directed at both individuals (earlier treatment and intervention) and at the social body through increased legislation and taxation. Abstinence and sobriety are choices made by individuals, and these choices require information about the presence of alcohol as beverages and ingredients in food preparation. A person practicing abstinence or sobriety may choose to consume nonalcoholic versions of beer and wine and use of alcohol in cooking.

## Cross-References

- [Alcohol as Food and the Good Life](#)
- [Food Addiction](#)

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## Alcohol as Food and the Good Life

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## Synonyms

Alcohol and the good life; Alcohol and value

## Introduction

Alcoholic beverages have been positively valued for many reasons. In the following entry these

positive reasons are explored within the historical context of the development of civilization. Human beings have produced and consumed alcoholic beverages ever since they changed from wandering bands of hunters and gatherers and settled down in established communities. Although alcohol can be found in the wild, it was the development of agriculture and pottery making that gave rise to the production of fermented alcoholic beverages such as mead, fruit wines, and beer. These beverages came to be valued for reasons beyond the pleasure of their taste and the effect they produced by inebriating their consumers. In antiquity they were used in religious ceremonies and valued as a medicine; they contributed to the development of social organization by encouraging trade; and they served as a kind of currency in early economies.

Later, with the invention of distillation and the spread of that technology throughout Europe in the Renaissance, distilled alcohol was initially identified as a vital life force or “spirit,” and distilled alcoholic beverages were prescribed for their medicinal value. In the nineteenth century with the invention of faster forms of transportation, the availability of a wide variety of wines and spirits promoted the values of gastronomy. In the twenty-first century, although the harmful effects of excessive alcohol consumption have been duly noted, their beneficial effects on health have also been acknowledged, particularly the benefit of the moderate drinking of red wine. Many contemporary societies continue to value alcoholic beverages in promoting conviviality, a value which was discovered in antiquity.

Early agricultural societies in Asia, Africa, Europe, and Central and South America all invented and consumed fermented alcoholic drinks. Several fermented drinks were made by the native peoples of Central America: the Aztecs fermented *pulque* from the agave plant, and in the Yucatan the Mayans made mead, flavoring it with the bark of the balché tree. In South America, the Incas brewed a beer made from the local grain, corn. In sub-Saharan Africa, palm wine and millet-brewed beer were indigenous, and rice wine was native to China and Japan (Gately 2008, pp. 95–101). There were exceptions:

aboriginal peoples in Australia and native peoples in North America did not produce and consume alcohol. There were also some societies that, for religious reasons, prohibited drinking alcoholic beverages. With the rise and spread of Islam, Middle Eastern societies that historically favored consuming alcohol turned against it. Certain religions in India also shunned alcohol.

Even societies that did allow drinking alcohol developed moral norms about when it was appropriate to consume these beverages. For example, modern Western societies made it unlawful for children to have access to alcohol. Other prohibitions arose because of the harmful effects of severe intoxication and the social disruption caused by public drunkenness. Nevertheless, alcohol was also recognized as contributing to “the good life” of people. It played a positive role in ceremonies of celebration such as wedding feasts, as well as occasions for mourning such as wakes. Sharing a “drink” was valued as a way to encourage conviviality among people, and it was even promoted as a catalyst that could spark ideas and lead to furthering intellectual pursuits. These positive social effects were noted in antiquity, and even today the cocktail party is valued as a means of bringing people together and getting them talking to each other. In the following sections of this entry, the economic, social, nutritional, medicinal, and religious values of alcohol as they relate to human well-being will be discussed. In addition, the aesthetic values of alcoholic beverages will also be considered.

### **The Social and Economic Values of Beer and Wine in the Fertile Crescent**

Potable alcohol or ethanol occurs naturally when the skins of ripe fruit, such as apples or grapes, break and the yeasts that form on the fruits’ skins come in contact with the ripe interior and feed on the fruit sugar. This consuming action of the yeast is called fermentation and produces alcohol and carbon dioxide. Bees and other animals ingesting this alcohol-imbued fruit would have become tipsy, as would have our early human ancestors, when they consumed these fermenting fruits.

Eventually early peoples learned to gather fruits with high sugar content such as grapes, crush the fruit, and let the natural yeasts on the fruit skins convert the grape juice into wine.

With the establishment of settled communities, the rise of agriculture and the invention of pottery making and winemaking evolved as a practice in areas hospitable to grape growing. By 7000 BCE there was an established wine culture that cultivated grapes and made wine in the Zagros Mountains of Armenia and Iran (McGovern 2009, p. 82). In the next few millennia, a taste for wine from grapes spread throughout the Fertile Crescent. However, enjoying wine was an expensive taste, more so than quaffing the considerably cheaper local beer, the importance of which will be discussed below. Wine was a luxury good that was much appreciated by the wealthy and powerful, and the demand for this fermented drink led to an increase in trade throughout the region, particularly by shipping, since wine was cumbersome to transport by land.

Babylonian and Assyrian monarchs lavishly served imported wine at their royal feasts. An early Egyptian pharaoh, Scorpion I, was entombed in 3150 BCE with 700 jars of wine which were imported from distant lands at considerable expense (McGovern 2009, pp. 166–67). By the time of the pharaoh Tutankhamen, grapes were widely cultivated in Egypt, and the boy king was buried in 1322 BCE along with his alabaster wine cup and 26 local amphorae of red and white wines, each marked with the winemaker’s name and where the wine was made (Gately 2008, p. 8).

Whereas wine at first was a luxury good, the drink of the ordinary folk in the Fertile Crescent was beer. Early people had learned that cereals such as barley could be fermented to produce an alcoholic drink; however, the starch in the cereal first had to be converted into sugar, by a process known as malting. They accomplished this by first soaking the cereal grains in water until the grains started to germinate, thereby changing the starch in the grains into sugar. The germinated grains would then be dried and ground, and boiled water would be added. Natural airborne yeast eventually would have started the

fermentation process and created beer, or the fermentation process might have been induced sooner by adding yeast-imbued fruit (McGovern 2009, p. 68). Technological innovations in making beer soon developed, and beer brewing became widespread throughout the Middle East by 4000 BCE (Standage 2005, p. 10).

Beer was valued in the life of early peoples for many reasons. It had a profound effect on individuals' well-being in settled communities and contributed to the development and cohesiveness of those communities. First of all, with the rise of larger settlements, finding clean drinking water became a problem, one which hunters and gatherers who were constantly on the move did not have. Beer and other alcoholic drinks were not microbially tainted, as was often the case with the water. The fermentation process would have killed off the disease-producing organisms. With its relatively low alcohol level, beer was a safe drink to consume by these early village and city dwellers. It also would have provided needed nourishment, particularly B vitamins, since communities were usually dependent on local resources for sustenance (Standage 2005, p. 21).

Second, in early Mesopotamian societies, beer drinking contributed a greater sense of community and encouraged social bonding. People drank their beer in groups from a large shared vessel. Several people each with her or his own straw or hollow reed would drink from the same vessel. Straws were used in order to avoid the chaff and grain debris that floated on the surface of the beer. Because a group shared beer from the same container, beer drinking was a social occasion. This act of sharing a drink was a mark of social warmth and conviviality, and beer drinking promoted these values. This social beer drinking fostered a valued tradition that continues today: "having a drink" with someone is a sign of friendship, or at least it promotes the value of having people get together in a relaxed and friendly atmosphere (Standage 2005, p. 18).

Third, as Mesopotamian societies developed more sophisticated economies and undertook more complex tasks that required a large labor force, workers began to receive a "wage" that

included an allotment of beer. Thus, beer was instrumental in the development of their economies. Some of the earliest written texts are Sumerian records that list the various allotments of beer given out to workers for performing different tasks (Standage 2005, p. 35). As beer drinking was a widespread and popular practice, paying people in beer was a natural form of currency. The same practice of paying people with beer was also found in ancient Egypt. The workers who built the pyramids each received a regular allotment of bread and two jugs containing roughly a gallon of beer in payment for their services. There was also a sliding scale of beer payments. Officials in charge of these state projects earned considerably more beer than the workers they supervised (Standage 2005, p. 37).

In both Mesopotamian and Egyptian societies, beer was also prescribed as a medicine for a variety of illnesses. The most ancient text detailing the medicinal uses of beer is a Sumerian text from Nippur dating from 2100 BCE that contains an extended list of beer-based concoctions. Egyptian pharmacology was no less explicit in prescribing beer. The Ebers Papyrus from 1550 BCE contains many beer-based recipes for treating a host of ailments. In fact, Egyptians considered beer and bread as being synonymous with health and well-being. These products were also believed to be necessary in the afterlife and were regularly put in the tombs of the departed (Standage 2005, p. 38). Sumerian society also recognized the importance of beer in society and as necessary in the afterlife. The tomb of Queen Puabi in Ur, around 2500 BCE, contained her gold beer-drinking jug, bowl, and cup, as well as gold and silver straws with which to drink the beer (Gately 2008, p. 4).

## **Wine and Religion in Greece, Rome, and Medieval Europe**

Perhaps the most important value ascribed to beer, wine, and fermented alcoholic drinks was a religious value. The fermentation process seemed magical to early people, and its effect on those who drank the beer or wine, the feeling

of euphoria associated with intoxication, they took to be a spiritual experience. Since they believed that these drinks had a divine origin, they also believed that religious ceremonies should include offerings of these divine potions (Standage 2005, p. 19). Egyptian mythology credits the god Osiris with creating both beer and wine. He was also the god of the underworld, having been killed and then revived, and thus seemed a natural divine sponsor of the grape vine which dies back in the autumn and revives in the spring. Egyptians believed that worshipers celebrating Osiris by eating bread and wine were consuming the transubstantiated body and blood of their god. Throughout the Fertile Crescent the gods were prayed to and worshiped by offerings and libations of beer or wine (Gately 2008, p. 7).

The Greeks were exclusively wine drinkers. They believed that wine was a divine gift, and it played a central role in their religion and what they considered civilized life. They scorned beer as being a barbarian tipple that had no role in the decorum of civilized living. Their god of wine, Dionysus, a semi-immortal offspring of Zeus, came to Greece from the Middle East bringing with him the vine and knowledge of winemaking. Dionysus bears some resemblance to the Egyptian god of wine, Osiris, because of his association with the autumnal death and springtime rebirth of the grapevine (Gately 2008, p. 17). Like religions in the Fertile Crescent, Greek religion also encouraged the offerings of libations of wine to the gods both in formal ceremonies and in family occasions for worship. A Greek city state or *polis* like Athens would sponsor public festivals where wine because of its religious association was offered to rich and poor alike (Gately 2008, p. 12). Because of the centrality of wine to their culture, the Greeks further developed the science of grape cultivation and the technology of vinification. In addition, Athens and other maritime Greek city states built up a very lucrative export trade in shipping amphorae of wine throughout the Mediterranean. Thus, wine also played an important role in Greek commercial life.

One of the main values associated with wine in Greek life was the role it played in the intellectual

life of the polis. The Greeks, particularly the Athenians, initiated the tradition of the *symposium*, which was a private feast and wine-drinking party for educated men. Women were excluded from participating in these events, as they were excluded from other aspects of Athenian public life. After dinner had been served, a dinner in which no wine was consumed, a person was selected as the master of the ceremony, a symposiarch, who would decide what the guests would do when the drinking commenced (Gately 2008, pp. 21–2). Then the wine was prepared. The Greeks drank their wine after first mixing it with water and flavoring ingredients, such as pine resin, in a large bowl called a *krater*. Guests were then offered a cup of the wine from this large vessel. This tradition of being served from the same *krater* was similar to the Mesopotamian tradition of people each using a straw to drink beer out of the same jar. For both societies it was a custom that stressed the social and sharing nature of the experience.

One of the things that might go on at a symposium was that the symposiarch might ask the guests to sing or recite poetry. Or the participants might be called upon to speak about music or medicine (Varriano 2010, p. 37). In his philosophical dialogue, *Symposium*, Plato recounts a symposium in which the guests each made speeches about the nature of romantic love. Elsewhere in his dialogues (e.g., *Phaedo*), Plato, in the voice of his character Socrates, takes a disparaging view of the role of food and drink in educating one's mind and pursuing knowledge. Indulging the appetites by drinking wine leads to sensuality and overcomes the rational faculty that leads to knowledge. In his dialogue, *Symposium*, Plato contrasts Socrates who leaves the drinking party sober with the other participants who end up befuddled by drink. In Book II of his dialogue, *Laws*, Plato is quite restrictive about who can consume wine.

However, Plato should not be taken as representative of Greek or Athenian views about the role of wine in cultural life. A countervailing tradition was that promoted by the Greek philosopher Epicurus. He believed that small gatherings of people at dinner parties where food and



wine could be savored would encourage the social virtues of friendship and lead to the cultivation of intellectual interests. Rejecting Plato's advocacy of the immaterial nature of human consciousness, Epicurus was a materialist who believed that the appetites employed in moderation, especially for food and drink, fed the life of the mind. Epicurus established a school in Athens, and he and his followers held a banquet on the twentieth day of every month to feast, to drink wine, and to celebrate their friendship and the pleasures of life. In contrast to the symposium in which wine was consumed only after eating, the Epicurean banquet allowed food and wine to be consumed together. Because of these regular monthly banquets and their central role in the Epicurean philosophical perspective about the good life, Epicurus and his followers became known as the "Twentyers" (Symons 2007). The Epicurean emphasis on the role of the banquet in social life influenced the development of the *convivium* feast in Roman society. (I discuss the Roman *convivium* below.)

The Greeks colonized Sicily and the southern part of the Italian peninsula, and they brought with them their love of wine by extensively planting grapes. With its rich volcanic soil and mountainous terrain, Italy was ideally suited for grape cultivation; the Greeks referred to the Italian peninsula as "oenotria" or the land of wine. Greek arts and literature exerted a strong influence on Roman society as it expanded throughout the Mediterranean, and the Romans adopted the Greek passion for wine even in their desire for military conquest. The Roman legionnaire was allotted a daily portion of wine. Not only was wine considered a healthy and uncontaminated drink, but it was believed to increase bodily strength and to assist in digesting food. It was also a very common anesthetic at a time when other remedies were unknown for treating the pain and strain of physical labor (Austin 1985, p. xvi).

From the days of the Roman republic, wine occupied a central place in the Roman household as opposed to beer which was considered the barbarian drink of northern Europe. In keeping with

their love of Greek culture, the Romans adapted the Greek symposium and Epicurean banquet, transforming them into a festive dinner party that they called a *convivium*. Unlike the symposium, the *convivium* was not exclusively for men; women and men ate together. However, like the Epicurean banquet, the *convivium* encouraged consuming wine and food together. Yet, the *convivium* reflected the stratified nature of Roman society in that the wine was not served from a common mixing bowl or krater. Instead, each person mixed her or his own wine, and not all the participants quaffed the same wine. The highest status individuals at the dinner were served the best wine; those of lower social importance were served lesser-quality wines. Former slaves (freedmen) were served the worst wine in the cellar (Standage 2005, p. 78). In addition, the *convivium* was not primarily an occasion for intellectual entertainment. Since it allowed including lower-class people and those with little education, it provided an opportunity for doing business. Wine encouraged the brokering of deals.

When Emperor Constantine made Christianity the state religion of the Roman Empire in 313 CE, Roman society came face to face with the Church's ambivalent attitude towards drinking wine. Like Judaism, Christianity held that wine played a central role in the religion. In the Christian *New Testament*, Jesus is described as performing miracles with wine. At the Seder which was his Last Supper, he refers to the wine he is drinking as his blood. In keeping with that pronouncement, Christians were expected to consume wine as part of the ceremony of the Eucharist. However, the secular consuming of wine posed a problem. As a religion focused on the afterlife and wary of the pursuits of the flesh, Christianity considered gluttony, which included the excessive drinking of wine, to be a deadly sin. In his *Pedagogia* written during the third century CE, St. Clement of Alexandria proposed that aside from the sacramental partaking of wine, women and young men should not drink wine but should stick to water. Only older men should be allowed to consume wine, and they should not try to cultivate an aesthetic interest in fine wine

but be content with whatever was offered to them or was available (Gately 2008, pp. 44–47).

Although the Church had reservations about consuming alcoholic beverages, during the Middle Ages alcohol was still highly valued for religious, medicinal, and mercantile reasons throughout Europe. Christian monks in their monasteries cultivated vines wherever grapes would grow. Although they made wine for use in the celebration of the Mass, they also made wine to serve at meals in the monastery's refectory. Since many hospitals were started by monks, wine was also produced to be used as a medicine. In fact, many of the great vineyards of Europe were originally established by monks. By the thirteenth century, trade increased throughout northern Europe spurred in part by the Hanseatic League. Two of the league's most successful items of trade were the new hops-brewed beer and wine which began to be widely produced and consumed as a popular beverage (Austin 1985, p. 95). A huge export trade in wine developed shipping wine from Bordeaux and other ports in western France to England and the Netherlands. However, alcohol consumption began to change in Europe due to the discovery of distillation.

### The Distillation of Alcohol and the "Water of Life"

Up until the late Middle Ages, the only alcoholic drinks known were fermented beverages such as mead, wine, and beer. That was soon to change once European entrepreneurs became aware of the experiments with *distillation* that were being conducted by Muslim chemists. The word "alcohol" is of Arabic origin and is derived from the word "kohl" which referred to the dark eye cosmetic used by the ancient Egyptians. By experimenting with the process of making kohl, and by using a vessel with a long spout called an *alembic*, Muslim chemists discovered that one could produce an unusual liquid from heating wine (Gately 2008, p. 72). Since alcohol has a lower boiling point than water, by heating wine or any fermented liquid in an alembic, or

vessel with a spout, or one connected to a copper coil, one could collect the alcohol vapors and condense them into a liquid with some surprising properties. Since Islam prohibited the drinking of wine or alcoholic beverages, Muslim chemists considered the distillation of wine to be only a curious scientific discovery.

The Italians, however, realized the significance of this discovery, and in the twelfth century CE, apothecaries in Salerno began writing about a new distilled liquid (*aqua ardens*, so-called because it could catch fire) and proposing it as a medicinal drink. By 1320 CE an enterprising merchant in Modena was distilling large quantities of alcohol for sale not only as a medicine but also as an invigorating beverage that was now referred to as *aqua vitae* or "water of life." It was realized that *aqua vitae* was the causally significant ingredient in wine or beer, and by itself in sufficient quantity, it could produce major changes in human behavior. Venice soon became a major port for distributing this potent beverage to the rest of Europe; however, before long the technology for producing alcohol had quickly spread throughout the continent (Forbes 1948, pp. 87–95).

Because it was more potent than wine or beer, distilled alcohol came to have its own value as the "water of life." The name, *aqua vitae*, was adapted into a number of European languages: the French called the distillation of fermented fruit beverages "eau de vie," and the Scandinavians distilled a spirit they called "akvavit." Even the word "whiskey" is derived from the Gaelic expression for "water of life." Alcohol was credited with being the water of life because it was believed to be a *spirit* (another name commonly used for alcohol) or a substance that had a major animating effect on the body and could induce radical changes in consciousness.

In his book *The Passions of the Soul* (1649), René Descartes proposed that human emotions were not produced by someone actively willing them, but they were passively brought about by specific agents in the body. Descartes referred to these agents as "animal spirits." With his mechanical view about the operations of the body, Descartes thought that these animal spirits

hydraulically affected the brain which in turn, according to his interactionist theory of mental-corporeal causation, produced changes in human consciousness. His views about these “spirits” producing emotional changes in human beings were probably influenced by the widespread use at the time of distilled alcoholic drinks which could make imbibers become loud and boisterous, or mean and aggressive, or even morose. Because of this respect for alcohol as an agent that could affect the mind and the body, there existed a popular belief that alcohol was a potent elixir that could not only cure illness but revive people who had collapsed in shock. In the pharmacopeia of the time, it was valued accordingly. Even today there still lingers a holdover of this Renaissance belief in the medicinal power of distilled spirits. Although there is no contemporary medical evidence to support the view, some people still believe that if someone has collapsed due to a shocking experience, the remedy should be to get that individual to drink a glass of brandy.

Distilled beverages also had a profound effect on the late Renaissance emergence of European commerce and the future course of European colonial expansion. Spirits could be distilled not only from wine and beer but also from sugarcane or molasses (rum) and potatoes (vodka or schnapps), as well as from many other sources. One of the evil results was the African slave trade that originally depended on using spirits to buy enslaved African people to work in the sugarcane fields of the Caribbean islands. A lot of the sugar that was produced was converted into molasses which then was distilled into rum and sold in Europe or used to buy more slaves in Africa. However, by the eighteenth century, a positive effect resulting from distillation was that farmers in the Americas and Europe that had previously had trouble getting their perishable produce to market could now take their grains or potatoes and make a spirit from them. For example, whiskey distilled from corn, rye, or barley was much easier to transport to market, and it would not perish. In fact, it would improve with age. Because there was a ready demand for spirits,

they could even be used as a kind of currency (Gately 2008, p. 216). Spirits could also be added to wine, as they were to port and sherry, which made these fortified wines less susceptible to spoilage when transported by ship.

### The Aesthetic Value of Alcohol and the Rise of Gastronomy

The eighteenth century saw a significant rise in the philosophical interest in what we now would refer to as aesthetic experience. Because the term “aesthetic” did not gain currency until the nineteenth century, the common philosophical term for the appreciative experience of art and nature was “taste.” Although many philosophers distinguished the critical taste for art and music from the gustatory experience of taste involved in alimentation, several philosophers recognized the metaphorical connection between the critical taste for art and the literal taste of gustation. These philosophers used the discriminating and appreciative tasting of fine wines as examples of how literal taste could lead to the development of critical taste. For example, in his essay “Of the Standard of Taste” (1757), David Hume used the example of a discriminative tasting of wines to explain his notion of “delicacy of imagination” which he thought was a requirement for an individual having sound critical taste. He thought that to be a good judge of the quality of wine, one had to be able to discern the minute constituents of the wine that added to or detracted from its being a good wine (Hume 1987). Voltaire, in “An Essay on Taste” (1757), also used the example of being able to discriminate the subtle qualities that give a wine its distinctive character as a sign of someone possessing good taste (Voltaire 1970).

Nevertheless, there were philosophers who opposed the view that wine could be an object of critical interest. In his influential work on aesthetics, *Critique of Judgment* (1790), Immanuel Kant argued that food and wine could not be objects of aesthetic interest. They were merely objects of personal preference and could not sustain the imaginative interest that works of art or

objects of natural beauty could (Kant 1987). However, Hume's and Voltaire's use of such examples shows a developing respect for fine wines as objects of critical appreciation, a respect that was also reflected in the interests of the emerging middle classes in Europe and elsewhere.

At the end of the eighteenth century and beginning of the nineteenth century, several significant changes took place in European culture that contributed to this developing critical interest in fine wine. Whereas in earlier times lavish dining and the consuming of expensive wines had been restricted to the palaces of the aristocracy, after the French Revolution restaurants proliferated which provided innovative food and drink to anyone with the resources to pay for these meals. With the appearance of restaurants, there also emerged an aesthetic interest in fine dining that came to be referred to as "gastronomy."

One of the popularizers of this aesthetic valuing of sophisticated dining and drinking of good wines was Jean Anthelme Brillat-Savarin, who published a widely read volume, *The Physiology of Taste* (1825). Brillat-Savarin championed "the pleasures of the table" which included the contemplative appreciation of fine wine (Brillat-Savarin 1978). He championed a "transcendental gastronomy" that challenged Kant's view that wine could only be a personal pleasure, one immediately sensed and not affording any opportunity for imaginative and contemplative engagement. Brillat-Savarin proposed a more sophisticated account of how we sense gustatory objects like wine, and he stressed the extended temporal progression involved in swallowing what we consume. His account of the extended nature of tasting allowed for the imaginative aesthetic engagement with what we were consuming. In accordance with his popular views on contemplative tasting, wine, beer, and other alcoholic beverages began to be recognized as beverages worthy of aesthetic attention.

With the spread of the railways in the nineteenth century, it now became much easier to obtain excellent wines from distant places. This easier availability of these wines and produce in

the capitals of Europe further promoted the aesthetic interest in wines and other alcoholic beverages. This greater appreciative interest in wine, beer, and distilled spirits has continued to grow in the twenty-first century. There is now a global market for, as well as interest in, these products. Wonderful wines are now made in South Africa, New Zealand, Australia, and countries in North and South America. Distinctive beers are brewed all over the world, and Japanese whiskey is no less excellent than the best scotch and bourbon.

Although Kant resisted accepting wine or food as being potential objects of aesthetic interest, he did realize that small dinner parties at which wine or spirits were served were very valuable social occasions. These dinner parties brought people together in a relaxed and convivial setting that allowed them to exchange and share ideas (Kant 2006; Cohen 2008). Just as the Greek symposium and the Epicurean banquet attempted to promote a convivial exchange of ideas, so one can take Kant as urging the value of similar social meetings. He also recognized the positive role that alcoholic beverages could play in these social gatherings. In the twenty-first century, another philosopher, Roger Scruton, has called for the reviving of something like the symposium tradition in which people would get together for a meal and to savor wine. He believes this meeting of minds aided by the consuming of wines of interest would also promote and further intellectual exchange (Scruton 2009).

## Summary

From their creation at the dawn of human communal life, alcoholic beverages have been recognized as valuable for a variety of reasons. Many cultures valued them for religious reasons, finding in them a mystical and animating power and consequently using them in religious ceremonies. Fermented drinks like beer and wine served to promote social and economic development. As early forms of medicine, they were used to try to cure the sick and to ease the pain of those who

labored. They were valued as aesthetic objects in antiquity, and today they attract an even broader aesthetic interest. Finally, their fostering of a convivial relationship among people, bringing people together to share ideas, continues to be recognized as an important and valuable social catalyst in contemporary life.

## Cross-References

- [Brillat-Savarin and Food](#)
- [Christianity and Food](#)
- [Epicureanism and Food](#)
- [Islam and Food](#)
- [Plato and Food](#)

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## Alimentary Delinquency

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## Synonyms

*Artiste provocateur*; Food terrorism; Neophobia, visual culture; Pica; Taboo

## Introduction

Alimentary delinquency, a term originally coined by French sociologist Pierre Aimez, will be used here to designate a wide range of eating practices that are generally considered by society at large as aberrant and as going beyond the normal, comprising a number of disturbed ingestion practices that are widely considered as taboo and/or excessive: ingestion of nonfood (nonnutritive) items or of excessive amounts of food, doing things with food that should not be done, and forcing/duping people into eating something they would not normally eat. Although evidence of alimentary delinquency as described dates back to antiquity, it will be discussed here as specific to the modern, contemporary period, as a symptom of “gastro-anomy,” a term coined by Claude Fischler to describe the consequences on eating and food-making practices of the bio-cultural crisis experienced by modern eaters. Fischler and other sociologists and historians of food maintain that eating practices in modern societies have undergone a complex transformation in the shift from agrarian to post-agrarian societies, which in turn has engendered confusion and conflict surrounding eating practices. Alimentary delinquency is thus a manifestation of this bio-cultural crisis and will be outlined here in four categories: alimentary delinquency as the province of eating practices from other cultures, notably as a prominent discourse in travel literature; involuntary alimentary delinquency, recognized by mental healthcare professionals as pica,



where subjects respond to oral cravings and drives beyond their ability to control; wilful acts of alimentary delinquency especially as they are presented in visual, graphic, and plastic art forms that are designed to provoke, disturb, and shock; and alimentary delinquency in the stricter legalistic sense, in cases of negligent or wilful food contamination and adulteration.

Alimentary delinquency as such lies at the crossroads of what can be eaten and what should be eaten and is central to making sense of our physical existence. More than the actual incidence of aberrant eating practices which in themselves are relatively rare, it will be maintained that the impact and significance of alimentary delinquency lies mainly in the collective imaginary: in the many conflicts that it exposes within conceptual issues related to the health and nutritional discourse around traditional food and eating practices; as well as in the “omnivore’s paradox” that pulls modern eaters between neophobia and neophilia.

► [Cannibalism](#) as well as other forms of disturbed eating, such as ► [eating disorders](#), are indeed forms of alimentary delinquency and are dealt with in separate entries.

## Alimentary Delinquency and the Food of Others

Travel literature through the ages, as well as more recent cookery and travel programs on television and the internet, places a particular critical emphasis on the eating customs of other societies. Although such accounts may very readily celebrate the diversity of culinary traditions around the world, they may just as readily be part of another tradition of being condescending to and denigrating other cultures for the food they eat and how they consume it, indicating that they may not have attained the levels of sophistication and civilization necessary for proper dining. Just as cannibalism has been used by various human groups to denounce others as fearful barbarians, eating habits of certain societies are described as alimentary delinquency to bolster descriptions of these societies as barbaric and uncivilized or as

simply peculiar. Although it is impossible to stand outside of one’s culture and speak about appropriate and inappropriate foods, this has never stopped chroniclers visiting other cultures from expressing a full range of reactions to the alimentary delinquency perceived in other cuisines, ranging from curiosity, amusement, and incredulity to shock, disgust, and outright moral outrage.

Although amusement coupled with mild ridicule may accompany stereotypical accounts of the French and frog legs and snails, the Congolese and termites, or the Scottish eating haggis, this amusement can quickly turn to more severe condemnation when questions of cruelty or morality arise in equally stereotypical accounts of Koreans eating dog, Chinese eating live monkeys, or even Europeans eating horsemeat. The foods that are commonly put under the spotlight in such chronicles fall under two categories: those for which the gustatory experience itself is noteworthy – for example, *surströmming*, fermented Baltic herring in Sweden that results in a primeval stew, or even very pungent cheeses from areas of central Europe. A second category would comprise zoophagic foods in which little effort has been made to camouflage the animal nature of the foods presented. The inherent cruelty of the cultures visited is often cited in many travelogues especially in places where live food – from fish to primates – is consumed. Such foods that mimic life and meals that present the spectacle of life and death remind the visitor of the original state of food and also of the eater’s very mortality. Needless to say, the shock of witnessing and participating in such meals is much more potent than any consideration of taste. Consider the overwhelmed reaction of Richard Gordon Smith in his 1907 account of being presented a live yet carved fish to eat in Japan by a proud local chef. These accounts focus relentlessly on meals that force the diner to confront and to contemplate the sacrifice made and the fact that life continues through the death of other beings – a fact that modern societies go to great lengths to obscure and dissimulate through preparations that conceal the animal nature of meat and the virtual elimination of offal and any

parts of the animal that could suggest the animality and corporeality of both cook and eater. A further form of outrage may indeed be of a moral nature and focus on the ingestion of foods considered as taboo or forbidden especially, but not exclusively, on religious grounds, where the simple mention of a society's diet can be used to condemn entire cultures as sinful and immoral. Numerous accounts have been written, as detailed, for example, by Eric Dursteler, describing the moral indignation of travelers from Muslim or Judaic cultures that describe a cuisine of "infidels," whose table manners are questionable and who sustain themselves on abominable forbidden foods. The Internet teems with reports, testimonies, and, of course, photographs of all that modern travelers, especially the vicarious ones, may find bizarre, cruel, and stomach-turning from all corners of the earth.

### **Involuntary Alimentary Delinquency: Pica**

Pica, from the Latin word for the omnivorous magpie, is classified in the *Diagnostic and Statistical Manual IV* of the American Psychiatric Association as a psychological disorder in which the subject repeatedly and obsessively craves and ingests nonnutritive substances. Subtypes of pica are virtually innumerable and are characterized by the substance consumed, ranging from dirt to clay, plastic, glass, feces, hair, etc. It has been difficult to assess the prevalence of pica, but studies show that it occurs more commonly in women and children, and very often in conjunction with another psychological disorder; for example, it is common in autistic subjects. It is only considered as inappropriate behavior when it occurs beyond the developmental level of the individual. Therefore an infant mouthing a stone will not raise as much concern as a woman who incessantly eats sand or sofa cushions. Given that pica occurs mainly in women and children one common explanation for the phenomenon is that it is the result of nutritional deficiency. Although the ingestion of plastic and other synthetic materials is not

uncommon in pica, organic substances such as clay, dirt, hair, nails, etc. are far more prevalent, suggesting that pica might not only be a sign of developmental disability but that it might indeed be indicative of an attempt by the subject to compensate for lacking nutrients. The ingestion of nonnutritive substances is only considered as a disorder when it occurs outside of culturally sanctioned practices. Many of these culturally sanctioned practices occur among women and especially pregnant women who practice various forms of geophagia, i.e., earth eating, in places all over the globe. Local studies have been carried out among women, and especially pregnant women, who ingest clay, stones, and soil in places as far from each other as Kenya, where women practice odowa, the ingestion of soft stones, to Saudi Arabia, where studies found pregnant women who consumed ice, plaster, and paper, to the state of Georgia in the United States, where pregnant women have long ingested kaolin, or white clay. Such studies explain that pica in these cases is an attempt to ingest vitamins and minerals lacking due to the surplus nutritional demands of pregnancy and, perhaps, the added stress of pregnancy. Women who practice geophagia when pregnant are shown to have lower hemoglobin levels and pica is often explained as a means to compensate for this deficiency. Such cases of pica can obviously be associated with the commonly evoked dietary "cravings" of pregnant women, which can at times be classified as alimentary delinquency.

Non-culturally sanctioned pica more clearly enters the realm of alimentary delinquency. Incidences of pica comprise the full range of all that could be possibly ingested and are explained by psychologists as being related to developmental difficulties. The variety of items consumed in such cases seems only to be limited by one's capacity to ingest them and, even so, many of the items consumed are simply impossible to digest. Subjects suffering from pica are obviously doing great harm to their bodies. Pica, much like bulimia, invariably takes place in private away from the shame and condemnation of others. Treatment for pica focuses on behavior modification, from aversion therapy to positive

reinforcement therapy, exposure therapy, and discrimination training.

Although the incidence of pica is relatively rare and could be aligned with other “shameful” eating disorders which mainly affect women such as bulimia and anorexia nervosa, the very notion of ingesting nonfood substances is intriguing to the general public and has been a typical feature of circus sideshow acts. The spectacular side of pica becomes more apparent when considering the 2012 reality TV series entitled *My Strange Addiction* on The Learning Channel, which makes a public spectacle of pica by featuring entire episodes devoted to one person’s particular and peculiar variety of pica – from the more classical varieties in which organic matters such as clay, dirt, sand, or hair is ingested to far more disturbing cases in which subjects ingest plastic, tires, sofa cushions, cat food, and mothballs, for example. The subjects are almost exclusively female and each episode typically includes segments in which the featured eater demonstrates how and in what circumstances they eat their preferred “food” – usually in small bites and always in secret. They are also given the opportunity to explain the gratification they derive from satisfying their cravings. Texture is often evoked in terms of either softness or crunchiness. Each episode also features a moment of confession where the subject reveals her craving to an incredulous friend or family member or a medical professional. Emphasis is placed on the pleasure derived from pica and the program rarely presents the subjects as suffering psychologically from their cravings. As such the program itself serves as a form of exposure therapy in that the subjects are confronting their craving in a very public fashion and they are being clearly informed of the health risks that they face.

### **Willful Alimentary Delinquency: Defying Taboo and the *Artiste Provocateur***

As much as the very real cases of pica require the attention of medical professionals and mental health practitioners, alimentary delinquency, because it is positioned at the crossroads of

what can be eaten and what should be eaten, captures the imaginaries of observers and spectators and thrives in very visible forms, as demonstrated by the visual attention given to pica in *My Strange Addiction*.

Artworks and other social acts based on food and eating practices can be divided into two broad schools: the well-behaved and the badly behaved. Well-behaved food art is concerned with harmony in the process of creation of food, the mise-en-scène of dishes themselves, and the staging of elaborate meals, often with real eating subjects. The work of Japanese food artist Ayako Suwa is of note in this domain, with the success of her touring pop-up “guerilla” restaurants/exhibits in international capitals, which place diners in unique stylized settings where they are presented with a series of bite-sized delicacies fashioned as *objets d’art*. We can also look at the harmonious tradition in the use of food displayed in such films as *Babette’s Feast* (Gabriel Axel, Denmark, 1987), *Julie and Julia* (Nora Ephron, USA, 2009), *Eat, Drink, Man, Woman* (Ang Lee, China 1994), or *Like Water for Chocolate* (Alfonso Arau, Mexico, 1992) to name but a few, where good food that is aesthetically presented is linked to tradition, heritage, and the positive moral bearings of those who prepare and eat the food. These notions can also be extended to many cookbooks and televised cookery programs that aim to teach people to be mindful cooks and appreciative eaters of good, well-presented food, emphasizing the visual more than any other sensorial organ involved in eating.

While “well-behaved” art places a premium on “gastro-porn” and the elegant mise-en-scène of food in enticing contexts, it is certainly in the “badly behaved” area where alimentary delinquency is prevalent as a form of artistic expression and manifests itself in quite different ways. More concerned with the process of ingestion itself and the bodily experience of eating, alimentary delinquency emphasizes corporeality and the link between the ingestion of food and other acts performed with/upon the body’s orifices. Foods featured in acts of alimentary delinquency are also intended to shock and disgust and are more often than not raw, viscous, and zoophagic in nature.

The early nineteenth-century European avant-garde Futurists and Surrealists began embracing the disturbing potential of food in numerous works and public pranks, notably Filippo Marinetti's *The Futurist Cookbook*. The *Eat Art* works of German artist Daniel Spoerri that appeared throughout the 1960s continued and expanded this trend, displaying unfinished dinners and messy kitchen counter and table tops as framed works of art, staging acts of auto-cannibalism, and projecting playful, yet negative, anti-aesthetic resonances around food and eating. Judy Chicago's widely acclaimed touring exhibit entitled *The Dinner Party* (1974–1979) featured multicolored dishes painted with highly stylized depictions of food-like vulvas which were openly displayed in homage to prominent women in history, pointing at the same time to the complexity of woman's problematic roles as both cooks and eaters.

While Spoerri toyed with cannibalism, the ultimate culinary act of savagery, other performance artists have gone further, willingly submitting their bodies for the purposes of creating such spectacles. In 2003, the Enema Collective in Havana made blood sausages according to a traditional Cuban recipe using blood drawn from the collective's members and displayed the sausages as artworks at exhibits and other events. Although these sausages were made to be contemplated and not consumed, art did meet reality in a similar yet unrelated incident, when in 2006 two members of the German Air Force were discovered in a human blood sausage making operation in which they collected the blood of fellow officers and prepared the sausages also according to a traditional recipe of one of their grandmothers.

More recently, Japanese asexual Mao Sugiyama had his penis and testicles surgically removed and offered to cook and serve them to five bidders at an event organized in Tokyo in 2012. The event was also attended with much fanfare by 70 other guests/spectators who were served beef or crocodile dinners and, of course, availed the opportunity to watch the five lucky guests dine on Sugiyama's genital delicacy, prepared with the advice of leading Tokyo chefs. The event was entirely staged with the same

level of decorum and *mise-en-scène* as a performance meal by the aforementioned "well-behaved" Ayako Suwa. Eventually, obscenity charges were brought against Sugiyama for exhibiting pictures of his severed penis and not for the staged act of cannibalism, designed, according to the artist, to raise awareness about the existence and turmoil of asexuals.

Filmmakers have also been among the principal exploiters of alimentary delinquency, and the list of well-behaved films mentioned above can be complemented by an even longer list of badly behaved films which, like other works of art that feature alimentary delinquency, are generally considered as aggressive and can be seen as mounting direct attacks against the conventional comforts and pleasures associated not only with consuming food but also with consuming art. In this light, one can consider the actor Divine's "spatiotemporal" ingurgitation of dog excrement in the epilogue of John Waters' 1972 *Pink Flamingos*. Similar types of shocking and bizarre scenes and themes around food and eating are featured, for example, in Marco Ferreri's *La Grande Bouffe*, Luis Buñuel's *Phantom of Liberty*, Dusan Makavejev's *Sweet Movie*, Pier Paolo Pasolini's *Salò o le 120 Giornate di Sodoma*, or Peter Greenaway's *The Cook, the Thief, His Wife and Her Lover*, to name but a few. To this list of "art" films can also be added a considerable number of American and Italian horror films of the 1970s and 1980s that feature repeated acts of cannibalism. As such, alimentary delinquency has flourished in filmic forms of the lowest and highest statures in terms of cultural esteem.

The spectacle that alimentary delinquency offers is graphic and frontal and what matters most is display, directed at the spectator. Such exhibits and acts elicit disgust and shock from observers and spectators, and, like pica, dissect the act of eating from any nourishing function. Their primary effect or purpose is not to provide entertainment or aesthetic pleasure, but to disturb and to jolt, striking out at the passivity of the viewer. Such works are often praised and condemned for the very same reasons; they are grotesque, destructive, chaotic, and repulsive.

## Alimentary Delinquency as Crime

Another type of alimentary delinquency that must finally be considered occurs in a stricter ethical and legal sense in the form of scandals and scares that arise from mass food contaminations and the incorrect labeling of foods purchased in supermarkets or restaurants. Food scares are centered around a wide range of potential hazards all along the food supply chain that can result in a host of food-borne illnesses of varying degrees of seriousness. It is widely believed that many incidents of contamination – in baby milk formulas, salmonella or *E. coli* outbreaks, for example – are attributable to negligent industrialized food processing methods, and questions are often posed by investigative journalists regarding the responsibility of the dominant food corporations. Attention drawn, for example, to the potential legal culpability of food producers who, perhaps knowingly, alter the contents of their products or insert “addictive” levels of sugars and trans fats in their products. While many indignant members of the public suspect industrial food giants of wanton negligence, establishing proof of intent and initiating change in certain production processes have been difficult. Officials or groups attempting to intervene by outlawing certain practices in the name of public health and/or consumer protection, using many of the same arguments that were used successfully against tobacco companies, face daunting legal challenges. The attempt made by New York Mayor Michael Bloomberg in 2013 to ban the sale of sugar-laden soft drinks in “super-sized” recipients in an effort to ward off upwardly trending obesity and its subsequent burden on healthcare systems was struck down by the courts in the name of civil liberties. Such incidents are coupled with other 2013 scandals involving the undisclosed yet widespread substitution of cheap horsemeat for beef in frozen meals sold in North America and Europe and the use of pork sold as reindeer meat in Scandinavia. Although there was no health risk involved in these inscrutable and deceptive practices, they have prompted consumer watchdog groups to increase demands on government agencies for greater vigilance and accountability in all steps of the industrial food chain.

Although actual cases of criminal mass food adulteration have been rare – the most prominent case occurring in Oregon in 1984 where 751 people became ill after a religious cult infected area salad bars with salmonella – the potential of “food terrorism” is considered as a real and current threat by national and world health organizations. However, the greatest threat posed by food terrorism is not so much the widespread physical harm that could be caused to the population, as much as the potential economic damage incurred, as reactions to contaminated foods are immediate and result in speedy recalls that in turn have a long-term financial impact on food producers and retailers. Fortunately, actual incidents of food contamination, much like the disturbed eating practices described above, are relatively rare, yet they have a long shelf life in the imaginations of eaters and have prompted modern eaters to become more mindful and responsible in their eating practices and to ask essential questions about the ways in which food is produced and consumed.

An important aspect of food scandals regarding alimentary delinquency is the manner in which they are exposed to the public by industry whistle-blowers and investigative journalists. Such revelations often elicit heightened indignation and reaction especially when accompanied by imagery or graphic description. One of the first food scandals to receive nationwide condemnation in the United States was the result of realistic and visually evocative descriptions of meat-packing practices in Chicago in Upton Sinclair’s 1903 *The Jungle*. Sinclair’s detailed descriptions are among the factors that contributed to the eventual creation of the US Food and Drug Administration. Meat has remained central to many food scandals. In 2012 it was revealed that many North American industrial ground beef preparations, notably hamburgers, contain alarming quantities of a viscous slaughterhouse by-product derived from centrifuging leftover offal, bones, cuttings, and blood that is used as a filler. Known in the industry by the euphemism “lean finely textured beef,” its prevalent use was revealed to the public in the press with the evocative term “pink slime.” More than any other



technique, the animal rights group People for the Ethical Treatment of Animals (PETA) depends on photographs and videos taken from behind the closed doors of animal confinement pens and slaughterhouses to arouse the shock and indignation of consumers and to garner support for their work against animal cruelty. Under pressure from the meat lobby, states have taken measures in 2013 to denounce and ban the use of such imagery by whistle-blowers, claiming that the images are unlawfully obtained and are frequently used to distort the truth while at the same time acknowledging that raw footage and terms like “pink slime” go a long way in raising consumer awareness and demands.

## Summary

Alimentary delinquency, as featured in travel literature, in cases of pica, in works of contemporary art, or in food scandals that are exposed in a heightened visual manner, is viscerally disturbing and elicits revulsion in both physical and moral forms. Creating spectacle and menace around the act of eating, it forces post-agrarian spectators-as-eaters to question “normal” eating practices, often through the use of shock and disgust, and points to the body as a potential site of suffering and disorder through the seemingly simple, and often unquestioned, act of eating. Michael Pollan, in his critique of the widespread mechanized mass production of food, but mainly of meat and the industrial slaughterhouse, is an advocate of the right to look, suggesting that slaughterhouses should remove their doors and take down their walls, exposing all of their methods to the eyes of the public, as hard it sometimes may be. According to Pollan, the very fact of being able to look inside the slaughterhouse would provoke profound changes in the ways that animals are slaughtered and the ways that food itself is consumed. With its emphasis on the display and presentation of blatant images, alimentary delinquency challenges the modern eater, who prefers less and less to be confronted with the reality of his or her food and who, in a state of post-agrarian bio-cultural crisis, must

confront the symbolic possibilities of food contamination, coprophagy, gorging, cannibalism, and the spectacle of human flesh turned to meat. Alimentary delinquency involves acts of representation, which, more than any real danger to eaters, disassociate the act of eating from actual nourishment and pave the way toward Pollan’s goal by eliciting eaters to think long and hard about food choices and the ways in which food is consumed.

## Cross-References

- [Cannibalism](#)
- [Eating Disorders and Disturbed Eating](#)
- [Food “Porn” in Media](#)
- [Food and the Avant-Garde](#)
- [Food’s Purposes](#)
- [Food-Body Relationship](#)

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## Filmography

*Babette's feast* (Gabriel Axel, Denmark, 1987)  
*The cook, the thief, his wife and her lover* (Peter Greenaway, U.K., 1989)  
*Eat, drink, man, woman* (Ang Lee, China 1994)  
*La Grande Bouffe* (Marco Ferreri, France, 1973)  
*Julie and Julia* (Nora Ephron, USA, 2009)  
*Like water for chocolate* (Alfonso Arau, Mexico, 1992)  
*Phantom of liberty* (Luis Buñuel, France, 1974)  
*Salò o le 120 Giornate de Sodom* (Pier Paolo Pasolini, Italy, 1975)  
*Sweet movie* (Dusan Makavejev, Canada, 1974)

## American Cuisine, Existence Of

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## Synonyms

Ethnic foods; Fast food; Food culture; Foodways;  
 Mass-produced foods; National cuisine; Native  
 American foodways; Regional foods

## Introduction

Does an American cuisine exist? The multicultural and theoretically egalitarian society of the USA as well as its relatively recent establishment as a nation makes it difficult to identify specific foods that accurately and inclusively represent the country. It also raises other questions. What is a cuisine? Is a description of what Americans eat the same thing as a description of cuisine? Can those eating patterns constitute a cuisine? In what ways do those patterns reflect and, perhaps, even shape the history and identity of the nation? Who gets to answer these questions and why do they matter anyway?

This entry reviews a variety of approaches to the initial question, treating the definition of cuisine as a fundamental starting point. Some scholars (Long 2009; Mintz 2002) see it as a publicly recognized and officially established repertoire of ingredients, preparation styles,

flavor principles, attitudes toward food, and means of evaluating taste. This repertoire represents an intentional and aesthetic approach to food as articulating the identity of that culture and is canonized through formal culinary training, fine dining restaurants, professional chefs, and cultural critics. Another approach sees cuisine as simply the culinary culture(s) and foodways of a nation – the actual practices surrounding food and eating. It is expressed in cookbooks, popular literature and media, commercial food establishments, food marketing, the overall food system (from producer to consumer) and *habitus*, and foodways in daily life. It can also be seen in symbolic meals, such as at holidays, and in tourist products associated with the nation. This approach defines a culture's cuisine, by describing its food practices.

## Cuisine as a Publicly Articulated and Respected Canon

If cuisine is an officially accepted set of foods representing national identity, is it possible to say that the USA has such a canon? Most observers say no, although recently there are chefs and groups presenting new versions of older food traditions (usually, local and/or high-quality ingredients with “healthier” preparation methods). This lack of a canon reflects the history of the country as a nation of immigrants. Some romanticize this history as creating a “melting pot” of cultures in which they all coexist harmoniously and blend into a new and unified culture; however, the plethora of cultures coming to the USA have generally been incorporated into the largely Protestant and Caucasian Western European cultures that have held political, economic, social, and cultural control since they first colonized the country. A “salad bowl,” in which individual identities are maintained, is often presented as a more accurate description as well as a democratic ideal.

There are foods (hot dogs, pizza, ice cream), food habits (shopping in quantity, outdoor grilling), and food events (Thanksgiving dinner) that seem to be shared by most Americans,

helping construct Benedict Anderson's concept of nation as an "imagined community"; however, these do not represent a unified cuisine that all Americans agree upon as representing their identity. They also do not represent a respected way of cooking, eating, and thinking about food that citizens should aspire to. In fact, the cuisines of other cultures are frequently held up as models for American foodways habits. Also, many of these foods do not necessarily require extensive culinary training or sophisticated palates to be enjoyed and are thus not considered representative of culinary arts.

Another issue in determining whether there is an American cuisine is that, until very recently, food was not part of an official public and political dialogue on American identity. There is currently much discussion on food security, food safety, and eating habits that lead to obesity and health issues in the USA, and there are social movements promoting more sustainable food systems and foodways; however, there have been no official public attempts to establish a canon of food that represents Americanness. Again, there are practices that use food to perform a national identity – politicians displaying their attempts to be one with the masses by eating certain foods (hot dogs, barbecue, fried chicken); holiday meals and foods that ostensibly celebrate the nation; and movements in the late 1800s and early 1900s to "educate" immigrants into "American eating habits," as well as to the current popularity of cooking shows, fetishizing of culinary arts, raising chefs to star and celebrity status, and the increasing turning of cooking and eating into recreation and entertainment as bringing food into the public dialogue; however, this dialogue does not seem to be articulating a canon of national food practices, a cuisine.

There are several venues in which this kind of discussion actually does occur. One is cookbooks and, more recently, recipe Internet sites. The first has helped construct a sense of national identity in the USA. Amelia Simmons' *American Cookery*, published in 1796, established a definition of the cuisine of the new nation as being variations on European (mostly, British) cooking using local ingredients, preparation methods, and

nomenclature. She introduced recipes using cornmeal, pumpkin, squash, Jerusalem artichokes, turkey, cranberries, and spruce beer, suggesting that American cooking was the localization of other national cuisines. Since that time, there have been numerous cookbooks either presenting American foods or that have had such a widespread appeal, such as the *Joy of Cooking* and *Betty Crocker's Cookbook*, that they have helped to construct a shared culinary culture.

Similarly, women's magazines since the 1940s have offered recipes and cooking and tips for procuring, preserving, and presenting food that create a shared national culture. These arguably present a national cuisine, one that in the past emphasized a heavy reliance on processed foods and new technologies in kitchen equipment. It was a cuisine dominated by the 1950s housewife concept and tied directly into American attitudes toward women, gender roles, the home, the nuclear family, and the American lifestyle as well as food. Since the latter 1980s, an industry of cookbooks, cooking shows, magazines, self-help books, Internet sites, and celebrities has helped shape a national culinary culture emphasizing the aesthetic and social dimensions of food.

These venues for public discussion raise further questions about cuisine being established by those trained and knowledgeable in the culinary arts as well as being validated by those holding power. The USA, although riddled with social hierarchies based on race, gender, region, religion, physical appearance, popularity, and more, is actually relatively egalitarian in establishing cultural standards. Its foundation in capitalist economic theory allows the "marketplace," the consumers, to set these standards. Anyone, in theory, can work hard and secure a place in higher social classes. They can then have a say in defining an American cuisine.

Interestingly, there are now some cultural and educational institutions participating in a national dialogue around food. In 2004, the Smithsonian Institution developed an exhibit, *Key Ingredients: America by Food*, which, sponsored partially by the National Endowment for the Humanities, traveled throughout the country,

promoting discussion and thought. Similarly, starting in 2010, the SI's American History Museum displayed an exhibit on Julia Child, replicating her kitchen and exploring her impact on American culture. Other food exhibits have been developed by museums around the country. Also, Food Studies has emerged as an academic discipline and is being embraced by educational institutions, helping develop a canon of thought and scholarship on food and the nation.

Another aspect of defining a cuisine is whether or not it is distinctive and has a recognizable identity. Elizabeth and Paul Rozin observed that cuisines could be defined according to "flavor principles," the basic ingredients and unique combinations of those ingredients. This not only gives a characteristic taste to each cuisine but also allows that cuisine to expand and vary its repertoire as long as it maintains those core flavors.

Does the USA have a flavor principle? French theorist Roland Barthes concluded that American food is characterized by two flavors: "crispiness" and sweet. This crispiness is oftentimes achieved through deep frying, which then adds oiliness to much of the food, and by adding salt. Also, sweetness, now often coming from high-fructose corn syrup, appears in most foods, even those not thought of as being sweet, such as bread, vegetables, and meats.

Are there other aspects of American foodways habits that distinguish them from other cuisines? Are there patterns recognizable as "American"? Patterns emerge (three meals a day, emphasis on protein, historical treatment of food as fuel and nutrients, etc.), but these are representative and common, not necessarily distinctive or unique. The existence of patterns takes us to the second way of approaching cuisine.

### **Cuisine as Food Cultures and Foodways of a Nation**

Cuisine can also refer to the total sum of what people in a nation eat, what can also be called "food culture" or "foodways." A cuisine then is simply the description of those foodways. This is problematic, though. A description is not

a definition. Also, the multicultural nature of American history as well as the geography of the country makes such a description lengthy and complex. There are simply too many foods to include in a single description. Furthermore, identity, whether cultural or culinary, is frequently "differential," based on contrasting with another identity. Since food in the USA has historical connections with numerous other cultures, it is difficult to identify food traditions that are distinctive or unique only to the USA.

One way to address the complexity of American food culture is to see it as a layering of all of these historical and contemporary food cultures. Folklorist Don Yoder observed that American food culture is characterized by the coexistence of layers of regional, ethnic, and popular food cultures, suggesting a way to begin describing and identifying patterns of food practices.

Every food culture or cuisine can be seen as a combination of the natural environment and the human use of and adaptations to that environment. The physical environment includes the climate, the topography, water sources, soil types, flora, fauna, and the distribution or geography of those components. These in turn shape what edibles are available naturally as well as what foods can be produced in that environment. Human interaction with that environment both shapes and is shaped by the belief system, worldview, values, and practices – the culture – of that group of people.

Such interaction in the USA has a complicated history for two reasons: the nation is geographically vast and diverse, and secondly, the human cultures interacting with the physical environment have also been varied and have taken multiple, and often conflicting, approaches to the land and to food production from that land.

The USA is the fourth largest country in the world, stretching 3,717,813 mile<sup>2</sup>. Its east coast faces the Atlantic Ocean, while its west coast faces the Pacific, and it also includes large sections of land that do not join the mainland. In between the coasts, it has plentiful freshwater resources with lakes, rivers, and smaller bodies of water totaling 181,519 mile<sup>2</sup>. The climate is mostly temperate although because of its size, it

reaches into the arctic as well as the tropical. It also historically contained vast woodlands and prairies with mineral-rich soils that sustained numerous plants and wildlife. It also contains desert landscapes, swamps, high mountains, deep canyons, and rolling hills.

This natural environment has translated into two characteristics of American food: seemingly unlimited abundance and rich diversity and variety of foods. Although the country has gone through times of limited food supplies (the Depressions and WWII) and there are individuals and communities suffering from “food insecurity,” the cultural ethos assumes numerous choices and enough food for every American.

The USA can be divided into four geographic regions: the Eastern Seaboard, the Midwest Interior Plains, the Western Seaboard, and the South stretching from the eastern seaboard to beginnings of the western one. Each region shares a unique combination of natural resources, Native American history, settlement history, ethnic groups, and political and economic development. Moreover, each region includes numerous subregions. These regions and subregions have their own cultural histories that oftentimes include distinctive and representative food traditions.

Can these regional foodways be taken all together to identify and characterize an American cuisine? Many cookbook writers take this approach: the excellent Time-Life series, Jeff Smith’s *Frugal Gourmet* series, and Jane and Michael Stern’s *Roadfood* collections of recipes and anecdotes from real people across the country. Folklorists and geographers also imply this approach in their ethnographic studies of foodways traditions of specific localities, for example, Brown and Mussell’s *Ethnic and Regional Foodways in the United States: The Performance of Group Identity* and the Shortridge’s *The Taste of American Place: A Reader on Regional and Ethnic Foods*. Both explore how food reflects as well as defines the history and identity of a region but also recognize that the association of food with a place can be a relative construction based on marketing, tourism, mass media, and communal imagination. Food can function as a “rhetoric of

regionalization,” being used to recognize and draw regional boundaries and invent regional identities (Brown and Mussell). Anthropologist Amy Trubek questions whether the American food system even allows for a “taste of place” since food tends to travel across the country so that its origins are rarely known. Analyzing the French concept of *terroir* (food literally tasting of the place where it was produced), she states that the USA does not have a cuisine based on regions or even a connection of food to a physical environment: “Our foodview is not informed by taste, or by place, but by the ability to purchase a consistent product, or more generally, a commodity” (p. 15). Beginning in the first decade of the twenty-first century, the locavore movement, Slow Food and similar organizations, and food systems critics and activists have begun reconnecting food and place, bringing these concerns to the general public, so that the concern itself is perhaps a step in creating a national cuisine.

The geographic regions of the nation developed into cultural regions through the adaptations of humans to those environments as well as the ways in which humans shaped the land. American history includes waves of settlement, each wave introducing new culinary practices and cultures.

The original cultural layer of American foodways is Native American, coming from Asia through the Bering Strait in Alaska between 15,000 and 13,000 years ago. These “immigrants” then spread throughout the continent adapting to local resources and developing into four distinctive regions: Eastern Woodland Cultures, Plains Cultures, Far West Cultures (including the Pacific Northwest, Alaska, and Hawaii), and Southwest Cultures. Although tribes had their own languages, social structures, and food traditions, they tended to share a belief that humans needed to live in respectful harmony with nature. They carefully used local resources, mixing hunting and gathering with farming. Corn (maize) cultivation began around 400 AD and allowed more reliance on farming, which then leads to more permanent settlements. Corn became a staple crop, usually grown and cooked



with squash and beans. These “three sisters” were integral to Native American foodways and are one of their most significant legacies.

European exploration and colonization began in the late 1400s, introducing new foods, animals, and technologies along with tremendous social upheaval and in some cases extermination. The Indian Removal Act of 1830 moved Native Americans to reservations west of the Mississippi, further disrupting traditional cultures. Many culinary and foodways traditions and skills were lost, although European settlers adapted many of them, particularly, the cultivation of certain crops of the three sisters. Native American foodways since have developed into new “cuisines” reflecting this history of disruption and homogenizing of separate cultures into one of displaced peoples. Fry bread, a flat bread of wheat flour, salt, water, and lard or shortening, is an example of a dish reflecting the experiences of poverty and disconnection with the land caused by governmental policies and social discrimination.

European settlement is the foundation of the USA as a nation, a reality that shapes its culinary culture as well as its politics, economics, and social structures. There were several waves of settlement of the USA. After the initial “discovery” by Spanish explorers in the late 1400s, the first wave occurred from the early 1600s through the early 1800s, with settlement by Western Europeans – primarily British, Dutch, and German in the 1700s. With the addition of French cooking styles and aesthetics, these three cultures laid the foundation for “American” culinary culture, setting what has been treated as the social norm for attitudes toward food – the dominant flavor and texture of the “melting pot.” The forced immigration of slaves from Africa during this time period until the Civil War in the mid-1860s significantly influenced the Southern USA – shaping its economy, agriculture, social structures, and foodways. Spanish colonization of Mexico during this time created a culinary culture influential in what later became the American southwest.

Industrialization brought a second wave of immigration in the 1800s and also restructured

the nation into rural and urban. These groups included the Irish (largely Catholic, fleeing the potato famines), southern and eastern Europeans, as well as European Jews. Although these groups came from Europe, their culinary traditions contrasted with and threatened the previously established food culture, leading to attempts to assert that culture as the American way to which immigrants needed to adapt.

The claiming of Texas and southern California from Mexico in the mid-1800s redefined Mexican citizens and their food as ethnic Americans. The California Gold Rush in the 1860s, as well as similar opportunities in the Pacific Northwest, attracted immigrants from southern China and other Asian countries as well as Russia and northern Europe. Immigration laws in the 1910s and 1920s limited the number of immigrants to the USA, shutting out some ethnicities altogether. Migrant workers from Mexico, however, were brought into the USA as an inexpensive labor force, affirming the status of Mexican culinary traditions as not only “other” but also less sophisticated and less “civilized” than “American” ones.

A final wave of immigration beginning in the 1960s brought refugees from international conflicts (Korea, Vietnam, Southeast Asia, Central America) as well as educated professionals from around the world. These immigrants introduced their own culinary traditions, expanding the foods available in the USA. Also, increased mobility, cross-cultural and cross-regional interaction among American residents, and access to global experiences have further broadened the variety of ingredients, cooking and eating styles, and cuisines available to Americans.

Throughout this history of immigration, some food cultures quickly assimilated, leading to the so-called melting pot of American culinary culture, while others retained their individual identities, maintaining cultural forms (such as language, food, religious beliefs) and social groupings and creating more of a “salad bowl,” in which multiple culinary traditions coexist. In many instances, immigrant foodways entered mainstream American foodways and are no longer thought of as ethnic – as described in Richard

Pillsbury's *No Foreign Food*. In other cases, food provided a means for economic survival and a venue for assimilation and even public sharing of culinary traditions. Whether that sharing translated into acceptance of those ethnic identities, as Donna Gabaccia suggests, or is another form of cultural imperialism (Abrahams, Heldke) is a matter of interpretation, but it is definitely accurate to say that such cross-cultural exchange of foodways is a characteristic of American food culture (Diner, Pillsbury; Long). Be that as it may, food has often been used as a way to mark boundaries, negotiate and celebrate identity, create community, and pass along beliefs and world-views among ethnic groups in the USA.

An additional characteristic of American food is that ethnicity – and participating in ethnic foodways – is, to a certain extent and ideally, voluntary and situational. That is, individuals can choose to highlight their ethnicity in given situations and, in some, treat it as irrelevant. This means that, in theory, an individual of Chinese heritage can choose to eat Chinese food on some occasions but not on others and can be motivated by factors other than his or her ethnicity, such as taste, convenience, expense, social setting, etc. Also, American society is literally multicultural with most residents claiming a number of ethnicities. An individual can therefore eat from multiple culinary cultures in performing their own ethnic heritage.

The final layer of food culture in the USA, and the one that is most often identified as American, is the mass-produced, commercial one that results from an industrialized food system. This system distances the people growing food (producers) from those who are eating it (consumers) by adding numerous links to the “food chain” – processors, packagers, marketers, distributors, and sellers. It depends heavily on technology and transportation, taking raw ingredients from throughout the country, transforming them into products that are then mass marketed and mass distributed. The system values efficiency, cost-effectiveness, and profit over more intangible qualities of food. It also reflects the historical American approach to food as fuel rather than something to enjoy for itself, and it embodies other American values – quantity over

quality, individual choice over communal or global responsibility, convenience, conformity, immediate and easy access to goods, and faith in human ingenuity and technology as well as a belief in its superiority and infallibility along with a sense of entitlement to abundance. Contemporary American eating habits have been shaped by the existence of large supermarkets, the choice of multiple brands of an item, purchasing in quantity and at discount, and the irrelevance of season or locale in having access to a specific food. The system has also created a national level of food culture made up of highly processed, heavily packaged, oftentimes pre-prepared foods that can be found throughout the country. Marion Nestle's *Food Politics: How the Food Industry Influences Nutrition and Health* (2002) and Michael Pollan's *The Omnivore's Dilemma* (2006) heavily criticized the industrial food chain and have brought its destructive implications to the attention of the general public.

An offshoot of the contemporary food system is “fast food,” oftentimes identified by observers as a distinctively American cuisine. Eric Schlosser argues in *Fast Food Nation* that this industry reflects particular American historical conditions – the rise of the automobile, the social and geographic mobility of US residents, capitalism applied to food production, etc. Along with franchise restaurants in general, it has also homogenized American tastes and foodways and, because of its centralized top-down management model, has spread and imposed its own culinary culture throughout the country. It has also literally taken over local venues for food and established similar processes, products, and evaluations everywhere, in what has been referred to as “the McDonaldization of America.”

At the same time, the fast-food industry now recognizes regional culinary traditions and oftentimes exploits them by inventing products simulating them and by catering to regional tastes. Sweet tea, for example, a drink distinctive to the American South, is available in many fast-food establishments throughout that region. Also, some franchises maintain their original regional roots, such as Friendly's, which started in Massachusetts

and continues to serve New England style hot-dog rolls wherever it is in the country.

This layer of commercial mass-produced foods can also include a number of food-related industries and products – cookbooks, food magazines, recipe websites, food festivals and trade shows, culinary tourism, food memorabilia, and new food “destinations” and food-based events. Many of these present a de facto American cuisine by referring to “all-American” food, “comfort foods,” and foodways traditions of grandparents. Even those that present foods that are unique or different in some way actually suggest that there is a normative American cuisine. This is usually characterized as plain, straightforward, hearty, “meat and potatoes” fare that is associated with the Western European colonial and pioneer settlers. Furthermore, the system has also created a national level of foodways that are practiced and shared among most Americans.

### **American Cuisine as Specific Ingredients, Dishes, and Meals**

These layers of food cultures can be explored through “biographies” of a particular ingredient, dish, or meal, some of which are used publicly and purposefully to signify American identity and to prove or imply the existence of a national cuisine. Oftentimes though, food takes on meaning through its usage or contexts of usage, and those meanings might not be recognized – until they either are missing or are seen to contrast somehow with another cuisine. These unrecognized foodways traditions can be seen as the actual practice of American cuisine.

Folklorists Wilson and Gillespie give an example of the raw materials of food in *Rooted in America*, in which they identify fruits and vegetables significant in American cultural history. Some are indigenous – corn, cranberries, hot peppers, pumpkins, tobacco (not an edible but ingested in a sense), and tomatoes – suggesting another way of defining an American cuisine, but others are not – oranges, apples, bananas, and watermelons – but are widely popular in the USA and are frequently found on American

tables across the country. Each of these items, however, reflects the economic, political, and social history of the nation as well as the larger food culture so that they can be said to embody American cuisine if not define it.

Similarly, specific dishes can also be “read” as presenting an American cuisine. In *Clambake: A History and Celebration of an American Tradition*, Kathy Neustadt explores the construction of meaning and identity of a particular foodways tradition in her ethnography and analysis of a community clambake in Massachusetts (1992). She demonstrates that this tradition was borrowed by Europeans from Native American foodways and has become imbued with concepts of self, nation, and community. In many ways, it represents an American cuisine through this process of adaptation, reinvention, and regrounding in the local and in the community.

Another example is barbecue. One of the most argued about food traditions in the country, barbecue is defined as a preparation method, a type of food, an event or activity, and even a condiment. It draws upon both Native American and African American heritage and has a regional association with the South but displays distinctive local variations. More subtly, it also reflects race, class, gender, ethnic, and even ethical (as in vegetarian options) identities in the USA. Similarly, in his history of Chinese food in the USA, Andrew Coe focuses on chop suey as representing the ultimate adaptation of an ethnic food to national tastes and the resulting homogenization and poor quality that has threatened the image of an ethnic cuisine as bland and tasteless. A final example of a specific dish signifying American cuisine is green bean casserole. Folklorist Lucy Long demonstrated that this casserole, although invented and distributed by a major food processing company, reflects the ethnic and industrial culture of the eastern Midwest, where it has been adopted into family and community foodways traditions.

The quintessential American meal is Thanksgiving dinner. Officially commemorating the first harvest of the Pilgrims, the meal promotes a national identity based on Western European, Protestant colonizers and a national myth of settlement for religious freedom and harmonious

coexistence with the prior inhabitants of the land. Unofficially, the holiday celebrates family, abundance, and the “freedom from want” represented in Norman Rockwell’s painting and part of the “American dream.” The meal can also be seen as representing, perhaps even constructing, national unity by offering a food event in which everyone can participate, not only sharing in certain expected foods, such as turkey, cranberry sauce, mashed potatoes, pumpkin pie, but also adding to that national paradigm individual variations reflecting region, ethnicity, ethos, class, gender, current circumstances, and even personality.

## Summary

Is there an American cuisine? The possible answers perhaps just raise more questions, but the fact that it is open to discussion suggests significant characteristics of American food culture. Scholars and pundits write about it, but there are also the “de facto” constructions of a cuisine by “the people” – by restaurant owners, readers of cookbooks, chefs trying to find a niche and a name for themselves, farmers holding on to family land and financial survival either by joining one of the large conglomerates or by joining the farmers market and CSA movement, and each individual who daily makes decisions around food and, whether intentionally or not, performs Americanness through their eating.

It is also important to ask why it matters whether there is an American cuisine. It matters because having a cuisine seems to represent having a national identity that people can be proud of, that they can publicly offer to the rest of the world as well as to themselves as the best of what they are. But it also represents a unified agreement on what constitutes that identity and what represents quality – decisions that reflect social hierarchies holding cultural power (and usually economic power) rather than the more democratic layering and blending of food cultures that exists in a multicultural nation. As Sidney Mintz points out, “. . .not having a cuisine. . .might be a price we should be happily prepared to pay for ‘what’s great about America’ (2002, p. 24).

## Cross-References

- ▶ [American Cuisine, Existence of](#)
- ▶ [Christian Stewardship in Agriculture](#)
- ▶ [Christianity and Food](#)
- ▶ [Company Identity in the Food Industry](#)
- ▶ [Ethnicity, Ethnic Identity, and Food](#)
- ▶ [Food and Place](#)
- ▶ [Trade and Development in the Food and Agricultural Sectors](#)

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## American Food Rhetoric

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### Synonyms

Agricultural mythology; Food identity; Food metaphor; Food politics; Food tropes

### Introduction

Definitions of rhetoric have evolved over the course of Western intellectual history. As a result, understandings of this civic art can range from the strategic manipulation of symbolic forms for persuasive ends to a constitutive process that is central to the formation of identity. In its infancy, the Aristotelian conception of rhetoric as a persuasive appeal deployed by speakers to gain the advocacy of an audience was highly influential (Kennedy 1991). From this traditional standpoint, rhetoric can be summarized as a process whereby an advocate meets an external challenge with a specific set of symbolic appeals, overcomes situational constraints, and achieves personal and communal objectives (Bitzer 1992). This narrow view of rhetoric began to expand as a result of theorists such as Kenneth Burke, who positioned it at the center of human symbolic commerce, suggesting that it played a significant role in developing and maintaining communities by maintaining and generating new meanings that shaped perceptions of the world. Most importantly, Burke elevated aesthetic elements often associated with style in the rhetorical canon to a position of prominence alongside logic

and argument. This meant representation, myth, metaphor, and narrative were central to understanding how these symbolic networks shaped identity and action. Thus, aesthetic elements such as metaphor were no longer perceived as mere ornamental devices, but were reconfigured as frameworks that shaped human perception and knowledge systems (Lakoff 1993). Here rhetoric is transformed from a civic art designed to persuade audiences into a symbolic dynamic through which those audiences are constituted. As the meanings of human experiences such as food are negotiated through these dynamics, food itself becomes a constitutive field upon which identity is both shaped and contested. Given that the constitutive negotiation of food is central to every person's experience, studies in the rhetoric of food now encompass a wide array of contexts. These investigations include, but are not limited to, the impact of certain food practices on identity, the depiction of food in political culture, the relationship between food and nationhood, agricultural myth, and food sovereignty movements' growing political resistance. Food's meaning is shaped and contested through three main processes: the mythic normalization of food production and consumption patterns, the metaphorical contestation of the meaning of food through visual and linguistic means, and the constitution of new identities that transform food into a means of political resistance.

### Agriculture and Myth

First, understanding the changing meaning of food requires exploration of the role that it plays within the mythic or narrative traditions that define a given culture. These forces deeply impact value systems and national ideologies. In the United States the rhetorical terrain of food is defined by agrarian myths that shape American consciousness. The narrative of the yeoman or gentleman farmer, sometimes historically embodied in the historical accounts surrounding Thomas Jefferson, remains deeply entrenched in the shared romantic traditions that define the relationship between farming and national ethics (Holden 2006).



The value systems that are romanticized in these myths are closeness to nature, hard work, independence, self-sufficiency, and individualism. This mythic account promulgates that nature exists as a resource provided by the Creator for the farmer's benefit, an ideal later expanded in Frederick Turner's frontier thesis, one of the earliest essays defining the development of rhetorical tropes commonly associated with farming, nature, and national virtue (Smith 1950). These myths' continuing rhetorical impact can be seen in the prevalence of these value systems in agricultural regions such as the southern United States despite decreasing percentages of citizens now actively participating in food production.

These mythic systems are also points of contest. As the nature of agriculture changed in the United States during the twentieth century, these mythic frameworks came into rhetorical conflict with progress narratives that advanced a belief in technology as salvation. Classic examples of these progress myths can be seen in Pare Lorenz's 1936 documentary *Plough that Broke the Plains*, a piece of New Deal propaganda advocating for planned communities. This film and other government-sponsored campaigns challenged the yeomen myth, suggesting that technological, mass farming would bring an end to hunger by overcoming nature. The erosion of independent agrarian practices in the face of this industrial farming regime generated fundamental conflicts in the national and global psyche (Singer 2011). Evidence of this appears in movements such as the Southern Agrarians, a political and intellectual movement that warned of the dangers of mechanized farming and the threat that it posed to regional identities that were linked to the soil. These thinkers overtly objected to the progress myth as essentially dehumanizing and attempted to galvanize a regional resistance movement by recovering the Jeffersonian myth of the small independent farmer who worked within the bounds of God and nature and did not seek to exploit the environment.

As the progressive myths of science and technology continued to expand, a new rhetoric of food emerged. This shift in food practices, as well as the methods used to normalize them, marked

the primary focus of the rhetorical analysis of modern food narratives. The mythic perspective highlights how food values, ethics, and practices are maintained intersubjectively. From a rhetorical standpoint, intersubjectivity can be defined as interlocutors defining their reality through symbolic exchange. This is what is meant by normalization. Rhetorical practices accumulate and sediment over time until they become widely accepted as unquestioned ways of life (Brummett 1976). As the twentieth century progressed, agricultural products far outstripped all other commodities in the global marketplace to become the most diverse and economically important trade item in the world (Murray 2007). In one classical rhetorical enactment, the original food pyramid, the shifting rhetoric of food associated with agrarian practices is evident. While cloaked in the rhetoric of science, the mythic shift from the yeoman farmer to the mechanized food system is normalized by this visual depiction of proper nutrition. Food historians note that this pyramid has little to do with personal health but instead supports agricultural policy (Mudry 2009). The placement of grains at the base of the original food pyramid persuaded citizens to accept the new technological developments in agriculture, specifically the trend toward industrialization and specialization that mark a grain-based market. This represents a fundamental reassessment of the ways that food policies, agricultural values, and nutrition function rhetorically to generate and normalize new food narratives.

## Food Metaphors

The second manifestation of food rhetoric occurs when the meaning of food itself is negotiated through metaphorical frameworks. To illustrate this process one can examine how a particular food item can be symbolically contested through time. Communication scholars, food historians, and anthropologists recognize that the consumption of certain types of food is central to the expression of both personal and group identity (Mintz 1996; Montanari 2006). Perhaps the most

coveted global commodity at the end of the nineteenth century was sugar. During the nineteenth century, consumption of foods high in sugar was a marker of status, and those who ate even modest quantities understood that this item was a luxury. As the century progressed and shifts in global marketplaces responded to the increased consumption of processed foods, sugar as a marker of status has disappeared. The diet regimes of the past few decades demonstrate that sugar has shifted in meaning from a commodity whose consumption denotes status to a nutritional toxin. This point is evidenced in the Whitehouse Taskforce on Childhood Obesity's (2010) assertions that processed foods that are high in sugar, now more prevalent in poorer neighborhoods, and constitute a threat to the health of economically deprived citizens. This metaphorical equation of sugar to a nutritional toxin has, not surprisingly, met resistance from organizations that produce and distribute sugar-based products. The Center for Consumer Freedom has been a primary mover in attempting to rhetorically challenge this view of sugar, leading to explosive political confrontations regarding the rhetorical meaning of food. The most high profile of these confrontations occurred in New York City where initiatives against large soda containers, limitations that are justified as attempts to improve public health, have been challenged in both the court system and the venue of public opinion. Here sugar undergoes yet a third metaphorical reconstruction as it is linked to personal liberty and freedom. As sugar is transformed from status marker to nutritional toxin and finally into a means for expressing individual freedom, sugar demonstrates how particular foods can be negotiated rhetorically.

A growing awareness exists that the linguistic terms to describe food have a profound impact on how the public perceives food. The publication of Upton Sinclair's *The Jungle* (1906), a novel that exposed the unsanitary working conditions of the Chicago stockyards, provides an example of the overt use of linguistic framing devices to shift the national consciousness about food. While the work was primarily intended to initiate a national conversation about the exploitation of

immigrant laborers in America, its reverberations within the food industry were more substantial. The public outcry inspired by the graphic descriptions of filth in the slaughterhouses began the age of food reformation, leading to the formation of the organization that is currently known as the Food and Drug Administration. Food companies are now conscious of the ways that images of filth, poison, or viscera can impact the marketplace and go to extraordinary links to limit what can or cannot be said about their products. Not surprisingly the management of food has generated a number of First Amendment cases in the United States (Grey 2013). Food libel laws, otherwise known as Food Disparagement Laws, have come into effect in many states. While sometimes known as "Veggie Libel" laws, cases of food disparagement usually deal with meat products. Texts such as Sinclair's *The Jungle* would likely draw a civil suit if the book were published in many agricultural states today. The most famous food disparagement controversy came in 1996 when talk show host Oprah Winfrey suggested that she would be hesitant to eat beef after hosting a show about mad cow disease. A vivid example of how food is linguistically contested through these cases appears in the use of the term "pink slime" by CBS news to describe certain methods for creating ground beef. While the metaphor "pink slime" was used in internal FDA memos to describe a product called "lean finely textured beef," the news organization has been litigated for its use of this term, which provokes disgust. Thus, the metaphorical framing devices used to describe food are now the subject of First Amendment litigation.

From a metaphorical standpoint, the terminology that divides linguistic constructs such as "natural" and "artificial" is also the product of rhetorical processes. As food is transformed from a commodity that is grown and delivered into a manufactured product, this led some rhetorical scholars to question the ontology of food (Jacobsen 2004). In other words, delivery, packaging, and promotional campaigns impact the consumer's relationship with food, but so do the constituent ingredients, texture, and experience

of eating it (Moss 2013). These foods are sometimes described as “spectral commodities” (McHugh 2010). Because these products are created in laboratories with mixtures of genetically modified organisms and artificially derived chemicals, debate exists regarding how to define these spectral products. Concerns raised about the normalization of artificial foods have increased the metaphorical contest between “natural” and “artificial” within the food sciences themselves (Nestle 2002). New linguistic terrains have merged to demarcate certain types of food that reflect particular dietary concerns. This growing linguistic consciousness is evidenced in the frequent use of terms such as “natural foods” or “whole foods” that have their origins in the organic farming movement that took root in the United States in the late 1960s. A resurgent interest in understanding how the processed food diet impacts both individuals and the environment has been the subject of a number of best-selling books (Pollan 2006). To demonstrate the rhetorical strategies of processed foods’ critics, the example of vitamin fortification is instructive. Critics such as Michael Pollan argue that the vitamin fortification of processed foods such as high-sugar cereals help to normalize the existing dietary regime by allowing producers to define these products as “healthy” when they are not. Rather than encouraging the consumer to eat more “natural” foods that humans have evolved to digest, vitamin fortification encourages the perception that all food is simply a collection of artificially generated ingredients that can also be defined as “natural.” Concerns about how food is being defined have led to new dietary regimes called paleo-diets that advocate a return to preindustrial nutrition patterns.

### Constitutive Food Rhetoric

The third major trend in the rhetoric of food deals with the manufacture of new subjectivities that challenge existing food patterns. Recognizing that rhetoric plays a key role in the constitution of communities by generating new meanings, many groups are now attempting to overtly create

new food identities. These movements are often called food sovereignty movements. Just as discourse shapes personal identity and experience, symbolic systems also can be used to create counter-discourses that generate new subjectivities (Hall 1985). The creation of new food identities proceeds in two stages. First, the dominant strategies used to normalize certain food patterns are exposed. A good example of this process is documented in George Ritzer’s work exploring the impact of the McDonalds Corporation on American consumer patterns. The rhetorical success of this one food company ushered in a new age in which consumer activity is dominated by chain stores to the exclusion of local businesses. Rather than thinking about food in terms of health and well being, consumers are being increasingly encouraged to understand food as a product that should be delivered quickly, be standardized across regions, and be efficiently offered with as little cost as possible. Thus, the rhetoric of food is deeply intertwined with the values generated by these new production, distribution, and consumption patterns. These models may be seen as natural by those who participate in them, but they are in fact products of efficiency value systems that now define and constrain human behavior by, in effect, promoting the idea that these models are natural. By making the consumer aware of the symbolic apparatus and patterns that are being used to exploit them, they are made more self-aware of the choices they make.

The second element in constituting the food sovereignty movement entails the projection of certain foods as conscious political expressions. These efforts are evidenced by the relationship between food and self-perception, as organic or whole foods become a dramatistic frame of political resistance. Environmental scholars suggest that when certain foods are consumed, the consumer is increasingly making these choices as a means to express political identity (Katz 2010). While early organic advocates suggested that these diets were beneficial for their positive effects on physical health, the growing food awareness movement looks at how certain practices express a form of political resistance. For example, while canning was once

practiced as a means to allow agrarian populations to survive harsh winters, new trends show that it is now becoming increasingly widespread in mid- to upper-income households that view food preservation as a medium through which to express their personal autonomy in the face of mechanized farming (Click and Ridberg 2010). Thus, food preservation has shifted rhetorically in both its function and significance. As these practitioners become increasingly aware of human and environmental exploitation associated with the mechanized production of food, these practices have also evolved into a means for generating new rhetorically generated food identities.

Most recently food is being contested along the axis of human rights as food sovereignty movements become global in scope. These advocates draw a direct link between food and the values of individual sovereignty and freedom. The food sovereignty movement is a direct expression of these rhetorical efforts, as food giants, the most visible of which is Monsanto, are perceived to “colonize” the food chain (Lang and Heasman 2004; Paul and Steinbrecher 2003). In the face of these concerns, many corporations have become increasingly conscious of the discourse that they generate, exploring ways to project a humane, eco-friendly image that sometimes involves the use of food imagery (Cozen 2010). Understanding rhetoric as a constitutive process entails exploring how symbol systems generate ways of seeing and experiencing the world. As this growing awareness has become a global movement, new terminologies are emerging to describe this shifting subjectivity. The most resonant of these theoretical constructs has emerged from the Slow Food movement initiated by Carlo Petrini, which attempts to create a new identity that resists the fast food mentality. *Gastronomes* are defined as food consumers who consciously expand their understanding of food beyond the parameters of cost and nutrition. In particular, these consumers view food as an aesthetic, cultural, and ethical complex. In this framework the lack of self-awareness among most food consumers is replaced by an increased awareness of both the

symbolic construction of food and the broader ramifications of various food choices (Andrews 2008). The gastronome, as a rhetorical construct, represents the culmination of the shifting terrain upon which food practices are currently contested. This demonstrates the extent to which this new class of consumers is becoming aware of food as a rhetorical concept. As new subjectivities emerge to account for the shifting rhetorical environment through which the meaning of food is established and negotiated, the theoretical and critical approaches that grapple with this discourse continue to proliferate.

## Summary

As American society has progressed from an agricultural to a postindustrial economy, food producers have been largely replaced by food consumers. The gulf that now exists between citizens and their food means that there are many layers of mediation between people and what they eat. Government agencies, citizens’ rights groups, corporations, and other organizations each contest the symbolic meaning of food. The process by which these meanings are negotiated, both strategically and unconsciously, is rhetorical. To suggest that food is discursively constructed means recognizing that food definitions are products of rhetoric. While aesthetic elements such as myth and metaphor may appear superficial or secondary, they are in fact the building blocks of literal meaning. Since the nation is entering a period when food is increasingly politicized, it is reasonable to expect that its meaning will undergo further transformations. Attention to the rhetorical dynamics that form the basis for how these conflicts are navigated is essential to understanding the shifting parameters of food consciousness.

## Cross-References

- [Company Identity in the Food Industry](#)
- [Food and Choice](#)
- [Food and Class](#)

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## Ancestral Cuisine and Cooking Rituals

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## Synonyms

Ancient cooking; Archetypical food; Cooking customs; Iconic dishes; Prehistorical recipes; Ritual food; Traditional cuisine

## Introduction

All over the world today, different peoples carry out culinary practices and methods of preparing food that belong to and denote earlier and often particularly ancient forms of cooking (Civitello 2011). Anthropological and ethnological studies show that the cuisine of our ancestors is far more than a long-standing system of preparing food developed down through the ages. Bio-archaeology and ethnobiology also reveal that the cuisine of our ancestors is not a simple



cluster of remote culinary habits or customs but involved special artifacts, technical expertise, and basic skills related to nutrition and environment. Moreover, it reflects archetypal images and ideas about the origin and identity of individuals and groups. In addition, traditional concepts of gender are embedded in the most ancient culinary practices. Ancestral cuisine is also a mirror of the economy and the resources of a territory and is a document of the political history of a community, its social hierarchy, and distribution of power through the centuries. But first and foremost, ancestral culinary practices have an anthropological and cultural dimension. They reveal spiritual and material beliefs in nature and the relationships between humans and other creatures (Kiple and Coneè Ornelas 2000). In many cases, the most ancient culinary practices have evolved into cooking rituals rather than simply systems of preparing food. What makes a remote culinary method ritualistic is not just a habit, albeit regularly and invariably followed by peoples on certain occasions or in precise contexts. Yet, a long-standing practice of preparing food becomes a cooking ritual if it is related to or carried out as a solemn rite, that is to say, an official ceremony consisting of a series of actions performed according to a prescribed order with a precise cultural meaning, whatever it is. So “ritual” is a collective term that designates the range of techniques that peoples use to capture or promote life, fertility, prosperity, health, etc. (Pilcher 2006). There is no science or discipline specific to ancestral cuisine and cooking rituals. Many social sciences deal with this field: e.g., anthropology, ethnology, archaeology, history, linguistics, sociology, theological studies, and so on. Indeed, many methods and approaches help us to understand how people conceive and develop cooking practices relating to their cultures (Mintz and Du Bois 2002). Interviews and participant observations are two primary methods, as well as archaeological and ethno-botanic researches. In addition to empirical data, popular mythology, epic, and historiographical literature shed light on the cuisine of our ancestors and their cooking rituals. Besides, the food lexicon of peoples is a depository of knowledge

of utmost importance. Culinary traditions are investigated by sociology, especially with regard to spiritual, moral, and political dimensions. Further important data are brought to light by cross-cultural comparisons. All these researches show that the attitudes toward the cuisine of our ancestors and their cooking rituals not only are a mirror of archetypal beliefs and shared convictions but also reveal and perform a critical function.

### **Food Preparing as a Biological and Cultural Practice**

From a historical perspective, the first appearance of ancestral cuisine occurred in prehistorical food rituals (Toussaint-Samat 2009). The analyses of these rituals are philosophically instructive insofar as they show that ancestral cuisine is not a mere relict of our past and that cooking is far more than a biological necessity and an instinctive practice. Prehistorical food rituals disclose that activities involving food had a theoretical dimension. There is no doubt that from the earliest times, culinary practices were strictly dependent on the resources, materials, and techniques at hand. On the other side, culinary tastes and social and cultural occurrences also play a role in the evolution of cooking. One of the most significant rituals among primitives was offering human flesh to deities. And cannibalism was not only a ritual but also a natural response to any severe food shortage. Prehistorical food rituals show that the adoption of techniques to prepare and process food comes from the interplay of technical and economic restrictions as well as culinary tastes and aesthetic or social standards. A good example is the prehistorical and historical Arctic peoples cooking sea mammal meat and extracting the oil by boiling according to special recipes. As this example shows, creating recipes and inventing cooking methods to make food edible were not simply technical issues, but expressions of human artistry and inspiration. More in general, ancestral cuisine represents the cultural heritage of populations and especially the natives of a country. Indeed, the 2010 declaration of Mexican cuisine as an intangible

cultural heritage in compliance with the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage has great significance. The award – the first for food – recognizes Mexican cuisine and in particular Michoacán cuisine as an integral part of an ancestral cultural system characterized by wide social diversity and geographic biodiversity. These days in fact Mexican dishes are still based on native foods and culinary practices, as *nixtamalization* and *chinampa* demonstrate. The award is a sign of the social, economic, and ethical issues existing in contemporary societies about preserving ancestral foods and practices. In the most recent philosophical debates, ancestral cuisine is seen as a public good and a keystone of the common well-being of multiethnic and multicultural societies. Along this line, many public policies are based on the assumption that preserving ancestral cuisine is a way of recognizing native peoples' identity and respecting differing cultures, attributing each its own dignity.

### Art and Religion: The Spiritual and Symbolic Dimensions

It is often debated whether ancestral cuisine is related to the spiritual/mystical dimension. Many studies have pointed out that the dividing line between cooking and religious rituals is not clear-cut. And the same may be said about the relationship between cuisine and art, given that food prepared according to cooking rituals is surely an artifact. Some dishes are even authentic artworks: in Korea rice cake are prepared with azalea flower petals to celebrate the beginning of spring or shaped like the sun, moon, stars, and earth as a prayer for good weather (Yeun ja 2010). According to some, cooking is itself a form of art and cooking rituals belong to religion and beliefs in the supernatural. This contains a grain of truth, though it seems to lay stress exclusively on one feature of a multifaceted phenomenon. Striking evidence of the spiritual as well as physical dimension of cooking can be found in the Ancient Greece *mageiroi* and their ways of preparing food (Berthiaume 1982). From

ancient times ancestral culinary practices have been related to religion and art, as ancient food ceremonies and sacrifices to deities demonstrate: e.g., Greek festivals like *Thesmophoria* and *Karneia*, the Jewish cult of YHWH, and Confucian ceremonies and sacrifices. In other words, cooking, religion, and art are separate spheres of human activity involving complex relationships. Accordingly, a reasonable view is to consider cooking not just as a material habit, but as a practice entailing spiritual convictions and revealing the mystical or, more properly, the symbolic dimension of food. So, in Ancient societies activities involving food were conceived as practices that enter the divine realm, and cooking was a daily practice with extra-material implications. This is a literary leitmotif and in particular a general theme running through epic poems, such as the *Odyssey* and *Iliad*, and comedies, such as *Dyscolus* by Menander. Food rituals that are genuinely ceremonies such as Japanese Way of Tea are philosophically instructive. This rite symbolizes the purification of the participants and creates a metaphorical relationship between the physical space where it is enacted and the cosmos. Taboos also confirm the symbolic power of food. In ancient cuisine a common rule was to avoid particular foods until sacrifices were performed. During sacrificial rituals, humans fed and communicated with their ancestors living in a supernatural realm, and once the spirits had finished eating and drinking, humans could not waste the food, but had to share it out for consumption. Some good examples are the *Hyakinthia* culinary rituals in Sparta and the Pythagorean and Orphic culinary customs. As well known, meat provides the most striking taboo in antiquity. Yet, in ancient Egypt, beans were treated with the same awe because of their association with the soul's transmigration. Nowadays, in the Indonesian island of Sulawesi, the nobility and their serfs are strictly forbidden from eating white buffalo, great river eel, and white chicken because their mythical ancestor, Tana Toraja, had united with a water sprite of the Sa'dan river. The close relationship of food with mystical/spiritual ideas is patent, especially where recipes are institutionally cooking rules

and religious precepts. The Jewish Kosher food is an emblem since cooking instructions (*kashrut*) are contained in the Talmud. According to Jewish tradition, cooking is not simply nutrition, but, like religious rituals, a path toward a richer extra-material sphere. The symbolic dimension of cooking is well depicted by many ceremonies and feasts such as *Rosh Hashanah*, the meal preceding Yom Kippur, Sabbaths, weddings, funerals, etc. At *Chanuka*, it is common to fry pancakes in oil in memory of the miracle of the Maccabean revolt. At *Tu B'Shvat*, fruit representing spring is served in addition to *kanape*. At *Purim*, *Hamantaschen* cookies are prepared to recall the episode of the Book of Esther where Haman plots to destroy the Jewish community in Persia. At *Shavuot*, which commemorates the giving of the Torah at Mount Sinai, cookies are baked in the shapes of mountains and Torah scrolls. Cleaning rice is one of the most difficult ceremonies performed during Passover, when on the first night, Jews take part in a ritual meal in which the story of the Exodus is recalled with *matzah*, the unleavened bread of affliction.

### Anthropological and Social Implications

Food preparing concerns theoretical issues related with personhood and fundamental anthropological and ethical questions, to begin with the essential values of life and death. Cooking rituals teach us how food preparing is related to human nature and the view of our ancestors about humankind and the survival of the race. Traditional food ceremonies, such as Mexico's Day of the Dead Ceremony, are in many cases a heritage of native ancestral rituals incorporating those of immigrants and conquerors, and thus, they are a privileged viewpoint for a more general inquiry into the concepts of life and death (Brandes 1997). The use of food offerings placed on graves or adorning home altars or idols are an important way to put the living in touch with the dead. This shows that peoples conceive food rituals as symbolic ways to communicate with their lost ones. Such offerings invariably include starchy foods,

either savory or sweet. A famous example is the Portuguese *foliar*, an ancestral food symbolizing solidarity and brotherhood. In Ancient Greece, the practice of offering bread or sweets to deities and preparing cakes for public celebrations had both a collective and individual significance. It is meaningful that cooking rituals related to death and life involve sweets and starch. As these foods contain glucose, an important energy source, bread and sweets offered at death ceremonies are expressions of life, vitality pleasure, and richness. Another ethical and social issue involved in cooking rituals regards differences between the genders and, conversely, equality between female and male (Goody 1982). The assumption that food is related to women is embedded in the history of ideas of many cultures, starting with the Western matrilineal structure. Firstly, ancestral cuisine is related to the mother role in the construction of families and communities. And then biological, social, and cultural elements all point to deep connections existing between cooking rituals and procreation. In many cultures, the kitchen is the place where social and gender relations are shaped. This displays the creative dimension of cooking and the intimate unity between body and mind embedded in activities involving food. The emotional and social dimension of cooking is well illustrated by Bangangté traditions and their idioms regarding procreation and gender division (Feldman-Savelsberg 1995). Among this Cameroon population, wives stay in the kitchen most of the time and welcome the guests either there or outside in the yard, while the other rooms are the realm of their husbands. Though Bangangté women no longer give birth in the kitchen, they continue to consider gestation as a long cooking process and talk about the full-term fetus as "cooked food" or "porridge." Men refer to sexual intercourse as "tending the fire." In the Bangangté view, the continual mixing of procreative fluids (water/sperm and oil/blood) produces a smooth and tasty meal (a healthy birth). Accordingly, Bangangté women describe their feelings about their swelling bellies like the smell of cooking maize. A double connection between cooking rituals and the human attitude toward the values of life and procreation lies

behind these ideas. Firstly, ancestral cuisine reflects our gender relations and convictions about the sexual sphere and social status of persons; besides, many cooking rituals associated with human sexuality and fertility are not only aesthetic rituals but also practical tools to implement a precise social and gender structure. Ancestral cuisine is a precipitate of our way of thinking and living together, and, furthermore, it is an artifact that concretizes desires and aspirations about social status. So, it is significant that food offerings are of paramount importance in many child-naming ceremonies where certain foods are offered to the infant as symbols of purity, power, health, wealth, and prosperity. The broad idea is that we are what we eat and that our lives and social roles are reflected in what and how we eat, an idea which is present in mythology and many idioms too. For instance, water and rice are the basis of ancestral cuisine and many cooking rituals, and in some idioms or myths, eating rice mirrors being and water denotes the power of plants and animals. Furthermore, ancestors are sometimes seen as seminate spirits growing from water (Bloch 1985). Cooking rituals are also a testimony of the historical coexistence between peoples belonging to different cultures and are a way to promote dialogues. This is not a proposal but a historical experience, since nowadays many national cuisines display this mixture of different culinary practices. Some experiences demonstrate that cooking rituals are able to overcome social and moral conflicts and divisions, and so they represent a powerful force to create a common background across populations. The Mediterranean cuisine is an outcome of the interplay of different culinary and cultural traditions. Around the Mediterranean sea, Christians, Jews, and Muslims today prepare and eat similar dishes based on fish, poultry, and eggs for marriage feasts, funerals, and other special occasions.

### Politics, Ethnicity, and Identity

Processing food has many ethnical and political implications concerning identity and reciprocity

among people and political authorities (Flandrin et al. 1999). In many societies cooking rituals are instrumental to political aims or are the symbols of special political powers. Peoples ascribe to ancestral food customs political meanings, too. Especially among immigrants culinary lexicon and cooking practices are a symbol of their communities' history and a reminder of their homeland. For instance, nowadays spices are largely used and carefully preserved in pouches to recall the forced Atlantic passage back in the slave trade. Moreover, to exchange food or to eat together, the same food according to a rite is a way to express trust and loyalty or manifest consent. Eating from the same cooking pan may denote a strong sense of fellowship; conversely, eating some kinds of food or someone else's dish may mean the opposite. In some cultures, there is the use of sharing food with relatives and neighbors in memories of ancestors. That can be also a sign of distinction and exclusion. Ways of processing food were introduced by political authorities in order to distinguish the culture of the land from foreign ones and in consequence build a distinct national identity. Moreover, to adopt a cooking ritual can be interpreted as a privilege of a class or group. As well, cooking rituals may be adopted to support a political primacy. Food ceremonies can also celebrate political powers within a community or the domination of one group over another. With the Incas *chicha* was associated with imperial power: the city of Cuzco was also called *Akhamama* which means "*chicha* mother," and *akhamama* is the fermenting agent used to brew *chicha*. Hence, *chicha* mother is a metaphor for the role of Cuzco in Andean politics. Iconic dishes are also powerful signs of national identity. This is well illustrated by the Vietnamese *Bánh Tét* prepared at *Tết Nguyen Dan*, the ceremony that celebrates the origin of sunlight. The entire cuisine of some populations is ritualistic and based on archetypical foods: Japanese cuisine and its rice culture are emblematic. From these experiences we see that the meaning of cooking rituals for a community may change, according to the political and historical context. To recall the

cuisine of the ancestors may have positive or negative connotations and effects with regard to present politics. Especially for those ethnical groups that suffer exile or persecution, cooking rituals refer to the past and, hence, express acute feelings of nostalgia. Alternatively they can express desire for peace, but even revenge. Legends about the lands and the foundation of the nations or about the origin of an ethnic group are sometimes embedded in ancestral cuisine. Nowadays the renewal of cooking rituals of our ancestors often conveys deep ideas about political powers among the peoples, and it is a way of conserving basic political conceptions about government and/or perpetuating traditional attitude toward democracy or aristocracy and/or the role of man and women in the public sphere. Ancestral cuisine shows that identity is a value which can be considered from both a collective and individual point of view. This is true especially when cooking rituals, such as Andean's *entrada*, are symbols of the identity of an ethnic group. Such collective practices in daily life or special ceremonies can assume more profound significance to individuals too: preparing and eating together dishes made of native ingredients may evoke mutual recognition (Hastorf 2012). In cooking rituals politics is frequently mixed with religion. In many cooking rituals pleas to political authorities are mingled with manifestation of gratitude to deities. Nowadays, in West African agricultural economies, indigenous cooking rituals based on the yam are a way to recall flourishing ancient clans and kingdoms. In some areas they are still an occasion for tribes to pay tribute to the king and gods in memory of their ancestors. In many Pacific archipelagos, first fruit ceremonies are based on yams, and they are typically associated with chiefship and ancestral deities. With its seasonal lifecycle, the yam is the fulcrum of the calendar and diet but is also a cultural icon. At the *i sevú* festival, new yams are offered to the gods and shared among the people to promote health and prosperity for the community. According to tradition, Fijian villages are an association of kin groups that claim to have separate ancestors. Thus, sharing food indicates solidarity and can also mediate

political tensions (Turner 1984). Furthermore, ancestral and ritual culinary practices can be evocative of the social hierarchy and political organization of a community. Food activities may define the relationships and the status of individuals within the community as well as between communities. Customs in Sulawesi are a good example. At the king's funeral in 1969, the Makale nobility were plied with a meal based on pork, rice, and betel to renew ancient feudal obligations. All the king's food and everything concerned with it are kept apart, even from his closest family. Food and political patterns are often metaphorically associated. In the ancient Chinese Laozi doctrine, it is common to compare governing the state to frying small fish. Cooking rituals are in some cases a real political practice, so that even the civil service and the education system for the top cadres include learning culinary techniques and food rites. Finally, foods can be icons of political and/or social institutions. In some cultures eating in compliance with a precise rite becomes a distinctive feature of civilized people. Some communities have developed a hierarchy of social status based on food taxonomies. As is well known, in many societies cereals were and sometimes still are emblems of the public ceremony officiating marriage as the basic institution of the society.

## Summary

Ancestral cuisine is neither just a form of art nor a relict of the past. On the contrary, by exploring ancestral culinary practices, we can understand that food preparation is a multifaceted phenomenon and a complex human practice. It has a great philosophical significance since its implications on our life are far from being transitory and purely material (Curtin and Heldke 1992). An inquiry into ancestral culinary practices is a good way to reflect about the relationships existing between our physical needs and our minds insofar as the body is inextricably connected with emotions and ideas about human nature. In addition, cooking rituals are habits



shaped by cultures and spiritual/religious/mystical ideas. Food ceremonies often show beliefs on personhood and conceptions about the self and others or about the relation of humans with nature. Ancestral culinary practices reveal moral and social convictions and show that preparing food may be an activity involving implicit values. Ancestral cooking practices rely on archetypes about the gender and self-identity of peoples and are a testament to the political history of a community and its social hierarchy. They also reveal the role played by natural resources and the environment as well as technical expertise and nutritional factors.

## Cross-References

- [Cannibalism](#)
- [Ethnicity, Ethnic Identity, and Food](#)
- [Food and Class](#)
- [Local and Regional Food Systems](#)

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## Animal Agriculture and Welfare Footprints

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## Synonyms

Agriculture; Animal rights; Animal welfare; Consumer ethics; Food ethics; Labor rights; Meat; Omnivorism; Vegetarianism

## Introduction

Agriculture and wild food harvesting impact the welfare of humans and other animals in many ways. The total impact on welfare varies according to the foodstuffs in question as well as the methods of production or harvesting used. Just as different lifestyles have different sized carbon footprints, different diets have different sized welfare footprints or total negative consequences to the welfare of sentient humans and nonhuman animals. Because every diet has a welfare footprint, the salient questions concern the size and moral salience of welfare footprints. This entry surveys the connections between human dietary choices, agriculture and other forms of food procurement, and welfare footprints, particularly as they pertain to nonhuman animals.

## The Concept of a Welfare Footprint

In an increasingly globalized, industrialized, and urbanized world, many people are becoming more aware of the impacts which their consumption of goods and services has on the welfare of other human and nonhuman animals. The result of this increased cognizance of welfare footprints is that many people change their patterns of consumption in order to reduce their welfare footprint.

While the term “welfare footprint” is newer and lesser known than terms such as “carbon footprint” and “ecological footprint,” the underlying concept is similar. Blood diamonds, for example, are a widely acknowledged example of the core concept of the welfare footprint for a nonfood good. These diamonds, also known as conflict diamonds, are mined in conflict zones and used to finance military insurgency, destabilizing regimes causing loss of life, including through the forcible use of child soldiers. Some would-be consumers opt not to purchase diamonds at all in response to the problems of diamond extraction and trade. Some players in the diamond industry are attempting to reduce the welfare footprint of diamonds by producing conflict-free diamonds. The Kimberley Process Certification Scheme is one such attempt.

Another familiar example illustrating the concept of welfare footprints, also concerning solely humans, is coffee production. The coffee market can be volatile, and small farmers can have difficulty competing on price alone against industrialized operators. While subject to various criticisms, fair trade coffee aims to produce coffee without the exploitative use of low-wage farm laborers, as is common in the tropical regions of the world where coffee is produced.

Coffee production also offers an example that helps transition to the welfare of nonhuman animals. Shade-grown coffee is a system of coffee production, which intersperses coffee shrubs with trees in order to provide habitat for wildlife, particularly birds in coffee plantations. Coffee is often grown in mountainous regions once covered with upland tropical forests possessing immense biodiversity, and so shade-grown coffee

is a form of environmental remediation and habitat enrichment for endemic and migratory wildlife. The Rainforest Alliance offers certified shade-grown coffee and is endorsed by the National Audubon Society for its positive impact on migratory bird populations.

## Food and Welfare Footprints

Having discussed some common examples of nonfood products illustrating welfare footprints, the connections between food and welfare footprints remain to be discussed. Many consumers now recognize that the welfare of nonhuman animals is impacted by the products they consume, especially food. The total impact on nonhuman animal welfare, both on animals directly consumed and on animals otherwise harmed in agricultural production or wild food harvesting, varies considerably depending on the foods one chooses to eat and how these foods were produced. Granting that animal welfare is morally significant, the size of one’s welfare footprint is morally salient and dependent on what one eats.

A number of complex factors enter into determining the welfare footprint of various. There are three distinguishable ways in which animals’ welfare is impacted by food procurement. These will be discussed in turn.

The first, perhaps most familiar way is in which animals raised for human consumption are treated. Living conditions and treatment from birth through slaughter constitute this potential contribution to a welfare footprint.

The second way involves animals harmed during animal agricultural production or the harvesting of wild animals yet not eaten. This includes accidents, bycatch, disease, and culling. A prominent example of culling occurs in chicken egg-laying factory farms where male chicks are simply discarded at birth because their lives are useless for egg production.

A third way involves animals harmed in the production or harvesting of food to be fed to humans or other animals. For example, aquatic animals are harmed to produce fishmeal used to

feed captive fish that are raised for human consumption. Less discussed are harms to field animals resulting from plant agriculture such as corn for human consumption or animal fodder. Even diets free of animal products have welfare footprints in the form of harms to these field deaths. This issue is discussed further below.

Indirect harms to other animals resulting from animal agriculture are more widespread, however. The Food and Agricultural Organization (FAO) of the United Nations concludes in no uncertain terms that “the livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global” (FAO 2006). The ripple effects of animal agriculture on wild animals and the broader environment are immense, perhaps incalculably so, yet also contribute to the welfare footprints of diets containing animal products.

## Animal Agriculture and Human Welfare

Animal agriculture also has costs in terms of human welfare, both of workers and of those in surrounding communities. The negative effects on humans, which contribute to welfare footprints, are particularly high for industrial animal agriculture. Upton Sinclair’s classic 1906 novel *The Jungle* portrays the conditions in which early twentieth-century immigrant laborers worked inside meatpacking facilities on Chicago’s stockyards. Although *The Jungle* is fiction, Sinclair worked undercover in the industry for several weeks to gather information in order to accurately portray working conditions inside slaughterhouses. The president at the time, Theodore Roosevelt, was so disturbed by Sinclair’s novel that he ordered an investigation into the meatpacking industry. This resulted in the 1906 passage of the Pure Food and Drug Act and the Federal Meat Inspection Act. The regulatory body associated with enforcing these acts is now known as the US Food and Drug Administration (FDA).

In the United States, there are approximately 700,000 workers employed in Concentrated

Animal Feeding Operations (hereafter CAFOs), colloquially known as factory farms. A further 500,000 workers are employed in the slaughterhouse and meatpacking industry. These workers are predominantly immigrants and people of color. Thirty-eight percent of these workers were born outside the United States. Fast line speeds lead to injuries and repetitive manual labor leads to overuse injuries such as carpal tunnel syndrome.

The quality of life in surrounding communities is also affected by factory farms from the copious amounts of excrement they produce. Manures transmit more than 40 diseases to humans, including *E. coli*, fecal coliform, and Salmonella. North Carolina has ten million hogs, which produce twice as much excrement and urine annually as the human populations of Chicago, Los Angeles, and New York combined. This waste is stored in large lagoons or sprayed, untreated, on adjacent fields. The stench can be unbearable and the hydrogen sulfide emitted can cause flu-like symptoms and brain damage. Water contamination also results. Livestock are a major source of nitrate pollution in groundwater, which is linked to spontaneous abortions and infant mortality. Runoff and catastrophic lagoon failures pollute streams, rivers, and lakes causing eye infections and leading to algal blooms of the dinoflagellate *Pfiesteria piscicida* which have killed tens of millions of fish in the United States and cause acute skin burning, cognitive impairment such as memory loss and confusion, gastrointestinal, and other symptoms in humans (EPA 2001).

## Animal Death and Animal Welfare in CAFOs

The number of land animals raised and slaughtered for food in the United States has varied between 8.9 billion and 9.5 billion annually from 2000 to 2011. When sea animals are also taken into account, the number of animals slaughtered annually increases to approximately 30 billion. In what is perhaps the most complete estimate of the total number of animals died

annually to feed Americans, Noam Mohr calculates that 63 billion animals died for the American palate in 2011. This figure includes animals killed but not eaten such as animals which are converted to fishmeal and “discarded” male chicks from egg-laying operations, but notably does not include field deaths resulting from the cultivation of animal feed. Mohr calculates that the average American’s diet equates to the death of 1/8 of a cow, 1/3 of a pig, 5/6 of a turkey, 25.5 chickens (including 1.5 for egg production), 43 fish, and 134 non-fish aquatic animals each year. This amounts to 16,000 animals per American when extrapolated over a lifetime (Mohr 2012).

Global meat consumption has increased dramatically in recent decades as has the exportation of factory farming techniques from the United States to countries abroad. Annually, approximately 53 billion animals are killed for consumption worldwide. Since 1950, worldwide consumption of animals has increased five times.

In addition to the number of animals killed, the size of the animals one eats is also a factor in welfare footprints. For example, if one were to eat solely chicken rather than beef and assuming that the chickens and cows were reared in similar conditions such that they had similarly poor welfare, one’s welfare footprint would be markedly larger because the number of chickens needed to fulfill one’s nutritional needs would be much larger than the number of cows needed to produce the same quantity of food. To quantify the issue in 100-g serving sizes, an average sized cow of 1,600 lb at slaughter before processing yields approximately 1,000 servings, a 300-lb pig yields approximately 650 servings after processing, and an average sized so-called “broiler” chicken weighs approximately 5 lb yielding around 12 servings. Since a person’s nutritional requirements are largely stable over time, and animals of different species differ in size by many orders of magnitude, a conscientious omnivore concerned with reducing his/her welfare footprint minimizing the number of animals he/she consumes could tailor his/her meat consumption accordingly (MacClellan 2013).

The conditions in which animals are raised and the manner of their deaths are essential

aspects of a diet’s welfare footprints. The vast majority of chickens, pigs, and turkeys raised for food in the United States spend their entire lives in CAFOs. Most cattle spend their final weeks in CAFOs for “corn finishing” as well. Increasingly, fish such as carp, tilapia, salmon, and grouper are raised in aquacultural CAFOs. Shrimp and prawns, invertebrate animals, which may be sentient, have been aquacultured since the 1970s.

Animal welfare in CAFOs is extremely low compared to relevant alternatives and is likely sufficiently low that lives lived in such conditions are lives not worth living. Factory farming has been condemned from a wide variety of moral perspectives, even by Pope Benedict XVI, religious authority to a tradition which believes that humans are categorically superior to all other animals and granted “dominion” over them. The welfare footprint of a diet containing factory-farmed animal products is invariably larger than a diet not containing animal products produced in factory farms.

## Cross-References

- [Agricultural Ethics](#)
- [Animal Welfare: A Critical Examination of the Concept](#)

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## Animal Welfare in the Context of Animal Production

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### Synonyms

Animal care; Animal ethics; Animal husbandry; Quality of life

### Introduction

Traditionally, the term “animal welfare” has been used to refer broadly to the “quality of life” of animals especially when people raise concerns about how animals are treated. This entry attempts to clarify some of the confusion that has arisen around the term, partly because different people view the quality of life of animals through different value-based lenses.

### Three Broad Concerns

In the 1700s and 1800s, concern about the treatment of animals was generally expressed in terms of “cruelty,” and the main focus was on deliberate acts of animal abuse or neglect. With the growing intensification of animal production since 1950, concern was often expressed about unintended effects of confinement production systems on the quality of life of animals, and these were generally captured under the broader term “animal welfare” (Woods 2012).

The term “animal welfare” has been used, especially in social commentary and debate, to capture three broad concerns that arise over the quality of life of animals (Fraser et al. 1997).

The first concern focuses on the “affective states” of animals including pain, fear, comfort, contentment, and other emotions and subjective states that animals experience as either pleasant or unpleasant rather than hedonically neutral.

For example, commentators have called for animals to be treated in ways that prevent pain and distress or to be allowed to experience the pleasures of life.

The second concern focuses on the basic health and biological functioning of animals including appropriate nutrition, prevention of injury and disease, and appropriate protection from harsh weather and other dangers. Thus, the World Organisation for Animal Health (OIE) refers to “a critical relationship between animal health and animal welfare” (OIE 2012).

The third concern is that animals should be able to live in a reasonably “natural” way. This can involve two components. One is simply that animals should have natural elements in their environment such as sunshine and fresh air. A second concern is that animals should be able to live in ways that suit their natural adaptations including their natural behavior. Critics might call, for example, for animals to be able to carry out their natural feeding and nest-building behavior and to be fed on diets that suit their digestive systems.

Sometimes these different concerns go hand in hand. For instance, allowing a pig to wallow in mud on a hot day might be seen as good for the pig’s welfare because the pig will feel more comfortable (an affective state) and will have less disruption of bodily processes through heat stress (basic health) and because the animal can perform its natural cooling behavior (natural living).

However, the three concerns are sufficiently separate that the single-minded pursuit of any one often fails to address the others. A hygienic laboratory cage may provide a high level of physical health but allow animals little opportunity to perform their natural behavior. Generous feeding of dogs may provide the animals with pleasure but lead to health problems and a short life span. “Free-range” systems for pigs allow fresh air and natural behavior but often involve harsh weather and high rates of neonatal mortality.

The three areas of concern are emphasized to different degrees by different people. Many animal protectionists focus on the affective states of animals; they may call, for example, for pain management to be used for procedures such as dehorning and castration, whereas animal



producers tend to downplay the significance of short-term pain. In general, animal producers who raise animals in indoor confinement systems tend to emphasize basic health to the extent that they justify keeping animals in very restrictive environments on the grounds that this helps prevent injuries and disease. In contrast, most studies show that members of the general public in Europe and North America tend to emphasize the naturalness of the environment and to downplay physical health (summarized by Sørensen and Fraser 2010); in fact, some people virtually equate animal welfare with “natural” living conditions. Ranchers who raise animals on pasture, together with some organic producers, tend to have a more mixed view, seeing natural, outdoor environments as generally providing a good life while acknowledging that the animals may suffer from some discomfort and ill health as a result.

### **Why Are There Such Different Views of Animal Welfare?**

The different views of welfare have deep roots in Western culture which can be traced back at least to the Industrial Revolution. At that time, opponents of industrialization tended to espouse values associated with agrarianism and the Romantic Movement. Such opponents valued nature ahead of technology and emotion ahead of rationality. They saw industrialization as reducing quality of life because it disfigured the natural landscape and forced people to give up wholesome rural living for dangerous factories and unhealthy cities. In contrast, promoters of industrialization, reflecting a set of values linked to the Enlightenment, saw nature as imperfect and looked to science and technology to overcome its shortcomings. They saw industrialization as a form of “progress” and interpreted the high productivity of the factories as evidence that the factory environments were well suited to the workers.

When animal production intensified during the twentieth century, the change was widely perceived in the industrialized countries as a further instance of industrialization, and it triggered a debate that mirrored the arguments that had

arisen over the Industrial Revolution (Fraser 2008). Critics, often using explicitly industrial phrases such as “factory farming” and “animal machines,” saw intensification as moving animals from wholesome natural settings into restrictive artificial ones which are not suited to the nature of the animals. They questioned whether animals could be healthy and happy in such environments and called for animals to be free to live in more natural ways. Promoters of intensification saw the new methods as using science and technology – vaccines, scientifically formulated diets, and insulated buildings – to protect animals from the hardships of nature, and they took the high productivity of these systems as evidence that they were well suited to the animals.

### **Critical Evaluation**

Each of the three broad concerns has been the subject of debate and critical analysis.

With their focus on basic health, some animal producers and veterinarians have argued that because the productivity of animals is reduced by disease and injury, a high level of productivity must demonstrate a high level of animal welfare. This view has been hotly contested since the 1960s. For one thing, high levels of physical health are seen as only one aspect of animal welfare. Moreover, intense genetic selection for very high levels of productivity has led to “diseases of production.” For example, genetic lines of dairy cattle that have been bred for very high milk production tend to have high levels of metabolic disorders and a short life span. Thus, although good health is almost universally acknowledged as fundamental to animal welfare, the links between health, productivity, and welfare are widely recognized as needing critical analysis.

Many people see the affective states of animals, or “subjective well-being,” as the ultimate criterion of animal welfare and regard good health, natural living conditions, and other factors as merely contributing to welfare inasmuch as they contribute to subjective well-being. Thus, the absence of pain and suffering and, conversely, the ability to experience pleasure and

contentment are viewed as the definitive elements of animal welfare. In the environment in which a species evolved, such affective states are thought to have evolved to make the animal seek what is beneficial and avoid what is harmful to its evolutionary fitness (Dawkins 1998). In artificial environments, however, this correlation may break down. Animals (like human smokers) may not dislike, or even detect, pollutants that affect their health; animals may find rich diets highly palatable even though they lead to obesity and other health problems; vaccinations, although causing pain, can improve future health. To many people, therefore, animal welfare needs to be seen as a balance between subjective well-being and longer-term health.

The call for animals to live reasonably “natural” lives has been especially controversial. In Europe and North America, the tendency of the public to equate animal welfare with “natural” environments has led to calls for animals to be kept in outdoor systems. However, some animal producers note that outdoor systems present challenges including harsh weather and exposure to infectious diseases. Moreover, biologists who have studied the natural behavior of animals point out that environments that appear natural to the human onlooker may not correspond well to the actual needs of the animals. For example, chickens are descended from jungle-dwelling ancestors, and they tend to avoid untreed pastures that are used in some free-range systems. Such considerations have led to more critical approach that calls for animals to be raised in ways that correspond to their natural adaptations. This would include physical and social environments that allow important types of natural behavior, temperatures that match their thermoregulatory capacity, and diets that correspond to their digestive systems.

If no single approach is likely to optimize animal welfare according to all criteria, the emerging practical response appears to be the development of two contrasting kinds of production systems. One accepts the health-protection features of controlled indoor environments but adds features that accommodate the natural adaptations, behavior, and preferences of the animals.

For example, enriched indoor environments for laying hens can accommodate important types of natural behavior such as nesting, perching, and dust bathing while still preventing the entry of predators and disease organisms. A second approach begins with unconfined systems but adds greater protection from parasites, predators, and harsh weather. These different approaches are likely to appeal to different producers and consumers, but both should provide valid ways of improving animal welfare.

### **Animal Welfare as a Topic for Moral Philosophy and Science**

As well as being a focus of public concern, animal welfare has also become a topic of study and debate among moral philosophers and scientists.

Early utilitarian philosophers, notably Jeremy Bentham and John Stuart Mill, although focused mainly on humans, tended to see good actions as those that promote happiness and prevent suffering. Following these ideas, some modern philosophers have emphasized the affective states of animals including states of pain and pleasure. Others, adopting ethical views loosely linked with Aristotle, have called for animals to be able to live in ways that correspond to their “natures.” Yet others believe that animals should be able to develop their “capabilities” or express their “essential possibilities.” Thus, philosophers have adopted different ethical views, modeled largely on different theories of human quality of life (Appleby and Sandøe 2002) and corresponding roughly to the three broad concerns about animal welfare described above. In contrast, however, other philosophers, especially those who apply rights-based theories and call for all use and ownership of animals to cease, tend to dismiss animal welfare as an inadequate concept for decisions about human conduct toward animals.

Concern over animal welfare has also stimulated a large body of scientific research. In the early days of this work, some people believed that objective scientific measurements would resolve disagreements that arise because of the different views of animal welfare. In fact, however, the

various scientists studying animal welfare tacitly adopted the different views of welfare as the basis for their research (Fraser 2008). Some sought to improve animal welfare by reducing problems of basic health, for example, by devising environments that do not cause injuries or that prevent the transmission of disease. Other scientists focused on affective states, for example, by developing methods to manage pain or methods of handling animals without causing fear (Hemsworth and Coleman 2011). Yet others tried to make rearing systems better suited to the animals' adaptations, for example, by developing diets that match the animal's digestive system or feeding systems that accommodate natural feeding behavior. As these examples illustrate, rather than arbitrating among the different views of animal welfare, the science incorporated the different views as a basis for a diverse program of animal welfare research and innovation.

At times, however, the different scientific approaches have led to conflicts because scientists using different criteria for animal welfare have arrived at different conclusions on contentious issues. For example, scientists who emphasize basic health may conclude that welfare is satisfactory in very restrictive housing systems as long as basic health and productivity are assured, whereas scientists who emphasize natural behavior may conclude that welfare is poor in such systems simply because they are so restrictive. The key to understanding such disputes is to recognize that they result from the different scientists using different criteria of animal welfare (Fraser 2008).

## Controversies

Beyond the issues noted above, other controversies have arisen over the welfare of farmed animals.

One controversy is simply over the semantic use of the term. "Welfare" has been used for centuries as a broad term referring to good fortune, health, happiness, and prosperity, and this usage has been the basis for using "animal welfare" in the sense of the animals' quality of life. However, "welfare"

also has a second, more recent meaning which refers to programs and reforms designed to provide food, shelter, and other benefits to vulnerable members of society. Given the possible confusion, the literature has generally followed Broom (1991) in using "animal welfare" to refer to the state of the animal, not to external benefits provided. In addition, the historical meaning of "welfare" implied a positive state (*good* fortune, happiness, and so on). However, because much discussion of animal welfare is about negative states such as pain and deprivation, "welfare" (like "health") has come to refer to a scale running from bad to good, not just the positive end of the scale.

A second controversy centers on whether animal welfare can be "measured." It is certainly possible to measure many variables that are relevant to animal welfare such as disease incidence, the level of stress responses in different environments, and the strength of an animal's motivation to carry out elements of its natural behavior. However, despite the best attempts to see animal welfare from the animals' own "point of view" (Dawkins 1990), there is no purely objective way to balance the different elements of animal welfare. There is no metric, for example, that allows us to say whether freedom of movement is more important or less important than freedom from ectoparasites. According to this logic, to speak of "measuring" animal welfare is to mistake the nature of the concept. By this view, the legitimate contributions of animal welfare science are to inform the debate about animal welfare and to improve animal welfare by identifying and accommodating the needs and natures of the animals, but not to "measure" animal welfare in some overall sense.

A third controversy is whether scientists and philosophers should use the term "welfare" in its everyday sense – as an umbrella concept covering the different concerns noted above – or in a more restrictive, technical sense. Some scientists, perhaps wishing to make animal welfare more amenable to objective scientific evaluation, have proposed technical definitions that link welfare to established scientific concepts such as fitness or to measurable variables such as longevity and productivity. Some philosophically informed

commentators, attempting to identify the philosophical essence of the concept of welfare, have also proposed narrower definitions, often equating welfare with subjective well-being (Duncan 1996; Nordenfelt 2006). An alternative view holds that when a term is widely used in the public domain, there is a risk of confusion if scientists or philosophers use the term in a different or more narrow sense; indeed, scientific or academic discussion might thus become divorced from the public debate that they are intended to inform.

## Summary

“Animal welfare” refers broadly to the quality of life of animals. In discussing animal welfare, people have expressed three broad areas of concern: the affective states of animals such as pain, fear, and contentment; the basic health and biological functioning of animals including freedom from disease and injury; and the ability of animals to live in reasonably “natural” ways. Because different people emphasize the different concerns to different degrees, they (in effect) espouse different views of animal welfare which sometimes come into conflict. The different views of animal welfare have deep roots in Western culture, dating at least from the conflict spawned by the Industrial Revolution. The different views of animal welfare are also reflected in the different theories of animal ethics and in scientific research on animal welfare.

## Cross-References

- [Animal Welfare: A Critical Examination of the Concept](#)
- [Telos and Farm Animal Welfare](#)

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## Animal Welfare: A Critical Examination of the Concept

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## Synonyms

Animal ethics; Animal welfare science; Animal well-being; Prudential value theory

## Introduction

The past half-century has witnessed a dramatic increase in both philosophical and social concern about animals. Much of this concern is about animals' moral standing and the ethical permissibility of various animal-harming practices. However, a parallel track of concern relates to animal mind and animal well-being. Some of the motivation for concern about animal mind and animal well-being can be traced to scientific curiosity; however, the investigation of what animals are like, and what makes an animal's life go well or poorly, is an important part of moral philosophy. Normative judgments about what humans owe animals usually presuppose some account of what is beneficial or harmful to them, and philosophical work in normative ethics therefore must proceed apace with conceptual and empirical work regarding animal welfare. In addition, an important historical and sociological aspect of debates about animal welfare is that they take place in the context of a society in which animal use is pervasive. Often, the persons who investigate animal welfare, and the institutions in which such investigations take place, are closely connected to various forms of animal use, for example, agriculture and biomedical research. While investigations into animal welfare are often intended to improve the lives of animals being used for various human ends, such investigations are often permeated by political concerns as well. This entry briefly reviews important philosophical and political issues relating to the definition and assessment of animal welfare.

## Animal Welfare: A Science-Based Concept?

A major issue in the history and philosophy of animal welfare is the extent to which animal welfare is a scientific concept. A historically prominent view is that animal welfare or its assessment is "science-based," a view that continues to enjoy popularity in some quarters (see Tannenbaum 1995; AVMA 2003; Korte 2007).

Commentators who advance this claim usually seem to understand "science-based" as positively entailing empirical verifiability and as negatively being distinguished from "value-based" or "emotion-based" accounts of animal welfare. Other commentators who do not explicitly assert that welfare is science-based nonetheless define it in similar terms.

A close connection exists between science-based conceptions of welfare and the philosophy of logical positivism. Logical positivism, which dominated scientific thinking for a large part of the twentieth century, holds that only empirically verifiable statements are meaningful. Two corollaries to this view are that (1) statements about non-observables, such as mind, are illicit unless translated into empirically verifiable terms and (2) evaluative statements, such as statements about aesthetics or morality, are meaningless because they are not empirically verifiable. Though logical positivism has since fallen from prominence in philosophical circles, it has played a large part in the history of thought about animal mind and animal welfare. Rollin (1990) has shown how this philosophy influenced the development of psychological behaviorism, which held talk of animal mind to be illegitimate, and replaced such talk with talk of physiology and behavior. Hence, "animal welfare" as a concept referring to subjective experience came to be replaced or defined by such terms as "stress" or "coping." In addition, positivism separated science from ethics, and so once talk of animal well-being was scientized, welfare as a concept was viewed as value-free.

Scientific information, such as information about an animal's physiology or behavior, can be crucial in *assessing* what is beneficial or detrimental to an animal's welfare. However, the view that animal welfare as a *concept* is "science-based" is subject to numerous criticisms. First, logical positivism has been criticized for a number of reasons, such as that the principle of verification it espouses cannot itself be verified, and because normal scientific practice involves both moral and methodological value judgments (Rollin 1990; Jones 1975). Furthermore, the moral theory of emotivism



(a corollary to logical positivism) also appears untenable in at least the simple forms that preclude any degree of moral objectivity (Rachels 1993). To the extent that “science-based” views of animal welfare trace back to logical positivism and emotivism, they inherit these difficulties. Second, the very meaning of the term “welfare” refers to an individual’s well-being, to what is good or bad for that individual – this is by definition an evaluative judgment (Fraser 1995). Third, it can be observed that no amount of scientific information in itself will answer questions about an animal’s welfare, because a person can always ask why such a thing is good or bad for the animal, and only an evaluative judgment can answer this question.

### Competing Definitions of Animal Welfare

A second major issue in the definition of animal welfare concerns the critique of multiple, competing definitions. Fraser and colleagues (1997) organize definitions of animal welfare into three categories: “feelings-based” definitions, which focus on an animal’s mental states and how it feels; “natural-living” definitions, which focus on an animal’s ability to express natural (i.e., “species-typical”) behaviors or live in natural conditions; and “function-based” definitions, which focus on such things as normal physical functioning, the absence of disease, survival and reproductive fitness, and adequate coping (adaptation) to various environmental stimuli. When considering these various definitions of animal welfare, further distinctions can be made between “type 1,” “type 2” and “type 3” definitions. Type 1 definitions of animal welfare define the concept in terms of single, measurable attributes, for example, an animal’s cortisol levels. Type 2 definitions hold that animal welfare is a single attribute that cannot be measured directly but which can be estimated indirectly using various measures. For example, one might argue that an animal’s welfare is a function of pleasure and pain, and while these mental states cannot be directly measured, behavior or

physiological indicators can be used to estimate what an animal is feeling. Type 3 definitions hold that animal welfare is a function of multiple attributes that are not amenable to assessment in a determinate way, for example, a function of physiological and behavioral measures, bodily integrity, natural living, and subjective feelings (Fraser 1995).

One fundamental question concerns the plausibility of definitions of animal welfare that do not make reference to an animal’s subjective experience, such as definitions based on evolutionary fitness, physiological parameters, or purely behavioral measures. Such definitions may commit a category mistake: it may be the case that “welfare” *by definition* relates to what an individual desires, prefers, or otherwise cares about (e.g., enjoys). It is difficult to articulate a positive account of why something advances or sets back an individual’s welfare if that thing in no way relates to what that individual desires, prefers, or otherwise cares about – that is, definitions not referencing subjectivity in some fashion appear arbitrary. This argument can be strengthened by noting that major options in prudential value theory – that is, philosophical theory articulating what it is that makes a life go well or poorly at the most fundamental level – reference an individual’s subjectivity in *some* fashion (though exactly how may differ between theories).

For example, mental state theories such as hedonism define value in terms of pleasure and disvalue in terms of pain.

Desire-based theories define welfare in terms of the satisfaction of desires, and of course an individual must be conscious in order to have desires. Furthermore, desire satisfaction may be valuable because satisfied desires tend to bring pleasure (returning us to hedonism), or because they correlate to some other kind of mental state such as cognitive appreciation. Objective theories hold that a good life is characterized by certain objective goods (e.g., friendship, education), perhaps irrespectively of whether an individual desires these goods, but the way in which these goods putatively contribute to an individual’s welfare still likely references what that

individual experiences. Furthermore, the most plausible version of such objective theories may require that an individual desires the objective goods in question (see DeGrazia 1996; Heathwood 2006 for further discussion).

Behavioral, physiological, and functional criteria may still be relevant to animal welfare not as definitional criteria, but as criteria of *assessment*. For example, it could be argued that it is important for animals to fulfill natural behaviors because these behaviors correspond to preferences or needs, which when thwarted prevent an animal from experiencing satisfaction and/or cause unpleasant mental states such as fear, anxiety, or suffering. Similarly, one may hold that the absence of disease is important because disease causes pain or suffering, shortens an animal's life and thus its future opportunities for satisfaction, or reduces an animal's present opportunity range because of impaired eating, grooming, mobility, playing, etc. In addition, functional criteria such as cortisol levels may be indicators of welfare: when an animal is experiencing unpleasant mental states, one might indirectly document these by looking at cortisol levels. But it is important to stress that these indicators are being used to assess the welfare of an animal where its welfare is defined by reference to some subjective consideration(s).

It might be objected that bodily integrity or good biological functioning (e.g., the absence of disease) is at least partly definitive of an animal's welfare and not just of instrumental importance as relates to subjective experience.

It is unclear whether such an argument can be defended, as it seems to encounter the same difficulties as any definition of welfare not referencing subjectivity. Ultimately, the intrinsic importance of some kinds of biological functioning may simply be a considered judgment that a person either accepts or rejects. However, even if the intrinsic importance of biological functioning is accepted, the likely upshot is that an individual's subjective experience is a necessary but not sufficient component of any plausible definition of welfare – not that subjective experience becomes irrelevant.

Stipulating that plausible definitions of welfare must reference subjectivity still leaves open most major options in prudential value theory, as well as the question of whether welfare should be regarded as a “type 2” or “type 3” concept. Problematic cases are easy enough to identify. Something that brings an animal pleasure in the short term (say, eating a certain food) may detract from its welfare later on, for example, by causing disease. Similarly, an animal may go to great lengths to satisfy a desire, such as the desire to reproduce, and in so doing impose other welfare costs on itself, such as pain or injury. If animal welfare is to be regarded as a “type 2” concept, then it would seem that a clear winner in prudential value theory must be identified. This may be possible, despite problematic cases: for example, the fact that an experience brings pleasure now but pain later need not be regarded as an objection to simple hedonism, since something that is good in the short term can also be regarded without contradiction as bad “all things considered” (Heathwood 2006).

Similarly, one may attempt to correct desires by stipulating that they be informed or that what is of value is what one “desires to desire” (Smith et al. 1989; DeGrazia 1996; Heathwood 2006). However, the situation gets more complicated from here. Simple hedonism is vulnerable to other objections that cannot be reviewed here, and these objections may or may not be successfully answered by more sophisticated versions of the theory. Similarly, informed desire theory may just collapse into an objective value theory, but objective value theories have their own liabilities (see DeGrazia 1996 for further discussion).

At present, there remain unresolved issues in the conceptualization of animal welfare because of these philosophical difficulties, and it may be the case that the most defensible welfare definitions are pluralistic and indeterminate (i.e., type 3). However, it should be noted that many political disagreements about animal welfare do not trace back to these philosophical difficulties but rather to obviously problematic definitions of the concept (e.g., purely physicalistic definitions) or to questionable cost-benefit calculations (see below).

## The Harm of Death

Views about whether or not death harms animals have serious implications for many of our animal-using practices. Though it is generally accepted that humans have strong reasons against animal cruelty, some argue that it does not follow that humans have strong reasons against the painless killing of animals in the prime of their life, since killing animals painlessly does not *harm* them. Harman (2011) helpfully reviews several arguments advanced in the literature for why death does not harm animals and concludes that each is false; the three most important are reviewed here.

First, it could be argued that death for a person is only bad because it frustrates her desires and plans for the future; and since nonhuman animals do not have abstract desires and plans for the future, death does not harm them. Putting aside the empirical question of whether or not animals have abstract desires and plans for the future, this argument is false, as Harman argues, because it is not true that death only harms an individual if it frustrates her desires and plans for the future. Death, even painless death, could also harm conscious (non self-conscious) individuals because it deprives them of future opportunities for pleasure or preference satisfaction. This argument can explain why, for example, death would be a harm to an infant or a mentally disabled person who enjoys life but is not capable of forming future-oriented preferences or projects. Similarly, it can explain why death ordinarily harms conscious animals (see also DeGrazia 1996).

However, a second argument holds that while death prevents animals from future enjoyments, this is best viewed as the deprivation of a benefit and not as a harm. The significance of this distinction between harm and foregone benefit would appear to lie in the weight given in moral philosophy to the distinction between positive and negative obligations – philosophers often seem to be in greater agreement about our obligations not to harm others than they are about our obligations to benefit others. Harman argues that this view may be rebutted by noting that some actions that deprive an individual of benefit do actually seem to count as harms. For example, if

someone deafens you, you have been deprived of the benefit of hearing, but you are also harmed by this. Though Harman does not explain why being deafened is a harm, one can make sense of this judgment by noting that to harm an individual means to set back their interests or make them worse off, and as regards the infliction of both deafness and death, an individual is being made worse off relative to how they would have been had one not acted.

Third, one may hold that humans have certain “time-relative interests” that arise based on our psychological continuity with our future selves, such as an interest in completing a college degree or writing a book. Since nonhuman animals have a lesser degree of psychological continuity with their future selves than do humans, nonhuman animals have either very weak or no time-relative interests. Therefore, the time-relative interest account (TRIA) may allow that death harms animals, but it would also hold that death normally harms humans to a much greater degree (see DeGrazia 2007). Even if animals do not have time-relative interests, one may hold that death significantly harms them on account of depriving them of future goods. However, Harman interprets the TRIA view to imply that killing an animal does not significantly harm the animal. She argues this view must be false because it cannot explain certain considered judgments about animals who have moderate psychological continuity (say, a few years). Consider, for example, a horse with a serious illness that will live a healthy life for 5 years but then will suffer significantly for several months and die. If treated now, the horse will only suffer for 2 weeks – and not nearly as severely as 5 years from now – during the post-operation recovery. If the surgery is done now, the horse will live a healthy life for another 15 years. Because TRIA cannot explain why this is permissible, Harman argues it cannot be the right account of the intuition that death for an animal may be less harmful than for a normal human (Harman 2011).

Hence, while a number of arguments may be advanced to show why death does not harm animals (i.e., set back their welfare), all of these arguments are problematic at the least and untenable at most.

## Philosophical Considerations in the Assessment and Interpretation of Animal Welfare

Even where agreement can be reached about the definition of animal welfare and the things that thwart or advance animal welfare, philosophical considerations still complicate the assessment of animal welfare. Primary amongst these is the question of whether scientific “assessment” is needed to make informed judgments about what affects an animal’s welfare. Should one be agnostic about what affects an animal’s welfare, or assume that a particular kind of treatment does not adversely affect an animal’s welfare, until scientific data show that it does? For example, should it be assumed that gestation crates, which severely restrict sows’ mobility, do not adversely impact sows’ welfare until there is strong scientific support for this judgment? This stance presupposes value judgments about the degree of warranted confidence we can have in our “common sense” judgments about the welfare effects of gestation crates.

On the one hand, one wishes to avoid *inappropriate* anthropomorphism and judgments about welfare that cannot be supported by good reasons. On the other hand, appeals to the necessity of scientific justification, or claims about when anthropomorphism is inappropriate, may beg the question as to what constitutes a good reason. One may, for example, have reason to believe that gestation crates are detrimental to sows’ welfare because of prior warranted beliefs that sows are conscious, that they tend to move around and perform various behaviors when allowed to do so, that these behaviors correspond to preferences, and that by analogy it would be considered detrimental to human welfare to be so severely confined.

Once it is accepted that some sort of circumstance-specific, scientific assessment of animal welfare is needed, questions arise about what constitutes appropriate evidence and experimental design. For example, what degree of weight should be assigned to anecdotal observations, such as the observation that when initially placed in crates or tethered, sows try vigorously

to escape (HSUS 2009)? Isolated anecdotal observations may be discounted because they represent statistical outliers or are made in uncontrolled conditions, but such observations do nonetheless represent a form of evidence, and furthermore scientists’ aversion to anecdotal evidence has been criticized as perhaps arising from a positivistic ideological bias (Rollin 1990). A related issue is whether an animal’s cognition and preferences should be assessed in controlled laboratory conditions or more naturalistic conditions. Laboratory assessment allows for the control of experimental bias and confounding variables but may introduce artifactual elements that change an animal’s behavior. Welfare assessment under naturalistic conditions avoids such artifactual elements, but under naturalistic conditions it may be more difficult to control for bias and confounding (though increasing the number of observations can help to compensate for statistical outliers) (DeGrazia 1996).

Methodological value judgments – defined here as judgments involved in scientific practice that are underdetermined by data, underdetermined by inference rules or criteria, or otherwise concerned with what makes for “good” science or knowledge – also enter into more specific elements in the design of scientific experiments assessing animal welfare. One such judgment concerns the choice of alternative conditions whose welfare impacts are being compared. Some philosophers have considered the concept of animal welfare on its own terms; however, much animal welfare science takes place within the context of agricultural production systems or biomedical research. As such, it tends not only to take for granted that these activities are morally justified at the normative level, but in addition to this experiments and comparisons are often performed with pragmatic or economic considerations in mind.

For example, the American Veterinary Medical Association (AVMA) recently published a review of housing systems for pregnant sows (AVMA 2005). Not only did the AVMA explicitly acknowledge the relevance of economic considerations in assessing the welfare impact of various housing systems, but in addition the only housing

systems that were compared were systems compatible with industrial farm animal production, including gestation crates, indoor group pens, and tether stalls. The comparison thus excluded sows in completely free-living conditions, as well as alternative housing systems such as hoop barns or pasture-based hut systems. Though the AVMA did not explicitly address the criteria guiding their selection of alternative housing systems, economic considerations likely played a part, since the implementation of these non-intensive housing systems may require changes to current industrialized production systems. Hence, the AVMA's conclusion that no single housing system appears to be clearly preferable over alternatives as concerns welfare must be viewed with this selection of alternatives in mind.

Similar issues attend to the assessment of animals' preferences amongst a range of alternatives. Haynes (2011) observes that "unless the range of preferences is large, we cannot be sure that an animal is simply choosing the lesser of evils. We cannot also be sure that an animal can distinguish between what the present situation has to offer and what the longer term consequences of that choice might be." Experimental design also involves methodological value judgments that affect our interpretation of whether an animal has a preference between alternatives at all. For example, one experiment offered sows 1 kg of straw if they performed a particular operant response. Since the animals rarely performed the behavior necessary to obtain the straw, even prior to farrowing when sows normally build nests, the author of the study concluded that sows have little motivation to use straw. However, a follow-up experiment allowing sows to perform an operant response to gain access to a pen furnished with 18 kg of straw showed that the animals had a strong motivation to gain access to the pen. The author of this study concluded that 1 kg of straw was too little to be significant to the animals (see Fraser 1995). Other experimental variables that may influence results include the type of aversive stimulus, the timing and duration of an aversive stimulus, an animal's psychological state when being subjected to various conditions, the time course

of the response being measured, interspecies and interindividual differences, and others (Mason and Mendl 1993).

Yet another type of methodological value judgment concerns the correlation of measurable attributes, such as physiological variables, with mental states. For example, an animal's cortisol levels may be taken as a measurable proxy for mental states such as anxiety. In order to say with certainty that a particular measure correlates with a particular mental state, one would need an independent way to verify the existence of the mental state in question. However, since mental states are private, they can never be verified independently of the measures that are correlated with them. The basis for the correlation between measure and mental state is thus inferential, where mental state attributions are based on other evidentiary considerations than the one in question (e.g., other behavioral or physiological measures, evolutionary considerations, analogical reasoning to what correlations can be made in the case of humans, and so on). Methodological value judgments must also be made in many cases where different sources of evidence conflict as to what they suggest regarding an animal's welfare. For example, behavioral measures may indicate that an animal finds a particular situation unpleasant, while physiological measures may not directly support this inference (Mason and Mendl 1993).

Finally, methodological value judgments must be made when determining that sufficient evidence has accumulated to support a particular conclusion about the effects of something on an animal's welfare. For any given scientific investigation, normal science operates with a more-or-less standard set of statistical conventions (e.g., a 0.05 type I error threshold in classical significance testing) for arbitrating between "true" and "false" claims; however, it is important to acknowledge that these conventions represent value judgments about the sufficiency of evidence and are not indisputable. In fact the level of evidence that is sufficient or appropriate in a given situation will depend on such things as the goal of the activity in question (e.g., harm avoidance versus knowledge accumulation for its own sake) and what is at stake if a wrong



inference is made (Rudner 1998). For example, many philosophers writing about risk analysis have argued that more relaxed type I error thresholds should be adopted, since the purpose of risk analysis is to inform policy choices about the avoidance of possible harm and since standard scientific statistical conventions would unduly defer policy choices about such things (see, e.g., Shrader-Frechette 1991). A similar argument might be applied to policy decisions about animal welfare. In addition, since different studies investigating the same question may yield contradictory results, methodological value judgments must be made in deciding which study to prioritize and when different studies, taken together, provide sufficient evidence to form a conclusion.

It is important to be clear about the practical upshots of recognizing methodological value judgments in the assessment of animal welfare. Of course one such upshot is that empirical data alone are insufficient to decide the issue when assessing animal welfare and that additional assumptions and inferences must be made. This in itself is not troubling. What is more important to recognize is that in some cases, methodological value judgments may be contestable or even faulty. For example, while elevations in cortisol levels may sometimes be plausibly associated with aversive mental states, such elevations may also be associated with novel and even pleasurable conditions. In addition, cortisol levels may sometimes be normal in conditions that are detrimental to animal welfare as evinced by other criteria (Fraser 1995). Whether a particular methodological value judgment can be defended is a determination that will most likely have to be made on a case by case basis, for example, by considering other sources of evidence, as well as more conceptual considerations relating to what one should expect a particular evidential source to tell us in a given situation. In some cases available data may underdetermine the correct inference; however, it need not be assumed that this will be the case. For example, Mason and Mendl (1993) argue that discrepancies between different sources of evidence can often be resolved by a more careful consideration of the evolutionary function of particular responses.

## Value Judgments in the Weighing of Interests

Many animal welfare assessments take place within the context of comparing different laboratory or production environments (e.g., different housing systems, different methods of euthanasia). In such circumstances, there may be both advantages and drawbacks of each alternative being compared, thus necessitating harm-benefit (or risk-potential benefit) assessments. Such harm-benefit assessments are value-laden, and even where there is agreement about what interests animals have, there may be disagreement about the degree to which interests are advanced or set back, the relative importance of specific interests, and the overall harm-benefit analysis for a particular practice or environment. Consider farm animal housing systems as an example. Some persons may emphasize the benefits of controlling feed and temperature, preventing attacks from other animals, and lowering the risks of some infectious diseases as speaking in favor of indoor, intensive confinement of farm animals. Other persons may argue that infectious disease risks of outdoor confinement are small; that animal feeding, temperature, and physical protection can be adequately accounted for by non-intensive conditions; and that living freely and in accordance with the animal's nature outweighs any putative benefits of intensive confinement (e.g., see, Fraser et al. 1997, Table 1; McGlone 2006) for discussion.

Another example comes from Carbone (2004). Citing the debate over laboratory guinea pig cage size in the late 1980s, he explains that this was the first time the USDA had used a scientific study to justify changes in cage size – a reduction by one-half. The authors of the study cited by the USDA in making this change explain that the guinea pigs spend “75–88 % of their time in about 47 % of their cage, mostly along the wall,” while 25 % is spent in other parts of the cage. The authors of the study concluded that spending only a quarter of their time in other parts of the cage does not constitute a significant enough use of cage space to warrant the larger size. However, as Carbone explains,

interpreted another way, 25 % of the time is 6 h a day, which is surely a considerable amount of time. The authors also do not mention exactly what the pigs are doing and whether or not there is any value in those activities (e.g., exercising, stretching, playing, etc.). Importantly, not only did the USDA make changes in cage size based on what they interpreted the pigs did not want (i.e., smaller cage size because of cage usage); they failed to make any changes based on what was clear the pigs did want (e.g., walled spaces or group housing).

As compared to judgments about moral obligation and right conduct, judgments about the prudential significance of animal interests, or harm-benefit assessments, may be less amenable to arbitration by specific principles; there seems to be a heavy intuitive component to such judgments. But this does not mean that all such judgments should be regarded as equally plausible. For example, it seems implausible to say that the benefit of avoiding a small risk of infectious disease outweighs the harm of intensive confinement for intelligent and social animals. It is also important to reiterate that harm-benefit comparisons are conditioned by the selection of alternatives being compared, whether these alternatives are broadly different or just variations on a theme. For example, any number of variables within a given sow housing system may be subtly changed, and this may affect the overall harm-benefit calculus for that system. Another important consideration in the weighing of harm and benefit is bias. One way to assess whether different judgments about animal welfare (even when highly intuitionistic) are equally plausible is to ask whether any factors are present that might distort the evaluations of a given person, as discussed in the next section.

### **Moral Bias in Welfare Definition and Assessment**

A major concern in both the definition and assessment of animal welfare is the possibility of moral bias. Haynes (2011) observes that the discipline of animal welfare science initially developed in

institutions and organizations closely linked with animal agriculture and animal research, rather than institutions with no vested interest in these activities. Such a link could, of course, bias the work of welfare scientists, insofar as it would make them less likely to develop accounts of animal welfare that were critical of, or incompatible with, the uses of animals made in these activities. Indeed, Haynes argues that the way in which persons in the scientific community define welfare “seems to play a major role in supporting merely limited reform in the use of animals and seems to support the assumption that there are conditions under which animals may be raised and slaughtered for food that are ethically acceptable” (2011, p.105).

Furthermore, persons in the animal welfare science community often see themselves as studying questions not only about animal welfare in the prudential sense, but also normative questions about what obligations humans have to animals (Fraser 1999). Such normative judgments often presuppose some account of welfare/prudential value, and thus there will usually be a link between the two domains. However, by explicitly tasking themselves with the charge of addressing both domains, persons in the animal welfare science community invite their normative commitments into their scientific work about welfare to a greater degree than if the two domains were “firewalled” to at least some extent. That this is the case can be seen in an article titled “Animal Ethics and Animal Welfare Science: Bridging the Two Cultures” (Fraser 1999). The author of this article, David Fraser, has the laudable goal of increasing dialogue between persons in the animal ethics and animal welfare science communities. However, part of Fraser’s explanation for why the two cultures have historically failed to communicate is that animal ethicists have elaborated ethical theories not compatible with certain forms of animal use. This argument appears to be both descriptive and normative in nature, in that Fraser’s recommendations moving forward include the use of ethical frameworks more compatible with animal use (e.g., killing) and grounded in such ideas as husbandry and care, rather than respect, rights, or justice (Fraser 1999). At the least, this

argument conflates the important distinction between assessing what advances or sets back an animal's welfare and assessing when harms to animals might be justified. At most, the argument takes for granted the moral correctness of certain forms of animal use, the result being that humans should tailor our normative ethic to be compatible with such uses; this latter interpretation suggests moral bias.

Moral bias may intrude into the definition of "animal welfare" in at least three ways. The first way, discussed extensively by Haynes, is that persons in the animal welfare science community have tended not to define death as a harm. In so doing, the concept of "humane care and use" came to be defined in such a way that activities involving the death of animals, such as agriculture and biomedical research, could (at least in theory) be conducted in such a way that they did not harm animals. Persons who wish to justify these activities need not rely on this assumption, but the assumption makes the activities seem less morally problematic and perhaps not even morally problematic in the first place, thus circumventing the need for positive justification. The philosophical question of whether death harms animals has already been discussed. Here, it should be noted that from a historical standpoint, the presumption of the welfare science community that death does *not* harm animals does not seem to have been driven by explicit philosophical argument, as much as by a culture of animal use that would find the conclusion congenial.

Second, moral bias may also intrude into the definition of animal welfare when human concerns are built into the definition. For example, the ease of managing large numbers of animals and economic productivity are often built into the "welfare" assessment of different sow housing systems (see McGlone 2006; AVMA 2005). Whether or not these considerations properly belong in an ethical analysis of confinement agriculture, they certainly do not belong in an assessment of the *welfare* impact of various housing systems on the animals. As Mench (1998) explains, "[f]arm-animal welfare science is bounded not only by ethics but by complex

economic and social constraints, including profitability, worker health and safety, food cost and safety, policy considerations, consumer acceptance, and environmental sustainability." This may be true, but it does not change the fact that the intrusion of such considerations into the definition or assessment of what is good or bad for animals properly counts as a bias.

Third, bias may also affect how an animal's welfare is assessed. One way in which this might happen is in the making of harm-benefit assessments, for example, the value of avoiding a certain risk of disease versus the disvalue of intensive confinement. What complicates attributions of bias here is that such judgments may be heavily intuitionistic, without a clear rational standard for how they should be made. Nonetheless, even in such conditions biases can sometimes plausibly be identified. For example, significant financial conflicts of interest are generally recognized as powerful biasing factors, even in the absence of an agreed-upon rational standard for how a particular judgment should be made. As concerns animal welfare science, both financial interests and interests in maintaining valued group memberships and identities may affect how persons in the welfare science community make such judgments. The idea of "net" or "cumulative" welfare may also involve moral bias. Here, the idea is that as long as the "balance" of welfare is positive, then welfare is considered good, and a housing system or procedure may be considered unproblematic (McGlone 2006; Mench 1998). This essentially allows for some harms to be legitimated without ethical argument, since if they are outweighed by enough positive elements, then welfare is good and the practice does not appear to even require ethical justification.

In order to avoid the ad hominem fallacy (i.e., directed at persons making claims about animal welfare, especially when it is suspected that their judgments are biased), it is important to evaluate welfare claims on their merits wherever possible. However, because the scientific assessment of welfare is often complex, with many assumptions and judgments driving the process, it may not always be immediately clear where and how

bias may affect an argument or scientific study. Therefore, it is helpful to keep this issue in mind when critically reading the literature.

## Summary

This essay has reviewed philosophical and political concerns in the definition and assessment of animal welfare. First, it was argued that animal welfare is an ethical concept at bottom, rather than a scientific concept – though the assessment of animal welfare may require scientific study. Second, the essay reviewed various definitions of animal welfare and suggested that a plausible definition of the concept should make reference to an animal's subjective experience. Third, the essay examined the question of whether death harms animals and concluded that the best arguments favor this conclusion, though it still may be the case that death harms humans more under most circumstances. Fourth, the essay discussed how the scientific assessment of animal welfare involves a number of methodological value judgments related to study design and interpretation. Fifth, the essay discussed how the assessment of animal welfare often requires that one weigh harm and benefit against each other, and that such judgments are value-laden. Sixth, and finally, the essay discussed how a person's political or moral commitments might inappropriately bias the definition and assessment of animal welfare, thus necessitating a critical stance when reviewing the literature.

## Cross-References

- [Animal Welfare: A Critical Examination of the Concept](#)

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## Aroid Production and Postharvest Practices

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### Synonyms

Arum; Biodiversity; Cocoyam; Eddoes; Edible aroids; Elephant ear; Elephant foot yam; Food security; Orphan crops; Roots and tubers; Smallholder farming systems; Swamp taro; Tannia (Latin *Araceae*: *Alocasia*, *Amorphophallus*, *Colocasia*, *Cyrtosperma*, *Xanthosoma*); Taro; Yam

### Introduction

This entry will explore the significance of aroids (L. *Araceae*) in different cultural settings and regions of the world and examine ethical issues associated with tangible and intangible aspects of aroids in the global food system. Aroids are the world's oldest cultivated crops. All plant parts are eaten, but most often they are cultivated for their starchy underground parts. The plants but also numerous aroid dishes carry a deep symbolic meaning and cultural value in numerous communities in and from Austronesia, Africa, Asia, the Caribbean, Latin America, and the Mediterranean. At present aroids are the sixth most important root and tuber crops and rank

fourteenth among staple vegetable crops in the global food system. The Food and Agriculture Organization of the United Nations (FAO) roughly estimates that around 400–500 million people in the (sub)tropics and developing world are involved in the cultivation, consumption, and trade. Simultaneously, aroids are described as “orphan” crops and hardly known in the Western Hemisphere, where, since the mid-twentieth century and the (global) South to North migration, aroids and aroids products became widely available (notably) in densely populated urban areas. In the same century, the food sector evolved into a highly commercialized industrial system and agriculture into agribusiness. Despite being the most widely distributed starchy staple in the modern era (c. 1500–1800), aroids managed to escape from industrialized agriculture with a focus on large fields and monoculture. But as a result of globalization, urbanization, and transnational trade, aroids are increasingly assuming importance as cash crops. In the first decade of the twenty-first century, the global food system has also become increasingly complicated. Concerns about population growth, land use, agricultural biodiversity, small-scale farmers, sustainability, and food security encompass every area of the world. Root and tuber crops, including aroids, play a considerable role in addressing these issues.

### Aroids in the Global Food System

The cultivation, consumption, and trade of aroids are foremost restricted to ethnicities in and from (sub)tropical regions and the developing countries, where 60 % of the world's food is produced by around two billion smallholder farmers. In Africa, Asia, and Latin America, the underground parts of aroids are a traditional staple food and main source of energy for millions of people. The vast majority live at a subsistence level or in extreme poverty. Especially in these regions, the cultivation and consumption of roots and tuber crops are projected to grow substantially in the twenty-first century (Scott et al. 2000).



Aroids are of importance in traditional farming systems and of significance for food security in the world's poorest regions and, therefore, described as orphan crops, which are also known as minor, neglected, and underutilized food plants. These crops continue to be maintained by local communities and have received little scientific research and funding. Since the 1990s, research interest in aroids is emerging, and at present a number of governments, research institutions, and nongovernmental organizations (NGOs) are engaged in research projects to preserve genetic diversity and exploit the potential of aroids as a food for the future (Scott et al. 2000; Ramanatha et al. 2010; INEA 2011; Biodiversity International 2012). Research institutions and NGOs consider a better use and conservation of aroids in smallholder farming systems instrumental to improve global biodiversity and food security. Since 2011 the International Network for Edible Aroids (INEA), a consortium of institutions and scientists from various disciplines, applies modern biotechnologies to overcome environmental and other challenges. In the process INEA seeks to increase aroid production and the income of farmers and improve food security (INEA 2011). By focusing on training and technical advice in good postharvest practices and storage methods, the FAO assists farmers to add value to aroids and thus increase their income from better market opportunities.

Orphan crops not only meet food and nutritional needs; they are also strongly linked to sociocultural preferences and use practices. Food practices and beliefs are among the many differences between Western and non-Western cultures; still schemes to improve food security through aroids often ignore or give very little attention to ethics of non-Western societies at large. In Western society nearly all food is purchased in supermarkets, and most people have no direct contact with farmers. Consequently, not the food westerners grow but the food they eat has become one of the most powerful symbols of who they are (or identity). The physical and mental distance between the farm and plate is less vast in the (sub)tropics and developing world. With an estimate population of three billion people,

around two billion people are engaged in farming at a subsistence level; therefore, not only eating but growing and preparing food play a fundamental role in who they are (or identity). These vast cultural differences are not yet well explored nor do they receive the necessary attention. The race to increase global food security often serves as a rationale to deploy modern biotechnologies, intensify production, and increase income. The continuing maintenance of aroids in smallholder farming system indicates that the world's oldest cultivated crops are grown on more direct cultural and moral grounds.

## Origin and Nomenclature

Aroids are ancient plants that evolved in swampy areas during the Cretaceous. In this geological period that lasted from about 145 million to 65 million years ago, the first monocotyledonous plants or monocots were formed. Fossil remains of ancient aroids have been found in the tropics but also in the Northern and Southern Hemisphere and temperate regions such as Patagonia (Argentina) and Canada (Bown 2005; Herrera et al. 2008). Aroids can be found on every continent, but the identification of the many different wild and cultivated genera and species is difficult and requires a trained eye (Bown 2005). Since ancient times, aroid genera and species carry a multiplicity of vernacular and overlapping names in various languages and oral traditions. The most dominant term for cultivated aroids is “taro,” which is a derivation from Polynesian languages and frequently used as an inter/exchangeable term for the various cultivated genera (Spriggs et al. 2012). Other terms include tannia, cocoyam, yam, elephant ears, dasheen, eddo(e), tannier, yautía, and malanga (Flach and Rumawas 1996; Elevitch 2011; Ramanatha et al. 2010).

## The Aroid Plant Family

The aroid plant family currently comprises of more than 120 genera and about 3,750 species

of which many are used as food, medicine, animal fodder, ornamental plants, and cut flowers. Several aroid genera, such as *Arisarum*, *Arum* (*Dracunculus italicum*), *Calla*, *Dracontium*, *Monstera*, *Pistia*, *Spathyrea*, *Typhonium*, and *Lemna* (duckweed or water lentils), are on record as food, but the five most important aroid genera, cultivated as a crop and collected from the wild but also used medicinal and as animal fodder, are:

1. *Elephant ear* (*Alocasia*) is a genus in excess of 100 species. Common names also include false or giant taro. Elephant ear is usually harvested in between 12 and 24 months after planting, but harvesting is also delayed for up to 4 years.
2. *Elephant foot yam* (*Amorphophallus*) is a genus of more than 257 species; only four species are used as food and medicine. The cultivation is most important in India, Sri Lanka, Myanmar, parts of Indonesia, the Philippines, China, and Japan. The large round subterranean tuber can weigh in between 1.5 and 30 kg or more. The tubers are sometimes harvested after a year, but depending on the variety, elephant foot yam commonly is harvested in between 2.5 and 4 years.
3. *Swamp taro* (*Cyrtosperma*) is a small species of aquatic aroids indigenous to Southeast Asia where it grows wild in swamps, rivers, and lakes. It is most widely cultivated in Micronesia and the western Pacific but also in parts of Indonesia and the Philippines. Swamp taro is one of the world's largest plants producing an edible corm or tuber, sometimes weighing as much as 100–120 kg. The corm is usually considered ready to harvest between 3 and 6 years but also harvested after 12 months up to 10 years. Stored underground the corms remain edible for many years.
4. *Taro* (*Colocasia*) is the world's best known edible aroid genus. The “eddoe” (*L. Colocasia esculenta* var. *antiquorum*) and “dasheen” (*L. Colocasia esculenta* var. *esculenta*) are the most popular species. “Dasheen” produces a large main corm with small cormels and is primarily cultivated for its main corm. “Eddoe” produces a smaller main corm surrounded by larger, more developed cormels

that are the principal harvest. Taro is most often grown as an annual and also cultivated for its edible leaves.

5. *Tannia* (*Xanthosoma*) has two main species, *X. sagittifolium* (L.) and *X. nigrum* (synonym *L. violaceum*), that are cultivated throughout the tropics. *Tannia* is also cultivated for its edible leaves, commonly grown as an annual (harvested after 9–12 months); both the main stem and the cormels are harvested. Leaving the plant intact, the underground cormels are also harvested (Flach and Rumawas 1996; Elevitch 2011; Ramanatha et al. 2010; Spriggs et al. 2012).

Elephant ear, elephant foot yam, taro, and swamp taro are believed to originate in tropical Asia. From the Indomalaya ecozone, an area between Myanmar and Bangladesh, they spread eastward to other Eastern Asian regions and the Pacific, where the domestication and cultivation of aroids in fields and terraces occurred when rice and wheat were just weeds (Ramanatha et al. 2010; Spriggs et al. 2012). Archaeological evidence on stone mortars and pestles from the Solomon Islands suggests that taro was already in use around 28,700 years ago. Therefore, ethnobotanists and archaeologists consider aroids the oldest cultivated staple crop on earth. Whereas elephant ear, elephant foot yam, taro, and swamp taro originate in Southeast Asia, tannia is the only indigenous American aroid widely cultivated for food. Together with taro, it is the most widely distributed and consumed aroid (Bown 2005; Ramanatha et al. 2010; Spriggs et al. 2012).

## Cultivation and Harvesting

Aroids are primarily cultivated by smallholder farmers on small plots and in a wide range of environments and agricultural systems. The production does not require special horticultural techniques, and fertilizers and pesticides are seldom used. Most aroids are well adapted to moist tropical climates with short dry seasons, and most genera tolerate short or longer periods of dryness (Flach and Rumawas 1996; Elevitch 2011). Elephant ear, elephant foot yam, swamp taro, and

tannia are also among the important subsistence crops used in times of food scarcity. Although sometimes seed propagation is applied, vegetative propagation is the most common practice for aroids and involves the removal of cormlets or suckers (pieces) of the “parent” plant. Aroids are cultivated on a wide range of soils, and a large diversity of local cultivars is used in traditional agricultural systems. In home gardens, traditionally aroids are intercropped with numerous other crops. On estates or plantations, they are intercropped with other aroids, corn (maize), plantains (or bananas), common yam (*Dioscorea*), cassava (*Manihot esculenta*), sweet potatoes (*Ipomoea batatas*), and other vegetables. In the Pacific, after the clearing of land via slash burning systems, elephant ear, taro, and tannia are produced in mixed gardens. Polyculture is also applied in agroforestry and for the production of tannia in Latin America and Africa, where the shade-loving plant is considered the most important aroid. In the Indo-Pacific region, historically taro is an important irrigated monocrop. The wet cultivation of taro in freshwater swamps, pits, true irrigation (via water transport systems of canals or pipes), and pond fields (in appearance similar to rice fields or terraces) is among the most ancient and productive agricultural techniques. Wetland taro cultivation is only competed by the similar agricultural system based on rice (*Oryza sativa*) (Flach and Rumawas 1996; Elevitch 2011; Spriggs et al. 2012).

Planting and harvesting of aroids are done by hand and hardly involve mechanization, also because harvested tubers can easily be damaged and are susceptible to diseases. In general aroid underground parts are harvested at the end of the growing season but sometimes also continuously or partial for home or local consumption. The harvesting of young aroid leaves from home gardens, and for edible purposes, often starts a few weeks after planting (Flach and Rumawas 1996; Elevitch 2011; Spriggs et al. 2012). The collection of aroid leaves (blades and petioles or stalks or stems) from the “wild,” and cultivation as a community food, is a widespread tradition in Southeast and East Asia. In countries such as

China, India, Indonesia, Fiji, Nepal, Vietnam, Myanmar, and the Philippines, soft young leaves and petioles of “wild” taro are obtained from uncultivated habitats, in or alongside roads, trails, ditches, ponds, forests, lakes, and streams (Elevitch 2011; Spriggs et al. 2012).

## Nutritional Value

All plant parts of aroids are edible. The leaves, stems, and petioles serve as a green vegetable, but they are particularly cultivated for their starchy underground parts. Providing for carbohydrates, the corms and cormels have a similar nutritional value as potatoes. If compared with potatoes, their protein content is slightly higher and about twice as high as in (sweet) potatoes and cassava. Because of the relatively small size of the starch grains, both the carbohydrates and proteins of aroid underground parts are hypoallergenic and easily digested. Furthermore aroids contain minerals, vitamins C and B1 and B2, and niacin. The nutritional value of aroid leaves is comparable with spinach. Apart from rich in protein, aroid leaves are an excellent source of vitamins A and C, calcium, potassium, phosphorus, iron, and folic acid (Opara 2003).

## Historical Significance

In several areas of ancient China, taro was an important staple crop; its cultivation is dated back to 8,000 BC or before. The crop also diffused westward to Madagascar and Africa and to the Middle East and the Mediterranean where it is cultivated since time immemorial (Bown 2005; Ramanatha et al. 2010). In ancient Egypt taro was among the important wetland crops, consumed as vegetable and used for the production of flour. The flower referred to as ciborium was used as a vessel or drinking cup and is seen on statues of the god Osiris, and the seeds were eaten green and dried. Extensively cultivated in Egypt, Syria, Palestine, and adjacent countries, taro probably migrated to Crete, Cyprus, and Greece where, among others, it is listed among the exotic and

rare plants in the orchards of Sicyon, the ancient Greek city-state in Corinth (Peloponnesus), and the nickname of both the goddesses Athena and Minerva. In Virgil's time (the ancient Roman poet Publius Vergilius Maro, 70 BC–19 BC), taro began to be planted in Italy. Using different definitions for the plant and plant parts, e.g., arum, Egyptian bean, cyamos, colocasia or kulkas, pontic, and ciborium, ancient authors such as Herodotus (c. 484–426 BC), Theophrastus (c. 327–288 BC), Dioscorides (c. 40–90 BC), and Pliny the elder (23–79 CE) all referred to taro in their writings (Genaust 1996). Taro is also mentioned in ancient herbals and as an ingredient in several dishes in the *Apicius*, the oldest collection of recipes in the western world, written in vulgar Latin and compiled around the late fourth or early fifth century. The recipes in the *Apicius* reflect the cuisine of a wider group of urban cosmopolitans and thus indicate that the Romans were well familiar with taro and taro preparation and considered it suitable for the palate of many financially secure Romans (Vaneker 2011; Van der Veen 2011). In the modern era (c. 1500–1800), taro was the most widely distributed starchy food plant and during this period was introduced in the Caribbean and Latin America. In later times taro became a less important staple crop and food (Ramanatha et al. 2010). Tannia, the only indigenous American aroid widely used for food, originates in Latin America, where the bulk of the diet of many (pre-Columbian) Amerindian cultures consisted of starchy roots and tubers such as cassava (manioc), sweet potato, and tannia. Although within the archaeological context the cradle of origin remains obscure, its domestication and dispersal throughout the Americas took place long before Columbus arrived. Excavations at Cerén (El Salvador), for instance, indicate that the ancient Maya cultivated tannia around 600 CE. At the time of the Columbian Exchange, tannia was among the important crop plants cultivated from Brazil to Southern Mexico and in Bolivia and the Greater Caribbean. In the modern era, tannia was introduced in Asia and Africa where it meanwhile is perceived as a traditional crop and food (Bown 2005; Ramanatha et al. 2010; Vaneker 2011).

## The Globalization of Aroids

During the modern era, aroids migrated South to South, but in twentieth century and as a result the age of decolonization and growing demand for low-skilled labor and a massive South to North migration, they became available in the Western world. At present Europe and the United States are home to over 100 million migrants of which many come from (sub)tropical areas of the world. Migration is known to affect the dynamics of cuisines and the perception of traditional foods. Apart from a necessity, the continuation of cooking and eating habits from the homeland enables migrants to adapt to new living conditions but also to continue important cultural practices and ways of life. In order to sustain a sense of identity and continuation, migrants living in densely populated urban areas started to revalue aroids. In the process aroids increasingly are transforming from subsistence or poor people's crops into a traditional food with cultural value. Especially in migrant dense areas, taro became widely available, but also tannia can be purchased all year around in ethnic stores; Asian, African, Hispanic, and other tropical markets; natural food stores; and sometimes mainstream supermarkets. Taro and tannia corms and cormels are sold fresh, as well as peeled, frozen (grated), and fermented and as flour. Aroid leaves are commonly sold fresh. Consumed by steadily growing migrant populations, outside of migrants populations, aroid consumption and consumer familiarity only slowly increase (Vaneker 2011).

The transformation of aroids from subsistence crops into a food with cultural significance increases its economic value. Since the 1920s taro and tannia corms are produced commercially throughout the tropics, including fields in Florida. Since 1988 global aroid production slowly increases and export grows (Opara 2003; Ramanatha et al. 2010). Especially West Africa (Nigeria, Ghana, Cameroon, and Ivory Coast) and Middle and Latin America (Costa Rica and Nicaragua) are large producing and exporting regions. Also more often aroid products are becoming available. Fresh or frozen taro

and noodles from taro and elephant foot yam are exported from Asia to Asian communities worldwide. West African packages of *fufu* flour, with both taro and tannia flour, can be purchased in African stores around the world. Commercial products from tannia and taro corms include starch for industrial purposes, flour (as a wheat substitute), and fructose syrup for bakery products and soft drinks. Other commercial products from aroid corms include chips (or crisps), breakfast cereals, flakes, and noodles (Flach 1996; Opara 2003). Ready-made aroid dishes include Hawaiian *poi*, Surinamese *pom*, and Costa Rican *olla de carne* and are sold in local supermarkets or exported to expatriate communities.

Increasingly farmers in Western societies are turning away from conventional agriculture and agribusiness to grown more profitable “ethnic” crops and other specialty vegetables. To provide migrant communities with taro and tannia leaves, since the 1970s, these are commercially cultivated in greenhouses in the Netherlands. And in order to cater to the “*taio*ba” needs of the local Brazilian community and support struggling farmers, tannia is among the ethnic crops cultivated in greenhouses in Massachusetts (Scott et al. 2000; Opara 2003; Bown 2005).

Regrettably the locavore movement, promoting the consumption of locally grown food, does not pay attention to crops migrants perceive as local (food), neither is the carbon footprint of greenhouse gas emissions versus fuel for transport part of current concerns and debates. In addition, the nostalgia for a taste of their homelands makes migrants reluctant to abandon aroids and replace these with much cheaper available alternatives. In many dishes taro tubers are preferred over less costly potatoes and sweet potatoes and the more pricey leaves of both taro and tannia over spinach. In Europe and the United States, one out of five of the total population is a migrant, often performing poorly paid unskilled labor, but still debates about the costs of foods Western societies perceive as their key staples exclude the perspective of migrants and other ethical issues specific to the food preferences of migrant populations.

## Preparation, Significance, and Cultural Value

Although several aroid genera are on record as being consumed raw, most aroids contain oxalic acid, and the acidity of the corm, cormels, and leaves is known to cause irritation of the skin and mouth. Common and ancient techniques to make aroids digestible and denature toxins (the calcium oxalate crystals) are cooking (baking, roasting, and boiling), drying, and fermentation (Ramanatha et al. 2010; Vaneker 2011). The tubers (stem, corms, and cormlets) are prepared in various ways and either washed and peeled before further preparation or boiled or baked with the skin. Preparation methods include boiling, baking, steaming, roasting, pounding, drying, frying, and fermenting. Together with other tropical roots and tubers (e.g., cassava, sweet potatoes, and common yams), aroids are used in soups, stews, and chowders. The tubers are also made into flour or meal for porridges or puddings, breads, and pastries. Common methods for the production of flour or meal include grating and the pounding of raw (fresh) or cooked tubers. The stems of leaves or blades and the leaves are used as a green vegetable and often considered a delicacy (Flach and Rumawas 1996; Ramanatha et al. 2010; Vaneker 2011).

In recent decennia, in Western societies, different cuisines started to coexist and began to overlap and mix, and increasingly “exotic” foods and ethnic cuisines are adopted. But apart from a handful of traditional dishes, relevant literature and cookbooks in Western society still hardly provide for aroid recipes and information. The standard advice is even aroids and other (sub) tropical roots and tubers are inter/exchangeable, and the lack of cooking advice and recipes indicates the unfamiliarity of westerners with aroids (Vaneker 2011).

Aroid preparation techniques and recipes are foremost orally transmitted, and traditional ways of preparation largely remain unrecorded. And even though there are no inventories of the many surviving recipes and traditions, increasingly non-western communities share traditional recipes via websites and blogs on



the Internet, showing that the cultural value of aroids keeps evolving in response to its environment and continues to provide communities and groups of people with a sense of identity and continuity.

Aroids are older than humanity and therefore only gradually became part of culinary traditions of countless groups and communities worldwide, whose ethical values most often have evolved within religious traditions. Dishes and rituals still in circulation encompass living expressions and traditions that countless people have inherited from their ancestors and transmitted to their descendants, in most cases orally. Not only in ancient Egypt and ancient Greece aroids became part of religious traditions, until today aroids are sacrificed to deities or commemorated in mythological stories. In India the antiquity and importance of taro is underlined by the rich diversity of traditional recipes and preparation techniques. Taro cormels, corms, leaves, and petioles are consumed in a wide variety of traditional Indian dishes, such as curries, chutneys, pickles, and stews and are used for ayurvedic or medical purposes. Taro is an important offering in several important rituals and festivals for major Hindu deity's such as Krishna and offered to the deity in the famous Jagannath Temple in Puri. On special occasions in Gujarat and other northern Indian states, taro leaves are prepared and consumed. Commemorating the baptism of Christ, taro is the main dish for Egyptian Copts on *Eid el Ghutas* (Epiphany). It is similarly deeply rooted in Japanese food culture where the "satoimo" (meaning village or home root or tuber) plays a central role in small-scale farming systems (Ramanatha et al. 2010; Misra and Nedunchezhiyan 2012).

Taro cultivation and consumption are ancient in several Austronesian communities (e.g., Pacific region and Hawaii), known as *dalo*, *kalo*, and *talo*; all over the region the corms are grated or pounded into starchy, fermented pastes or puddings referred to as *fakakai*, *fai'ai*, *feikai*, *loloi*, *poke*, *po'e*, *poi*, *roroi*, *sua*, *tukituki*, *taufolo*, and *vaihalo* and an integral part of Polynesian feasts. Hawaiians believe that eating *poi* unites people but also supports the family (*ohana*) and

shows appreciation for the ancestors (*aumakua*). In Hawaiian mythology, taro (or *kalo*) is believed to be the greatest force of life of all foods and linked with creation. According to the legend, the plant grew from *Hāloa-naka*, the first stillborn son of *Wākea* (father sky) and *Papa* (mother earth). After the burial of *Hāloa-naka*, a second child *Hāloa* (everlasting breath) was born, and Hawaiians consider themselves descendants from *Hāloa* (Vaneker 2011).

Both taro and tannia are a prominent staple in the diets of numerous West African communities where aroids and other starchy tubers and roots – alone or in combination – are used for the preparation of the traditional staple dish *fufu* or *futu*, a pounded porridge or pudding. Other common African preparation methods for aroid corms and/or cormels include boiling whole with the skin, pounding, roasting, fermenting, and baking. Cubans consider tannia, known as "malanga," the queen of the stew vegetables. Fidel Castro is on record saying "¡se ha olvidado la malanga!, a pesar de las veces que hemos dicho que si no hay nada que comer comeremos malanga (APLAUSOS)" ("!the malanga has been forgotten!, despite the time we have said that if there is nothing to eat we will eat malanga (Applause)"). Tannia is a prominent ingredient in the Cuban stew *ajiaco*. Similar stews or soups with root vegetables, pieces of meat, fish, or chicken are prepared in households all over middle Latin America. In Costa Rica the popular multiethnic dish is known as *olla de carne*, in the Dominican Republic as *sancocho de siete carnes*, in Colombia and Puerto Rico as *sancocho*, in Panama as *sancocho de gallina*, in Haiti as *bouyon* or *bouillon*, Venezuela *aspicadillo llanero*, and in Jamaica, Antilles, and Guyana as *pepper pot*. All over the Caribbean deep-fried fritters (such as *frituras*, *friturita de malanga*, *malanga chips*, *alcapurrias*, *accra*, *frituras de yautía*, and *buñuelos fritos*) with tannia are prepared. In the Caribbean the leaves of tannia and taro are known as *callaloo*, *calalu*, *calalou*, *callilu*, and *callalou* or Caribbean spinach. Boiled and pureed, they are a central ingredient for a popular one-pot dish (from green vegetables) and known by the same name. In the Surinamese community in Suriname

and the Netherlands, taro corms are used in soups, and the leaves (known as *tajerblad*) are among the most popular green leafy vegetables. The main corm (stem) of tannia is a central ingredient in *pom*, the national oven dish prepared with grated tannia and stewed chicken in a sauce. In recent years, outside the Surinamese community, the oven dish rapidly gained popularity in the Netherlands (Vaneker 2011).

Swamp taro was a popular food crop throughout Southeast Asia in the early twentieth century and still an important crop in the Pacific. The underground corm is the primary edible product and highly valued in parts of Micronesia where large tubers are presented and offered to honorable guests. The young leaves, stalks, and inflorescences are also on record as vegetables. In Southeast Asia and Micronesia, swamp taro leaves are used in dishes and as a wrapping material for food prepared in the pit or earth oven. In Asian cuisines aroid corms and leaves are often prepared with coconut milk. In the Philippines taro leaves (blades and petioles) are preferred over the corms and widely used in cooking. Taro leaves are also consumed in Indonesia, Fiji, Nepal, Vietnam, and Myanmar (Flach and Rumawas 1996; Ramanatha et al. 2010; Elevitch 2011; Spriggs et al. 2012).

Elephant foot yam is the most important cultivated aroid in India. On Diwali (or Devali), one of the most important annual Hindu festivals, it is consumed widely in northern India. The tuber is considered a delicacy and also used for the preparation of pickles and indigenous medicine. Of wild species the sprouts, petiole, corms, cormels, stem, and even the unopened inflorescence (a typical feature of aroids) are collected for medical, ayurvedic, and nutritious purposes. The tuber is boiled, baked and fried, and used in curries and the preparation of gruel (Misra and Nedunchezhiyan 2012). In India and Bangladesh, the mature stem of elephant ear is peeled, cut into pieces, and eaten as a cooked vegetable, usually with tamarind juice and in curries or stews. In the Pacific the stems are roasted, baked, or boiled and eaten as a carbohydrate or starch. Older stems require prolonged cooking, and the leaves are

eaten as well (Flach and Rumawas 1996; Elevitch 2011).

The above practices and uses show that aroids are an ancient crop and food with all kinds of symbolic and other meanings. Millions of people in and from the (sub)tropics and developing world maintain aroids as tangible and intangible cultural heritage. Simultaneously, and despite their ancient and evident importance in the global food system, the orphan crops are largely linked to subsistence agriculture and local expressions of culture. Postwar globalization, migration, and urbanization have had a very different outcome in the many different aroid-“producing” and aroid-“consuming” regions and cultural and economic settings. The wide availability of aroids and aroid products in Western society has an ongoing impact on culinary uses and production. In addition, the effectiveness of food security schemes to relieve hunger, increase global food security, and maintain agricultural biodiversity transcends tangible values and the fundamental moral and political responsibility to feed the hungry. Aroids are foremost grown because of sociocultural preferences and use practices; subsequently culture and morals play an important role to maintain, manage, and safeguard the crop that has been part of the development of human civilizations and still is part of living cultural expressions. The vast cultural differences and worldviews that exist between governments, research institutions, NGOs, and the poorest and most vulnerable people are an ethical challenge. Apart from a contribution to global food security and biodiversity, bridging the existing gaps will provide everyone growing and eating aroids with “...a standard of living adequate for the health and well-being of himself and of his family” (United Nations 1948).

## Summary

This entry addresses the history, distribution, cultivation, and importance of edible aroids, or taro, in the global food system. Aroids are a little known ancient crop and are foremost maintained

by farmers in small farming systems in the (sub) tropics. Since time immemorial aroids but also aroid dishes carry a deep symbolic meaning and cultural value in communities in and from Austronesia, Africa, Asia, the Caribbean, Latin America, and the Mediterranean, where culinary knowledge is transmitted orally. Since the mid-twentieth century and especially in migrant dense (urban) areas in the western world, aroids and aroid products are becoming more available.

## Cross-References

- Biodiversity
- Buddhism, Cooking, and Eating
- Community-Supported Agriculture
- Cooking, Food Consumption, and Globalization: Ethical Considerations
- Food Security
- Food Security and Rural Education
- Geographic Indications
- Geographical Indications, Food, and Culture
- Public Institutional Foodservice

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## Artisanal Food Production and Craft

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### Synonyms

Craft; Pickling; Preserving; Small batch; Traditional food preparation

### Introduction

The word “artisanal” has regained a foothold in the US food vernacular and is being used to describe many food and beverage products like pickles, cheese, jam, and gin that have been populating the shelves of specialty shops and crowding tables at farmer’s markets since the start of the new millennium. Like so many similar monikers that have been adopted to connote a specific sense of values in production or quality, such as “natural” and “green,” the word is not regulated and has since been used by large corporations to describe industrial- or mass-produced goods such as crackers, potato chips, and pizza (Donnelly 2012). Thus a debate has ensued about the true meaning of the term and what, if anything, should be done to ensure its veracity.

The term “artisanal” has its roots in the Italian word “artigiano,” meaning artisan or craftsman, which has its own etymology from the Latin “artitus” which means instructed in the arts. Thus, the term is understood to mean someone who makes a specific product or provides a specialized service with a high degree of skill or art, stemming from the Old World culture whose economies relied upon local artisans for everything from bread to furniture. In present vernacular, “artisanal” is used, in its broadest sense, to describe a product that is made by an artisan and is most properly used to indicate something that is handmade, unique, and high quality – often the very opposite of

mass-produced. It was the reaction of some to the industrialization of US culture’s food system – with its cheap meat and dairy, increasing monoculture and proliferation of processed foods – that helped spark a growing revolution in the last few decades back towards personal gardens, small farms, and traditional forms of food preparation and preservation, both in the home and in the marketplace, which prompted a resurgence of interest in artisanal goods and methods.

Historically, the term artisanal has been used to refer to a wide variety of goods and services, including some edibles. However, only since the start of the new millennium has the term been reclaimed within the vernacular to describe primarily food products, generally referring to those that have been made using traditional methods, often by hand and with attention to quality. Artisanal goods are sometimes referred to as “craft” goods, referring to the skill needed to make these items, or “small batch” – a term that originally was used to describe high-end whiskeys that represented the highest quality of a batch and were closely tended to by artisans, but has come to be inclusive of all goods that are made with the same attention to ingredients and skill. Thus, with this increase in artisanal food production for both personal and commercial use, the debate surrounding this category of food has focused on determining a true definition of what an artisanal good is and whether an embracing of more – and often more expensive – artisanal goods in the marketplace is a move forwards in regard to food culture, safety, and security.

### History

The term artisanal was originally used to refer to primarily to nonfood-related goods and skills, and evidence of an artisan class can be traced back to Ancient Egypt where workers specialized in jewelry making, carpentry, and sculpting, among other skills. During the medieval period, when artisan guilds were created to help organize and maintain standards of these workers whose livelihood and status depended on their specialized skills, the western societal role of artisans

was elevated beyond that of a slave or laborer and seen more akin to an artist. The artisan guilds of the Middle Ages included bakers and butchers, as well as experts in other food and nonfood-related skills. Many of these skilled workers continued to be a vital part of western society into the modern age. The food artisans in particular – through trial and error, new understandings in science and technique, and technological advances – continually improved their craft and helped define their role in their local and regional food culture. The result was specialty artisanal food that developed in areas and regions around the world, such as the refined smoked sausages from Germany, cured prosciutto from Italy, or aged cheese from Spain, as well as many other examples of food local to a region prepared or preserved used traditional methods unique to an area or culture.

What made the artisanal food culture in the United States unique, however, was the ways that the population learned to adapt to the available foods and climate of the New World and the eventual melding of cultures and skills, starting with what the settlers learned from the Native Americans in the 1600s and continuing with the immigration of many different cultures from Europe, Asia, Africa, and beyond into the 1900s and through to the present. All of these cultures brought their own food preparation and preservation skills and methods, inspiring the culture and adapting to the region, creating a unique artisanal food culture in the United States, noted for its independence and individuality, both for commercial sale and personal use (Eden 1999).

In the United States, artisanal food culture was evident in many towns and neighborhoods from the earliest settlers, even if the term artisanal was not often used. By the twentieth century, however, increased technological advances spurred cultural changes, fewer homes had personal gardens, and women in both urban and rural areas were more likely to purchase staples like pickles, cheese, and canned goods at a store rather than make them at home, and these purchased goods were increasingly mass-produced rather than made by local artisans (Levenstein 1988).

Further technological advances and the two World Wars also greatly influenced the

movement towards mass-produced convenience foods. The wars brought cultural changes, such as more women in the workforce, which resulted in less time spent on food preparation at home. Packaged foods like TV dinners, using technology developed for soldiers, became popular, and the introduction of fast-food chains made eating out more accessible (Shephard 2000). Agricultural moved towards monoculture as well, which, along with the increase in mass-produced foods, helped push culinary trends towards flavor homogenization. Further, after the rationing of the Second World War, feeding people food of uniform quality and safety becomes the highest priority, rather than distinction of flavor (Roudot 2004). Skilled household food preparation and preservation activities from a generation prior, such as canning, pickling, and cheesemaking, were becoming increasingly rare in urban and suburban homes, with more consumers choosing to buy the versions available at the local grocery store. Likewise, many local artisanal food producers went out of business as shopping habits moved towards the larger supermarkets and away from specialty retailers. With this move towards mass production, prices dropped for the average consumer, as did the variations in products, quality, and proliferation of food preparation and preservation skills.

The “counterculture” movement of the 1960s sparked interest in a growing segment of the population in gardening, vegetarianism, and food co-ops and brought attention to the potential health risks of the red meat- and preservative-heavy meals that had become prevalent in US homes. This influenced a shift in culinary tastes that gained speed in the 1970s when Alice Waters began to popularize “Californian” cuisine that emphasized fresh, seasonal ingredients, and traditional preparation methods. This movement began to grow into a resurgent interest in personal gardens and small-farm production, as well as traditional food preparation and preservation methods, which evolved into a “back-to-the-land” movement in the 1980s (Paxson 2010). International travel also hastened the shift of cultural tastes, with sophisticated eaters returning from their trips interested in increasingly



diversified flavors and more in touch with the artisanal foods that they encountered in countries like Italy, which had not moved towards the pervasive mass production of popular foods like the United States.

This cultural shift was apparent in a small, but influential portion of the population into the new millennium. As the first rumblings of the recession were being felt in the mid-2000s, so continued a rise in family gardens, preserving, and artisanal food production, as evidenced by the dramatic rise in cheesemakers, whose numbers doubled since 2000 (Paxson 2012). This interest in artisanal edibles grew alongside the interest in locally sourced food. In fact, since the US Department of Agriculture (USDA) began publishing the national directory of Farmer's Markets in 1994, the number of farmer's markets had more than quadrupled nationally by 2012 (United States Department of Agriculture 2012). With these new markets came new customers interested in local produce and products made from ingredients and by people, they felt adhered to their same values of environmental and economic sustainability. In addition, these markets provided a literal marketplace where small and start-up businesses could sell their products and started to gain customers relatively easily, because of the lack of need for distributors, and for a relatively low start-up cost. Also, at this time, people looking to cut costs started to grow their own food, and sales of seeds spiked in 2007, with the National Gardening Association noting that more than 43 million households grew their own food in 2009, an increase of 19 % from the year before (Sanburn 2011). Now, not only were more households harvesting their own produce and, presumably, looking for ways to preserve their bounty, but also more people were looking for work. This led to more people trying traditional preserving and preparation methods in their home, a greater cultural interest in home-made, local, and high-quality food products (Muller 2010), and an increased number of people starting food-based businesses (Casserly 2012). These businesses ran the gamut from a glut of food trucks serving mostly urban areas

to smaller-scale organic farms to specialty foods like high-end baked goods, often boasting of as "artisanal" aesthetic of preparation and quality. Many of these businesses were envisioned to cater to the new "foodie" culture that sought high-quality, handmade, and often environmentally conscious food options. This new trend in artisanal foods can be seen most prominently in the recent rise of artisanal cheese, pickles, fruit preserves, charcuterie, alcoholic spirits, and other similar small batch purveyors. The dominant narrative in each of these industries is a desire to reclaim what the makers believe are the original, traditional, or true essence of each product – and its endless variations – because of the vast dominance of mass production that each product had endured over the course of the twentieth and early twenty-first century.

## Debates

While artisanal food production and craft had long histories in many countries outside of the United States, the larger culture of artisanal foods is relatively new in this country. While there have been some artisanal food makers who have retained a tradition of their craft for generations, unlike in Europe, most food artisans are relatively new with the rise of artisanal products increasing sharply after 2000. These goods may draw heavily from Old World traditions, but pride themselves on individuality. However this variety of craft products and techniques can mean the dilution of the understanding of the term artisan. Unlike Europe's highly regulated cheese industry, for example, the American Cheese Society asserts a definition of artisanal cheese but has no power to police that their members use it correctly. The European Union has rules about process and ingredients in various artisanal goods, such as cheese, and other countries, like Italy, have similar regulations to preserve the quality and identity of other traditionally made products, such as meat, wine, cheese, among other foods (Gudrais 2010). Thus, the primary debate within the artisanal food community surrounds the true

definition of the term and what, if any, regulation should be in place to preserve it.

Various organizations, craftspeople, and food writers assert that a true “artisanal” food product is one made by a skilled craftsman, using high-quality ingredients and a mastered, often traditional, technique (CUESA 2006). Some also assert that artisanal foods can only be made in small batches and with ingredients that are sustainably sourced. However, with the rise in popularity of artisanal edible or potable goods come stories of artisans who initially produced all of their goods by themselves using ingredients that adhere to the strictest of values, but who have expanded to include multiple employees, more readily available produce or other ingredients, automated methods such as mass-processed heat preserving or labeling. The question remains of when a good ceases being artisanal, even if it follows a similar recipe or technique of a small batch good, but on a larger scale. Some argue that a good retains its artisanal descriptor as long as the artisans themselves are still ensuring that the more nuanced mixing, tasting, and quality control are to their standards. Others cite any form of automation or any deviation from traditional methods as unworthy of the artisanal moniker. Only the cheese industry has a somewhat standard, although unenforced, definition of artisanal cheese, which is understood to mean a product made primarily by hand, in small batches, with attention paid to the quality of the ingredients and the skills used in production (Raskin 2012). This also represents the overarching general understanding of the term by the consumers, food writers, and producers who are familiar with this segment of the market. Thus, while the average consumer may not be concerned with the debate surrounding the term “artisanal” as used by corporate marketers to describe clearly mass-produced items like pizza or potato chips, the numbers who do seek out specifically “artisanal” goods – the National Association for the Specialty Food Trade (NASFT) conducted a study in 2011 which found that 26 % of specialty-food consumers seek out

artisan products – are growing making the debate over standardization of this term even more pertinent and could lead to misrepresentation of the true nature of products and the devaluing of artisanal goods and methods.

With the consumer desire for artisanal goods is growing and the relatively easy entrance into this market at community spaces like farmer’s markets comes the concern of food safety. Numerous artisans cite the often arduous safety or legal regulations that have been a detriment to their growing business, with a great number of craftspeople admitting that they began their business in their kitchen or some other unregulated and illegal space. Most food safety laws are regulated at the state level, although many are similar and include the need for food sold for public consumption to be produced in a certified commercial kitchen, with other frequent requirements including the need for a food processing license or lab tests to ensure food safety. Some exceptions to these laws include allowances for farmers who process produce they grow or “non-potentially hazardous” items to be produced in home kitchens (Gansky 2012). Many artisanal producers note the high price of these regulations – which can reach into the thousands – and cite this as a major burden for starting a business and staying profitable. They have lobbied for more changes to the “cottage food laws,” as they are known, which have resulted in more than thirty states creating allowances for the sale of small batch food items, often limiting the types of food that can be produced and sold and putting a ceiling on allowed profits (Andrews 2012). However, proponents of keeping food safety laws strictly in place note the long history behind these regulations, which historically have greatly reduced illness from food produced in unsanitary environments or through questionably methods, and cite the need to keep standards high to ensure the integrity of public health.

Another issue faced among artisanal food producers is whether the term encompasses a specific value system of environmental ethics. Many small producers begin with a commitment to source their ingredients seasonally, organically,

or from local farms, while others merely put an emphasis on self-assessed “quality” raw materials. These purveyors note that this is borne out of the true intent of many artisans throughout history, who were fully integrated with every step of procuring and creating their product, such as illustrated via the strict regulations on ingredients of artisanal foods in Europe, where there are numerous continent- and countrywide rules on the ingredients and methods necessary for proper labeling of specific artisan-made goods, such as types of cheese, sausage, or wine. Some artisans argue in favor of a more exclusive definition of the term, looking to a study that cited an understood level of quality and environmental consciousness in a good labeled “artisanal.” This research looked at the artisanal food culture in Ohio to determine the definition and motivations of artisanal food producers and corroborated a commitment to handmade aesthetic, quality, and environmental concerns – with ingredients often organic or locally sourced. (Caricofe 2011). These findings echo what other artisans in favor of a more exclusive definition of the term argue. Opponents note, however, that Americans pride themselves in their independence and would resist additional bureaucracy, with even the large artisanal cheese industry preferring not to pursue regulations, offering instead standard definitions only as guides for labeling (Gudrais 2010).

Further, the issue of environmentally conscious sourcing as part of the definition of an artisanal good can be complicated. Shipping heavy jars, or perishables like charcuterie and cheese, can increase the carbon footprint or call into question the often initial business philosophy of environmental sustainability. The true environmental and health costs of nonorganic and nonlocal goods are often debated, with others noting that high-quality ingredients can be environmentally sustainable, even if they do not share these distinctions (McWilliams 2009). Likewise, not all artisans put high priority on organic or local ingredients or handmade techniques, asserting that promoting artisanal goods made with whole ingredients, like dessert topping

made with fresh cherries – even if with the inclusion of sugar – and less processed or unnatural ingredients like high fructose corn syrup and food dye, is beneficial to consumers and the environment overall, even if the ingredients are not sustainably sourced or the production methods used are sometimes automated. These proponents cite that anything that keeps traditional preservation methods alive, and goods with fewer preservatives and more produce and whole foods in demand, is a positive outcome (Raskin 2012).

Along with environmental sustainability comes the issue of business viability. Some artisans note that they feel pressured by some consumers and fellow craftspeople to keep production as small and handmade as their business survival will allow, sometimes even eschewing automated chopping or mixing machines. Strict adherence to completely handmade can result in higher prices, more barriers towards expansion, and issues of business sustainability, depending on the industry. This reality of business sustainability and the related issue of affordability are issues that many artisanal producers deal with. For the home artisan, whether the material and time required to make a product for personal consumption is worth, it is a personal decision, akin to a hobby or based in preserving traditions, and is worth a higher cost. For others, using raw materials from their own farm or garden, or purchased cheaply in season, making a large amount of an artisanal good for personal use and perhaps to trade with others in their community, is cheaper than buying the goods at retail. However, from a business perspective, often the real calculated cost of selling a jar of artisanal jam or pickles can be many times the price of the mass-produced version to reflect the true price of high-quality produce, packaging, and manual labor. While some consumers are willing and able to pay that amount, many artisans note that lowering the cost of their goods can improve their profitability and overall ability to provide what they consider higher-quality foods to a larger population, making a case for a more liberal interpretation of the definition of artisanal production. Those in favor keeping the term artisanal highly defined or exclusive would note that

any dilution of the term would create a slippery slope resulting in lower-quality products and lost culture or methods that some artisans care deeply about retaining.

Despite these debates over safety, sourcing, and costs, the proponents of artisanal food – both produced for profit and also for personal use – note the unquantifiable positive effect of community building. This can be seen through the exponential growth of farmer's markets that sell artisanal goods in addition to produce, community classes teaching traditional production and preservation methods, and the myriad first person accounts of small batch producers who cite the help of friends, family, consumers, and even other artisans as helping them refine their process and build their business.

## Summary

There is no denying that artisanal food production has long been an integral part of global food culture. With increasing industrialization in the western world in the late 1800s and early 1900s, the number of artisans – creating edible goods for both commercial and personal use – dropped, and mass-produced food became more popular in the vast majority of households. However, the past decade has seen a rapid return to these traditional methods of food production for a number of reasons, including the desire to explore and preserve tradition and the increased consciousness about the quality and provenance of one's food. For commercial artisans, there are barriers to entering this increasingly crowded marketplace, including the cost of licenses and fees to operate a certified food production business and the increasing dilution of the term “artisan” through large businesses who seek to cash in on this growing trend. However, even with artisanal goods priced at a premium over similar mass-produced items, growth in this sector of the market is still robust, which seems to indicate that the consumer interest in true artisanal goods – and the values that these products often embody – is only increasing.

## Cross-References

- [Farmers' Markets](#)
- [Local and Regional Food Systems](#)
- [Public Institutional Foodservice](#)
- [Slow Food](#)

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## Asian Cuisine: Ethical Considerations

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### Synonyms

Asian Food; Religious Aspects Vegetarianism

### Introduction

Numerous factors shape decisions about what to eat, including region and geography, nationality, social class, ethnicity, and – central to this piece – ethical considerations.

Ethical belief systems influence not only what people eat or do not eat, but also how people eat and who they eat with. Other food and cuisine-related issues having ethical implications include hunger and food security, shifting diets and their repercussions, and sustainability.

This piece focuses on South Asia, especially India, and East Asia, primarily China, Japan, and Korea. China has some of the world's oldest cuisines which have had an enormous impact on other countries – especially in East Asia – in terms of ethical/religious belief systems and their impact on food. I also briefly consider mainland Southeast Asia, especially in terms of the

influence of India or China. This omits large areas of Asia, such as the so-called Middle East and other areas in Southeast Asia. Asia is an incredibly diverse area with a wide range of food and cuisine and even within nations themselves there is incredible diversity. India and China themselves are each comparable to Europe in many ways including diversity of foods. As Sen (2004, p. xviii) cautions, “there is no national cuisine in India or even a single national dish.” This is true of China as well.

There are conflicting definitions and debates over the meaning of cuisine. One useful definition emerges from Pettid's (2008, p. 10) history of Korean food. Cuisine refers to how

Cultures manipulate and transform potential food-stuffs into what these cultures consider proper food. Thus, what makes Korean foods ‘Korean’ includes the detailed processes that Koreans use to transform various raw materials into food that is culturally considered to have been prepared correctly. In conjunction with the manner of preparing food are the cultural practices that determine what can, or cannot, be eaten, the manner in which meals are taken, and the social significance attached to various foods.

This definition makes it clear that cuisine is related to a variety of issues related to food, including food preparation, beliefs, and consumption. In this sense, cuisine refers to what Albala (2012, p. 1) defines as food culture, “the entire set of beliefs and practices surrounding food, agriculture, distribution, and consumption and any topic related to food.” This approach is adopted here.

Ethics is ultimately about values and value conflicts. Introducing *The Philosophy of Food*, Kaplan (2012, p. 9) suggests that food “is about serious things like hunger and malnutrition, diabetes and heart disease, eating and being eaten. It is a profoundly moral issue. It always has been. Even ordinary, everyday acts of cooking and eating are forms of ethical conduct.” Throughout history belief systems have prescribed what and how to eat, at the same time as they proscribe other choices. Therefore, this piece will examine the genealogy of important Asian belief systems and their relevance to food. Kaplan suggests that



in addition to questions about what we should eat, food ethics raises questions of how we should eat and whether or not to eat meat. The question of meat eating or vegetarianism is central to ethical considerations on Asian cuisine, as are ethical questions related to hunger, health and well-being, and sustainability.

## Origins and History

Since humans moved out of Africa and into other parts of the world, food has been central to our survival. The earliest human groups subsisted on gathering and hunting. It seems likely that the differentiation of different types of food had not started then. Differentiation and stratification within these groups was also minimal. There are various theories of the role that food played in the development of modern humans, with some suggesting that it was an early reliance on meat. Richard Wrangham (2009) famously hypothesizes that cooking is a central factor, perhaps the central factor, in human evolution. Cooking also provides the basis for the development of various cuisines. Fernández-Armesto (2002) suggests that the history of food can be seen through a series of revolutions in food.

The first revolution is the invention of cooking, which fits with Wrangham's ideas. In the second revolution, humans move beyond food as merely subsistence and begin to attribute meaning, often religious or superstitious, to food. Ethical beliefs about food surely emerge from this transformation. His third revolution – the “herding revolution” – deals with the domestication and breeding of some animal species. This is followed by a revolution in developing agriculture. The fifth revolution refers to the beginnings of the stratification of food in increasingly hierarchical human groupings. The differences between the food of the elites and the food of the common people are central features of cuisine after that. Fernandez-Armesto's sixth revolution is the inception and spread of long-distance trading and is “the ecological transformation of the last 500 years, which is usually

called the ‘Colombian Exchange,’ and the place of food stuffs in it.” His final revolution is the industrialization of the last several centuries.

In developing this scheme Fernández-Armesto makes some fascinating arguments about the history of food. Although it provides an overall orientation to food history, a less detailed periodization of revolutions can be useful. The first, the Agricultural or Neolithic Revolution, marked the development of agricultural production in about 9500 BCE in the West and about two centuries later in China (Morris 2010). This shift from food gathering to food production enabled and required basic changes in human social organization. One such change is indicated by noting that this revolution is also called the First Urban Revolution. The new mode of food production made large human settlements possible, something that was not supportable for nomadic bands of hunter/gatherers. It depended on the development of social organization characterized by an enhanced division of labor and increasing hierarchy and stratification. Religious and government specialists were able to live based on the cultivation, gathering, storage, and control of food by other groups. This marks the beginnings of differentiation of foods among various groups, a differentiation that was often justified by appeals to religious or other belief systems. It also signaled the onset of developed hierarchies in human societies.

In *Cuisine & Empire*, Rachel Laudan (2013) makes invaluable contributions to understanding the development of world cuisines from various perspectives, including ethical ones. She suggests that one can trace the history of half a dozen major families of world cuisines and “that each was shaped by a culinary philosophy that defined what cooking was and how cuisine was related to society, to the natural world . . . , and to the supernatural” (2013, p. 1). Laudan hypothesizes that these cuisines had all been shaped by long-distance transfers. These interactions among various regions and the ethical belief systems of those regions shaped the development of various Asian cuisines and the ethical systems that influenced them as well as the ethical outcomes generated by them.

## Religion and Food Choices: India

India is one of the most diverse countries in the world with a rich variety of cuisines within it (Achaya 1994, 1998). The diversity encompasses not only food and cuisine, but also religion and ethnicity, which both affect cuisine. India is home to numerous religion traditions, three of which originated there, and they each have beliefs about food that have ethical consequences for cuisine. In addition to Hinduism, Buddhism, and Jainism, other religions have played an important role in India throughout history. For example, India has the third largest Muslim population in the world. Other groups such as Christians, Jews, Sikhs, and Parsis have been important as well, but here I focus on Hinduism, Buddhism, and Jainism and their effects on cuisine.

It is not surprising given the centrality of food to people's lives that ethical considerations based in these belief systems would affect food choices. As Collingham (2006, p. 4) argues,

Each of the religious communities on the Indian subcontinent is distinguished by their particular food taboos, especially with regard to meat. Thus for example, Christians will eat virtually any meat or fish. Muslims will eat most meats, including beef, but avoid pork. Jains are usually strict vegetarians, and sometimes even avoid red foods, because they are the color of blood. Hindus will not eat the flesh of the sacred cow.

There are exceptions to each of these and economist Amartya Sen, quoted by Colleen Sen (2004, p. xvii), makes the point even more strongly when he notes that one cannot understand any aspect of Indian society, including food, "without seeing the extensive interactions across barriers of religious communities. These include Hindus and Muslims, Buddhists, Jains, Sikhs, Parsees, Christians, Jews, and even atheists and agnostics."

But it is not just religion that determined what was appropriate to prepare and eat. "In traditional India, what and how people ate was inseparable from their religion, the life-cycle stage, town and region, caste and/or social status, family

traditions, health concerns, and spiritual beliefs:" (2004, p. 29). The religions themselves were not monolithic. Although each had, and has, its own rules about what to eat, there are numerous sects and subgroups within each religion and they each have their own food prescriptions and proscriptions (Sen 2004).

Hinduism is the third largest religion in the world. Not created by one person, it is a syncretic belief system characterized by a wide variety of beliefs and sects. Hinduism developed during the period 1000–500 BCE and with it came a caste system which divided people rigidly in all areas of life, including food and eating. Although the Aryans, who had developed Hinduism, were not vegetarians, an aversion to killing and eating meat, especially cows, had developed by 1000 BCE. Sen (2004) suggests several reasons for the emergence of this move away from beef. One important factor may have been how valuable cows were in a variety of ways, such as plowing, giving milk, and producing manure used for fuel. Religious reasons – such as the development of beliefs in reincarnation – were also important. Because humans can come back as animals, the idea of slaughtering animals became less attractive and ethical.

It is not only what to eat that constitute moral and ethical issues in Hinduism, but also how food is prepared, handled, and served. For Hindus, "in this world and beyond, the cosmic moral order (dharma) regulates the availability of food to all creatures" (Khare 1992, p. 5). In India, food is, among things, a moral substance. Many of the distinctions among types of acceptable foods and many of the rules about who can eat what and with whom have declined in significance in recent years, especially for urban dwellers. However, vegetarianism remains important, although there are many gradations of meaning of vegetarianism and estimates are that 25–30 % of Indians are vegetarians (Sen 2004), which would make them the largest concentration of vegetarians in any country, given India's population size.

Islam has a significant presence in India, with the world's second largest Islamic population. The key restrictions on food in Islam are the

prohibitions against eating pork and drinking alcoholic beverages. Meat that is slaughtered and prepared according to Islamic regulations is called *halal*.

Two other important religions – both of which have major ethical implications in regard to food – originated in India in the sixth century BCE: Jainism and Buddhism. In Jainism, founded by Varhman Mahavira, the central doctrine “is that all nature is alive,” and should not be harmed (Sen 2004, p. 10), thus leading to the doctrine of *ahimsa*. The term means nonviolence, and stresses the avoidance of harm to living things. The concept is also important in Hinduism and Buddhism. Given their strong adherence to this doctrine, it is not surprising that for Jains eating meat was considered abhorrent and they are strict vegetarians. The Jain food proscriptions may well be the most rigid in the world, encompassing not only “meat, fish, and eggs, but thirty-two things that are believed to contain the germs of infinite life” (Sen 2004, p. 34).

Buddhism was founded in India by Siddhartha Gautama, later known as the Buddha. His emphasis was on moderation in all areas of life, including food. Although Buddhist monks were vegetarians in their monasteries, when they traveled and begged for food they ate whatever was offered to them. Today Buddhists make up less than 1 % of India’s population (Sen 2004). Although Buddhism has played an important role historically in India, it has arguably had more important effects beyond India. From India, Buddhism spread to China and from there to other parts of Asia.

### Religion, Ethical Systems, and Food: China

In China, food choices and ethics were most affected by three sets of belief systems or ethical codes. In addition to Buddhism, from India, two indigenous belief systems – Confucianism and Daoism – shaped food ethics in China. Other religions and belief systems, such as Islam and animism, also played important roles, but the

three listed were most influential. Albala (2012) suggests that Chinese food and eating were shaped by the three traditions of Confucianism, Daoism, and Buddhism. It is important to keep in mind that Chinese food and eating patterns were and are diverse.

Confucianism was derived from the writing of Confucius (called Kongzi in China) who lived 551–479 BCE. He emphasized social harmony based on one’s place in an ordered society and an awareness of one’s obligations to those above and responsibilities to those below one in the social hierarchy. This started at the level of the family with children owing filial piety to the father, who is seen as the household head. The father in turn had obligations to those above him and those eventually reached to the top level of society. Properly followed this awareness would enable life and society to function smoothly. “This translated into a fully codified set of manners, a way to avoid potential conflict, including at the table” (Albala 2012, p. 44). Albala notes that this explains why the Chinese developed and used chopsticks and did not use potentially dangerous implements such as forks and knives.

Daoism, founded by Laozi in the sixth century BCE, emphasized appreciation of nature with a focus on its simplicity and beauty. Albala (2012, p. 44) suggests that Laozi’s most important contribution to Chinese “culinary culture is the espousal of a simple diet tied closely to ingredients directly from the soil, treated without artifice.” Albala notes that an appreciation of food close to its natural state is at least an indirect consequence of Daoism.

Fried (2004) shows how failing to follow the appropriate eating etiquette and form led to disastrous results in Zhang Yimou’s 1992 film *Raise the Red Lantern*. She notes traditional sayings which emphasize the centrality and importance of food in China, for example, “To the people, food is Heaven.” In this film, Master Chen takes a fourth wife or concubine and the new wife contravenes the expected food etiquette in various ways, therefore committing serious ethical and social breaches which – with some other factors – lead to a disastrous outcome for her.

Thus, the movie demonstrates that “communal adherence to food etiquette and the rituals of dinner reflect societal behavior critical for all aspects of household and societal harmony; if dinner is disrupted, so is the flow of daily life” (Fried 2004, p. 131).

Even though Confucian beliefs, such as those underlying the above example, and Daoism were passed on to Korea and thence to Japan, the impact of Buddhism on ethical beliefs and norms relating to food is perhaps more directly important in China than Confucianism or Daoism. From its origins in India, Buddhism made such rapid inroads into China that Morris (2010, p. 323) refers to remarkable “Buddhism’s conquest of China.” From a few hundred adherents in 65 CE, Buddhism claimed perhaps 30 million followers by the sixth century.

In understanding the impact of Buddhism on ethical beliefs about food and eating in China, it is essential to keep in mind that Buddhism is composed of multiple schools of thoughts and sects which have different consequences for ethical considerations about food. There are three broad schools of Buddhism and numerous sects within each. *Theravada*, or *Hinayana*, Buddhism is the oldest and considered the most conservative school, but it has few proscriptions on food. Most adherents live in Southeast Asia and Sri Lanka. *Vajrayana*, or *Tantric*, Buddhism originated in India and is most highly concentrated in India and Tibet. *Mahayana* is the largest of the three schools. It was highly influential in China and, in different varieties, in Korea and Japan.

The different schools of Buddhism and the differing interpretations within and between each have given rise to different approaches to the ethics of food. Monks and laypeople have varying obligations in regard to food. As Lapp (2013) notes, “the most prominent dietary practice, and question of ethical debate, pertaining to Buddhism has to do with vegetarianism.” This is related to the injunction not to do harm expressed in the doctrine of *ahimsa*. Practitioners are also called on to avoid eating the “Five Pungent Spices” – onions, garlic, scallions, chives, and leeks – because they may kindle sexual desire or anger.

## Indianization, Sinicization, and Asian Food Ethics

The food ethics associated with Hinduism and Buddhism also spread to Southeast Asia. Islam also plays a key role. The impact of outside influences has waxed and waned in Southeast Asia, with both India and China notably influencing the area. Indianization, “the influence of southern Indian traders and religious practitioners in Southeast Asia” (Van Esterik 2008, p. 5), brought Hinduism, Buddhism, and mixtures of both to the region. Theravada Buddhism is mainly practiced in mainland Southeast Asian countries, including Myanmar, Thailand, the Lao People’s Democratic Republic, and Cambodia, although practices vary among them. In terms of ethics and food, “Buddhism and food intertwine at the level of rituals and lay offerings, but also at the level of ideology and text” (Van Esterik 2008, p. 99). There is an emphasis on moderation in food, or what could be called “moderate asceticism” (Van Esterik 2008). Theravada Buddhists are not generally vegetarian and neither are most Southeast Asian societies.

Van Esterik points out that where Mahayana Buddhism is more popular, such as in Vietnam, vegetarianism is more widely spread. Vietnam is the most Sinicized country in Southeast Asia. China had numerous influences in Vietnam, but one is the use of chopsticks. Vietnam is the only Southeast Asian society in which this is the case (Van Esterik 2008).

Korea’s closeness to and interaction with China ensured that both Buddhism and Confucianism would spread to Korea. By the fourth century BCE, both belief systems were present in Korea and both influenced numerous aspects of Korean culture, including cuisine. The Buddhist Koryŏ Dynasty (918–1392) unified the Korean peninsula and the succeeding Chosŏn Dynasty (1392–1910) was guided by Confucian beliefs (Pettid 2008). In terms of the ethical aspects of Korean food, the type of Mahayana Buddhism that developed in Korea led to the popularity of vegetables of all sorts and to the development of various vegetarian dishes. This was not completely new. “The tradition of incorporating

numerous vegetables and greens into foods probably is an ancient one that evolved from pre-agrarian times and was greatly enhanced by Buddhist beliefs that one should refrain from eating meat” (Pettid 2008, p. 51).

As in China, Confucianism had less to say about what to eat, but emphasized how to eat and in what order. There was an order to who would eat first and in what order people would eat, especially in better off families. Pettid notes these patterns “reflect the Confucian view of the hierarchy governing gender and age relations” (2008, p. 159).

Buddhism and Confucianism also entered Japan from at least the sixth century BCE and both have been extremely influential there, especially Buddhism. There are numerous sects with varying foci. In terms of food ethics, one of the most influential thinkers was the Buddhist monk Dōgen (1200–1253). He founded the Soto Zen sect and wrote a manual on cooking. *Shōjin ryōri* cuisine, which is Buddhist vegetarian cuisine, emerged from the ideas of Dōgen and others (Ashkenazi and Jacob 2000).

## Contemporary Ethical Issues

Introducing this work, the editors point to expanding areas of interest within the study of food and agricultural ethics. “These wide-ranging debates encompass questions in human nutrition, animal rights and the environmental impacts of aquaculture and agricultural production” (Thompson and Kaplan 2014). Among these and other topics, the continuation of what Carolan (2012) refers to as the “globalizations” of food take on exceptional significance, as does a dietary transition that transforms food and cuisines around the world (Smil and Kobayashi 2012). This transition is eroding some of the distinctiveness of food around the world, lessening culinary differences, and raising questions about health and well-being. As diets around the world, including in Asia, trend to more Western diets, with heavier consumption of meat, diabetes and other diseases become more common. The appeal of meat also raises questions of

sustainability, with some scholars arguing that meat eating is essentially not sustainable (McWilliams 2009). These changes decisively shape what may be called Asian cuisine, homogenizing it in the process.

The importance of the ethical dimensions of food and agriculture are also evident in the decision of the Food and Agriculture Organization (FAO) of the United Nations to publish their Ethics Series. The Foreword to the first entry in the Ethics Series of the Food and Agriculture Organization (FAO) of the United Nations starts by commenting that “the stubborn persistence of hunger and poverty raises what are perhaps the most burning ethical questions of our age (FAO 2001, p. iii).” The importance of food ethics has become increasingly clear in recent years, as indicated, in part, by this encyclopedia as well as the FAO series.

Although it may not be directly related to Asian cuisine, especially in terms of food culture and cooking styles, as the FAO indicates, the most basic ethical issue remains access to food. Over one billion people do not get enough food, while almost one and one half billion are overweight. These extremes are linked and they affect many in Asia. The debate over food security – the ability of people to get nutritious affordable food through regular channels – has become a major issue all over the world, with India being a powerful example. This is an extreme amplification of the distinction in Asian, and other, cuisines between elite and poor cuisines, and one that has serious consequences. The recently passed Food Security Ordinance of 2013 in India addresses food security issues, in some ways helpfully, but in others not. According to development economist Jean Drèze (2013), “the food security bill is a fraction of what is required to tackle India’s enormous nutrition problems.” The issue of food security leads to questions of what is the ethical imperative of the developed world to ensure adequate food and nutrition in the developing world, as well as pockets of food insecurity in developed societies. How can cuisines for the poor and rich be brought into greater congruence, in Asia and the rest of the world?



## Summary

This piece introduced the topic, spelling out its limitations and scope in terms of Asia, cuisine, and ethics. After examining the origins of cuisines it moved to consider the ethical aspects of food in India and then China, emphasizing the belief systems and religions that generated ethical beliefs on food. It then looked at the spread of those belief systems and food ethics to areas in Southeast and East Asia. The piece concluded with an overview of contemporary ethical issues relevant to food and cuisine in Asia.

## Cross-References

- [Buddhism, Cooking, and Eating](#)
- [Buddhist Perspectives on Food and Agricultural Ethics](#)
- [Chinese Agriculture](#)
- [Ethics and Food Taste](#)
- [European Cuisine: Ethical Considerations](#)
- [Hinduism and Food](#)
- [Islam and Food](#)
- [Jainism and Food](#)
- [Vegetarianism](#)
- [Water, Food, and Agriculture](#)

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## Authenticity in Food

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## Synonyms

Authentic dishes; Dishes; Traditional foods

## Introduction

In reference to dishes, authenticity is a central axiological category, informed by aesthetic and

ethical concerns, much used and abused on the part of both consumers and retailers. The application of the concept of authenticity to dishes has indeed grown to be so widespread that – in contrast with a previous reading of the term – some scholars regard judgments of authenticity as social constructs far from any possibility of falsification. Another school of thought, instead, sees authenticity as the expression of a genuine existential sentiment. In order to present the different perspectives, the entry opens up with some terminological remarks on the use of the expressions “dish” and “recipe.” To be offered next is an examination of different interpretations of “authenticity,” then employed to present four perspectives on the authenticity of a dish.

## Dishes and Recipes

Before proceeding any further, the reader shall be made aware of certain important disambiguations. “Food” is sometimes used to refer to a *dish* and other times to a *recipe*, two notions whose difference shall be explained below. For the sake of clarity, the use of the expression “food” will be limited in the remaining of the entry, specifying which of the two senses is intended. Secondly, “food,” “dish,” and “recipe” are subject to a similar double interpretation: at times they refer *merely* to the item that is consumed – say, a tray of tiramisu; in other contexts, however, the expressions refer to that item *plus* the relevant events that brought to its realization; the relevant events, in turn, may be limited to the action of the cook (say, all the toil and labor that went into preparing the tiramisu) or rather include a more extended series of events (e.g., the chicken farm where the eggs were produced). The latter will be termed the *extended food/dish/recipe concept*. This entry will mainly attempt to offer a characterization of dishes and recipes in the extended sense; a derivative understanding of the less extended versions may ensue.

Authenticity, in reference to foods, is more aptly predicated of dishes; an authentic dish is a dish authentically reproducing a recipe. It is,

then, relevant to explain the distinction between dishes and recipes. To put it bluntly, a dish is the *stuff*, a recipe is the *idea*. More precisely, a dish is the specific concoction of that perishable edible stuff, such as *those* specific actions that led to *this* tray of tiramisu sitting on my kitchen counter. On the other hand, a recipe is – in first approximation – the array of repeatable aspects that are found within a dish; that is, a recipe comprises any relevant aspect of a dish whose replication would deliver a dish of the same sort. In this sense, recipes stand for those *sorts* of actions that deliver certain *sorts* of dishes.

What is the relationship between recipes and dishes? Utilizing a terminology familiar to the contemporary literature in metaphysics, a dish can be an *instance* of a recipe or, alternatively, an *example* of a recipe. This tray of tiramisu – a dish – is an instance of tiramisu’s recipe; last week another instance of tiramisu was prepared, which has now been all eaten up.

Not every dish, however, need exemplify some recipe. While in principle every dish has some aspect to it that could be replicated, only selected dishes enter the ranks of recipes. Indeed, it might be that some dishes are such gerrymandered or random concoctions of foods that there is no relevant repeatable aspect to them. Furthermore, a recipe may exist before having been instantiated or, in extreme cases, without ever being instantiated. Before executing a novel recipe for the first time, it seems accurate to say that the chef who came up with it had the recipe. Other times, of course, the dish and the recipe come to be simultaneously: as the chef makes a dish, she is also – maybe accidentally – discovering the recipe.

Even if for every dish there is a recipe, the partition of dishes into recipes would still remain the most salient matter of dispute in the foodworld. Do *cecina* and *farinata*, as found respectively in the Italian culinary *milieus* of coastal Tuscany and Liguria, indicate different recipes? Who is entitled to judge of the matter? The partitioning of the foodworld, whose study lies beyond the scope of the present entry, is thus crucial to establish the identity of both dishes and recipes.

## “Authenticity”

The axiological relevance of authenticity can hardly be overestimated. Its underpinnings may concern either the aesthetic value of a situation or a thing, or its ethical worth, or both, depending on the context in which the term is employed and on the rationale for its usage. The expression “authenticity” has indeed much relevance in a number of fields, including visual arts, musicology, and cuisine. In reference to a person, authenticity stands for a virtuous disposition, achieved through the cultivation of simpler traits such as discernment, honesty, sound reasoning. In philosophy, the idea of an authentic life occupies a central role in existentialist philosophy and has been employed most notably by figures such as Kierkegaard, Nietzsche, Heidegger, and Sartre (cfr. Ferrara 1998; Taylor 1992). Being an authentic person means being *true to yourself*. In a nutshell, regardless of external conditions, the authentic person will persist in her most fundamental propositions. However, it is key not to confuse authenticity with stubbornness. The stubborn will persist in her decisions even when they contrast with paramount changes not just in external conditions but also in personal convictions; the authentic person, instead, will be able to discern her changes and channel her actions in such a direction that they will be most suitable in keeping with her present dispositions and, when applicable, her history. Personal authenticity, then, is entrenched with creativity. The truth in question, when it comes to the authentic life, is uncovered through a creative process rather than via an examination of the past or a measurement of what is present.

How authenticity applies to the arts is much debated. To address the issue, it is useful to borrow the distinction, introduced by Nelson Goodman (1976), between *allographic* and *autographic* forms of art. The former can be represented by a language other than the one in which they are expressed; an autographic piece of art, on the contrary, cannot be expressed other than by itself. For instance, music is an allographic art because musical notation can make do for a musical piece – thus the limit case of

pieces that have never be executed; on the contrary, painting is autographic, as any way of representing a painting cannot substitute for the actual work. In visual arts, where autographic works are predominant, authenticity seems to be employed especially to underline a genuine attribution of authorship; the opposite of an authentic work of visual art is, then, a *forged* work (cfr. Hick 2010). Central to an allographic form of art like music, instead, is the notion of *authentic execution* of a piece, and it is debated which performances best deserve such an etiquette (Kivy 1995) – those employing original instrumentation? Those eliciting similar effects in the audience? Those most faithfully interpreting the score, when available? Another story still is authenticity in the context of a collaborative art, as in the case of architecture, which is partially autographic and partially allographic. Three notions are most relevant in architecture: authenticity as authorship, as opposed to forgery; authenticity as cohesion, on the part of an architect, with her own past projects; or authenticity as adequate application of certain architectural creeds to a given situation.

Dishes are human artifacts bearing aesthetic worth; although it is debated whether selected foods may be regarded as forms of fine art (cfr. Telfer 1996, Chap. 3), what said of the arts has a bearing on foods as well. First, we may wonder whether cuisine is an allographic or autographic endeavor. There are several means of expressing a recipe, from cookbooks to culinary reports to videos: this suggests the allographic nature of cuisine. On the other hand, none of the means to express a recipe seems to be able to fully substitute for the actual execution of a recipe that is a dish; the upshot is that cuisine has a fundamental component of creativity too, an adaptation of a generic procedure to circumstances. The unavoidable creative component is implied also by the fleeting nature of food. Out of material necessity, each dish employs novel ingredients: food is perishable and transient; taste is a *destructive* sense, as it destroys what it experiences; and cuisine is a destructive endeavor, as it irreversibly transforms what it prepares to be consumed. Thus, whoever creates

a dish, even on the score of a recipe, will be employing ingredients that are *unique* and that contribute crucially to the aesthetic quality of the gastronomic experience.

## Authenticity in Foods

The authenticity of foods has been at the center of a wide debate in the social sciences, particularly intense in the last 15 years, so much so that, according to Taylor (2001, p. 8), “there are at least as many definitions of authenticity as there are those who write about it.” In the attempt to devise some threads in the literature, we may extrapolate four distinct perspectives:

1. *Realist perspectives on the authenticity of a dish.* The realist maintains that judgments of authenticity are true or false depending on whether the dishes have or lack certain characteristics. For instance, from a reading of Boorstin (1964), one may extrapolate the idea that an authentic dish reenacts a recipe in accordance to a specific relationship between a people and a place. Boorstin’s proposal, however, has been criticized because it presumes a *static* view of a culinary culture, as opposed to one accommodating the seemingly unavoidable possibility of its evolution. Realist perspectives on the authenticity of a dish need not be static, however. It is possible to recognize that certain traits are essential, *at a given time*, in establishing the authenticity of a dish, without assuming that such traits will be valid in the future. Geographical indications (cfr. entry on GIs), which will be more fully considered below, are a case in point here. While the geographical area of production and the essential features of a product such as Champagne wines have changed over the centuries, current standards of production provide allegedly objective criteria on the basis of which a wine is judged as an authentic champagne. Of course, some may argue that the standards associated to a geographical indication are more a product of human *fiat* (ultimately creating a brand) rather than the expression of some fundamental natural

properties of the products; this is indeed a major point at stake in the debate over geographical indications.

2. *Constructivist perspectives on the authenticity of a dish.* Constructivist perspectives on the authenticity of a dish move from the observation that no human culture is ever wholly separated from all other cultures; rather, cultural contamination is the norm. What comes to be seen as authentic, then, is the outcome of a selection process ultimately guided by human *fiat*. For instance, there is no objective boundary between authentic and non-authentic Thai cuisine, rather some ingredients, cooking methods, serving tools, etc. are chosen by consumers as being more authentic than others (cfr. Germann Molz 2004 and Urry 2005). Analogous considerations will be made with respect to geographical indications: the borders of the Chianti Classico region as well as the rules and regulations regimenting its production are not discovered, but conventionally established. The upshot – as summed up by Sims (2009) who draws on Jackson (1999) – is that “instead of talking about “authenticity,” we should focus upon “authentification,” which is the process whereby people make claims for authenticity and the interests that those claims serve” (Sims 2009, p. 324).
3. *“Existentialist” perspectives on the authenticity of a dish.* Some existentialist notions have entered the contemporary debate on tourism and authenticity (cfr. Wang 1999; Sims 2009, pp. 324–325); the ensuing proposal may be labeled “existentialist,” among quotes, since it comes free of the broader theoretical framework of existentialism. The basic idea – when applied to our case in point – is that gastronomic experiences contribute to create a sense of the self; the quest for authentic dishes, then, becomes the quest for the realization of an authentic self. This perspective shares much with the constructivist, as it starts from the assumption that there can be no objective authenticity of a dish; on the other hand, for the “existentialist,” there is a form of authenticity which may be genuinely devised – personal authenticity. What sorts of

experiences are conducive to personal authenticity and which ones are not, however, remains to be cleared. We may speculate that those experiences conducted independently from societal constraints and in keeping with core personal creeds are to be preferred; still, work remains to be done in this area.

4. *Naïve perspectives on the authenticity of a dish.* Finally, we come to a perspective paying dues to naïve approaches to authenticity (Cohen 2002). To an ordinary gastronome, some dishes *are* authentic, without the need to justify why that is the case. What to a culture theorist appears as a social construction or an “existentialist” quest to the naïve gastronome is simply a *sui generis* experience: it is all a matter of relaxing and enjoying a certain way of preparing and serving food. At times, there, you will encounter authenticity.

## Authenticity in a Globalized World

The naïve perspective on authentic dishes opens the door to some conclusive remarks on the importance that the concept of authenticity in the kitchen has assumed in contemporary society. Three are the domains where the concept is more notably employed. The first comprises all experiences of “exotic eating” in local restaurants (Heldke 2003), as when visiting a Thai restaurant in Helsinki or an Italian restaurant in Bangkok. Such contexts typically reinforce the conviction that a realist perspective on authentic dishes is of little use.

The second domain is tourism (Heldke 2005; Sims 2009). Also in this context, we find chief examples reinforcing the thesis that the realist perspective is untenable. In tourism, indeed, the traveler’s demand for an authentic experience encounters the needs of merchants to package an experience that will match the expectations. Thus, landscapes will be “beautified” so to appeal to visitors – for instance, in a region famous for its wines, vineyards will be embellished and become predominant with respect to other plants; restaurants will orient their menus on the basis of the

preferences of the visiting clientele; and architectural styles and internal décor of living spaces will seek to match the tourist image of a place.

The third domain is the quest for local foods, particularly important to study as it suggests that the realist perspective held strong up to these days. Authenticity is indeed often associated to local foods and geographical indications, which in the mind of most consumers demarcate genuine, real relations between foods and places, making for an unrepeatable experience. Here is an example attesting the trend, from a study by Sims of two regions within the United Kingdom, the Exmoor, and the Lake District:

Tourists tended to associate local food with particular specialty products. Of the 36 Exmoor tourists interviewed, 32 were able to name specific examples of foods and drinks that they associated with the area, with a similar trend being observed in the Lake District, where 38 of the 42 tourists identified at least one food or drink product with the area. (Sims 2009, p. 330).

The variety of contexts within which authenticity has come to play a role in food discourse suggests that more than one of the four perspectives presented above may come in handy to analyze a specific case. As taste and culinary cultures evolve, more work remains to be done in ascertaining the nuances of each perspective.

## Summary

Some terminological remarks on the use of the expressions “dish” and “recipe” are offered first. Follows an examination of how the concept of authenticity has been employed in philosophy both to describe a personal quest (in connection especially with existentialist philosophies) and to characterize a work of art. Next, four perspectives on the authenticity of a dish are presented: realist, constructivist, existentialist, and naïve. The conclusive section, which points out three domains where the concept of authentic food is of particular significance, suggests that depending on the case study at hand, different perspectives turn out to be most suitable.



## Cross-References

- [Cooking Tools and Techniques: Ethical Issues](#)
- [Geographical Indications, Food, and Culture](#)
- [Recipes](#)

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