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Intellectual Property and Food

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Synonyms

[Patents and copyright](#)

Introduction

Many foods and food crops are covered by intellectual property rules. Intellectual property laws allow people to protect ideas and inventions by preventing other people from copying, using, imitating, importing, or selling the protected subject matter. These protections come in several different varieties, including patents, trademarks, and copyrights, as well as trade secret protections. These rights provide those who possess them, for a limited time, with exclusive claims that cover inventions, discoveries, or original expressions. Intellectual property protections originally applied primarily to mechanical inventions – new machines for moving stones or weaving cloth. As intellectual property law has grown, it has expanded to new areas, to cover different forms of creativity and different products, including foods, agricultural crops, and even living (nonhuman) animals. At present, US law supports intellectual property protection for bacteria, food crops, animals, and recipes, provided that the inventor can show that the covered subject matter meets other requirements. In the case of patent protection, the covered subject must be *nonobvious*, *novel*, and *useful*. While these laws protect people's interests in ideas – “intangible subject matter,” as it is called in legal jargon – not all ideas are eligible for protection. No intellectual property protection can be given for mathematical formulae, even though they may be difficult to prove. No intellectual property protection can be given for discovery of fundamental laws of nature, even though their discovery may take brilliance and creativity. Several different forms of intellectual property protections cover food or food ingredients, including plants, animals, recipes, and food additives. The following section will discuss different kinds of intellectual property and the different levels of protection they afford.

This entry begins with a brief outline of different forms of intellectual property and the different protections they provide. The second section reviews the major lines of argument that have been employed to justify and defend the various institutions of intellectual property protection. Special controversies that arise in the case of intellectual property protections for foods and crop varieties are considered in the third section, followed by a brief discussion of alternatives to patent and intellectual property protections for food and agricultural products.

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Types of Intellectual Property Protection

Intellectual property law includes rules covering patents, trademarks, copyright, and trade secrets (Schechter and Thomas 2003).

Trade secrets include information that an individual or company might wish to keep private, often because this information provides a strategic market advantage. For example, the recipe for a popular food or drink might be protected as a trade secret, because the manufacturer hopes to prevent others from producing and selling an identical product. Trade secrets receive minimal protection, but are often covered by nondisclosure agreements that constitute a legal barrier to workers who could otherwise sell or reveal the protected information.

Copyright allows authors or publishers to prevent others from making and selling unauthorized copies of written material. The associated rights also include the creator's right to be identified as author of the work and to determine who may revise, adapt, or perform it. For example, most cookbooks are protected by copyright. The associated rights afforded to the copyright holder do not include the right to decide who may use the recipes, but do typically include the right to prevent others from *publishing* the copyrighted recipes.

Trademarks, borne by many food products, are a recognizable sign that uniquely identifies products as being from a particular source. Trademark protects a manufacturers' exclusive right to prevent others from using a designated "word, phrase, symbol, or design, or a combination [thereof], that identifies and distinguishes the source of the goods of one party from those of others" (US Patent and Trademark Office). Trademark protection is not available for generic food terms – for example, one could not get trademark protection for the word "pasta" or "hamburger" – but may be gained for names that are used to distinguish one brand from another, like "Barilla" or "McDonald's."

Patents are similarly designed to protect against unauthorized copying, but apply to inventions or discoveries that are useful, nonobvious, and novel. A patent holder has the right, for a limited time (often about 20 years), to prevent others from copying or possessing a copy of the patented item. In return, the patent holder is obliged to *disclose* the invention, by providing a full explanation of its nature and the process by which it can be produced. The scope of patent law has broadened over the course of recent decades to include genes, cells, and organisms as well as more ordinary inventions. These extensions are controversial, but have been widely supported by courts in many countries. Most agricultural food crops grown in the United States either are patented or include genes that are covered by patent laws.

Foundations of Intellectual Property Rights

Intellectual property laws are intended to spur innovation and to give inventors control over the fruits of their creative efforts. Some legal systems incorporate the idea that inventors and creators have special *moral rights* to control their creative products. There is a philosophical debate between those, on the one hand, who think that creators have underlying moral rights that are secured by these legal institutions and others who regard intellectual property rights to be entirely created by the laws that are used to enforce them. If the reasons supporting intellectual property rights are *moral reasons* such as justice or fairness, then presumably the rights in question are moral rights as well as legal rights. If the reasons supporting these rights are merely based on expediency or utility, this is sometimes taken to undermine the claim that there are underlying moral rights to be secured.

Intellectual property rights are typically defended on three different grounds: first, they are sometimes defended as *Lockean* rights, following the theory of property described by John Locke in Chapter V of his *Second Treatise of Government*. Second, they are often defended in terms of the “personality interest” that creators have in the control of their creations. Third, these rights are often given a utilitarian defense. Utilitarians urge that the protection of these rights promotes public welfare (Moore 2011, 2008; Hughes 1988; Hettinger 1989; Kuflik 1995).

The *personality defense* of intellectual property begins with the idea that people have a moral claim to their talents. When people invest their creative efforts in the development of new works or ideas, they have, it is argued, a special claim to control the results. Artists, for example, have an interest in defining, within reasonable limits, the uses to which their artworks can be put, an interest which is set back if they have no control over their works. In a similar vein, new recipes invented by creative chefs may be works of art into which the creator has a personality interest, like any other artist. The personality defense of intellectual property is founded on the view that creators invest their personalities in the works they produce, giving them a right to control these works.

The *Lockean defense* of intellectual property is based on the idea that individuals are entitled to the products they create and in which they invest their labor. Locke argued that, because people have a right to their own bodies, when they improve something’s value by investing their own labor into it, they acquire a property right to that thing which justifies excluding other people from using it. However, such property rights only accrue to things that were previously unowned. Thus, on Locke’s view, a person who collects pecans from under an unowned tree in the wild would acquire a property right in them, but someone who collects nuts under a neighbor’s tree would be a thief.

Finally, the *utilitarian defense* urges that legal regimes that protect intellectual property are good policy because they promote social welfare. They do this, principally, by providing an extra incentive to reward creative work. In many cases, the development of new products requires a significant investment of time and money for research. Protection of intellectual property rights gives creators a period during which they can hope to regain the costs of development and to profit from their creative efforts. By providing an incentive for creative work, an intellectual property regime promotes the development of valuable and welfare-enhancing products and ideas. Some people also see intellectual property rights as a safeguard against people who might “free ride” on the creativity of others by using others’ inventions without payment or consent. This view, however, is by no means universal. Other writers, including Thomas Jefferson, have argued that it is a virtue of invention that one person may use another’s invention without imposing disadvantage on the inventor. From the utilitarian perspective, wider dissemination of valuable inventions is a good thing. From the perspective of the *personality defense*, however, such dissemination might be interpreted as unjustified theft.

Some forms of intellectual property protection are expressly designed with these utilitarian considerations in mind. Patents, for example, are often described in terms of the expectation that patent protection represents a mutually beneficial exchange between an inventor/patent holder and the public at large. The patent holder receives, for a limited time, an exclusive right to license and the patented item and to prevent others from making and selling it. (A patent right does not include a positive claim to make the patented invention: where inventions are dangerous or otherwise regulated, even the patent holder may not have a right to make the item.) The period of patent protection is supposed to provide the patent holder with the ability to recover research and development expenses and to make a profit. The public receives, in return, access to creative products that would not otherwise be available and free access to the information necessary to produce them. As part of the patent process, the patent holder must *disclose* the invention, by providing complete instructions sufficient to allow another person to make copies of the patented

invention. After the patent expires, the invention is in the public domain, freely available for use by anyone.

The alternative different defenses of intellectual property, variously based on personality, labor, and utility, are not mutually exclusive: one might accept that each provides relevant reasons to protect and respect intellectual property rights. But different reasons may be relevant to different circumstances. The personality defense is most plausible for artworks and for other creative products in which creators have invested personal meaning. The Lockean argument is most plausible for creations that can be framed as the fruit of the creators' labor.

The utilitarian argument may be the broadest of all, but has its most central application to inventions that promote the public good. Critics of intellectual property laws often argue that these laws fail to promote public welfare since they prevent people from using valuable information. Defenders urge that the information that is constrained would, in at least some cases, not have existed at all but for the incentive effect of intellectual property law. This incentive effect and the fact that intellectual property rights are typically time-limited are important aspects of the case for the claim that these rights promote public welfare. After the time limitations on these rights expire, the protected ideas are in the public domain and can be used freely by anyone.

The disclosure requirement, for patents, is another important element of the utilitarian defense. Unless the invention is otherwise regulated, a patent holder typically has an exclusive right to license and sell patented goods and to prevent others from making, selling, or using the patented subject matter without permission or payment. In return, the patent holder must *disclose* the invention by publishing a full account of the invention, including instructions for making it. When the patent expires, other people can use this account to make, use, and sell the item. The idea behind this policy is that inventors invest money, effort, and creativity to develop new technologies. The period of patent protection enables them to earn back that investment and to make a profit on their creative efforts. Inventors are advantaged because they have exclusive rights in their patented subject matter. The public is advantaged because the patented technology is available and publicized. In the absence of patents, inventors might keep their inventions secret to prevent others from copying. Such secrecy is worse for the public, because secret inventions are usually less widely used. And it is worse for the inventor because secret inventions often cannot be sold or produced without disclosing the secret. Critics of intellectual property rights sometimes overlook the fact that keeping information secret is a likely outcome for some products and inventions and that secrecy will often be advantageous when other forms of protection are not available. In such cases, it can be argued that the elimination of intellectual property rights would not immediately make information public and available. Instead, it would drive information underground.

This case may be undermined, however, if there is evidence that intellectual property protections are not being used in the way projected by the laws. Sometimes, for example, people have tried to take out patents on technologies that would otherwise have been available in any case or to patent inventions created by other people. Attempts have sometimes been made to patent ideas that are widely used and understood. And sometimes, patent protectors become "trolls," the term used for people making money by suing people who use the technology covered by their patent, without marketing the patented product themselves. In such cases, intellectual property protections can lock up inventions by moving them out of the public domain, preventing or slowing creativity instead of promoting it.

Intellectual Property Controversies in Food Ethics

Some of the earliest examples of intellectual property protection covered food items. Moore (2011) reports that “chefs in the Greek colony of Sybaris were granted year-long monopolies for creating particular culinary delights.” Presumably, the purpose of this brief protection was to provide an incentive for creative cookery. More recently, there has been a surge in intellectual property protection for foods, especially patents on mass-marketed food products. US patents have been granted for foods with novel properties, including longer shelf life, flavor, nutritional value, appearance, and many others. Some of these patents are controversial for one reason or another. Sometimes patents are granted for information that should properly be in the public domain, in which case the patented item can no longer be freely used. Some people have other reservations about patented material, arguing that some kinds of things – including some intangible subject matter – should not be privately owned. Some people object on moral grounds to the technologies that are covered by patents. And it is sometimes argued that intellectual property protections improperly give to corporations or individuals control over food or agricultural production.

Patenting in the Public Domain? If the material is already in the public domain, it is not properly patentable subject matter. Patent law was not intended to remove valuable intellectual property from the public domain, but sometimes patent examiners make mistakes. Examples of errors, in this case, are controversial, but sometimes errors are recognized, and patent protection is rescinded.

For example, one highly controversial patent (US Patent Number 6004596) covers:

A sealed crustless sandwich for providing a convenient sandwich without an outer crust which can be stored for long periods of time without a central filling from leaking outwardly. The sandwich includes a lower bread portion, an upper bread portion, an upper filling and a lower filling between the lower and upper bread portions, a center filling sealed between the upper and lower fillings, and a crimped edge along an outer perimeter of the bread portions for sealing the fillings therebetween. The upper and lower fillings are preferably comprised of peanut butter and the center filling is comprised of at least jelly. The center filling is prevented from radiating outwardly into and through the bread portions from the surrounding peanut butter.

This patent covers peanut butter and jelly sandwiches with certain special properties: to violate the patent, a sandwich must have its crust removed and edges crimped. In addition, there must be two separate layers of peanut butter to prevent the jelly from coming in contact with the bread, making it soggy. The examiner who approved this patent must have judged that this technique would not be obvious to experts “skilled in the art” of sandwich making. Nonobviousness of this kind is a requirement for patent eligibility. The fact that crustless peanut butter and jelly sandwiches are common in lunch boxes around the country has been cited as evidence that this patent was improperly granted (Jaffe and Lerner 2004).

Another similarly controversial case involves US Patent 5894079 issued to cover a species of bean called by the patent holder as the “Enola bean” (Wolf 2007). The patent identified the bean by its species and color, but it was later discovered that beans with the same properties had been in use in the United States prior to the issuance of the patent and that they had been in use in Mexico for hundreds of years. The Enola bean patent was challenged and rescinded, but the process required to challenge patents is expensive and time-consuming. Unless people are willing to spend the necessary resources to challenge them, such patents are likely to remain in effect.

Patenting what “should not be owned.” It has sometimes been argued that plants and crop species should not be patented, because, as some people believe, they should be regarded as part of the common heritage of humankind (Magnus 2002, Ossorio 2007). The claim is that plants and living organisms are automatically in the public domain so that private appropriation of them is a kind of theft. This argument is more tenuous when it is applied to crop varieties that have been

carefully developed, whether by selective breeding or by direct genetic manipulation. In such cases, the organism developed may be quite different from the original, and there are good reasons to think that the kind of development work undertaken by plant breeders and geneticists is just the kind of work intellectual property rights is intended to promote.

Patenting controversial technologies. Some critics of agricultural patents, however, regard some of the patented products to be morally questionable whether they are properly regarded as inventions or not. Critics of agricultural biotechnology, in general, and genetically engineered food crops, in particular, often argue that these technologies should not be covered by intellectual property rights because they are dangerous to humans or to the environment or because they find such technologies to be intrinsically wrong. Under US law, however, the claim that a technology is morally reprehensible is not regarded as a legitimate reason not to issue a patent. If patented subject matter is *dangerous* or if its production would violate other people's legal rights, then the state may prohibit the patent holder from making the invention covered in the patent. For example, a chef who invented a new recipe for cooking endangered animals might be able to get a patent on the recipe, but no right to possess or kill or serve the endangered plant or animal. In such a case, the fact that the recipe cannot legally be made, it would not necessarily prevent a patent from being issued. But in general, the fact that a technology is regarded to be morally questionable is not a valid legal reason to deny patent protection. One might find this to be at odds with the thought that patents and intellectual property rights in general are supposed to incentivize the development of valuable new technologies: how can patenting immoral inventions promote the public good? But in a pluralistic society, different people hold different moral values and might not agree on which inventions are morally questionable. Patent examiners are not qualified to make judgments about the morality or immorality of the inventions they review.

Patents and the control of food and agriculture. Still others regard agricultural and food patents to be morally problematic because they enable corporations to control the behavior of farmers, cooks, and eaters. Still others worry that agricultural patents may leave people hungry or otherwise exacerbate food security concerns, since they constitute a kind of proprietary control over the food supply (Tansey and Rajotte 2008).

One context where this problem arises is *seed saving* by farmers. Before agricultural varieties were patentable, farmers were able to save seeds from 1 year to the next and did not rely on corporations to provide seed. Those who grow crops covered by patents or other intellectual property protections, however, cannot save and replant seeds without violating the terms of the patent. Farmers can still grow non-patented seed varieties, which are in the public domain. But patented crop varieties often have features farmers want, including pest or herbicide resistance, higher yields, or other desirable agronomic properties. Defenders of patents note that these desirable properties are present because of the research and development done in pursuit of the patent. The crop varieties that possess them, therefore, are significantly different from the varieties that are in the public domain.

It is a different matter if the patented crops or traits were developed, in part, at public universities with public funding. In such cases, it may be inappropriate for a private individual or corporation to gain control over the patented variety, since this would involve the conversion of public funding for private benefit (Streiffer 2006).

Agricultural patents have changed the power relations involved in food production in other ways as well. At one time, farmers were mostly independent, reliant only on their own resources and the fertility of soil and weather. Present market conditions have been significantly created by intellectual property laws, and farmers must work within these strictures. The existing system allocates enormous market power to large agribusiness companies and less power to farmers. Some people

urge that this situation renders farmers vulnerable to exploitation or that it is an intrinsically unjust distribution of power.

One major issue involves the containment and “adventitious presence” of patented crop varieties. When patented crops migrate and replant themselves, who should be held responsible? Current patent law regards possession of patented subject matter as sufficient for the charge of patent violation, even in cases where the patented item was not used. This provision makes sense for machines and software and in general for inventions that do not replicate and distribute themselves. It is much more controversial in the case of plants. In a widely discussed Canadian Supreme Court case, *Monsanto vs Schmeiser* (2004), Percy Schmeiser, a Saskatchewan canola farmer, was sued by Monsanto corporation for patent violation when patented glyphosate-resistant canola plants were found in his field. He argued that the patented material arrived on his field by pollen drift and that he had never used the protected patented trait. The Canadian Supreme Court noted that possession of patented subject matter constitutes violation even in the absence of use. In such cases, the law does not distinguish cases where the possessor of the patented item intentionally acquired it or acquired it involuntarily, as Schmeiser claimed. The court sidestepped the issue, however, ruling that Schmeiser had taken positive steps to acquire Monsanto’s patented product and that he had used glyphosate expressly to select for the patented trait. Current US and Canadian laws leave open the possibility that land owners may be liable for patent violation when patented plants migrate onto private property. Some commenters are undisturbed by this feature of patent law and note that involuntary patent violators might have a cause of action against their neighbors in such cases. They recommend that the possibility of involuntary patent violation should not motivate a change in patent law. (Janis 2002) It would be a significant disadvantage for property owners, however, if they must endure a lawsuit from a patent holder, even if they can regain some of the loss by suing the neighbor whose field was the source of the patented germplasm. It is likely that patent law will continue to evolve in response to these problems involved in the containment of patented crop varieties.

Alternatives to Intellectual Property

Where intellectual property protections are not available, innovators have three choices: (1) they can make their creative products freely available to everyone, in the public domain; (2) they can keep their inventions secret; or (3) they can find alternative means to control their products.

Public domain. If new products immediately enter the public domain, this would undermine the incentive effect of intellectual property law, which is intended to spur creative invention. But, while intellectual property laws provide an incentive for both creativity and disclosure, there is no reason to think that creative efforts would cease if these laws were not in place. Some kinds of creative work, however, require many years of costly investment in research and development. For example, the development of a new crop variety typically requires 10–15 years for development, and the research involved may cost millions of dollars (Sease and Hodgson 2006, p. 350). Creative efforts that impose these heavy costs might be less likely in an environment where protections are not available.

Secrecy. Critics of intellectual property sometimes argue that ideas should be freely available to everyone, but the elimination of the laws protecting intellectual property would not immediately make ideas free. Some inventors would simply keep their inventions secret. Many creative products are already maintained as secrets, instead of being made available in the public domain.

Secrecy is not necessarily better than public disclosure: patented creations are available for others to study, even during the period when they are protected as private property.

Alternative means. In the absence of intellectual property laws, it is sometimes possible for people to protect their creative products in other ways. Some seed companies include license restrictions on seed bags that itemize restrictions on replanting or require growers to sign a technology agreement when purchasing seed. In this way, they are able to use contract law to restrict growers' legal right to save seed and replant. While contract law can be used to replicate *some* features of intellectual property protection, however, it cannot replicate them all. Contractual agreements apply only to those who sign or otherwise consent to their terms, while standard intellectual property protections imply obligations for everyone, not just to consenting contractors. But some crops are effectively protected when desirable traits are not heritable by the next generation or when biotechnology is used to restrict the possibility of seed saving and subsequent planting. For example, hybrid crop varieties are effectively protected since seeds saved from hybrids will not grow into plants that have the desirable agronomic traits and high yields of the originals. And some companies have worked to develop "genetic use restriction technologies" (GURTs) that effectively accomplish the same thing. The so-called "terminator" technology makes next-generation seeds sterile, insuring that farmers cannot save and replant patented seeds. This technology is highly controversial and is not presently in use.

Summary

Because intellectual property rules allocate advantages and constraints, they will always be controversial. Since some ways of distributing these advantages and constraints are morally better than others, the problem is one of ethics and justice, not just efficiency. These rights are designed to reward creativity and to provide incentives to promote research and development of new ideas. Some ethical controversies associated with intellectual property law arise when the laws are misused. Other ethical controversies arise as a result of the way the institutions are structured. Food is a fundamental human need, and agricultural food production is an enormous undertaking. For this reason, it is especially urgent to ensure fairness and equity in the distribution of intellectual property rights in these areas.

QI Cross-References

- ▶ [Agricultural Policy and Governance](#)
- ▶ [Avant Garde Art and Food](#)
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References

- Hettinger, E. C. (1989). Justifying intellectual property. *Philosophy and Public Affairs*, 18, 31–52.
- Hughes, J. (1988). The philosophy of intellectual property. *Georgetown Law Journal*, 77(2), 287–366.
- Jaffe, A. B., & Lerner, J. (2004). *Innovation and its discontents*. Princeton: Princeton University Press.
- Janis, M., & Kesan, J. (2002). Intellectual property protection for plant innovation. *Nature Biotechnology*, 20, 1161–1164. <http://www.nature.com/nbt/journal/v20/n11/full/nbt1102-1161.html>.
- Kuflik, A. (1995). Moral foundations of intellectual property. In D. Johnson & H. Nissenbaum (Eds.), *Computers, ethics, and social values* (pp. 169–180). Saddle River, NJ: Prentice Hall.
- Magnus, D. (2002). Intellectual property and agricultural biotechnology. In G. McGee (Ed.), *Who owns life?* (pp. 265–276). New York: Prometheus Books.
- Monsanto Canada Inc. v. Percy Schmeiser. (2004). 1. S.C.R. 902, 2004 SCC 34
- Moore, A. (2008). Personality-based, rule-utilitarian, and Lockean justifications of intellectual property. In H. Tavani & K. Himma (Eds.), *Information and computer ethics* (pp. 105–130). Hoboken, NJ: Wiley.
- Q2 Moore, A. (2011). Intellectual property. In *Stanford encyclopedia of philosophy*. <http://plato.stanford.edu/entries/intellectual-property/>
- Ossorio, P. (2007). The human genome as common heritage common sense, or legal nonsense? *Journal of Law, Medicine, & Ethics*, 35(3), 435–439. <http://onlinelibrary.wiley.com.proxy.lib.iastate.edu/doi/10.1111/j.1748-720X.2007.00165.x/pdf>.
- Schechter, R. E., & Thomas, J. R. (2003). *Intellectual property: The law of copyrights, patents, and trademarks*. St. Paul, MN: West Publishing.
- Sease, E., & Hodgson, R. (2006). Plants are properly patentable under prevailing U.S. law, and this is good public policy. *Drake Journal of Agricultural Law*, 11, 327–351.
- Streiffer, R. (2006). Academic freedom and academic-industry relationships in biotechnology. *Kennedy Institute of Ethics Journal*, 16(2), 129–149.
- Tansey, G., & Rajotte, T. (2008). *The future control of food*. London: Earthscan. U.S. Patent and Trademark Office, http://www.uspto.gov/trademarks/basics/trade_defin.jsp.
- Q3 Wolf, C. (2007). Plants, patents, property, and pirates. *Bioethics in Brief*. In three parts: Part I: http://www.biotech.iastate.edu/publications/bioethics_outreach/Bioethics_in_Brief/mar07.html, Part II: http://www.biotech.iastate.edu/publications/bioethics_outreach/Bioethics_in_Brief/may07.html, Part III: http://www.biotech.iastate.edu/publications/bioethics_outreach/Bioethics_in_Brief/nov07.html

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