

Ethics of Intellectual Property

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Legal Aspects



Legal definition of IP

- Patent
- Trade secret
- Copyright
- International agreements



Patent

- Designed to encourage *disclosure* of ideas in exchange for limited period of exclusive use.
- Can patent:
 - A “method, product, apparatus, composition of matter, design for articles of commerce, or in certain cases a plant.”
 - Software or an algorithm.
- Cannot patent:
 - A pure idea, such as a theorem.
 - Anything that occurs in nature.
 - A “way of doing business,” even if automated by computer.
 - “Look and feel,” e.g. spreadsheet.



Patent

- Patented invention must be useful, novel, and unobvious.
 - “Novel” means:
 - It was not known or used in the United States prior to the patent application.
 - It was not patented or described in a publication anywhere in the world more than a year prior to the patent application.
 - “Unobvious” means it was not obvious to a person skilled in the art at the time of the invention.



Patent

- Duration of patent is 20 years.
 - 14 years for “design for article of commerce” (ornamental appearance of device).



Trade secret

- It is a “secret formula, pattern, or device that is used in a business and provides a commercial advantage.”
 - It can be bought, sold and licensed.
- It remains intellectual property forever, or until the secret gets out.
 - For example, the formula for Coca-Cola.



Trade secret

- The law does not prohibit *use* of a trade secret.
 - It only prohibits others from *stealing* a trade secret.
- It is legal for another company to conceive the idea independently and use it.
 - Reverse engineering is not theft (the idea was not really secret).



Copyright

- It limits the number of copies others can make of a document or work of art without permission.
- It lasts longer than a patent.
 - Individual's copyright lasts 70 years beyond his or her lifetime (recently extended from 50).
 - Work made for hire: 95 years past publication or 120 years past creation, whichever is shorter.
- Ideas cannot be copyrighted.
 - Only a particular expression of ideas.



Ownership

- A patent is *registered* in the name of the inventor.
- The *owner* may be someone else, or a company.
 - An employer normally owns any idea conceived by someone working *for hire*.
 - The 3-M employee who invented post-it notes at home for his church choir had to turn rights over to the company.



Ownership

- Who works “for hire”?
 - Normally, full-time employees work for hire and do not retain IP rights.
 - However, a university faculty member normally retains rights to a scholarly article.
 - Universities are free to modify this tradition in the employment contract and sometimes do.
- Normally, consultants do not work for hire, depending on contract.



Ownership

- A PhD student paid by professor to develop a specific algorithm is not working for hire.
- Retains IP rights unless there is a specific agreement to the contrary.
- **But...** professor or PhD student working under a grant is subject to terms of the grant.
- A PhD student interested in IP rights should explore the issue *before* investing heavily in a project.
- Universities typically publish IP policies.



International agreements

- The ruling international law is the TRIPS agreement.
 - Trade-Related Aspects of Intellectual Property Rights.
 - Added to GATT (General Agreement on Tariffs and Trade) at the Uruguay Round of trade negotiations in 1994.
 - Amended at 2001 WTO Ministerial Conference in Doha.



International Agreements

- Most controversial provision of TRIPS is its limitation on compulsory licenses.
- A state may issue a compulsory license to require a holders of a pharmaceutical patent to grant rights to the state or third party.
 - In exchange for royalties set by the state.
 - A major issue in the pharmaceutical industry.



International Agreements

- TRIPS limits grounds for compulsory licenses to national emergencies and the like.
- Doha meeting liberalized this.
 - Gives countries the right to determine the grounds on which they issue compulsory licenses.

Ethical Aspects



Concept of IP

- The term *intellectual property* has been in common use only about 30 years.
 - Can leave the impression that IP is like other property.
 - But one can use IP without denying others the use of it.
 - So it is unclear that IP rights are “natural” property rights analogous to the right to own an automobile or land.



Lockean defense for IP rights

- There is no property in a state of nature.
- But when humans improve or transform natural resources, they can *take possession* of the fruits of their labor.
 - Natural ownership of one's body extends to creations of one's body.
 - One can sell possessions once acquired.
 - So one can acquire property without creating it.



Lockean defense for IP rights

- But this is an argument for the right to *take possession* of something.
 - As opposed to leaving it available for common use.
 - But one cannot take possession if IP in this sense.
 - Lockean argument doesn't seem relevant to IP.



Kantian defense for IP rights

- One can act only if one has to freedom to choose one's actions.
- This presupposes some degree of control over one's immediate surroundings.
- To deny this kind of freedom is to deny agency and therefore immoral.



Kantian defense for IP rights

- One mechanism for ensuring control is the right to exclusive or at least uninterrupted use of artifacts one needs to carry out one's purposes.
 - So a right to a reasonable amount of property can be grounded in the right to agency.



Kantian defense for IP rights

- But one doesn't need exclusive use of IP, since others can use it simultaneously.
 - One can have full access to IP no matter how many other people use it.
 - So Kantian argument does not apply to IP.



Utilitarian defense for IP

- None of the previous says that there is no right to IP.
 - Only that there is no *natural* right.
- There may be a utilitarian obligation to respect IP rights.
 - This is a weaker right, as reflected in the law.
 - Limit on how long one can own IP.
 - Fewer limits on who can use it (trade secrets).



Utilitarian defense of IP rights

- Utilitarian argument for IP
 - IP rights provide incentive to develop new ideas.
 - This increases overall utility.
 - Patent law allows free discussion and exchange of ideas, despite IP rights.
 - Original intent of patent law.
 - Also increases utility.
 - But trade secrets, nondisclosure agreements restrict discussion.



Utilitarian defense of IP rights

- So IP rights are not rights to exclusive use of IP, but rights to make a profit from it.
- Unlike inherent human rights, all IP rights must be justified in terms of consequences to society.
 - There can be no “balancing” of IP and human rights.



Back to TRIPS agreement

- Some criticized original TRIPS agreement for trying to balance human and IP rights rather than giving human rights priority.
 - For example, restriction on compulsory licenses.
 - A north/south issue.
 - GATT signatories have taken little action to implement Doha reforms.
 - Apparent pressure from “north.”

Examples



Patenting Life

- One cannot patent an organism that occurs in nature.
- However, one can patent a genetically altered organism.
 - U.S. Supreme Court, *Diamond v Chakrabarty*, 1980, allowed patenting of oil-eating bacterium.
 - Chakrabarty was genetic engineer at GE.
 - One gets credit for the entire organism after tinkering with its DNA.



Patenting Life

- Disclosure requirement limits generality of patent.
 - Philip Leder patented genetically engineered “oncomouse” that contains cancer-causing genes, and any similar mouse.
 - “Similar mouse” must be engineered according to the technique disclosed in Leder’s patent application.



Neemix

- W. R. Grace patented neemix, derived from seeds of neem tree, which grows naturally in India.
- Patent was challenged on two general grounds:
 - Neem seeds are natural and belong to everyone.
 - Neem extracts and their effects are traditional knowledge in Indian culture.



Neemix

- Can Grace patent a substance that occurs in neem seeds?
 - No. They cannot patent anything that occurs in nature.
 - Grace patented a more stable form of neem seed extract.



Neemix

- Can Grace patent a neem extract that is traditional knowledge in India?
 - Not in India. They didn't try.
 - They got a U.S. patent because
 - the extract had not been known or used in the USA prior to the patent application
 - The extract had not been patented, nor the idea published, in India a year or more prior to the patent application.



Neemix

- Suppose patents extended across international boundaries.
 - Neither U.S. nor Indian companies would be able to patent traditional Indian knowledge.
 - But U.S. companies would be entitled to video royalties in India.
 - First-world intellectual property would have the advantage.

Moral Status of IP



Moral status of IP

- Traditional conception of property rights was more sophisticated than the modern one.
 - Several kinds of property.
 - Only partially interchangeable.
 - For example, bride price may be payable only in cattle.
- Money usable only for trade with other groups.
 - Different kinds of money.



Moral status of IP

- Modern conception of property makes all assets interchangeable.
 - Reduction of all value to single medium of exchange.
 - This tends to result in concentration of wealth
 - One can use economic power to acquire assets of those less well off. (See M. Walzer, *Spheres of Justice*).



Future of IP rights

- But we are seeing a trend away from this extreme solution.
 - Illegality of prostitution.
 - Abolition of chattel slavery.
 - Removal of medical care from marketplace in some countries.



Future of IP rights

- Strengthening of IP goes against this trend.
 - Further extends interchangeability of assets.
 - Response to business pressure over the last century.
 - Minor modifications of life forms can be patented.
 - *Diamond v. Chakrabarty*
 - Minor modifications of folk knowledge can be patented.
 - W. R. Grace and Neemix.



Future of IP rights

- Incentives for innovation are key to West's continued prosperity in a new world order.
 - “Developed” and “less developed” nations therefore clash over IP agreements.



Future of IP rights

- We may see a weakening of IP rights, due to:
 - Growing clout of non-Western nations.
 - General trend away from reducibility of value.
 - Growing practicality of limits on interchangeability.
 - Airline miles.
 - Web-based accounting.