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Marketing, Food Policy, Diet, and Health

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Synonyms

Ethical principles; Food choice; Food marketing;
Utility theory

Introduction

This entry explores the interface between food ethics, food marketing, and food policy, in the context of diet and health. It confronts two ethical issues which arise within this subject: whether food marketing can be held responsible for poor diets; and the extent to which it is legitimate for food policies to restrict consumer food choice on grounds of diet and health. The essay considers how, respectively, ethical principles and economic theory can help.

Ethical Principles and Economic Theory

Ben Mepham (2008) has articulated three principles as a guide to ethical decisions. These are the following:

- **Respect for Well-Being**

This is derived from the utilitarian theory of the British nineteenth-century political economists Jeremy Bentham and John Stuart Mill and epitomized by the famous quotation “The greatest good for the greatest number.”

- **Respect for Autonomy (Freedom and Choice)**

This is associated with the deontological theory developed by eighteenth-century philosopher Immanuel Kant and concerns the rights and duties we have as individuals with respect to other individuals – “Do unto others what you would have done to yourself.”

- **Respect for Justice (Fairness)**

Originated by the contemporary American philosopher, John Rawls, and based on the concept of an egalitarian society with equal rights and opportunities.

Economic theory has developed the utilitarian principle into a utility theory of consumption, in which it is assumed that consumers take product purchase decisions, constrained by budgets, designed to maximize the utility (satisfaction) they derived from consumption. The relationship between different patterns of product choice and utility is known as the consumer’s “utility function.” For a consumer to be able to maximize his utility in this sense, the principle of autonomy needs to apply – he needs “freedom to choose” – and issues around consumer food choice are central to the debate over diet and health.

Food Marketing

First, distinguish between the use of the word “marketing” to describe a subject of study, and as a description of the activity of a company “communicating” with its customers (Ritson 1997a). There are many definitions for the former, but most would embrace reference to “accurately identifying and meeting customer [in our case, food consumers] needs and wants”; and superficially at least there is nothing unethical about that. It is the second use of the word that has brought “marketing” a bad press, where the term is often regarded as synonymous with advertising and other methods of product promotion. Defenders of marketing in this sense would argue that marketing communication simply allows food consumers to make informed choices to meet their needs and wants – a sort of win-win situation in which food consumers are able, in terms of economics, to maximize their well-being and food suppliers their profitability. Under this interpretation, marketing becomes consistent with the argument of Adam Smith (1776) that “in pursuing his own advantage” every individual was “led by an invisible hand to promote an end which was not part of his intention” namely to “render the annual revenue of society as great as it could be.”

The counterargument on the merits of marketing is summarized by Tim Jackson (2009) as:

.. people are being persuaded to spend money we don't have, on things we don't need, to create impression that won't last, on people we don't care about.

As far as having a negative effect on food consumers, this can be narrowed down to two main concerns. The first is marketing communication which includes messages which mislead consumers over health aspects of a food product. This can vary, at one extreme, from what one could describe as merely subtle use of words (e.g., “90 % fat free”) to, at the other, bold and unsubstantiated health claims. “Informing the consumer” becomes “misinforming the consumer.”

Second is where “informing” merges into “persuasion.” The dictionary definition of

“persuade” is “to cause a person to believe or do something by reasoning with him.” In this case “do something” is consume more (or perhaps sometimes less) of a particular food, and “reasoning” is marketing communication. Marketing is no longer simply identifying consumer “needs and wants,” but creating them. There are two reasons why this might have a negative impact on consumers. First, as the effect is to increase the range of consumer needs and wants, then people with limited income are more likely to be dissatisfied over the pattern of consumption they actually achieve. Second, and more fundamentally, is if consumers are “persuaded” to develop less healthy diets.

Take the current interest in “sugary drinks” as an example. Sponsorship of sporting events can be argued as misleading by linking the product with a healthy lifestyle; and much of advertising and promotion can be regarded as attempting to persuade people to consume more of the product. One only has to invoke the principle of well-being to be able to judge marketing communication as “unethical” in these circumstances. Similarly, within economic theory, the consumer’s utility function is being manipulated, and the decisions he takes can no longer be regarded as maximizing his utility (satisfaction) for a given income.

Socially Responsible Marketing

Returning however to the textbook definition, with marketing regarded as genuinely merely identifying and meeting consumer needs and wants, not creating them, then things become more complicated. What if consumers do want (if not need!) sugary drinks and are fully aware of the dietary implications? At this point the debate switches from the negative of “unethical” to the positive of what is “ethical marketing” relative to diet and health. A school of thought has developed that argues that responsible food businesses have a duty to restrict access for consumers to “unhealthy” foods, and this practice has become known as “choice editing.” This in turn raises the question of whether a conflict now arises between

the ethical principles of well-being and autonomy, and phrases such as “consumer sovereignty” and “freedom of choice” appear. Defenders of choice editing would argue:

- It is an illusion to imply that consumers have unlimited choice. Decisions are taken throughout the supply chain which restrict the choice of food products available to consumers. In these circumstances, the health and well-being of consumers should become paramount in determining the food basket from which people can “freely choose.”
- Consumers are faced with a bewildering array of thousands of products on the supermarket shelves. Even the socially responsible, well-informed, health-aware consumer will find it almost impossible to achieve the mix of products that they would choose with perfect information and unlimited time. Choice editing will therefore help them to move toward optimum decisions or, in terms of economic theory, to maximize their utility.
- Most people are not well informed about the relationship between their diets and their health. Choice editing is one way of forcing them to take the consumption decisions which they would if better informed.
- The issue is complicated because the term choice editing is used perhaps more often to refer to aspects of production rather than consumption by, for example, restricting access to products from non-sustainable sources or only stocking “fair trade” products. However, consumer research suggests that many people would quite like the food industry to assume the function of ensuring that they are “responsible” food consumers. This particularly relates to sustainability and production methods, but may extend to healthy diets.

The head of marketing and procurement for Sodexo UK, a large food service company, comments (Hanson 2012):

We develop recipes . . . to embed the principles of a healthy and balanced diet into all our dishes. This includes removing trans fats, reducing levels of salt, fat and sugar, and increasing fruit and vegetable content. . .

Ultimately, choice editing is not about imposing. . . A critical mass of committed food buyers and producers, who are able and prepared to make choices on behalf of consumers . . . will help to convert favourite foodie cravings into commitments and actions that support a more sustainable future.

Encouraging as this is, it is arguable that choice editing can only nibble at the margins of the problem of diet and health. Many food firms will not adopt it; and large areas of food consumption will be unaffected. This leads to the view that Governments should step in.

Policy Intervention

Although in principle choice editing could be accused of being in conflict with consumer autonomy, for the reasons listed above, “responsible” food marketing of this kind appears to attract almost universal public and political support. In contrast, Government policies which attempt to restrict consumer food choice are sometimes subject to sustained hostility.

Public policies which merely “encourage” consumers to adopt healthy diets – such as the British 5-a-day fruit and vegetable campaign – are usually welcomed. Even here, though, not everyone agrees. The British Minister of Education is reported (Mail Online 2012) as describing the British Food Standards Agency as having gone from:

a body that was responsible for governing the safety of food to one that became yet another meddling and nanny organisation that was telling us what we should eat and in what proportion.

There are of course more explicit ways for a policy to limit consumer food choice. A recent example was the announcement by New York Mayor Michael Bloomberg that he planned to prohibit the sale of sugary drinks in containers above a certain size, in restaurants, movie theaters, and street carts. The Center for Consumer Freedom echoed that of the British Minister of Education, with an advertisement in the New York Times depicting the Mayor as a Nanny under the caption:

New Yorkers need a Mayor, not a Nanny... What next? Limits on the width of a pizza slice, size of a hamburger or amount of cream cheese on your bagel.

The American Beverage Association called the plan “ridiculously unreasonable, unsound, and incongruous” ([Mail Online 2012](#)) and subsequently sued the City, challenging the ban.

On the eve of the implementation of the policy, a State Supreme Court judge ruled the ban as invalid, describing it as “arbitrary and capricious” ([CNBC 2013](#)).

“Arbitrary and capricious” is not too far from “unethical.” Can ethical principles and economic theory therefore help in deciding whether there are limits to the legitimacy of food policy methods which seek to improve diets?

First, policies to combat marketing techniques which include false or misleading messages over the health and nutritional properties of a food product are generally regarded as legitimate. Legislation on this in the European Union ([Davies 2013](#)) has recently become much more stringent, with health claims requiring prior approval from the European Food Safety Authority (EFSA) on the basis of scientific evidence submitted by the food manufacturer. (Previously, in the UK, it was up to local Food Standards Officers to challenge the wording of claims on foods already on the market.) Although consumer groups have welcomed this development, some food businesses regard the degree of evidence required by EFSA as too high. They argue that “qualified health claims” should be allowed. Claims are rejected if they rely simply on “good evidence of a relationship” or “the balance of evidence,” whereas food firms argue that the interests of consumers would be better served if the manufacturer was allowed to inform consumers of potential health benefits even when there was less certainty over the validity of the claim. In the USA, conditional claims that clearly state the level of uncertainty and the nature of the research behind the claim are permitted ([Food Ethics Council 2009](#)).

Second, there is an important contribution of economics to the debate – the concept of social costs (or benefits), sometimes known as “externalities.” Poor diet has an adverse impact on the

well-being of everyone, via the increased national costs of health care, not just the well-being of the obese, and policies to improve diets are often justified on these grounds, probably because of a reluctance to become involved in the debate over consumer choice. Economists have developed techniques for attempting to value the social cost of poor diets; it then becomes a matter of judgment within ethics as to whether the positive benefit under the principle of well-being overrides the impact on consumer autonomy under the application of ethical principles.

Third, as already mentioned in the context of choice editing, the case for altering patterns of food consumption in the interests of food consumers themselves is influenced by consumer awareness. The economic theory of utility would regard it as legitimate to attempt to alter diets if there was evidence that consumers were misinformed about the consequences to themselves of their consumption decisions. The problem arises when the concept of the “acceptability” of risks is explored. With respect to food consumption, people regard some food safety risks as “more acceptable” than others.

This problem is particularly prevalent when considering the health risks of food consumer autonomy. There appears to be an inverse relationship between the food safety risks which concern consumers and the aspects of food safety which scientific evidence implies should concern consumers. To illustrate this, the first Chairman of the British Food Standards Agency, John Krebs, provided estimates of deaths per year in the UK related to diet and food, listed in [Table 1](#).

Contrast that with the outcome of a consumer survey ([Table 2](#)) which asked “Which of these concern you about food safety?”

This of course does not resolve the question of the extent to which “lack of concern” reflects poor understanding of food-related health risks, but there is now a substantial body of evidence (e.g., [Miles et al. 2003](#); [Ritson and Kuznesov 2006](#)) that people find risks perceived of as technologically driven and uncontrollable as “less acceptable” than those perceived as “more natural” and subject to personal control.

Marketing, Food Policy, Diet, and Health, Table 1 Estimate of annual UK deaths related to food and diet

Risk	Number of deaths
Cardiovascular disease	73,000
Cancer	34,000
Food-borne illnesses	50
Food allergy	20
vCJD	15
Genetic modification, pesticides, growth hormones	0

Marketing, Food Policy, Diet, and Health, Table 2 Proportion of consumers expressing concern over food risks

Risk	Proportion expressing concern
Risk of chronic disease due to poor diet	25 %
Food poisoning	48 %
BSE “mad cow disease/CJD”	52 %
New food technology (e.g., genetic modification)	60 %
Chemicals in food (e.g., pesticide residues)	78 %

Source: Tables prepared from data cited in Ritson and Kuznesof (2006)

Thus, the application of ethical principles and economic theory justifies food policies aimed at altering patterns of food consumption on the grounds of the social cost of diet induced poor health; and also where there is evidence that consumers are not fully aware of the health implications of their diets, or are being misled by marketing messages, and would take different purchase decisions if better informed. However, the fact that consumers regard some food-related health risks as “more acceptable” than others raises a difficult ethical issue. The economic theory of utility assumes that the well-informed consumer is the best judge of his own utility.

Food Policy Mechanisms

Finally, are some methods of altering patterns of food consumption “more ethical” than others?

Here there is a useful distinction that economists make which may help, at least to clarify thinking on the subject. The distinction is between methods which alter utility functions (crudely, what people want to do) and methods which alter what people consume, without altering their utility functions.

Methods which alter utility functions are, primarily, “education” and “social marketing.” Education – making people better informed about the impact of their consumption decisions – is fine and passes the economics test above. With social marketing – the application of marketing techniques to achieve public interest objectives – we return to the issue of whether it “informs” or “persuades.” Is it ethical to persuade consumers to eat more healthily, even if their change in diet is for reasons other than knowing it is more healthy, if it is “unethical” for food firms to persuade people to choose unhealthy diets? In other words, it is perhaps not the marketing technique which is unethical, but the motive behind it. (The end justifies the means.)

There are a variety of ways in which a policy can alter diets without altering utility functions. The most prominent are price manipulation and restricted availability. In principle, a price policy aimed at improving diets could operate either by taxing unhealthy foods or by subsidizing healthy ones. The former is sometimes called a “fat tax,” which can conveniently refer either to the food being taxed or the problem being addressed by the policy. To many people, subsidizing healthy foods is much more acceptable – it is seen as not impacting on consumer choice. Yet taxpayers lose with subsidies and gain with taxes, and economists would argue that it is legitimate to raise the price of those food products which contribute to the social cost of health care caused by bad diets (externalities). This money could be used to finance health campaigns or to subsidize fruit and vegetables. A recent report from Sustain (2013) advocates a tax on sugary drinks primarily on the grounds that the money raised could be used to fund health awareness programs

There is another reason why taxing unhealthy foods can be defended; other Government policies can have a substantial impact upon the level

and balance of food prices. For example, for many years the Common Agricultural Policy (CAP) of the European Union, as a consequence of its measures aimed at supporting prices received by farmers, is estimated to have increased food prices in the UK on average by the equivalent of a 15 % tax (Ritson 1997b). More fundamentally, however, the price raising effect of the policy varied from product to product, pushing up most the consumer prices of dairy products and sugar – equivalent to a tax of 100 % or more, with little or no price raising effect on fruit and vegetables. Quite by accident, the CAP was a kind of “fat tax,” pitched at a level well in excess of any now suggested as a way of improving diets. It seems difficult to argue that it is ethical to push up food prices for low-income consumers in order to aid farming, but not to improve the well-being of consumers themselves.

Summary

- “Choice editing,” with the objective of improving consumer diets, can be justified as “ethical marketing.”
- Policy intervention is legitimate when it is used to combat misleading (or “unethical”) marketing with respect to health claims, though questions have been raised over the degree of evidence required before it is in the interest of consumers to inform them of a potential health benefit.
- The benefit to society as a whole of better diets, because of the externalities associated with the health consequences of poor diets, will normally allow the principle of well-being to override that of autonomy as a justification for policy intervention.
- Food policy intervention is justified where there is evidence that consumers are unaware of the degree to which there is a link between their diets and their health. This need not necessarily be restricted to policies which attempt to “educate” the public to take more informed decisions, but could include policies which simply have the effect of altering patterns of food consumption.

- The fact that consumers find some food-related health risks “more acceptable” than others raises a difficult ethical issue – to what extent has society a responsibility for “forcing” consumers to alter their diets in a way that society believes to be in their own interests?
- Finally, this entry leaves the reader with two further questions. Is there an ethical distinction between subsidizing good food and taxing bad food? And is there a distinction in food ethics between altering what people want to do – even if this involves “persuading them” – and altering what they do, without altering what they want to do?

Cross-References

- ▶ [Corporate Social Responsibility and Food](#)
- ▶ [Ethical Matrix and Agriculture](#)
- ▶ [Food and Health Policy](#)
- ▶ [Food Ethics and Policies](#)
- ▶ [Informed Food Choice](#)
- ▶ [Obesity and Consumer Choice](#)

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Meat: Ethical Considerations

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Synonyms

Omnivorism

Introduction

Meat eating has been the norm in most human societies. Historically, it has not had many defenders, but this is probably because few thought that it was in need of defense. In the contemporary philosophical literature, however, the pro-vegetarian arguments are usually taken to be quite strong, and omnivores have assumed the burden of proof. The purpose of this entry is to explain this shift by surveying the various frameworks that offer neutral or positive moral assessments of meat eating. After briefly tracing the evolution of these frameworks from the ancient to modern period, the entry outlines the three most prominent contemporary approaches. It closes by considering possibilities for future research.

Historical Perspective

Consider the perspective found at the beginning of the Hebrew Bible:

²⁶ Then God said, 'Let us make humankind in our image, according to our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the wild animals of the earth, and over every creeping thing that creeps upon the earth.' ²⁷ So God created humankind in his image, in the image of God he created them; male and female he created them.

²⁸ God blessed them, and God said to them, 'Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth' (Genesis 1:26–28, NRSV).

The salient points are (a) that all humans are categorically different from all animals and (b) that the world has a certain order. Moreover, although the text permits weaker readings, it does seem that humans' status as image bearers justifies – or at least explains – humans' having dominion and the authority to subdue.

The points above, however, do not lead to the view that meat eating is morally unproblematic; to reach that conclusion, there must be a claim about the purpose (or purposes) for which animals were created. And in what immediately follows, the text indicates that they are not for food:

²⁹ God said, 'See, I have given you every plant yielding seed that is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. ³⁰ And to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food.' And it was so.

So subduing and having dominion over animals does *not* include consuming them, and in the view of some later biblical authors, there are hints that the world will be restored to this vegetarian order (see, e.g., Isaiah 11:6–9). Nevertheless, it remains the case that the biblical tradition sanctions the consumption of meat: God says that all creatures are for Noah's use after the flood (Genesis 9:1–3), and when Christians have reflected on this issue, they have used it not only

to defend omnivorism but to put it forward as a good. For example, John Calvin (1509–1564), the French theologian and pastor, wrote these words:

For it is an insupportable tyranny, when God, the Creator of all things, has laid open to us the earth and the air, in order that we may thence take food as from his storehouse, for these to be shut up from us by mortal man, who is not able to create even a snail or a fly (1554/1847, pp. 291–292).

Moreover, Jesus probably ate lamb (see Luke 22:14ff. in the light of Exodus 12:3) and fish (Luke 24:41–43), and he encouraged others to do so (Matthew 15:34–37; John 21:5–14). In Acts, God tells the Apostle Peter to kill and eat animals in a vision (Acts 10:9–16); Paul insists that there is nothing wrong with eating meat sacrificed to idols (1 Corinthians 10:25–26); and the author of 1 Timothy contends that abstaining from certain foods – i.e., meat – is evidence of having fallen away from the faith (1 Timothy 4:1–5). In the background, of course, are commitments to there being a fundamental difference between humans and animals, a divinely ordained teleology, and some form of theological voluntarism. Between these three factors, it is not hard to understand why there was no felt need to defend meat eating.

God moves into the background in Aristotle's work (384–322 BCE), who maintained that humans are the *rational* animals; the “lower” animals, by contrast, lack this faculty (*Nichomachean Ethics* VI.2). The upshot of the difference is that man is ruled by reason, whereas animals are subject to “despotic” rule – i.e., they are governed by appetite rather than intellect. Aristotle goes on to claim that animals are better off if ruled by beings that *are* rational (*Politics* 1.V). The capacity hierarchy apparently justifies a corresponding paternalistic hierarchy, though it remains to be shown that animals ought to be killed for food. This issue is addressed by the second part of his view – i.e., his natural teleology:

... a bare livelihood, seems to be given by nature herself to all, both when they are first born, and when they are grown up. [...] So] we may infer that, after the birth of animals, plants exist for their sake,

and that the other animals exist for the sake of man, the tame for use and food, the wild, if not all at least the greater part of them, for food, and for the provision of clothing and various instruments. Now if nature makes nothing incomplete, and nothing in vain, the inference must be that she has made all animals for the sake of man (*Politics* 1.VIII).

So, since Aristotle thinks that the good for any being is found in actualizing its potential, he can conclude that the good for animals is found in their being used for our purposes.

This view faces two serious objections. The first is that even if Aristotle is right about there being a capacity hierarchy, it is not clear why this justifies a moral hierarchy based on species membership: it is very hard to identify a morally significant property (or even a plausible constellation of morally significant properties) had by *all* human beings – not just normal adults – that is not shared by at least some animals. The second is that, since Darwin, natural teleology has fallen on hard times. To be made respectable again, it will have to be naturalized. However, it seems very unlikely that it will be naturalized in a way that would provide the ethical implications that Aristotle needs. It is possible to view many of the historical discussions of meat eating as grappling – albeit implicitly – with one or the other of these problems.

Take, for example, a related view in the Greek Stoic Chrysippus (c. 279–206 BCE) (via Porphyry (234–c. 305) and with his help):

But, by Jupiter, the assertion of Chrysippus is considered by our opponents to be very probable, that the Gods made us for the sake of themselves, and for the sake of each other, and that they made animals for the sake of us; horses, indeed, in order that they might assist us in battle, dogs, that they might hunt with us, and leopards, bears, and lions, for the sake of exercising our fortitude. But the hog (for here the pleasantry of Chrysippus is most delightful) was not made for any other purpose than to be sacrificed; and God mingled soul, as if it were salt, with the flesh of this animal, that he might procure for us excellent food (Bk 3, §20; 1823, p. 114).

Chrysippus' approach is also teleological – hogs are literally *for* humans – but he reverts to the overtly theological position that Aristotle eschewed. Chrysippus does not explain why

hogs are fit for this purpose, and Porphyry – an advocate for vegetarianism – does not press him on this point. Instead, and in keeping with his earlier criticisms of Zeno of Citium (c. 334–262 BCE), Porphyry takes the lacuna to be an account of how slaughtering an animal could serve its interests. Charitably, he goes on to quote Carneades (214–c. 129 BCE.) – a member and eventual head of Plato’s Academy – who apparently maintained that “everything which is produced by nature, is benefitted when it obtains the end to which it is adapted, and for which it was generated” (Bk 3, §20). With Carneades’ theory in hand, Chrysippus can insist that hogs *are* benefitted by their slaughter, since that is the purpose for which they were made. Thus he offers Aristotle’s view with one major revision: there is no need to naturalize teleology, since it can be explained by way of divine intentions. However, Chrysippus doesn’t provide the resources to explain why the moral hierarchy tracks species membership; there is nothing like image bearing in his account. And – at least in the extant fragments – Chrysippus offers no contrast between humans and animals that can account for them.

In *Summa Contra Gentiles*, Saint Thomas Aquinas (1225–1274) – an influential Dominican priest, theologian, and philosopher – supplements Chrysippus’ teleological framework with the claim that animals have no intrinsic value:

...the very way in which the intellectual creature was made, according as it is master of its acts, demands providential care whereby this creature may provide for itself, on its own behalf; while the way in which other things were created, things which have no dominion over their acts, shows this fact, that they are cared for, not for their own sake, but as subordinated to others. That which is moved only by another being has the formal character of an instrument, but that which acts of itself has the essential character of a principal agent. Now, an instrument is not valued for its own sake, but as useful to a principal agent. Hence it must be that all the careful work that is devoted to instruments is actually done for the sake of the agent, as for an end, but what is done for the principal agent, either by himself or by another, is for his own sake, because he is the principal agent. Therefore, intellectual creatures are so controlled by God, as objects of care for their own sakes; while other

creatures are subordinated, as it were, to the rational creatures. [...] Through these considerations we refute the error of those who claim that it is a sin for man to kill brute animals. For animals are ordered to man’s use in the natural course of things, according to divine providence. Consequently, man uses them without any injustice, either by killing them or by employing them in any other way (Bk III, Pt II, Chap. CXII, § I and XII).

Aquinas’ account removes the pressure to explain why the moral hierarchy tracks species membership; likewise, it relieves the need to explain why God fashioned them for human use. If animals have only extrinsic worth, then the arbitrariness of God’s decision is not obviously problematic: if something had to serve human ends, there is no reason why animals shouldn’t.

Aquinas doesn’t offer much of an argument for the view that animals have no intrinsic value, but the demand for one probably would not have seemed reasonable. A tacit commitment to the no-intrinsic-value view appears to be present even among some of the ancient vegetarians, a number of whom gave up meat based on their belief in reincarnation. Take, for example, a passage from *The Lives and Opinions of Eminent Philosophers*, where Diogenes Laertius (third century) quotes Xenophanes (sixth to fifth century BCE) on Pythagoras (c. 570–c. 490 BCE):

They say that once as passing by he saw
A dog severely beaten, he did pity him,
And spoke as follows to the man who beat him:
“Stop now, and beat him not; since in his body,
Abides the soul of a dear friend of mine,
Whose voice I recognized as he was crying”
(8.20).

At least in this passage, there is no suggestion that the dog would deserve moral consideration if it *weren’t* occupied by Pythagoras’ “dear friend.” Likewise, in fragment 137, Empedocles (c. 495–435 BCE) criticizes the slaughter of animals for food:

Each slits the throat and in his halls prepares
A horrible repast. Thus too the son
Seizes the father, children the mother seize,
And reave of life and eath [*sic*] their own dear
flesh (1908, p. 62).

Here too, the challenge to meat eating is premised on these animals once having been people (indeed, the *relatives* of the meat eaters) – and *not* on anything about them as, e.g., sentient beings in virtue of which eating them constitutes “a horrible repast.” The assumption that animals have no intrinsic value appears to be just beneath the surface. Moreover, this is not an assumption unique to the ancient and medieval worlds: it’s also present in the work of René Descartes (1596–1650) and Immanuel Kant (1724–1804). Descartes was convinced of this because he maintained that animals are mere automata; he insisted that “[his] opinion is not so much cruel to animals as indulgent to human beings [...] since it absolves them from the suspicion of crime when they eat or kill animals” (1649/1991, p. 366). Kant, by contrast, did not deny that animals have mental lives, but he did believe (a) that their mental lives are impoverished relative to humans’ and (b) that this difference explains why animals have only extrinsic worth:

The fact that the human being can have the representation “I” raises him infinitely above all the other beings on earth. By this he is a person [...] that is, a being altogether different in rank and dignity from things, such as irrational animals, with which one may deal and dispose at one’s discretion (1798/2006, p. 15).

(The above passage permits a reading on which animals have so little value, relative to that had by humans, that it is permissible to treat them as though they had no intrinsic value at all. However, it’s clear from other portions of Kant’s corpus that only rational beings have intrinsic value, and – at least among earth’s inhabitants – he takes rationality to be a uniquely human characteristic).

The Contemporary Conversation

In the contemporary literature on animal ethics, it is difficult to find philosophers who maintain either (a) that each and every human has some morally significant property that distinguishes her from any animal or (b) that in the objective order of things, animals exist for humans.

Moreover, contemporary philosophers are much more likely to the possession of properties like *being able to feel pain* or *having desires* to be sufficient for having some sort of moral standing. So, meat eaters end up on the defensive (see, e.g., Nozick (1983), Cohen (2004), and Williams (2006)).

There are three general approaches among those who make a case for the rightness of meat eating. Those taking the first maintain that meat eating is either compatible with or required by the moral theories that are usually used to defend vegetarianism. Those opting for the second offer contractalist defenses of speciesism. Those electing for the third argue from general considerations relating to the good of the environment as a whole.

Steven Davis (2003) represents the first approach. He argues that given the “least harm” principle that features in certain arguments for vegetarianism (cf. Frey (1983)), the best diet is one that includes the flesh of large herbivores. The problem with drawing the pro-vegetarian conclusion, he contends, is that it ignores the animal lives lost as a result of modern agricultural technology, e.g., field mice being crushed by the combines that harvest grain. These casualties could be reduced by allowing large ruminants to forage in and fertilize the fields, minimizing the number of times that machinery had to be deployed. Based on his calculations, this would cut the total loss of animal life by one third. Matheny (2003) raises some hard questions about the numbers in Davis’ argument, but the calculation-oriented strategy may still have merit. Consider the hordes of animals that would not exist were it not for the animal husbandry that supports the omnivorous diet. Frederick Ferré (1986) argues that if those practices could be altered so that animals lived subjectively pleasant lives (to include painless deaths), then the sheer numbers will undermine any straightforward utilitarian argument against killing them for food. Indeed, once these changes have been made, there may even be some obligation to consume them.

R. G. Frey (1983) takes a line like Ferré’s, although he seems to think that meat eating is

morally permissible before any reforms have taken place. From a utilitarian perspective, he claims, there is an obligation to abstain from meat eating only if so doing spares some animals from the suffering they would otherwise experience. But the existence of moral vegetarians makes no discernible difference to the practices of the meat industry: the sheer scale of modern factory farming makes it insensitive to the behavior of what is, ultimately, a very small number of consumers. So, there is no obligation to abstain from meat eating. Moreover, he argues that even utilitarians are free to say that, while animal lives are valuable, they are not as valuable as human lives, and hence it is possible for significant human interests to outweigh significant costs to animals. (He makes this last point in a defense of vivisection, but it clearly applies to omnivorism as well. Jack Weir (1991) uses roughly this idea to defend meat eating for those persons for whom a vegetarian diet would pose health risks.)

Finally, feminists like Kathryn Paxton George (1990, 2000) argue that the condemnation of speciesism involves an implicit commitment to sexism. She contends that pro-vegetarian arguments make assumptions about human dietary needs that are accurate only for adult males. Moreover, they assume – falsely – that people have equal access to the means to secure healthy vegetarian meals. She insists, therefore, that nothing more than “semivegetarianism” is morally required of women, children, the elderly, and those disadvantaged economically or by poor health.

The second group of philosophers is composed of contractualists. Roger Scruton (2006), for example, says that animals have no moral standing because they cannot participate in “the ongoing dialogue which binds the moral community” (59). To participate in this dialogue, a being needs to be – *inter alia* – self-conscious, free, rational, able to exhibit sympathy, able to accept obligations, and able to insist on their fulfillment (25–32). Scruton grants that this excludes those humans at the margins, but he replies that “it is part of human virtue to acknowledge human life as sacrosanct, to recoil from treating other humans, however hopeless their life may seem to us, as merely disposable” (43). Peter

Carruthers (1992, 2011) takes a similar contractualist line, but he responds to the “humans at the margins” problem differently. He points out that, given the purpose of the social contract, rational agents will not select rules that are not psychologically supportable, since that would undermine the ability of the contract to provide a safe, stable environment. And given people’s strong attachments to infants, the senile elderly, and the severely mentally handicapped, they will not choose rules that do not presuppose moral standing for such individuals.

Scruton and Carruthers agree that contractors ought to give animals some moral consideration; what they deny is that contractors have reason to grant animals full moral standing. For Scruton, this is because animal death is involved in the realization of certain human goods – hunting, cooking, feasting, etc. (cf. Scruton (2004)). For Carruthers, this is because almost all animals do not have phenomenally consciousness mental states – a conclusion that follows from a number of higher-order theories of phenomenal consciousness; see Carruthers (2005) for details – and hence do not feel pain.

On the contemporary accounts considered thus far, a being’s moral standing depends entirely on its intrinsic (nonrelational) properties. (For utilitarians, that value depends on sentience; for contractualists, it depends on a combination of sentience and various sophisticated cognitive capacities.) The final strategy for defending omnivorism abandons this assumption, opting instead for an extrinsic (relational) theory of moral standing. Take, for example, J. Baird Callicott’s (1989) “biosocial” view, which updates Aldo Leopold’s (1949) land ethic. On this view:

...the good of the community as a whole, serves as a standard for the assessment of the relative value and relative ordering of its constitutive parts and therefore provides a means of adjudicating the often mutually contradictory demands of the parts considered separately for equal consideration (25).

Here, the “community as a whole” refers to the entire ecosystem. On this approach, everything in the ecosystem has moral standing, but a thing’s having moral standing does not entail that it

should not be killed. Hence, there is nothing inherently wrong with killing animals, since it is sometimes in the best interest of the environment to do so (e.g., if the deer population is out of control, then culling the herd might be warranted). The biosocial view says, “not vegetables instead of animals, but organically as opposed to mechanico-chemically produced food” (36). (Pollan (2006) seems to have a similar position in mind when he discusses the role of animals in sustainable, small-scale agriculture. For an alternative theory of moral standing that combines intrinsic and extrinsic criteria, see Warren (1997).)

Future Work

Meat eating needs little defense, if any, given that (a) all humans are categorically different from all animals and (b) the world has an objective order. However, since neither assumption enjoys the philosophical currency it once did, the proponents of meat eating face an uphill battle. Their best bet is probably some combination of the contractualist approach and the environmental perspective. The contractualist approach offers a principled way of denying animals’ moral standing, but it leaves open questions about the extent of the moral consideration that it is appropriate to extend to them. Callicott’s biosocial view might provide the resources to resolve this problem. After all, science is only beginning to map the complicated webs of ecological dependencies that the planet supports. Should it turn out that the environment will fare best if people have a diet that includes the flesh of humanely and sustainably raised animals, then people may have a self-interested reason to be omnivores. And that, of course, is precisely the sort of reason to which contractors would attend.

Summary

This entry presents historical and contemporary perspectives on the ethics of meat eating. Many of the historical voices suppose (a) that all humans are categorically different from all animals and/or (b) that the world has an objective order. However,

most contemporary philosophers do not make either assumption, so those who defend meat eating tend to take one of three approaches. Those taking the first maintain that omnivorism is either compatible with or required by the moral theories that are usually used to defend vegetarianism. Those opting for the second offer contractualist defenses of speciesism. Those electing for the third give an environmental perspective.

Cross-References

- ▶ [Agricultural Ethics](#)
- ▶ [Animal Welfare: A Critical Examination of the Concept](#)
- ▶ [Eating, Feeding and the Human Life Cycle](#)
- ▶ [Hunting](#)
- ▶ [Meat: Ethical Considerations](#)
- ▶ [Vegetarianism](#)

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Medicalization of Eating and Feeding

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Synonyms

Medical epistemology; Medical power; Normalization; Pathologization

Introduction

A variety of developments over the past century have produced the conditions in which eating and feeding are transformed from practices embedded in social or cultural relations into explicit medical practices. The rise of medical science, expansion of the pharmaceutical and food industries, escalating concern over diet-related diseases and conditions, and growing anxiety over infant and childhood development have contributed to a process of medicalization.

Medicalization is a sociological concept that analyzes the expansion of medical terminology, interventions, or practitioners into areas of the life that were previously considered outside the medical sphere. For instance, undereating has previously been defined using theological language, as an act of fasting demonstrating a saintly character. Such practices are now understood through medical terms of anorexia nervosa, malnutrition, or general diagnoses such as “eating disorders not otherwise specified.” Individuals engaged in under- or overeating practices are increasingly defined by medical concepts (anorexia nervosa and obesity) and treated in medical spaces (hospitals, clinics, or rehabilitation centers) through medical interventions (pharmaceuticals, surgery, psychotherapy, or dietary regimens). Likewise, infant feeding (breast or formula) is understood as a practice that requires monitoring and instruction from medical practitioners. Further, eating in general is progressively invested with medical significance. Foods and diets are touted as possessing a therapeutic- or health-enhancing capacity that indicates an individual's or population's present and future health.

Due to the high regard for, and influence of, medical science in the West, medicalization studies primarily focus on Western contexts. Medicalization does have an impact on non-Western societies and the developing world; however, its influence emanates from Western biomedicine, industries, and policies. There is important work to be done in examining the process of medicalization in non-Western contexts; however, this entry is limited to the Western context (Hunt 1999).

To analyze the medicalization of eating and feeding, it is important to first sketch the theoretical and historical background of medicalization as a sociological concept. The relationship between eating and medicine is extensive. In order to focus the discussion, three examples are used – undereating, overeating, and infant feeding. This background focuses the analysis of the forces driving the medicalization of eating and feeding. Finally, in elaborating the influences and consequences of the medicalization of eating and feeding, some of the central ethical implications are identified and discussed.

Background

The concept of medicalization developed out of the anti-psychiatry critique in the 1960s. Thomas Szasz's *The Myth of Mental Illness* (2010), originally published in 1961, argues that psychiatry obscures the social with the psychological, transforming social behaviors and problems into symptoms of diseases that require medical intervention. According to Szasz, mental illnesses such as schizophrenia or attention deficit hyperactivity disorder are medical creations that mask the social problems individuals experience and justify coercive medical treatment. The work of Michel Foucault, Ivan Illich, Irving Zola, and Peter Conrad has been influential in advancing the concept of medicalization.

Philosophical debates over medical epistemology (theories of knowledge) play an important role in critical and ethical analysis of medicine (Stempsey 2006; Schwab 2012). Medicalization is associated with social constructionist theories of knowledge (Conrad 2007). Rather than contending the existence of a biological or pathological reality, medicalization studies argue that complex yet contingent social and cultural forces determine certain medical knowledge, categories, and definitions. Importantly, the social constructionist theory of knowledge does not argue that the phenomena described by medical categories are mere fictions, but that the medical categories are artificial constructs that misrepresent social phenomena as biological or psychological

pathologies. This is evident in the example of undereating and anorexia nervosa.

Undereating and Anorexia Nervosa

Anorexia nervosa is an important case of the medicalization of eating and also demonstrates that the social constructionist approach does not minimize or trivialize the phenomena that are medicalized. Critics of the medicalization of anorexia do not discount the health implications of undereating, extreme weight loss, or food refusal (Bordo 2003). However, they argue that reducing the reality of anorexia to the biology or psychology of the individual excludes the influence of social and cultural norms of the body, beauty, and femininity. Rather than isolating anorexia and undereating as medical phenomena abstracted from society, critics argue that anorexia and undereating need to be understood in the sociocultural context in which they arise.

The relationship between hysteria and anorexia is helpful in elaborating the social constructionist account of medicalization. In the nineteenth century, hysteria was considered a meaningful medical diagnosis for women, demonstrated by an array of symptoms such as nervousness, increased or decreased sexual desire, food refusal, disobedience, or sleeplessness. Medical practitioners treated women who exhibited these symptoms through a variety of methods supported by highly esteemed research and evidence. However, by the twentieth century, hysteria was no longer recognized as a legitimate medical diagnosis. Some of the symptoms came to be regarded as the result of coercive social norms of femininity, while others were reframed as evidence for other conditions such as schizophrenia and anorexia (Brumberg 2000).

Establishing a psychological and/or biological cause for undereating and anorexia justifies medical interventions into the practice of eating. Through cognitive behavior therapy and medical nutrition therapy, medical professionals attempt to intervene in the psychological factors affecting eating practices. Using strategies such as food diaries and meal plans, medical professionals

seek to control eating behavior in accordance with medically determined norms. In life-threatening situations, techniques such as forced or intravenous feeding can be employed. The implications of these interventions and the transformation of eating from a social and cultural practice into a medical act are discussed further below.

Overeating and Obesity

Since the middle of the twentieth century, large body mass has been viewed as medical problem and defined through medical terms such as obese or adipose. Overeating is regarded as the primary cause of large body mass and therefore targeted by medicine. Importantly, medicalization is not an absolute process. Medical language and practices do not completely exclude moral, theological, or legal perspectives. Moral descriptors such as gluttony and weak-will remain entangled with medical conceptions; however, these terms are increasingly recast through medical language, such as “hyperalimentation,” “binge eating disorder,” or “night eating syndrome.”

The medicalization of eating in the context of obesity relies on a mechanistic conception of physiology. Energy intake (food) needs to balance with energy expenditure (exercise). Too much eating with too little exercise creates an energy surplus that leads to an increase in body mass. Obesity is commonly determined by the body mass index (BMI), which divides an individual’s body mass by the square of his or her height. A BMI greater than 30 kg/m^2 is defined as obese. Not considered a disease itself, medical professionals regard obesity a risk factor for diseases such as diabetes, heart disease, and types of cancer (Gard and Wright 2005). While there is a focus on increasing exercise, altering eating practices is regarded as the most obvious way to treat obesity. By creating a causal chain from eating to obesity to disease, medicine seeks to control eating practices as a means to control disease.

A number of medical interventions have been developed to control eating practices. Surgical

interventions include jaw wiring (resulting in a liquid diet), intestinal bypass surgery (reducing the absorption of calories), gastric bypass surgery (reducing the size of the stomach and the volume of food it can hold), and gastric banding (implantation of a medical device to reduce the size of the stomach). These procedures enable medical control over the form, absorption, volume, and frequency of eating (Sobal 1995). Each procedure has a range of significant complications, such as malnutrition, anastomotic leakage, gastric dumping syndrome, infections, and incisional hernia. In addition to surgical interventions, pharmaceutical solutions have been sought to alter eating behaviors by producing the feeling of satiety and the suppression of appetite.

The use of direct surgical or pharmaceutical interventions is increasing; however, the most common treatment to change an individual’s eating practices, and thereby reduce body fat, is through dieting. Dieting ordinarily occurs away from medical professionals and outside of medical spaces (clinic or hospital), yet they are imbued with medical significance and often supported by medical professionals. The increase of the medically prescribed or validated diet for obese and nonobese individuals suggests a general medicalization of eating (Sobal 1995). Through meal planners, food diaries, or commercial weight loss programs that offer meals created by nutritionists, eating is reframed as a medical practice that either fortifies health or increases the risk of obesity and disease.

The validity of the energy intake/expenditure conception is disputed from a variety of perspectives (Gard and Wright 2005). Some critics accept that obesity and overeating are a problem but argue that it is a social problem with causes located beyond an individual’s eating practices. These critics focus on social and environmental factors, such as urban planning and the increased availability of highly processed foods at the expense of fresh foods. At the other end of the spectrum, critics argue that the medical significance of body mass and overeating is exaggerated. They argue that individuals process and use energy at different rates and that larger body mass

is not an indicator of overeating or disease but human diversity (Rothblum and Solovay 2009; Bacon 2010).

Infant Feeding

Infant feeding (formula, breast, or bottle-fed breast milk) has also been brought under the guidance of medical knowledge and practitioners. The vulnerability of infants and perceived long-term health impacts of infant feeding produce impassioned debate over the best feeding practice. The medicalization of infant feeding occurred with the development of pediatrics as a medical speciality and an emphasis on scientific motherhood from the 1840s onwards (Apple 1987). Prior to this, infant feeding was largely within the domain of mothers and midwives. Under these circumstances, breastfeeding was the norm with rudimentary and unreliable substitutes used under particular circumstances.

During the 1840s, the infant food industry began producing infant formula and advertising their products in medical journals and women's magazines as a healthier and more convenient alternative to breastfeeding. Recognizing the commercial and medical significance of formula, medical researchers began working alongside and in competition with the commercial sector to enhance formulas. This period also saw a shift in childbirth from the home to the hospital. With childbirth occurring in hospitals, medical practitioners and pediatricians assumed control over infant health and encouraged mothers to use formula for its healthfulness and scientific basis. Mothers choosing to breastfeed were advised to supplement breastfeeding with formula to ensure the infant's health (Apple 1987).

It is important to note that formula is not the medicalization of feeding, with breastfeeding is as a nonmedical practice. The emphasis on the medical benefits of formula implied the medical insufficiency of breastfeeding. The reemphasis on breastfeeding that occurred during the late 1970s mobilized medical evidence to counter arguments that breast milk is inferior to formula.

Extensive lists of health benefits of breastfeeding were published in magazines, medical journals, and popular books, claiming that breastfeeding protects against diabetes, asthma, and obesity and that it increases an infant's IQ (Wolf 2011). Further, research into the potential for diseases, toxins, and alcohol to transfer to an infant through breast milk did not dampen enthusiasm for breastfeeding but has led to medical professionals monitoring mothers to ensure that an appropriate diet and necessary care are used. Controversies over both formula and breastfeeding are part of, and contribute to, the process of medicalization of infant feeding (Van Esterik 1989).

Forces of Medicalization

Early critiques of medicine, notably Ivan Illich's *Medical Nemesis* (1975), argue that medical institutions and practitioners drive the process of medicalization. Illich argued that the imperialist expansion of medicine to all areas of life – from birth to death – allows practitioners to control, dominate, and direct the lives of individuals. This thesis has provoked a counteraccusation that critics of medicalization are given to conspiracy theories and “doctor bashing” (Conrad 2007). The extent to which nineteenth- and early twentieth-century medicine sought to control life is debatable; however, it is clear from recent examples that medicalization has been driven by forces that do not fall exclusively within the domain of medicine. The forces that have promoted the medicalization of eating and feeding include, but are not limited to, professional medical organizations, advocacy groups, private industry, government policy, and the media.

National and international medical organizations have significantly influenced the process of medicalization. For example, the American Psychiatric Association and the World Health Organization produce diagnostic manuals that shape the definition of disease and influence policymakers, clinicians, researchers, insurance companies, and pharmaceutical companies. Conditions such as hysteria, homosexuality, masturbation, obesity, erectile dysfunction, and

attention deficit hyperactivity disorder have been included or removed from such manuals over the past fifty years, arguably due to nonmedical influences (Conrad 2007).

Consumer and patient advocacy groups are increasingly influential forces on medical research and the medicalization of eating and feeding. Advocacy groups use public awareness campaigns, lobby policy makers, and provide research funding to increase the profile of an existing condition or to promote a condition or practice not yet recognized as medical. For example, the La Leche League International and the National Alliance of Breastfeeding Advocacy raise awareness about the health benefits of breastfeeding and campaign for policies to encourage breastfeeding (Wolf 2011). A variety of other advocacy groups foster public understanding for diet- and eating-related conditions, such as the National Association of Anorexia Nervosa and Associated Disorders, the Obesity Action Coalition, or the National Foundation for Celiac Awareness.

Advocacy groups are also influential in the de-medicalization process. In response to obesity, the National Association to Advance Fat Acceptance and the Fat Underground critique the medicalization of overeating and advocate for the acceptance of body diversity (Rothblum and Solovay 2009). These groups draw on the exemplars of the Gay Liberation Front and the Gay Activist Alliance, who were instrumental in the removal of homosexuality from the 1974 edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*.

Industries also play a significant role in the medicalization of eating and feeding. The food, weight loss, pharmaceutical, and insurance industries all play distinct yet overlapping roles. For instance, many pharmaceutical companies own the medical devices used in gastric banding. It is profitable for these companies, as well as the surgeons and clinics, if more surgeries are performed. However, health insurance companies often limit coverage to surgeries for medical rather than cosmetic need. Therefore, the medicalization of obesity, and the control of eating

practices as a treatment, is promoted by a network of actors. These include advocacy groups (Obesity Action Coalition), pharmaceutical industry representatives (Johnson & Johnson), and medical organizations (American Society of Bariatric Surgery; Conrad 2007). The food industry is also an important force in the medicalization of eating. While food companies are careful not to market products as pharmaceuticals, there is an increasing trend to market products with health claims, blurring the distinction between food and medicine. This process transforms the act of eating from a pleasurable or social act into a medical and health-benefiting act.

Government awareness and public health campaigns drive shifts in the way conditions and practices understood. For example, the US Department of Health and Human Services' National Breastfeeding Campaign from 2004 or the many campaigns around the Western world targeting overeating and obesity have promoted medical conceptions of eating and feeding practices. These campaigns attempt to alter public perception of eating and feeding and raise awareness of the medical relevance of such practices.

The media are enormously influential forces yet difficult to quantify. From reports on food safety scares to the importance of superfood, the media (in their increasingly varied forms) shapes public understanding of the medical significance of eating practices (Lupton 1996). The media helps to popularize nutritional research as well as introduce the public to terms such as omega-3 or folic acid. The media are used by, and amplify the impact of, the forces described above.

Ethics and Consequences of Medicalization

The analysis of medicalization can be a purely descriptive task. A study examining the medicalization process may attempt to describe shifts in the way a condition or practice is understood and refrain from valuing one understanding over another. However, the majority of research

into the process of medicalization adopts a critical stance. The transformation of social or cultural phenomena into medical conditions is often considered to have harmful consequences for individuals and society. However, some scholars suggest that medicalization produces both positive and negative consequences (Purdy 2001; Parens 2011). Considering the potential for medicalization to produce mixed consequences, philosophical and bioethical analysis of the process is needed (Sadler et al. 2009). The examples above demonstrate a number of consequences that require ethical consideration. Consequences vary between conditions, practices, and the sociocultural situation in which they occur; yet a number of common consequences can be isolated.

First, the lives and practices of women are disproportionately medicalized (Bordo 2003; Conrad 2007). Women are burdened with the responsibility to ensure their own eating practices accord with medical direction, but they are also positioned through the forces of medicalization as responsible for the eating and feeding practices of infants, children, and partners. While medical authorities target certain eating practices of men, particularly in relation to obesity, male overeating is often regarded as an indicator of masculinity.

Second, the process of medicalization obscures sociocultural contingencies. In treating undereating and anorexia as a medical condition, the analytic lens is focused on the biological and psychological. This focus excludes the influence of social and cultural norms on eating practices and perception of the body (Bordo 2003). Ironically, failure to acknowledge the influence of norms of femininity and the body has consequences for health, as the foundational causes are not addressed. The failure to critique social and cultural norms also has implications for the just and fair ordering of society.

Third, in framing problems such as undereating and anorexia as a pathological condition of the individual, medicalization has an individualizing effect. Instead of addressing harmful social norms, political discrimination, or environmental factors and critiquing those that promote them, medicalization reduces the

cause of a particular phenomenon to a blameless and morally neutral pathology. Positioning the individual as sick can be beneficial as it reduces individual responsibility and stigma, particularly when an individual is suffering from a biological pathology. However, if the “disease” is social, or entangled with the social, rather than biological or psychology, then focusing on the individual also removes responsibility from societal and political influences.

Fourth, medicalization can remove stigma and limit individual responsibility for a problem; however, it can also reinforce and amplify individual responsibility and choice. Rising concern over the ramifications of the perceived “obesity epidemic” has led to eating practices and the bodies of people defined as obese to be characterized as irresponsible (Gard and Wright 2005). The amplification of individual responsibility and choice is also evident in the medicalization of infant feeding. Mothers’ feeding decisions are positioned as evidence of responsibility (or irresponsibility) and determiners of the long-term health of the infant (Wolf 2011). In these instances, medicalization burdens individuals with the responsibility for outcomes that are not necessarily within the individual’s control or choice. This scenario raises deep philosophical questions of moral responsibility for actions partly determined by uncertain or uncontrollable factors (Nagel 1991).

Fifth, medicalization enables medical control of aspects of life that do not require control. The fat acceptance movement argues that bodies medically defined as obese are instances of human diversity, like height and eye color. Further, they contend that people with a larger body mass do not necessarily eat more than people considered to have a normal body mass (Rothblum and Solovay 2009). From this perspective, medical control and surveillance of eating as it relates to body mass are unnecessary and harmful, especially when irreversible surgical interventions are employed.

Sixth, increased medical surveillance over daily life is a substantial consequence of medicalization. Examples can be home visits from dietitians and nutritionists to ensure medically

appropriate meals are prepared or the use of nurses to monitor infant development and instruct mothers on how to care for their child in accordance with best medical knowledge (Apple 1987). The provision of medical assistance is an important part of a just society. However, if assistance is provided for nonmedical conditions, the medicalization of these conditions can reduce individual autonomy and create an unnecessary dependence on medical authority.

Finally, in addition to the effect on specific practices and conditions, the medicalization of eating as it relates to dieting and health promotion can transform eating and feeding from a social and cultural practice into medical therapy (if the individual is ill) or enhancement (if the individual is well). This shift disrupts and transforms relational and communal activities, such as the meal and food preparation, into medical acts. Further, in magnifying the medical effect of eating practices on the future health of an individual or infant, the medicalization process has the potential to produce anxiety and unease without the necessary evidence to support claims about the future effect of eating practices on health.

Summary

The medicalization of eating and feeding is a process through which eating and feeding practices are transformed from social and cultural phenomenon to medical acts. The process of medicalization occurs through political, social, and medical contingencies that shape human behavior and interpret certain practices or conditions as causes or symptoms of disease. The examples of undereating, overeating, and infant feeding demonstrate the complex web of influences involved in the medicalization process. A number of ethical concerns result from this process, including the reduction of culturally significant practices to medical ends, gender inequality, masking social injustice, obscuring social and environmental determinants of health and disease, burdening individuals with responsibility for conditions beyond their control, and increased medical surveillance.

Cross-References

- ▶ [Ethical Assessment of Dieting, Weight Loss, and Weight Cycling](#)
- ▶ [Food Addiction](#)
- ▶ [Food-Body Relationship](#)
- ▶ [Functional Foods](#)
- ▶ [Obesity and Responsibility](#)

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Metaphysics of Natural Food

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Synonyms

Compound foods; Organic foods; Philosophy of nature; Whole foods

Introduction

The adjective “natural” is often employed to characterize a food or beverage, and consumers tend to associate a positive value to it (Siipi 2013). The understanding of the adjective, however, varies across countries, and, in some circumstances (e.g., in the United States), “natural” is considered vague to the point that it cannot be defined and its usage cannot be strictly regulated. The *Codex Alimentarius* – a chief collection of internationally significant standards, practices, and regulations pertaining to food, which is maintained by the FAO (Food and Agriculture Organization) – does not acknowledge the term “natural” as significant to characterize a product; it contains, instead, a standard for organic foods. At any rate, as a first approximation we may define the adjective “natural,” when used in connection to food labels, as “produced or existing in

nature.” That which is natural, that is, is seen in contrast with that which is artificial, where the definition of “artificial” is “made by human work.” When the human work in question is a chemical synthesis, then the product is said to be “synthetic.” Synthetic products are made from parts or elements that do not occur in nature or, at the very least, from parts or elements that do not occur independently in nature. A material formed by chemical synthesis has a characteristic chemical structure that was, at some point, invented within a specialized laboratory; that is, the parts or elements of the material are combined to form a whole whose chemical structure does not occur spontaneously.

“Natural” Foods

Two sorts of foods can be bestowed the “natural” label: *whole* and *compound* natural foods (cfr. also Bozicevic 1987). Whole foods are those that can exist also spontaneously – that is, without human intervention – such as honey, milk, apples, or blueberries. Though by now we have well-developed techniques for the production of some of these foods, the production does not crucially alter the identity of the food. The current British labeling system for natural foods, which is inspired by this twofold distinction, can be useful to illustrate it a bit further. A whole food that is natural is a food that is natural without qualification. This is when a food has not been subject to any modification during its production and packaging, other than those procedures that would make it suitable for human consumption. For instance, a natural dairy product is a food manufactured from milk alone, with the possible aid of traditional cultured bacteria that are necessary for the fermentation process. A natural milk yogurt, under this understanding of “natural,” is a milk yogurt obtained solely from milk and *Lactobacillus bulgaricus* and *Streptococcus thermophilus*; no additives, such as preservatives, flavorings, or colors are allowed.

Between whole and compound foods, there are some ingredients whose naturalness

needs to be assessed on separate grounds. Belong to this list of ingredients additives and flavorings. Thus, a natural additive is one deriving from a natural whole food, or from a natural organism, by a traditional process (e.g., sugar extracted from sugar cane) or by a process that does not alter its naturally occurring chemical structure.

The second sort of natural food is compound foods made from natural ingredients. These foods differ from whole foods in that, without human intervention, they would not exist on their own. An apple pie, a portion of spaghetti with pesto, and a salad of red beets and walnuts are examples of this second sort of foods. Compound foods derive their naturalness from their ingredients. Compound foods, that is, are “natural” when all of their ingredients are natural. Thus, a natural bread would be a bread whose ingredients are all either whole natural foods or natural flavorings and additives. While “artificial” products require human intervention, some artificial foods are made from natural ingredients and are hence regarded as natural. “Natural,” when applied to foods – or, at least, to compound foods – does not stand for an entity that occurs spontaneously in nature. On the other hand, “synthetic” products not only require human intervention, but they must be arrived at by means of chemical synthesis performed by humans.

An alternative labeling system has been in use in Israel. In this case, the naturalness of a product is defined by means of a list of 33 processes. The processes identify the only allowed manners of modifying a whole natural food. The processes are all physical treatments, such as freezing, drying, cleaning, and blending; none of the allowed processes are chemical modifications.

Some countries have remained skeptical with respect to the meaningfulness of the adjective “natural,” when used to describe a food. In the United States, the Food and Drug Administration (FDA) agency discourages producers from using it. The agency attempted to define natural foods in 1991 but gave up in 1993, noticing that the term “natural” was too vague and indefinite. A similar attitude is held by the United States

Department of Agriculture (USDA), which has standards to define organic produce, but no standard for natural produce. Of course, both the FDA and the USDA disapprove of, and can take action against, claims that falsely describe a product, including claims that falsely portray a food as natural. But without some standards for naturalness, it is difficult to hold producers accountable for misleading consumers. A notable example in the United States is chicken meat labeled as “all natural” even when it has been injected with a saline solution that increases its weight up to 25%. Consumers and institutions, such as the Center for Science in the Public Interest, have objected to this use of the adjective “natural,” without significant governmental responses.

Finally, “natural” can also be employed in complex expressions, such as “natural goodness,” “nature’s way,” or “naturally better;” it may also be substituted or implicitly implied by terms such as “real,” “genuine,” or “pure.” Most legislation dissuade or prevent the usage of such expressions and terms, which can easily misguide a consumer because of their ambiguity. On the other side of the spectrum, the use of “natural” to describe some products – mostly fresh products – is subject to no specific labeling restrictions. When it comes to such products, the consumer is left on her own to determine the naturalness of the food.

Natural Misunderstandings

The adjective “natural” can have several misleading implications. Four of them are considered here (cfr. Siipi 2013 for a further discussion). The first feature is *nutritional suitability or superiority*. Natural foods are not necessarily nutritionally suitable, or more suitable than their non-natural counterparts, however. Some natural foods, such as sugar and lard, need be used in moderation and may not be suitable for someone’s diet. Also, synthetic foods, such as vitamins and amino acids, may be as nutritious as their natural counterparts.

Secondly, “natural” may imply some *health claim* (cfr. Siipi 2013). While it is the case that, in

some states, the adjective indicates that the food has not been substantially altered or processed, this is not sufficient to establish a general health claim. For instance, it may be believed that “natural” equals “nontoxic,” but this is not always the case. Depending on the soil or the specific characteristic of the product, a food may be toxic even when natural. Also, some natural whole foods – such as sugar and lard – and some natural compound foods – such as lasagna or apple pie – may be unhealthy, if eaten without moderation.

Thirdly, “natural” may suggest the *lack of human influence*. However, this is not the case for all natural compound foods. Moreover, in the case of natural whole foods that are farmed, the product is obviously the result of human effort.

Finally, “natural” may suggest *authenticity* (See entry on “► [Authenticity in Food](#)”) or *familiarity*. Not all natural foods, however, fit these adjectives. Consider, for instance, the case of natural breads. As the number of ingredients found within a loaf of bread grows high, and their processing becomes increasingly cumbersome, the tendency is not to regard the bread as familiar or authentic, even when all of its ingredients qualify as natural.

Often there is a gulf between the legal understanding of a term, the scientific understanding of a term, and the term’s everyday meaning. Terms used to characterize foods are no exception; in fact, they offer several prominent case studies. “Organic” (See entry on “► [Trade Policies and Organic Food](#)”) is another term whose usage is often misleading. In its scientific understanding, organic stands for a living organism, a part of a living organism, or that which is derived from an organism. However, in its everyday and legal usage, the term stands for the product of a plant or an animal grown without synthetic pesticides, synthetic fertilizers, hormones, antibiotics, and meeting all other standards issued by the country in which the product is grown. Obviously, there is a major difference between the meanings of “organic” in the two contexts. But, manufacturers of products other than agricultural ones are under no obligation to specify their understanding of the term.

Natural Foods and the Metaphysics of Nature

The difficulties in defining and regulating the use of the adjective “natural” to describe a food are part and parcel of a broader metaphysical debate over the proper understanding of the term. The idea of nature is perhaps one of the most abused ideas in common usage, not only from a commercial point of view but also ideologically and theoretically. One’s view of the proper understanding of natural foods depends on one’s underlying metaphysical approach to nature. Helena Siipi (2008) has proposed a threefold classification based on whether naturalness is grounded in a certain history or in a property or in a relation. Such classification is complementary to the one proposed here, which is based on four classic metaphysical positions concerning nature. For each position, its place in the debate over natural foods is indicated.

1. “Nature” derives from the Latin root “gna,” which stands for *that which generates*. In fact, the predicate “nasci,” to be born, has the same root. The very first position regards nature as that from which everything is born. On this metaphysical understanding, any food ultimately counts as natural. This position backs up the opinion of agencies, such as the FDA, who hold that “natural” is too broad and vague of a term to be useful in describing some foods as possessing a characteristic which other foods lack.
2. The second position, of Aristotelian descent, claims that *any individual thing has a nature of its own*. Thus, the nature of this apple is different from the nature of that yogurt. Also in this case, the adjective “natural” is of little use on food labels. However, individual natures can and should be captured by food labels. The definition of items provided by governmental agencies, then, should try and pin down the fundamental kinds of foods that there are. Such kinds reflect biological differences (e.g., the variety of an apple tree or the genetic makeup of a seed of corn) and also mirror geographic similarities (See entry on “► [Geographical Indications, Food, and Culture](#)”) and particular

methods of production (e.g., authentic specialties or fair trade products) (See entry on “► [Fair Trade in Food and Agricultural Products](#)”). This definition is especially important for understanding compound natural foods. An apple pie, as noted above, is natural only if its ingredients are natural. But it takes the right ingredients in order to make an apple pie; that is, the nature – in the Aristotelian sense – of the apple pie needs to be respected as well in order for the resulting product to even count as an apple pie.

3. A third position defines natural as that which is *spontaneous*. To be emphasized here is the lack of an ordering will on a crucial phase of the process of generation. Thus, a golden delicious apple, despite being the product of a grafted tree and of human effort, is still spontaneous, as its characteristic genetic makeup is not the outcome of human intervention: it occurred spontaneously. Vanilla extract counts as natural, under this definition, because its chemical structure is contained in the vanilla beans. Vanillin produced by chemical synthesis, instead, is not natural.
4. According to the fourth position, natural is opposed to *artificial*: natural is that which is not produced by humans. In some cases, that which is natural could also be produced artificially. Thus, for instance, ocean waves can be natural or artificial. This position cannot be applied to natural compound foods, which are the outcome of recipes and – as described above – are derivatively natural in that they derive their naturalness from their ingredients. However, the position plays an important role in the labeling of natural whole foods. A whole food, which is delivered without altering its key characteristics, is natural; for instance, an apple that is washed and cleaned, before being delivered to the market, is still natural. On the other hand, a whole food which is processed and substantially altered, or a food which is produced by chemical synthesis, is not natural.

Each of the four metaphysical positions on nature helps to shed some light on the debate over natural foods. The upshot is that the

understanding of the adjective “natural,” when applied to food, can hardly be reduced to one metaphysical schema. Some skepticism regarding the usefulness of the term in picking out a genuine characteristic of a food remains.

Summary

The entry employs the conceptual tools of metaphysics to critically study the adjective “natural,” when utilized to characterize a food or beverage. There is some skepticism regarding the usefulness of the adjective in picking out genuine characteristics of a food. While some countries, such as the United States, have abstained from issuing specific regulations regarding the use of the term “natural” to describe a food, others – e.g., England and Israel – do have such regulations. The entry first draws a distinction between the application of the adjective to whole foods and to compound foods. Hence, four typical misunderstandings of the term are flagged. They comprise circumstances in which “natural” is taken to imply – respectively – nutritional suitability, a health claim, lack of human influence, and authenticity or familiarity. Finally, four classic metaphysical positions on nature are introduced. The positions jointly support the different facets that the adjective “natural” takes in describing a food. They also reveal how the adjective “natural,” when applied to food, cannot be reduced to one metaphysical position.

Cross-References

- [Natural Food](#)

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Molecular Gastronomy

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Synonyms

Food science; Modern cuisine; Molecular cooking; Progressive cuisine

Introduction

Molecular gastronomy is a scientific field that studies the changes food products go through during the process of manipulation. These physical and chemical processes take place due to the impact on the molecules of the food as it goes through the different stages of cooking. In more recent times, molecular gastronomy has had a different meaning. It has become known as a movement led by chefs who introduce innovative techniques in cooking to diners around the world. This entry will follow the history of the discipline and the movement, mention the key people involved in making it known, and look at the ethical questions that arise from all perspectives of the discipline: ingredients, preparations, and marketing.

History

The field of “molecular gastronomy” began in 1988 by two scientists, Nicholas Kurti and Hervé This, who began working with the natural processes of food. They noted the physical and chemical changes the food underwent during its preparation and manipulation (Koppmann 2009). Kurti and This were looking to answer some of the most common questions of food preparation: How did food react to heat and why did it react that way? What other changes did food go through during the different stages of its preparation? In the beginning, the field was about the discovery of why changes occurred when food

was exposed to common stages in every day food preparation. It had nothing to do with creative cuisine (This 2005).

The creators of the field of molecular gastronomy argue the field began with the use of fire to cook food. The exposure of food products to this treatment caused it to change physically. These physical changes took place because of the modifications in the molecular structure of the foods. Before Kurti and This began to study these evolutions, there was not a complete understanding of what exactly was causing the food to be transformed. Trial and error and observation made creations possible. An anonymous text from the second century BCE makes reference to fermented meat, and a later Apicius text from the fourth century BCE mentions making a liquid with animal parts and water that illustrates the beginning of making a basic stock, a food preparation still common today, and the base to many traditional French culinary creations that form the foundation of modern culinary arts and cuisine. In addition, most French culinary texts are laden with recipes that illustrate molecular gastronomy at its best since the beginning of their publication. Famous classic sauces such as a Hollandaise created by French Chef Auguste Escoffier are classic examples of food transformation in a chemical and physical form using friction and temperature to cause an emulsion. All of these examples allow This to prove that though molecular gastronomy is a new field of study, the aspects of food that it studies have been occurring since the beginning of the use of fire (This 2005).

Kurti and This were disappointed that people did not know why food was transformed through cooking. They decided to not only research but also teach others about their discoveries. Food undergoes chemical and physical modification with the use of different elements through its processing and manipulation. In spite of the unavoidable use of molecular gastronomy within cuisine and cooking, most cooks prepared food without a conscious understanding of what happened to it on a molecular level. Disappointed by the lack of interest of food from this perspective, Kurti and This set out to identify all of the aspects

and spread knowledge about them. Many years later, after a successful spread of the existence and importance of the field by its creators, it was added to the curriculum of the University of Paris in 1996. After Kurti's death in 1998, This continued to teach about the field but made one slight adjustment; he changed the name from molecular and physical gastronomy to just molecular gastronomy. He believed this name would be shorter and explained the physical changes reflected due to the molecular restructure that occurred within the foods throughout their life stage (This 2005).

In his PhD dissertation, Hervé This listed five aims to the field of molecular gastronomy. They were "to collect and investigate old wives' tales about cooking; to model and scrutinize existing recipes; to introduce new tools, products and methods to cooking; to invent new dishes using knowledge from the previous three aims; and to use the appeal of food to promote science" (This 2005). This took the science into a new direction. A lot of publicity about this science was created and that led to the affiliation of many chefs within France and, later also, within the rest of Europe, who set out to create new recipes and food preparations that led to a cutting-edge, scientific form of food that was innovative and good to eat.

Molecular Gastronomy in the Twenty-First Century

Since the late 1990s, molecular gastronomy began to be recognized worldwide as a movement in a modern take to food. In 2001 French schools began to experiment with flavors. This successful venture led Canadian and French schools to integrate the teaching of molecular gastronomy within the curricula of the culinary programs. Many professorships were created around the world in places such as the Netherlands, Argentina, Canada, and many other countries to continue to spread the knowledge of molecular gastronomy. The discipline, as being taught in culinary schools, differs from the original, introduced by This and Kurti. Molecular gastronomy, as a modern movement, focuses on

innovative food preparations based on the more thorough understanding of the physical and chemical changes caused by food manipulation and the merging of ingredients. Kurti and This's molecular gastronomy did not focus only on food preparation; it was based on studying the changes of the food's physical and chemical states through their life cycle. Therefore, according to This, it is the scientists, not the cooks, who are molecular gastronomists, since they spread the knowledge of the science (This 2005).

The field of molecular gastronomy changed cuisine forever. Many chefs became interested in finding out why food reacts the way it does through the process of cooking. Chefs are interested in the work done by This and have joined forces with scientists to learn more about how they can create great dishes by understanding the physics and chemistry behind the food. Many dishes, concepts, and restaurants have opened, featuring foods, where the conscious application of scientific techniques transforms food into exciting culinary creations. Wylie Dufresne told Harvard students, doing things just because or because they had always been done that way was okay for a young chef, but as a more mature professional, he wanted to find a more precise reason as to why things happened. Opening his restaurant was an opportunity for him to continue to learn and find out the real reasons why changes in food occur (Brenner and Dufresne 2010). Restaurants such as elBulli, The Fat Duck, WD-50, and Alinea, among others, are recognized worldwide and not only prove to be exciting but also have become known as the pioneers of a new dining experience (Barham et al. 2010). Some restaurant chefs who use modern techniques label themselves as molecular gastronomists; others have rejected the title, claiming they are chefs. The fundamental elements of being chefs and serving great food are not dependent on the use of modern techniques; instead, it is about using the best possible ingredients and preparing good food (Barham et al. 2010).

The molecular gastronomy movement has spread worldwide, and some chefs have been collaborating with Harvard scientists to

demonstrate how the understanding of science can transform culinary tradition. The class, *Cooking and Science*, is meant to use food as a way to illustrate molecular transformations and allow for a better understanding of scientific concepts. The course is filmed in its entirety and available to viewers on YouTube free of charge. The scientists teach the theoretical portion of the course. The chefs demonstrate the preparation of dishes featuring the molecular changes mentioned in the theoretical portion of the class. However, these demonstrations include the modern preparation of the dishes; new ingredients are introduced in the form of powders, and more advanced technology plays a role in the cooking process. This illustrates not only how molecules change but also how science and technology impact the culinary field. On the lesson “Meat Glue Mania” on November 8, 2010, Professor Michael P. Brenner, professor of applied mathematics and applied physics, teaches students about complex chemical changes. Professor Brenner claims these changes can be as common as the Maillard reaction and caramelization, processes normally seen in the browning of meat or preparation of caramel. He also claims one of the challenges with these complex changes is they are not very well understood by scientists.

However, complex changes can also take place to create new foods. One of the ways these new creations can take place is with the use of transglutaminase; this compound glues two protein molecules together with a covalent bond between amino acids. As an illustration of the theory, Wylie Dufresne, chef of WD-50 in New York City, uses meat glue to adhere one filet of codfish onto another to create a thicker filet that will have a perfect shape that he can cook more evenly. This new creation reflects how the two existing protein molecules adhere to each other. Without the powdered meat glue, which he makes into a slurry to create a more even coat, this reaction would not be possible. However, the understanding of molecular structure of foods has allowed Dufresne to create more modern takes with this product, including shrimp, tofu, and peanut butter pastas, which use meat glue to

re-gelatinize the products into sheets (Brenner and Dufresne 2010).

Ingredients in Molecular Gastronomy: An Ethical Dilemma?

In the popular New York Times Magazine Essay “Unhappy Meals,” Michael Pollan begins to warn consumers about eating industrialized food. He asks consumers to avoid foods that are either unfamiliar or unpronounceable. Many of the ingredients added to processed foods have been incorporated into them to increase their shelf life and make the process of fabricating these foods less expensive. In addition, these foods substitute whole foods or, as Pollan calls them, real foods. The hydrogenized, high-fructose, maltodextrin and xanthan gum creations have been the center of an epidemic of health deterioration and disease in the United States and other countries using “Western diets” (Pollan 2007). Some of these ingredients, independently, are not harmful. However, their use in the foods suggests highly processed creations that contain other ingredients of lesser benefits (Pollan 2007).

Some of the ingredients utilized to “molecularize” food are common to food labels of supermarket conventional foods. In his lecture on complex chemical changes, Professor Brenner states that all of the chemicals he lists in his lecture change the flavor of foods depending on the amount of the chemical present in the foods. He also says: “. . .what is interesting about these chemicals is you can’t go to the grocery store and buy them, it is not like salt. . .” (Brenner and Dufresne 2010). However, many of these chemicals are produced through the process of cooking, not on the addition of a chemical; these flavor compounds are created by different combinations of food products and are also dependent upon the rate and temperature the food is being cooked. So, not all unpronounceable ingredients are additives; in addition, not all additives are fabricated chemicals; some are extracted from natural sources (Brenner and Dufresne 2010).

Rachel Zemser, a culinologist, claims chefs “stole” the creations of the true food scientists:

the people who originally created all the varieties of modified food starches and the equipment (centrifuges, freeze dryers, etc.) used by many chefs today. They use all of the techniques and ingredients and receive more fame from these creations than the scientists working for years to create them. She adds that chefs such as Ferran Adria, Wylie Dufresne, and Grant Achatz should become “real” molecular gastronomists. She defines this as a person who uses their creations for the improvement of societal food issues of every day consumer goods, rather than the creation of a modern dish within a restaurant targeted to just a few (Zemser 2010).

The ingredients Zemser talks about are identified as powders within the movement of molecular gastronomy (Zemser 2010). These are also the unpronounceable ingredients such as maltodextrin and xanthan gum, which Pollan tries to steer consumers against (Pollan 2007). Will Goldfarb, pastry chef and owner of Will Powder, one of the few distributors of powders in the United States, on his website, explains the source of the ingredients and their use. Stabilizers, emulsifiers, and spherification ingredients, just to name a few, are featured on his site and product list and are also elements of his own menu creations (Goldfarb 2012). The powders are sourced from natural sources, extracted, and sold as powders. Professor Brenner and Wylie Dufresne use transglutaminase, which is naturally produced by soil bacteria (Brenner and Dufresne 2010). In the powdered form, these ingredients cause transformations from the natural state of the foods, giving life to the foams, gels, capsules, and other shapes and textures common to the menus of the restaurants that brought molecular or modernist cuisine to life (Brenner and Dufresne 2010).

In his article “Incredible Edibles,” Lanchester claims Colonel Sanders’s cuisine is just as molecular as that of Ferran Adria because they both undergo textural and physical transformations through cooking (Lanchester 2011). Modernist cuisine uses some of the same ingredients used as preservatives and texture modifiers within flavored milk. In the past few years, British Chef Jamie Oliver has been on a campaign to decrease obesity in the United States and teach people how

to cook. One of his biggest battles in the food revolutions of West Virginia and California was the consumption of flavored milks at schools. He claims chocolate milk has more sugar than soda and in general is a bad addition to the diet of a child (Oliver 2010). Usually, chocolate milk labels feature the following: partly skimmed milk, vitamin A, palmitate, vitamin D, sugar, cocoa, artificial flavor, carrageenan, cellulose gum, and guar gum. The carrageenan added to the milk gives it a richer, silkier texture (CBS News Canada 2005). Carrageenan is also used within modernist cuisine; the purpose of adding carrageenan to restaurant food is to create gelified sauces and jellies (Goldfarb 2012). It is not just about the powders or the technique. Wylie Dufresne says all food is transformed scientifically even without the addition of powders. His cooking style is traditional food that has been impacted by the understanding and use of science to the food’s benefit.

Modernist or molecular cuisine is not just about the powders or preservatives. The cooking methods, many of which include modern technology, are also a part of the innovation in food. The sous vide technique includes packaging the food in a Cryovac or vacuum-sealed plastic. Though chefs use high technology with a circulator, these are not necessary. It can be done with a ziplock bag in a microwave. Though these foods resemble packaged supermarket food that generally have a bad reputation, due to the ingredients and health risks associated with it, not all sous vide food is bad. Using the microwave is also not by definition bad. It allows quick cooking, which in the example provided by Michael Voltaggio in his YouTube video is a healthier alternative to cooking carrots or vegetables than a pot of boiling water. It keeps the nutrients in the package and does not let them out and leech them into the cooking liquid (Voltaggio brothers 2011). How good the food is is dependent on what is placed in the package. The whole carrots in the microwaved package used by Michael Voltaggio will keep the natural sugars and nutrients in, thus making it a healthy alternative to food (Voltaggio brothers 2011). This technique can be used with any ingredients and will

keep the shape and the integrity of the food, as well as the nutrition. It is less harsh on the food item through its preparation and is, in many cases, a better alternative to cooking. It also creates a more consistent food product, one that is hard to mess up (Dickerman 2005).

Progressive or Modern Cuisine

Many do not believe it is ethical to label the chefs as molecular gastronomists. The scientists and culinologists argue the molecular gastronomists are the people who spend the time discovering and creating the products themselves (Zemser 2010) and transmitting the knowledge of the molecular reactions (This 2005). Others believe that calling chefs molecular gastronomists makes people believe that their food is a gimmick and that it is always attached to some sort of scientific creation. Though many of the creations of the chefs include ingredients or cooking methods that are innovative and scientific, there are other dishes and parts of creations that are straightforward interpretations of good food and traditional food preparations. For these reasons, the term “modernist cuisine” is more appropriate to the style of cooking of chefs like Grant Achatz, Wylie Dufresne, and Thomas Keller, just to name a few (Arnold 2009).

As many chefs began to imitate those who pioneered the food transformation, many bad copies arose. These were chefs who did not really understand the processes and also did not know how to blend them into traditional cooking techniques. However, they saw the difference in price range and fame that was brought to these pioneers. For that reason, they began to label themselves as molecular gastronomists and raised their food prices and became more well known (Melonas 2009).

There are many chefs who do not only focus on the innovation but also on the tradition of preparing good food. Some of them prefer the new term progressive or modernist cuisine. This has also proved less intimidating to the public (Melonas 2009). Many chefs dislike the

modernist or progressive label as well and argue that they are still chefs; they focus on creating good food. Using different cooking techniques does not renounce the fact that they are preparing food for the public and they just want to be known as chefs (Melonas 2009).

Marketing Molecular Gastronomy

Chefs create, but do not teach; calling chefs molecular gastronomists is not appropriate (This 2005). Many chefs use the term to market themselves as innovators; this is also a tool to communicate to others that their menus feature modern or progressive cuisine. Using the term molecular gastronomy for these innovative creations is unethical; it is a misrepresentation of the term because molecular gastronomy is the science itself, not the cuisine (Koppman 2009).

The Italian Department of Health banned the “powders” used within molecular gastronomy on a temporary basis. Their original claim is that these elements are not good for people’s health. Many chefs, such as Wylie Dufresne and Jose Andres, believe the Italian government is making an unethical choice, using this as a marketing tool to discourage people from being interested in and fall in love with the trend. After all, the Italians did not ban these ingredients from processed foods sold outside restaurants in markets and other areas. This temporary ban was put into effect for the period of only 1 year as a trial. Soon after the ban, the Italian Minister of Agriculture promoted the introduction of a new McDonalds burger, which led many chefs and molecular gastronomists to believe that it is the tradition of the classical Italian cuisine that they are looking to preserve and not that the ingredients are harmful for the health.

Journalists began to use “molecular gastronomy” to write about the trends of innovative cuisine. Not only is the term not properly used with chefs, but most of the better-known chefs labeled with it (Grant Achatz, Wylie Dufresne, and Ferran Adria, among others) who use

innovative techniques also dislike the term (Arnold 2009). What has become known as molecular gastronomy is a new idea, dish, or technique with high-technology equipment. However, at this point, chefs and pastry chefs of some of the most well-known restaurants in New York City, and in the world, use techniques and ingredients classified by journalists as “molecular,” but not all of them, such as Johnny Iuzzini, have been labeled as molecular gastronomists. The use of technology and avant-garde or innovative ingredients should not be labeled “molecular.” Giving it that title not only is a misrepresentation of what molecular gastronomy really is but also suggests that anything related to high technology or innovation automatically becomes a fad (Arnold 2009).

Using the label molecular gastronomy for all of the chefs using high technology or new ingredients begins to classify all of the chefs under the same category. Categorizing people with such different styles and approaches to food and restaurants is unethical. It is merging all of them together, as if they all had the same methods and personality. It creates an expectation to consumers that all of the restaurants and foods will be similar in style and have the same approach, since they all have the same label. This could not be further from the truth (Arnold 2009).

Summary

Molecular gastronomy is a field of study that looks at the chemical and physical changes foods undergo throughout the process of their manipulation. Due to many modern techniques, the term has taken another connotation. There are many ethical concerns with the field. Some of them have to do with the use of the term itself for food producers. Others have to do with the use of ingredients that in other food products seem to arise questions of health in consumers. This entry looks at the history, the evolution of the term, and the use within modern food preparations.

Cross-References

- ▶ [Cooking Tools and Techniques: Ethical Issues](#)
- ▶ [Food Additives and International Trade](#)

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Montaigne and Food

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Synonyms

Autoethnography; Cannibalism; Dietary medicine; Dining company; Eating habits; Essays; Gastronomy; Humoral physiology; Lent; Travel journal

Introduction

Michel de Montaigne was among the most important Renaissance thinkers, the greatest advocate of skepticism, and the virtual inventor of the modern essay as a literary genre. After serving as mayor of Bordeaux, late in life (1571) he shut himself up in an “ivory tower” not to escape from the world but to contemplate humanity from an objective distance. Trusting that any true knowledge, as opposed to received wisdom, begins with a skeptical willingness to suspend all preformed assumptions, he dared to ask “Que sçay-je?” or “what do I know?”

The only logical place to begin is with self-examination, which itself has a long philosophical pedigree. The idea of “know thyself” (γνῶθι σεαυτόν) was associated by Plato with Socrates but is probably much older. Montaigne’s intellectual sojourn led to the composition of the essays in 1580. These as well as his travel journal contain numerous references to food, his own experiences, preferences, and bodily functions, which is only to be expected since he critically examines every aspect of himself. Montaigne’s writings present numerous ethical issues regarding food, most importantly how and what people should eat, whom people should trust as authorities in matters of health and gastronomy, and ultimately how people should consider those with customs different from their own.

Main Text

Book III Essay 13 *On Experience* focuses largely on Montaigne’s own eating habits. As the title of the essay suggests, experience is the best guide in determining food choices and dining customs. This implies that medical professionals cannot always be trusted, partly because they disagree so much among themselves, but also because their opinions are drawn from authoritative texts rather than from direct personal experience. Every individual is the best authority regarding his or her own body. Although the dietary precepts of the Renaissance are now wholly outdated, the modern reader can empathize with Montaigne’s comments, especially given familiarity with so many competing diets, fads, and foods marketed with explicit health claims. Today people are faced with the same dilemma: to trust expert medical advice, often proffered in the interest of profit, or follow one’s own bodily experience and taste preferences? Montaigne’s advice is generally to remain skeptical when it comes to food advice and choose a diet and mode of life that best suit one’s own body, ingrained habits, and customs, as learned over time.

This particular essay would today be called an autoethnography. By relating his own personal habits in regard to food, Montaigne attempts to communicate something essential about his character. In humoral medicine, the reigning medical orthodoxy of his time, a person’s taste preferences and habits and ultimately “complexion” were thought to be an indication of personality type and inner psychology. Thus choleric are angry, melancholics depressed, phlegmatics slothful, and sanguine people cheerful and optimistic. Montaigne doesn’t actually classify himself using this scheme, which may be an indication that he was skeptical about the entire system. Nonetheless, food preferences do reveal something about personality and character and are used to communicate identity, which Montaigne seems to instinctively understand. Montaigne confesses to eating too fast and even biting his fingers in the process. Keep in mind that forks were still considered strange and effeminate and King Henry III was scandalized

for using one in a satire called the Isle of Hermaphrodites (Artus 1605). By admitting this, Montaigne reveals that he is generally impatient and voracious. His eating habits likewise reflect his intellectual capabilities; he similarly devours topics, fixating on one then moving quickly to another, though often coming back to savor familiar themes.

But his food preferences also carry culturally and socially constructed meanings specific to his own time and place. His preference for salt beef, for example, would have immediately signaled to his readers that his tastes and affinities are not with aristocrats who preferred wild fowl and delicate white-colored dishes, but with the bourgeois and even working classes. The labor undertaken by these classes was believed to give them strong stomachs able to digest coarse foods like beef. He also preferred undercooked meats and game hung to the point of becoming slightly rank. These preferences not only ran counter to dietary recommendations but importantly they show that he is not fastidious, has no squeamishness about food, and follows his taste buds rather than fashion.

More importantly Montaigne admits to a fondness, even preference, for fish, which was normally seen as a privation during Lent. “I am very fond of fish: for me lean days are fat and fast days are feasts. Besides I believe that, as some people say, fish is easier to digest than meat.” This was not the standard physicians’ advice, but quite the opposite. Once again Montaigne trusts his own body’s evidence over prevailing opinion. Moreover, the original purpose of Lent as a form of penitence is subverted, since he enjoys fish immensely and feels no need to find a suitable ascetic substitute, which may signal his skeptical attitude toward the entire institution of fasting. In any case, he admits that his tastes are unusual, and unlike everyone else, he hardly suffers during Lent. Contrast this with the situation of Erasmus, another great Renaissance figure, who couldn’t stand fish, purchased an official dispensation, and was embarrassed when people went out of their way to make special dishes for him. Montaigne, to say the very least, is much less fastidious.

Montaigne was also skeptical of medical authorities on the topic of diet. The dominant system of humoral physiology posited that each person was born with a certain complexion and the foods they eat should be of an opposite quality to maintain a humoral balance. Therefore a choleric (hot and dry) person should eat cold and moistening foods and phlegmatic hot and dry – or spicy – foods. The basic logic is allopathic. By the latter sixteenth century, this entire system, which stretches back to classical antiquity, began to be questioned, since a barrage of conflicting dietary advice generally confused readers, much like today. There were literally dozens of dietary manuals published in this era, and Montaigne seems to have appreciated their effect on readers who followed the latest fad: failure. “If your doctor does not think it good for you to sleep, to take wine, or some particular meat, do not worry; I will find you another who will disagree with him.”

This attitude toward physicians and dietary dogma was not unique to Montaigne, but rather indicative of a gradual breakdown of Galenic orthodoxy in the latter sixteenth century, which led many writers to examine the book of nature directly rather than the medical classics. In fact, the autobiography of the great mathematician and physician Girolamo Cardano, roughly contemporaneous with Montaigne, strikes many of the same notes. In chapter 8 on *Manner of Life*, he too describes what he normally eats each day and even his favorites like pot-roasted veal (Cardano 2002). Like Montaigne, he enjoys fish and fruits like peaches, despite the dire warnings of physicians. The best practices learned through experience are here too the greatest authority.

Among the Renaissance, dietary fads none was more popular than the *sober diet* recommending strict reduction of intake and general abstinence. Spread by Alvise Cornaro in mid-sixteenth century, its author was the original “before and after” example of a life nearly wrecked by riotous living but then miraculously cured by strict abstinence (Cornaro 1996). Most importantly Cornaro was given a wide range of differing advice, which in the end he ignored, following the messages of his own body instead

and living to extreme old age in perfect health. Exactly like Montaigne, his own body told him what to do; it was merely a matter of trusting oneself. Actually, it is likely that Cornaro was a diabetic since he found solely through trial and error that sweets would make him sick and that severely limiting his intake kept his blood sugar level stable. Naturally this regimen would not work for everyone. Montaigne also understood that his own experience could not serve to guide his readers – and that abstinence would not work for everyone. Having suffered himself from kidney stones, Montaigne appreciated the fate of a member of the medical faculty who resorted to extreme abstinence to combat his disease and died, by drying up his kidneys, according to his physicians, a story he relates in the same essay. That is, each person should refer to his own experience in self-diagnosis and therapy and one individual's personal judgment, such as Cornaro's, could not be taken as universal advice. Ironically it was, even though Cornaro himself insisted on trusting himself.

The other details of the essay *On Experience* may strike readers as quirky or coincidental, but they actually reveal that Montaigne was thinking about much broader philosophical questions in gastronomy and aesthetics in general. For example, when he mentions that his father hated sauces but he loves them all, he is indirectly wondering why taste is not inherited like physical attributes. He also wonders how it is that taste changes over time and with age, sometimes randomly. Radishes once agreed with him, then they didn't and later they did again. Purely aesthetic questions also seem to fascinate him. Montaigne discusses how throughout his life he has often skipped a meal, merely so he will appreciate the next meal more, not like Epicurus who wanted to accustom himself to little food and not depend on luxuries. Interestingly, Montaigne seems to be among the few food writers since then who really understands Epicurus.

Montaigne also notes how eating too much dulls both his mind and body and in particular how difficult sex is after a big meal. Like a good anthropologist, he also notes that the pleasure of a meal hardly consists in the food itself.

The company is far more important. "There is no dish so sweet to me, and no sauce so appetizing, as those derived from the company." Montaigne was also a keen observer of the customs of other peoples and in particular how their bodies become habituated to local practices. The most obvious one is the custom of diluting wine with water, which was the typical custom not only in the great wine capital of Bordeaux but in most of Europe. But he knows Germans drink their wine straight, and since this custom serves them best, they should continue to follow it, regardless of what physicians claim.

Montaigne's opportunity to observe the customs of other countries was made possible in particular by one long trip. In 1580–1581, Montaigne took a 17-month journey through Germany, Switzerland, and Italy, mostly visiting various mineral baths to search for a cure for his kidney stones. The trip was recorded in his travel journal, the manuscript of which was first discovered in 1772. It recounts many of unusual customs he encountered in these places and again relates the same theme of objectivity when discussing the wide variety of human habits.

The most celebrated passage regarding food occurs while in Rome, when Montaigne met the *Maitre d'* of Cardinal Carafa who offered a discourse on the "science de guele" with a magisterial countenance as if he were discoursing on a fine point of theology. The encounter is described in Book 1 chapter 51 *On the Vanity of Words* as an example of the incongruity of grandiose verbiage to describe the proper seasons for eating hot and cold salads, how sauces should be ordered, and so forth. Food scholars cite the episode as evidence of the importance of gastronomy to Italians in the sixteenth century, but explain no further the details of the discourse.

First, the character Montaigne met closely matches a real person who was in Rome at the time. He may very well have met the famous banquet manager Cesare Evitascandalo, who composed the *Il Maestro di Casa* (i.e., *Maitre d'*) in Rome in 1585, which was subsequently published in 1598 (Evitascandalo 1598). The book is indeed about various officers of the household employed by cardinals, including the *trinciante* or

carver, whom Montaigne mentions in the Latin quote on carving hares and chickens. *Evitascandalo* even mentions a Cardinal Carafa in a passage about table settings. This was Antonio Carafa, rather than the earlier and more famous cardinal Giovanni Pietro Carafa who became Pope Paul IV and died in 1555.

In Montaigne's journal entry, the *Maitre d'* discusses the qualities and effects of various ingredients. This was standard subject matter in the genre of *Scalo* (banquet management) literature, as was garnishing and decorating food to render it more pleasant to the eye. He distinguishes between salads that should be served cold and those that are best hot according to season and how to recognize the difference between an appetite at the start of a meal and how to revitalize or pique the appetite after two or three courses. Obviously these are gastronomic questions which no longer concern us today, yet were of great importance to cooks and banquet managers of the past. Although there are some universal truths about human nutrition, clearly Renaissance people had a very different understanding of what was occurring in their bodies, and a need to stimulate the appetite mid-meal appears to have been a genuine concern.

Another phrase Montaigne relates that would confuse a modern audience is the "*La police des sauces*" not merely ordering but controlling and regulating the use of sauces. There are two senses in which one might interpret this phrase, either which sauce goes best with which ingredient from a gastronomic perspective or which serves as a corrective to the potentially harmful qualities of the dish.

Passing through Switzerland, Montaigne noted many of the common customs of the people, for example, that they are good cooks, of fish especially, implying that they cared more about what they ate than housekeeping, which he found lacking. Their table service was also very different from what Montaigne was accustomed to. They never mixed water with their wine, which he assumed stemmed from the weakness of the wine. He also remarks about how they serve only two or three types of meat, sliced and presented on the same dish. In France many dishes would

have appeared at once on separate platters, known as *service à la Française*, and dishes would have been replenished as they were depleted. In Switzerland new dishes never appeared until those on the table were entirely consumed. Montaigne relates these customs generally without criticism, in keeping with his skeptical attitude toward any universal pronouncement about what is right or wrong. People develop customs which suit them and though they seem strange, they make sense in context. Montaigne marvels, for example, how the Swiss regale the lowly crayfish, considering it a delicacy, which is entirely appropriate given their pristine source.

At Lindau in Bavaria, he waxes rhapsodic about the quality of the food he is served. There is soup made of quince, rice dishes, excellent fish, and the most tender meat he had ever eaten, cooked with plums, apples, and pears. He sorely regretted not taking along a cook who could have learned these recipes and taken them back to France. A good sense of the food he ate here can be found in the cookbook of Anna Wecker, published in Amberg in 1597. There are many recipes for cooking apples with meat, of exactly the type Montaigne enjoyed. When in Tirol he notices that people eat fish and meat together, but that meat is never served on fasting days, adhering strictly to Catholic ban on meat during Lent. Apart from curiosity and the urge to observe, Montaigne mentions these differences in gastronomic preferences and regional customs to point out that people should never be absolutely certain of the correctness of their own habits.

Of course the ultimate discussion of relativism when it comes to food is about cannibalism, in one of Montaigne's most celebrated essays. Here he describes Native Americans, drawn largely from contemporary accounts and perhaps from an individual he met in Rouen, brought from what is today Brazil. Montaigne describes their ordinary eating habits: "Their drink is made of a certain root, and is of the color of our claret, and they never drink it but lukewarm. It will not keep above 2 or 3 days; it has a somewhat sharp, brisk taste, is nothing heady, but very comfortable to the stomach; laxative to strangers, but a very

pleasant beverage to such as are accustomed to it. They make use, instead of bread, of a certain white compound, like coriander seeds; I have tasted of it; the taste is sweet and a little flat.”

Eventually he describes their eating of human flesh. The essay is of course not advocating toleration of cannibalism, but rather objectivity, that Europeans should not be so quick to call a practice barbaric when they commit equally horrible acts themselves. Here he was thinking of the terrors of the civil wars over religion which rent France apart in this century, and in which people were tortured and burned while alive, certainly worse than eating a person after death.

While not generally acknowledged to be a writer especially concerned with food or the ethics of food topics, Montaigne’s writings reveal that he was continually actively engaged with questions about food, many of which still concern us deeply today.

Summary

Montaigne was a skeptical Renaissance thinker who revealed his own eating habits and those of others as a way to gain insight into individual personality, national character, as well as universal patterns of gastronomic behavior. He also discusses numerous ethical concerns of his own day: whether physician’s advice should be trusted over one’s own experience, whether people should stick to their native habits, and whether we should be tolerant of differences among peoples.

Cross-References

- ▶ [Cannibalism](#)
- ▶ [Christianity and Food](#)
- ▶ [Culinary Tourism](#)
- ▶ [Ethical Assessment of Dieting, Weight Loss, and Weight Cycling](#)
- ▶ [Epicureanism and Food](#)
- ▶ [Fasting](#)
- ▶ [Taste, Distaste, and Food](#)

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Multifunctional Agriculture

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Synonyms

Externalities; Fringe-benefits and heterodox economics; Utilitarianism

Introduction

The innovative, indeed provocative nature of the concept of multifunctional agriculture can only be understood fully by thinking back to agriculture’s role in twentieth-century society during the Cold War era, which was simply to provide food for a growing world population. Within this line of thought, two different scenarios were posited: whereas Neo-Malthusians seriously questioned the ability of farmers to cope with the rapid increase in population, particularly in southern Asia (Commander 1986), others, adopting

a more western perspective, observed the remarkable productivity gains in the farming sector and concluded that only half of the land would have to be farmed (Kuhlmann 1986). In any case, agriculture was merely the location of a production function in which labor, fertilizer, and other factors were to be transformed into wheat, rice, and beef. Organic agriculture and other attempts at environmentally sensitive farming were on the very fringes of society, viewed highly skeptically by initial government investigations (Paster 1980), their products largely absent from supermarket shelves.

By that time, the term “multifunctionality” had already been coined: in a book by a German forestry-policy researcher (Dietrich 1953), the existence of jointness and externalities was for the first time perceived as being a constituent element of an economic sector. With the description of this notion as the “multifunctionality of forests,” a new concept entered economics. At the time, however, hardly anybody took any notice of the phrase. Much later, the concept began to be revived for political discourse, with the result that the concept was still described as follows 20 years ago:

In his Vision 2020, Mr. Kienle [Secretary-General of the German Farmers' Union] talks about ‘multifunctional’ agriculture. He defines this as agriculture in one’s own country which produces food and fibre, but which is also perceived as indispensable owing to its environmental tasks and societal functions. (Thiede 1992, p. 299; translation by S.M.)

Over the last 20 years, the theoretical concept of multifunctionality has undergone significant development. It is important to note, however, that the main impetus for this development has come from the policy process rather than from academia, most notably for the purpose of defending EU protectionism in international trade negotiations (Potter and Burney 2002). The next section of this paper sets out the main arguments of key international actors in the agricultural sphere. The final section then describes the potential impact of the concept of multifunctionality on agricultural ethics.

Why Is Agriculture Multifunctional?

While the Commission of the European Union has elaborated the notion of the multifunctionality of agriculture as a mainly normative concept (EEAC 2000), there is certainly no other organization which has contributed more decisively to challenging and elaborating the concept of multifunctionality from a theoretical viewpoint than the Agricultural Division of the OECD. The latter’s analysis stands as a mainly environmental economic approach that essentially describes the multifunctionality concept as a tool for the appreciation and internalization of external effects. Changing shortages lead both to new functions of agriculture and to the creation of new markets for commodities and non-commodity outputs alike, with the ensuing problem of failing markets for some of these outputs.

A wide variety of jointly produced, largely mutually inseparable agricultural non-commodity outputs such as soil preservation, land degradation, landscape scenery, tradition, and employment were identified, classified, and defined by each participating country (OECD 2001a). The OECD secretariat formulated its stance, however, as follows: “The key elements of multifunctionality are: (i) the existence of multiple commodity and non-commodity outputs that are jointly produced by agriculture; and (ii) the fact that some of the non-commodity outputs exhibit the characteristic of externalities or public goods, with the result that markets for these goods do not exist or function poorly” (OECD 2001b, p. 8). It is becoming obvious that the OECD definition of multifunctionality is strongly output related: employment, for example, which is identified by the OECD as a non-commodity output, is also a necessary input in the production process.

Multiple commodity and non-commodity outputs are therefore the first key element making a production process multifunctional (OECD 2001b). With sheep production, for example, a wide variety of commodities such as meat, wool, and milk are produced as part of the process of sheep-rearing, rendering this activity multifunctional without even bearing in mind

the resultant non-commodity outputs or rather externalities. The sheep-production process is thus characterized by a number of outputs (i.e., commodities and externalities) that are interconnected. Generalizing this notion, all production processes allowing for all weight and energy fluxes are characterized by some sort of joint production (Baumgärtner and Schiller 2001). The radical view is that joint production is in fact a necessary characteristic of all production processes (Baumgärtner 2000). It would also appear necessary to extend the definition of production to nontechnical processes.

An even more important aspect is the “jointness” that exists between commodities and externalities. The relationship between commodities and externalities within the production process is becoming increasingly important, especially where the concept of traditional agriculture has changed and the relevance of the resulting by-products is therefore growing. A case in point, many European farmers are paid by the government to keep grassland open with the aim of producing the externality “biodiversity.” The process of keeping grassland open is mainly achieved by husbandry and thus by producing commodities. Were the farmer to increase livestock numbers, thereby increasing commodity production, the production of the externality “biodiversity” would arguably also increase to a certain extent. Thus, a complementary “jointness” exists between the externality of biodiversity and the commodity (wool, milk, or meat). Beyond a certain point, however, the increase in livestock numbers within a limited space would adversely affect biodiversity, owing, e.g., to the higher level of organic pollutants from the animals (competing jointness). Moreover, a backward-bending effect of the production curve is also conceivable. The larger number of animals would have a negative impact on the original population, due to a shortage of space and fodder alike.

Mann and Wüstemann (2008) have suggested that in addition to physical products and technological externalities, the range of outputs of a production process also comprises psychological, social, and human capital externalities. With such a broad interpretation of the concept of

multifunctionality, it is obvious that this term not only applies to the agricultural sector but would also be a powerful concept, for example, in the context of the provision of cultural services. Moreover, as Rørstad et al. (2007) have pointed out, it is not always useful to replace general support measures with programs targeting individual externalities. The transaction costs necessary for the administration of many small government measures may easily exceed the welfare gains from a more targeted policy. This applies particularly if some of the externalities are not amenable to a reasonable and realistic monetary evaluation.

Implications for the Ethics of Food Production

For a long time, discussion about ethically sound strategies of agriculture took place mainly in two different subgroups. Scholars with a deontological orientation emphasized the rights of different groups in agriculture. They described the support to poor peasants as an appropriate tool of social policy (Granberg 1999), focused attention on animal rights (Benton 1993), and mused about the need to preserve biodiversity (Zunino and Barbero 1993). Utilitarians, however, usually approached agricultural policy from a different angle: In applying public choice theory, they acknowledged the strong representation of the farmers’ union and considered subsidies for farmers as an outcome of political pressure (Balisacan and Roumasset 1987). At the same time, simple welfare-economics models convinced them that social utility could easily be maximized by leaving the agricultural sector to market forces (Anderson 1992).

The paradigm of multifunctionality has shown that utilitarians can easily reach similar conclusions to those of deontologists. If a given agricultural production process brings about a wide range of externalities that are relevant for personal utility, this indicates that the absence of government involvement will probably not lead to utility maximization. This allows the justification of sometimes massive policy interventions from a utilitarian perspective.

Take animal welfare as a case in point. Surveys have repeatedly shown that a number of populations are greatly concerned about farm-animal welfare (Bennett and Blaney 2007; Böbner and Vogel 2007). Chickens in cages or pigs on fully slatted floors appear to cause massive negative psychological externalities. Under these conditions, utilitarians may arrive at the same policy recommendations as deontologists, who claim that raising animals under such low-welfare conditions should be prohibited.

The multifunctional agriculture paradigm does not answer all questions raised concerning the formulation of appropriate agricultural policy. It does, however, clarify the position of those who are convinced that farming is much more than just calorie production.

Summary

Multifunctional agriculture describes farming systems with numerous positive externalities which only partly can be reasonably put into monetary values. The notion that utility can be maximized by broadly supporting agriculture brings the utilitarian approach closer to traditional rights-based arguments.

Cross-References

- ▶ Biodiversity
- ▶ Environmental Ethics
- ▶ Free Trade and Protectionism in Food and Agriculture
- ▶ Multifunctionality of Agriculture and International Trade
- ▶ Provision of Agricultural Ecosystem Services
- ▶ Virtue Theory, Food, and Agriculture

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Multifunctionality of Agriculture and International Trade

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Synonyms

Agricultural policy; Competitiveness; Cultural issues; Economic development; Food security; Global ecology; International trade; Sustainability; Trade policy; World governance

Introduction

As the guarantor of our subsistence, “agriculture is a security matter” (PISANI 2004). It is the oldest political issue and probably one of the most worrying in the years to come.

In the current framework of the World Trade Organization (WTO) agricultural trade negotiations, the aim of reducing, or even suppressing, the impossibly high custom tariffs of the 1980s has not been achieved and seems in fact to have reached its limits. These have been highlighted by the deadlocked Doha Round negotiations and the endless debates and disputes inherent to these talks. They might even point to the culmination of a system. The tariffs that have been immune to past efforts to reduce them now represent the core of national protective barriers, and the political cost of tariff reductions seems today way too high compared to their potential for economic gain. The July 2008 dispute between India and the United States, concerning the definition of the precise moment when a special safeguard mechanism can be triggered in case of falling agricultural prices or of a drastic increase of imports, is an example of the difficulties of reaching agreement in the current framework for agricultural trade negotiations.

Misunderstandings on agricultural policy are first and foremost cultural and political and are therefore extremely difficult to overcome. The scenario of a complete liberalization of

agriculture does not seem particularly relevant at the present time, and even though liberalization of trade in agricultural products is set in the WTO’s agenda, that agenda is currently stalled and even be frightening to some. Consequently, instead of focusing on the “for-or-against” debate on agricultural free trade, should we not question the need to maintain agricultural policies that ensure food security, preserve the rural fabric, and encourage countryside planning as well as environmentally sustainable modes of production?

Agriculture is in fact much more than simply an economic activity. In developing countries, it employs the vast majority of the population, and it is also a particular type of lifestyle that answers a fundamental human need: hunger. Agriculture also fulfills many different functions: not only does it produce food, it creates jobs and boosts the rural economy. In addition, it is a crucial element of environmental management: farmers play a very important part as guardians and protectors of the land and living environments.

Given the lack of consensus on agricultural trade, the WTO has not managed to establish a negotiating framework that transcends the traditional issues of tariffs and subsidies, and this is probably the reason explaining the current deadlock in trade talks. In order for the WTO to be in a better position to address the concerns of its members and civil society on representativeness and legitimacy issues, it should integrate global sustainable development aims much more explicitly in its agenda.

Therefore, the idea would be to better take into consideration the social and environmental aspects of agriculture within trade negotiations in order to overcome the divisions that have stymied progress on the Doha Development Agenda. In fact, Article 20 (c) of the Uruguay Round Agreement on Agriculture as well as the November 2001 Doha Ministerial Declaration require that “non-trade concerns” be taken into account in the WTO negotiations (WTO 2001b). These social and environmental considerations of agricultural international law (food security, land access, and environmental concerns) refer, in fact, to the concept of the multifunctionality of agriculture.

The multifunctionality of agriculture is based on the concept of externalities (side or external effects) and public goods. More specifically, farmers may produce goods or services that possess the characteristics of externalities of productive activity affecting the well-being of citizens. Externalities can be positive or negative. They are not or insufficiently taken into account by the market.

Positive externalities refer to situations where citizens benefit from the action of the farmer without having to pay anything. Enhancement of the landscape and protection of biodiversity are examples of positive externalities generated by agriculture. However, for the farmer, the production of these goods or services may involve costs that are not internalized in the price of his or her products. We then say that there is market failure.

There are also negative externalities of agricultural production such as soil erosion, sedimentation, or pollution. If the farmer does not assume the costs that may be involved, it is the general public that may experience a worsening of its current and future well-being.

Public intervention may be necessary to remunerate the positive externalities of agriculture, corresponding to the expectations of society, or to compensate for and reduce negative externalities. To recognize the multifunctional character of agriculture is to recognize the positive externalities of agriculture.

Legal Recognition of the Multifunctionality of Agriculture

Since the Club of Rome called for, in 1968, a “zero-growth” approach in order to offset the increasing scarcity of natural resources, concerns about the environment as well as about natural resources and their renewability have multiplied in all relevant international fora. International law recognizes, and has done so for many years now, the concept of a multifunctional agriculture. This concept made its first appearance in the Agenda 21 adopted by the UN in Rio in June 1992 during the “Earth Summit.” The Quebec

Declaration, adopted in 1995 during the Food and Agricultural Organization’s (FAO) fiftieth anniversary conference, as well as the 1998 OECD (Organization for Economic Co-operation and Development) ministerial conference also explicitly refers to it.

The introduction of the notion of multifunctionality in agricultural trade negotiations originates in the final agreement of the Uruguay Round which recognizes the importance of taking into account the “non-trade considerations” specific to each state in the process of liberalization. During this round, the European Union (EU), Japan, Norway, and Switzerland put forward the possible consequences of rapid and deep agricultural liberalization for the environment, national food safety, and the risks of destabilization of the agricultural sector. Joined by Korea and Mauritius, these countries constitute the group known as the “Friends of Multifunctionality” at the WTO.

Thanks to this group of countries, these concerns are included in the Agreement on Agriculture and referred to as “non-trade concerns”: “commitments under the reform program should be made in an equitable way among all Members, having regard to non-trade concerns, including food security and the need to protect the environment” (paragraph six of the Agreement on Agriculture’s preamble). According to Article 20 (c), these concerns should be taken into account in the agricultural trade talks that started on January 1, 2000, in accordance with the agenda set in the agreement: “recognizing that the long-term objective of substantial progressive reductions in support and protection resulting in fundamental reform is an ongoing process, Members agree that negotiations for continuing the process will be initiated one year before the end of the implementation period, taking into account (...) non-trade concerns” (Article 20, Continuation of the reform process).

During the conference on non-trade concerns in agriculture held in July 2000 in Ullensvang, Norway, a number of WTO members expressed their openness toward the issue of non-trade concerns in agriculture, particularly so in the rural development, food security, and environmental

protection sectors. In a joint note on non-trade concerns, submitted to the Special Session of the WTO committee on agriculture in November 2000, 27 member countries declared that “Every country has the right, in accordance with mutually agreed rules, to address non-trade concerns, such as strengthening the socio-economic viability and development of rural areas, food security and environmental protection, and promoting the coexistence of various types of agriculture.”

The concept of the multifunctionality of agriculture quickly emerged as a controversial concept. Indeed, this concept has sometimes been interpreted as having implications for trade and protectionism, some countries justifying further subsidies based on this concept. Following the controversy caused by this debate, the Organization for Economic Co-operation and Development (OECD) tried to formulate an analytical framework for the concept of “multifunctional agriculture” based on the following points (OECD 2001):

- “the existence of multiple commodity and non-commodity outputs that are jointly produced by agriculture;
- the fact that some of the non-commodity outputs exhibit the characteristics of externalities or public goods, with the result that markets for these goods do not exist or function poorly.”

The OECD also formulates two possible approaches to the analysis of multifunctionality, interpreting it either as a characteristic or as a goal:

- The positive approach consists in interpreting multifunctionality as the characteristic of an economic activity. The particular characteristic that makes an economic activity multifunctional is its multiple, interconnected outputs or effects. These outputs can be positive or negative, intended or unintended, complementary or conflicting, and reinforcing or offsetting. Some of the outputs are valued in existing markets, whereas others may elude the market mechanism. Multifunctionality, interpreted in this way, is not specific to agriculture; it is a property of many economic activities. There are numerous ways in which economic activities can be multifunctional. A certain activity may be multifunctional or

not, but there is no implicit notion that it should be multifunctional.

- The normative approach defines multifunctionality in terms of the multiple roles assigned to agriculture. In this view, agriculture as an activity is entrusted with fulfilling certain functions in society. Consequently, multifunctionality is not merely a characteristic of the production process, but it takes on a value in itself. Maintaining a multifunctional activity or making an activity “more” multifunctional can become a policy objective.

The positive approach, chosen by the OECD, leads to purely economic reasoning consisting in identifying goods and services in terms of supply and demand equilibrium models. This is, in terms of public policy, an extremely reductive way of seeing things compared to the normative approach. The European Union (European Commission 1999) and the FAO (2004), on the other hand, have chosen the second approach. As highlighted in the European Commission’s report, agriculture is multifunctional because it is not simply limited to the production of agricultural commodities; it also has to guarantee food safety, protect the environment, and sustain rural employment. The agricultural sector’s unique features are put forward in order to explain the specific role of agriculture in society: agricultural production as a nature-bound process, facing inelastic demand, situated in space, as well as having particular strategic and cultural characteristics. This approach is a more cultural- and identity-based approach, superimposed on a purely market-based approach.

The Stance of Advocates of Multifunctionality

Supporters of multifunctionality consider that agriculture fulfills several functions, in addition to the production of food and agricultural goods. These functions derive from the specific nature of the agricultural sector as well as from the socio-logical, economic, historic, and cultural context in which agriculture is situated. These supporters recognize agriculture’s role in environmental and landscape protection as well as its importance in rural development. They equate the multiple roles of agriculture to the delivery of goods and

services of general interest. Due to their public character, these goods and services cannot be produced by the market in sufficient quantities to meet social demand and, above all, cannot be obtained by any means other than agricultural activity.

The potential for agriculture to yield environmental services is now widely recognized among the OECD countries. For example, it is stated in an OECD document that “the provision of environmental benefits and amenities is increasingly seen as an element of the multifunctionality of the agricultural sector.” The word “amenities” is important because it differentiates the concerns of industrialized countries from those of developing countries, with those of the former focusing primarily on protecting agricultural landscapes and those of the latter focusing on the resource-protecting services – prevention of soil erosion and watershed protection, for example – without which food security may be threatened.

Developed country advocates of multifunctionality (EU, Japan, Norway) thus call for a review or an enlargement of the criteria defining the measures that are exempt from the reduction commitments made under the WTO Agriculture Agreement. Norway, for example, considers that the support granted to agricultural production destined for the domestic market should be subjected to less stringent reduction commitments than those for traded commodities. Korea wishes to see new measures, especially compensatory supports for the multifunctionality of agriculture, exempted from reduction commitments. Korean delegates are concerned about restrictions on “supports for maintaining domestic production capacity of staple crops for food security purposes,” as well as support measures designed to strengthen producers’ income safety nets, help small farm households, and boost agricultural and rural development in developing countries. Finally, Japan has called for an improvement of the criteria for green box designation (subsidy reduction exemptions for policies related to the environment) in order to be able to better take into account the public aspects of agricultural production.

The Arguments Against the Recognition of the Multifunctionality of Agriculture

The countries that have expressed the strongest reservations regarding multifunctionality are those in the Cairns group (especially New Zealand, Australia, South Africa, and Argentina) as well as the United States. For representatives from these countries, the multifunctionality argument is more precisely described as the claim that agriculture generates positive externalities in addition to the primary output, food. Externalities, which can be both positive and negative, arise when the private costs and benefits of economic activities differ from the social benefits and costs of these activities. Economic agents are influenced by the private costs or benefits ignoring the social impacts. The costs of negative externalities are borne by society as a whole rather than the individual decision-maker, while the benefits of positive externalities are uncompensated.

From this perspective (essentially, the positive approach described above), multifunctionality is not specific to agriculture, as every economic activity inevitably generates externalities. Moreover, in this regard, national or domestic agricultural industries are not necessarily intended to guarantee food security and the viability of rural communities, especially in developed countries. Food security should rather be seen as a joint product or as an externality of trade rather than an outcome of national production. Diversification of supply sources constitutes a better strategy than the sole development of national supplies against the risk of supply shortages, the latter being subject to meteorological, phytosanitary, or sanitary uncertainties. Greater trade liberalization would contribute to the stabilization of global commodity prices, especially by eliminating the disruptive effects generated by states’ trade and agricultural policies and by reducing climate risks. Similarly, the viability of rural communities is considered to be more closely related to other sectors or to the agrifoods sector as a whole rather than to the agricultural sector itself, considering particularly the declining importance of agriculture in industrialized countries in terms of jobs and contribution to rural income.

Opponents of multifunctionality suggest that every single country has legitimate non-trade concerns and objectives, but these remain subject to “the long-term objective of substantial progressive reductions in support and protection, resulting in fundamental reform” of the agricultural sector (Article 20 of the Agreement on agriculture). Continuing the reform process is still the best way of boosting growth and development. According to these countries, multifunctionality is being used as an excuse to maintain trade-distorting agricultural support, as increasing trade liberalization is not incompatible with pursuing the objectives related to multifunctionality.

The Divergent Views of Developing Countries

Given their heterogeneity, developing countries do not have a common position in agricultural talks.

The developing countries which are members of the Cairns group (they are all agricultural exporters) wish to see increased and accelerated agricultural trade liberalization and call for further opening of the domestic markets of partner countries to their products.

On the other hand, some developing countries have embraced the positions of the Friends of Multifunctionality (Barbados, Burundi, Cyprus, Estonia, Fiji, Latvia, Mauritius, Mongolia, Poland, Slovakia, the Czech Republic, Romania, Saint Lucia, Slovenia, Trinidad and Tobago). They argue that agriculture is a key sector in the pursuit of vital national objectives. With the Friends of Multifunctionality, these countries submitted a note to the WTO on non-trade concerns reflecting the achievements of the international conference held in July 2000 in Ullensvang, Norway (European Commission 2000).

Between these two extremely different positions is found a group of eleven countries that have proposed the creation of a development box (Cuba, Haiti, Honduras, Kenya, Nicaragua, Uganda, Pakistan, Salvador, Sri Lanka, Dominican Republic, and Zimbabwe). India also is favorable to a food security box. The suggested development box would group together a list of products to which domestic support or market

access commitments would not be applicable. Just like the special safeguard clause, mostly available to and used by developed countries, it would allow the implementation of a set of border protection mechanisms in the case of a drastic increase of low-cost imports endangering national production. Finally, it would include provisions aimed at facilitating access to developed countries' markets and would prohibit dumping. India, whose agricultural policy is traditionally quite close to that of the Friends of Multifunctionality, nonetheless denounces multifunctionality used as a way to justify high levels of protection. Its food security box aims at exempting intervention tools guaranteeing food security from liberalization commitments.

The Multifunctionality of Agriculture: A Guarantee for Its Sustainability

The agricultural question has once again become a geopolitical issue which will probably turn out to be increasingly complex given the demographic, environmental, and socioeconomic challenges of the twenty-first century. The current state of agriculture leads to a number of questions for the future, and for many of these, there is still no answer. The challenge will be to include the social and environmental aspects of agriculture in international negotiations in order to guarantee its sustainability. In 1931, Paul Valéry wrote in *Reflections on the World Today*: “And so begins the era of the finite world”...Something new must therefore begin. . . .

The Agricultural and Food Challenges of the Twenty-First Century

Over the next four decades, agriculture will have to face multiple challenges. First of all, there will be nine billion inhabitants on Earth in 2050 (compared to the current seven billion). The planet will therefore need to produce more with fewer agricultural workers given increasing urbanization. By 2015, one in two people will live in cities and by 2050 two out of every three human beings will be city dwellers, which means concretely that there will be more consumers but

fewer producers. Africa, for example, is thus expected to see its general population double and its urban population triple by 2040. Moreover, each year, 30 million hectares of land are lost in the world due to urbanization and industrialization. Last but not least, not only is the agricultural population shrinking but it is also getting older, especially in developed countries. Indeed, in most developed countries, only three to six percent of farmers are less than 35 years old (EUROSTAT 2010) – two thirds are over 55 – and one can thus legitimately question the sustainability and the durability of agricultural activity in these countries.

According to the FAO (FAO 2011), agricultural production needs to be increased by more than two thirds by 2050 in order to be able to face these challenges. Yet, the growth of agricultural production is decreasing and, each year, 30 million hectares of land are lost because of the sprawl of cities and transport networks. Moreover, the use of petroleum-based inputs will have to be reduced and global pressures on water resources will have to be curbed.

Agriculture is thus now at a historic turning point. Not only will it have to meet the demographic challenge of a need for increased production and the environmental challenge of preserving ecosystems, but it will also have to work toward raising the living standards of agricultural producers as there will clearly be no agriculture without them. Guaranteeing farmers a decent income will be crucial for global food security. Agriculture has a cost and we should have enough foresight to pay its price.

The Relationship Between Agricultural Sustainability and Competitiveness

The sustainability of agriculture inevitably raises the issue of its competitiveness. In order to be sustainable, an activity must be competitive: there is therefore a clear link between these two elements in a competitive and globalized economy. Yet, in certain areas of poor countries and even in developed countries, agricultural sustainability is clearly challenged by its lack of competitiveness. The question is now to know how competitiveness should be defined in a sustainable economy.

The aim of sustainable development (UNGA 1987) is to set and implement viable models that reconcile the economic, social, and environmental aspects of human activities. These are the three “pillars” of sustainable development which need to be taken into account by governments but also by companies and individuals. The ultimate purpose of sustainable development is thus to find a coherent and viable long-term balance between these three pillars.

When discussing agriculture’s multifunctionality, one should not limit the debate on competitiveness exclusively to economic criteria. Indeed, this debate should include the environmental and social aspects of the issue just as it seems obvious to establish the environmental and social history of a product in its price and cost of production.

The Explicit Inclusion of Sustainable Development Global Aims in International Negotiations

Future agricultural trade negotiations should clearly identify non-trade concerns of agriculture such as social and environmental considerations. Given the challenges associated with sustainable development, the recognition of the multifunctionality of agriculture will visibly constitute the main driver for the evolution of agricultural policy toward environmental respect and the aim of food security.

This approach would in fact question the multilateral *modus operandi* based exclusively on free trade: instead of being solely in charge of promoting free trade, the WTO would be put in charge of organizing and rationalizing the necessary protections needed by states in order to offset the negative impacts of trade liberalization as well as of safeguarding the positive externalities of agriculture in the environmental and food security sectors. As a result, the WTO would stabilize the trading system and would reduce protectionist incentives without completely inhibiting them. The challenge is thus to find the proper balance and to elaborate neutral solutions in order for countries not to be accused of defending particular interests. This calls for a generic definition of the criteria and degrees of

flexibility. This would enable the defense of protection motivated by non-trade concerns such as food security, environmental protection, and social considerations of agriculture.

The Doha Agenda was set on the basis of a hypothesis of overproduction and of a fall in agricultural prices amplified by agricultural policies which would distort the commercial advantages of developed countries at the expense of developing countries. However, today the trend has been completely reversed. Now the issue is not the need to handle surpluses and the deflation of international prices but to deal instead with scarcity and tensions on the agricultural market. It is therefore essential to update WTO rules in order for them to meet these new challenges and to rebalance them to face the social and environmental concerns of the twenty-first century.

In order to address these non-trade concerns, it could be envisaged to:

- Reformulate article XX of the WTO in order for it to define in a precise and updated way its principles and to integrate more explicitly sustainable development objectives (food security, environmental concerns, multifunctionality of agriculture)
- Coordinate the WTO rules with those of other international organizations (FAO, UNCTAD, UNDP) in order to correct the deficiencies linked to its overspecialization

Conclusion

Is there a right to difference? This is in fact the crucial issue of the debate on the multifunctionality of agriculture as well as on non-trade concerns. This debate is contentious because of political and cultural misunderstandings that are hard to overcome and the fact that the general objective of trade liberalization is often difficult to reconcile with the necessity of maintaining agricultural policies which ensure food security, preserve the rural social fabric and land use planning, as well as encourage environmentally sound production patterns.

The WTO Dispute Settlement Body itself has increasingly been taking into account non-trade

concerns. Through its interpretation of the Shrimp-Turtle case, for example, its Appellate Body permitted the adoption of unilateral measures for the protection of the environment (WTO, DSB 2001a). The Doha Declaration confirms this trend: “We recognize that under WTO rules no country should be prevented from taking measures for the protection of human, animal or plant life or health, or of the environment at the levels it considers appropriate” (WTO 2001b).

Arising from cultural, sociopolitical, and environmental factors, agricultural policies today express the aspirations of consumers for certain types of consumption patterns, the preferences for a certain type of production, and, more generally, the relationship between society and its diet and agriculture. The tensions arising from the hormone-treated beef and GMO cases illustrate perfectly Europe’s and North America’s different perceptions on these issues. But however contentious these North/North tensions can be, the North/South fracture is even more radical as the incorporation of sanitary, environmental, and social requirements in agricultural policies reflects the level of economic development and social demands while also being an obstacle to the import of Southern agricultural products to the developed countries’ markets. According to Pascal Lamy “the issue of collective preferences in trade conceals a structural divide between the North and the South.”

Of course, a state that imposes the respect of sanitary, environmental, and social norms in trade relations creates obstacles to trade. This also means that these obstacles are susceptible to be interpreted not as what they are or should be – the promotion of legitimate societal choices – but as a new form of protectionism.

Today, developing countries exert a great deal of pressure on developed countries to liberalize their agricultural policies, and this pressure will probably not enable multifunctionality or non-trade concerns to be put at the center of discussions because of their seemingly conflicting nature with the non-trade objectives of developing countries.

Since the WTO Agreement on Agriculture, developed countries have been invited to open

their borders not in order to encourage a modernized or more efficient agriculture but to favor agricultural models which, because of certain natural and social dispositions, permit cheaper production. But can the competitiveness of agriculture be still solely defined by its capacity to sell cheap agricultural products on the world market? And can the theory of comparative advantage, based exclusively on economic competitiveness and the lowest possible production costs, determine on its own the framework and substance of agricultural trade negotiations when agriculture needs to ensure food security, to guarantee the quality and healthiness of products, as well as to protect the environment and contribute to the vitality of rural areas? Given the challenges linked to sustainable development, economic competitiveness used as the sole criterion of international agricultural negotiations is now obsolete; agricultural prices should now also reflect the environmental and social cost of production.

Far from being a protectionist policy smoke screen, taking better account of the multifunctionality of agriculture constitutes a major evolution of agricultural policy toward good environmental practices and the objective of food security.

Summary

The agricultural question has once again become a geopolitical issue which will probably turn out to be increasingly complex given the demographic, environmental, and socioeconomic challenges of the twenty-first century. Over the next four decades, agriculture will have to face multiple challenges, and the test will be to introduce the social and environmental aspects of agriculture in international negotiations in order to guarantee its sustainability. Given the lack of consensus, the WTO has not yet managed to establish a dynamic negotiating process which is not limited to tariffs and subsidies, and this is probably the reason for the current deadlock in the trade talks. Article 20 (c) of the Uruguay Round Agreement on Agriculture as well as the

November 2001 Doha Ministerial Declaration requires that “non-trade concerns” be taken into account in the WTO negotiations. These social and environmental considerations of agricultural international law (food security, land access, and environmental concerns) refer, in fact, to the controversial concept of the multifunctionality of agriculture.

Cross-References

- ▶ [Biodiversity and Global Development](#)
- ▶ [Climate Change, Ethics, and Food Production](#)
- ▶ [Economy of Agriculture and Food](#)
- ▶ [Food Security](#)
- ▶ [Multifunctional Agriculture](#)
- ▶ [Sustainability of Food Production and Consumption](#)
- ▶ [Trade and Development in the Food and Agricultural Sectors](#)

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Multilateral Trade Organizations, Food, and Agriculture

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Synonyms

Agricultural trade; Ethics; Food security; General Agreement on Tariffs and Trade; Legitimacy; World Trade Organization

Introduction

The relations between ethics, agriculture, and multilateral trade organizations are complicated, both in terms of academic and policy debates. In the post-World War II period, the most powerful international trade institutions have been the General Agreement on Tariffs and Trade (GATT) (1947–1994), a treaty-based regime, followed by the establishment of a formal institutional structure in the shape of the World Trade Organization (WTO). Other agencies at the United Nations, notably the Food and Agricultural Organization (FAO) and the United Nations Conference on Trade and Development (UNCTAD), have interests in the links between agriculture and trade, but this entry will not debate these institutions. The discussion introduces and dissects debates that have revolved around the GATT/WTO system, divided into two main sections. First, there is a focus on political decision-making norms within the GATT/WTO system and how this culture shapes the scope for deliberation on agricultural trade ethics. Second, the entry probes some major aspects of recent WTO agricultural debates, including attention to questions of subsidies and food security.

Institutional Practices and Agriculture in the GATT/WTO System

The management of agriculture as a multilateral trade concern has been intensely fought over in the postwar period. For most of the history of the GATT, particularly in light of the establishment of the European Common Agricultural Policy in 1962, agriculture was granted an exceptional political status. This took the form of two major measures: (1) the legitimization of subsidies as long as they were proven not to increase market share (GATT Article XVI:3) and (2) the normalization of quantitative restrictions which enabled, among other outcomes, the application of export limits to prevent critical shortages of foodstuffs (GATT Article XI:2). Thus, while it would be wrong to say that agriculture was excluded from all GATT proceedings, there was little political energy to unlock and negotiate wider trade in agricultural goods. It was only in 1986, with the launch of the Uruguay Round of trade talks, that agricultural law was codified into a particular agreement. In 1995, when the new WTO system assumed responsibility for monitoring the implementation of the Agreement on Agriculture (AoA), some trade experts, although by no means all, expressed optimism that a fairer regime of agricultural exchange could be established. By 2001, as part of the (still ongoing) Doha Round, WTO members agreed to reopen negotiations on agricultural trade rules in an effort to realize a diverse range of material benefits.

How such recent negotiations have been conducted is one important dimension for any ethical analysis of the nexus between trade and agriculture. Similar to other international organizations, the WTO has been troubled, at times acutely, by problems of “input legitimacy” or “procedural justice” that inevitably shape the scope for material rewards (Brown and Stern 2012; Elsig 2007). Particularly in light of institutional debacles, such as the collapse of the Seattle Ministerial in 1999 amidst scenes of street protests, criticism has surfaced that the agenda-setting processes lack sufficient inclusiveness, transparency, and representation. Initially, such critics were found within particular governments,

notably Southern countries such as Brazil and India, who grew tired of being diplomatically marginalized. Other prominent voices that condemned decision-making practices included national farming collectives and unions; research-informed civil society groups, such as Oxfam; and some policy-relevant scholars who were close to the Geneva-led policy process.

Three sets of debates can be highlighted here. First, as one prominent analyst has expressed it, the “major and unsustainable discrepancy” in the business of rule making and decision making at the WTO has always been the coupling of an automatic and binding system of laws under powerful surveillance with the informal, ad hoc practice of bargaining and negotiation (Narlikar 2005, p. 42). The importance of informal political practices in establishing agendas and codes of conduct within the WTO is impossible to overstate, a legacy drawn from the diplomatic “club” culture of the GATT. But when informality becomes the institutional *modus operandi*, weaker actors are always vulnerable to manipulation through forms of power (Narlikar 2005; Eagleton-Pierce 2013). Second, the need to perform effectively in negotiating arenas is closely tied to the technical resources and competences of each government. Historically, in terms of legitimacy, concerns lay in several aspects of the negotiating processes, including legal expertise, access to elite “green room” forums for select members, the core protocols on the negotiation of rules, issue linkages, and the role of the secretariat. Third, the question of representation remains a vexed problem: is the WTO’s legitimacy sufficient on the basis of the “collective” legitimacy of individual states (even when many may exhibit poor forms of domestic democracy and protest opportunities), or should the organization welcome greater parliamentary and civil society oversight and engagement? (Shaffer 2004; Charnovitz 2004). Whether one conceptually views this search for deliberative legitimacy in terms of a focus on the optimal allocation of powers or, more amorphously, through multilevel governance within the system is one notable qualification.

Inequities in the organization and conduct of WTO agricultural talks have not, however,

remained fixed. In 2003, at the Cancún Ministerial, three major Southern country coalitions arose to contest the tendency of the USA and the EU to monopolize decision making: the G20 (led by Brazil, India, and China) on offensive agricultural interests, the G33 (led by Indonesia and the Philippines) on defensive rural development concerns, and the Cotton-4 (Benin, Burkina Faso, Chad, and Mali) which targeted the removal of cotton-specific subsidies. Researchers have explored how these coalitions have worked to reconfigure the WTO negotiating environment. Within a largely positivist methodology, literature by Narlikar and Tussie (2004) and Odell (2006) has unpacked some of the factors behind effective coalitions, including comparing bloc and issue-specific groupings, the utility of material and diplomatic resources, leadership questions, and the means for managing criticism. Elsewhere, within a more critical sociological reading on symbolic power, Eagleton-Pierce (2013) has tracked how the G33 and Cotton-4 successfully drew upon different argumentation strategies in an effort to gain recognition in the WTO order.

Ethical Concerns and the WTO Agricultural Agenda

The very notion of “ethics” does not easily fit into the institutional vocabulary of the WTO’s agricultural agenda, nor do trade analysts and scholars commonly invoke it. The subject matter of neoclassical economics, which serves as a font of theoretical inspiration for most participants and knowledge producers on trade, has consistently eschewed explicit questions of ethics. This is regrettable given that classical political economists in a pre-disciplinary academy, such as Adam Smith, always incorporated ethics into their conceptual schemas. Nevertheless, one can point to ethical tensions and dilemmas that resurface in negotiations over agricultural trade, even if such contests are conventionally explained through other concepts and guises.

Perhaps the starkest ethical concern has centered on the distributional effects of OECD government measures on resource-poor countries

in the trading system. Many Southern countries have a disproportionate reliance on agricultural trade for export revenue, employment, and, by association in many instances, political stability. For instance, as a percentage of GDP, agriculture averages 10.3 % in Southern countries, with an annual growth rate of 2.9 %. By contrast, in Northern countries, the sector forms just 2.4 % of GDP, growing only slightly by 0.8 % per year (FAO 2006). In terms of the economically active population in Southern countries, 53 % are engaged in agriculture-related work. Dependence upon the export of three or fewer agricultural products for foreign exchange remains a critical problem for many countries (FAO 2004). At the same time, Northern country support programs that restrict access to wealthy markets, generate large surpluses, and subsidize exports. Many critics have noted the transferring of government support funds to a concentrated number of large agricultural firms. For instance, according to the Washington DC-based Environmental Working Group, among subsidy recipients, the top 10 % of US farms collected 73 % of all subsidies (\$121 billion out of \$165 billion) from 1995 to 2005, an annual average of \$34,190 per recipient. In 2009, across the OECD as a whole, it was estimated that the value of support to producers was US\$252 billion (OECD 2010). Farmers in Southern countries are often excluded from these Northern markets and forced to compete against heavily subsidized competition in international and even local markets.

As a result of these material conditions, the political relevance of WTO negotiations on agriculture has been closely associated not only with efforts to close the Doha Round but also with the overall legitimacy of the WTO system itself. How the reform of the AoA is now intimately tied to notions of fairness or “diffuse reciprocity” in trading relations and, more broadly, international politics cannot be overestimated. Representatives from Northern governments seldom miss an opportunity to preach the virtues of trade openness and external integration strategies with the capitalist system, while remaining resolutely protectionist themselves in key subsectors and categories. The agricultural rules in the WTO

system largely perpetuate a system under which the distribution of agricultural trade is shaped not by comparative advantage in terms of competitiveness but by access to subsidies, an area in which privileged countries have an unrivalled advantage. While some modifications and policy reforms have been introduced by Northern members, failure to fundamentally change these conditions will inevitably reinforce a perception that WTO rules skew the benefits of trade towards the North. The degree to which the increased international awareness of inequities in trading relations actually impacts on the WTO agenda can be debated, but there is no doubt that the backdrop is considerably different compared to the years of the Uruguay Round.

Another related ethical tension involving the WTO agricultural agenda has pivoted around the relationship between definitions of food security and trade policy. The idea of food security was incorporated into the AoA text, but there have been criticisms that the notion largely privileges OECD country concerns. Within the preamble, Article 20, and provisions in Annex 5, food security is classified under what are called “non-trade concerns.” The basic premise behind this larger category is that agriculture serves many purposes beyond what is commonly recognized as “trade” – that is, the production and sale of commodities – and that such distinctions need to be acknowledged in multilateral rules. Since the conceptual debut of “non-trade” at the end of the Uruguay Round, the naming and classifying of topics under the heading has remained ambiguous. Countries have preferred to offer illustrative (rather than indicative) lists of “non-trade” items, going beyond food security to include ideas about environmental integrity or cultural preservation (Smith 2012). It is crucial to note that the dominant actors who shaped the legal meanings of food security in the Uruguay Round were not Southern members, but principally Japan, the EU, and the Nordic countries. In subsequent policy debates, the EU’s heavy promotion of the concept of “multifunctionality,” characterized as a subcategory within “non-trade,” worked to complement and reinforce these meanings.

Yet, when analyzed holistically, there are perhaps more profound problems with how food security is conceptualized in the AoA. One only needs to glance at the vast academic and policy literature on the subject to appreciate that it is much more than simply government stockholding, a provision that can be exploited in the rules. Rather, the concept has been progressively stretched in multiple directions and spawned a variety of potential ideas. Since the 1970s, there have been changes in thinking that have reshaped what “food security” means: from the global and the national to the household and the individual, from a food-first perspective to a livelihood perspective, and from addressing objective indicators to subjective perceptions (Shaw 2007). The FAO’s (1996) definition often serves as a contemporary starting point for many analysts: “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” Thus, the issue of food security may indeed go beyond the commercial model of farming and the supremacy of the price mechanism. As Aileen Kwa and Walden Bello (1998, p. 2) have argued in their critical reading of the AoA, “*real* food security raises questions such as who has access to the land, who produces, who makes the decisions, who will eat, and whether or not the food produced is culturally appropriate.” And yet these multiple perspectives and meanings, derived from a range of analysts, have found little home at the WTO, or at least not in its early life prior to 2000.

Since 2003, however, as a result of the efforts of the G33 coalition in the Doha Round, there has been some movement towards rethinking the nexus between food security and WTO policy. Research promoted by the FAO and civil society groups has also helped to spark and engender policy debates in this area. Although a Doha settlement has yet to be reached (and may never be), the creation of the category of Special Products (SPs) in agriculture talks is still significant. SPs have provoked discussion on the limits of trade liberalization and how, in particular, Southern countries could protect certain critical goods

from tariff reductions if it can be shown to benefit domestic livelihood security and rural development. Discussions between governments have centered on which products could be defined as “special,” how the evidence for differential treatment can be formulated, and what material consequences would be generated by such instruments. Major agricultural exporters, including the USA and the Cairns Group (led by Australia and Canada), have been most vocal in opposing SPs. But it is also important to recall that any implementation of SPs would result in significant disturbances in South-South trade patterns. For instance, Thailand, as the lead rice exporter in the world, has been concerned that other countries would specify rice as an SP. Malaysia also signaled that exports of its palm oil could be undermined if other countries, such as India, chose that product as an SP.

Summary

Researchers of WTO agricultural issues have historically not addressed their analytical problems through the category of ethics. At a deeper level, such a lacuna can be explained by how the major structures of knowledge production on international trade – neoclassical economics and law – tend to marginalize the unpacking of ethics. Yet despite this absence, analysts may deploy alternative conceptual vocabulary that grapples with certain ethical tensions and dilemmas in WTO agricultural debates. As noted, this has primarily surfaced in both scholarly and political discussions on the meaning of “fairness” and reciprocal exchange in trade talks. In particular, since 2003, coalitions of Southern countries have slowed down the pace of WTO political negotiations in order to defend their perceived interests. Within these moves, agriculture has come to dominate the Doha Round to a greater extent than was envisaged by the EU and the USA. The AoA was a historical accomplishment in terms of its initial formulation, but it has left a tangled labyrinth of rules that in many areas legitimize government subsidies of rich countries. Internationally, access to such government measures

will always be uneven, with distributional consequences in terms of competitiveness and livelihoods.

To conclude, there are some additional areas of research that need to be explored at the interface between ethics and WTO agricultural reform. First, in light of the ecological threat posed by a carbon-constrained world, scholarship needs to explore the extent to which WTO agricultural rules and practices contribute to forms of environmental injustice. For instance, at a higher level of policy abstraction, does the AoA promote a commercialized food system that is fundamentally unsustainable to ensure the preservation of agriculture? Second, and in a related sense, how can one analyze the emergence and material effects of biofuels in relation to WTO disciplines? If biofuels have been one contributing factor in commodity price volatility, including raising food import costs for resource-poor countries, what role does the WTO serve (if any) in limiting or managing such instability? A final under-researched area would center on larger questions of corporate or “market power,” including the financialization of trade in commodities. Further scholarship is needed to understand how major transnational agricultural businesses structure the scope for material impacts and work with political elites to further particular capitalist interests.

Cross-References

- ▶ [Agricultural and Food Products in Preferential Trade Agreements](#)
- ▶ [Food Security and International Trade](#)
- ▶ [Multifunctionality of Agriculture and International Trade](#)
- ▶ [WTO Dispute Settlement and Food and Agricultural Trade](#)

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