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Title: "**Patents, Trade Agreements and the Technology of Theft**"

Stream: Global Themes

Discipline: Public policy

Note: This paper will be updated soon to include (a) general information on patents, (b) material on recent intellectual property problems deriving from the patenting of ayuhasca, basmati rice, and other biota , as well as (c) new evidence that the granting of (agricultural and pharmaceutical) patents may not be in service to the commons.

Theft has always depended on the encouragement of law and public relations ("spin") to flourish. Consider the case of patents.

When Columbus stumbled upon a land new to him, he was carrying "letters patent" from the King and Queen of Spain. Those documents made the discovery and the exploitation of a whole "New World" possible, legal and rewarding. The letters were issued for the benefit of Spain by authorities whose right to issue such patents ---according to the spin-meisters of another day-- came directly from God.

Why bother to create such letters patent? Because -- to borrow insight from ecologist/activist Vandana Shiva -- what was necessary for the invasion and exploitation of other people's land, what was essential to the colonization, was to have a means of declaring inhabited land "empty" --- void of true human beings (1). With such a legal fiction in place, land could be discovered with impunity and "filled" with clear conscience. In the moment of discovery, "empty" land could become the Queen's (or the King's) and afterwards, title could be conferred by sovereign grant.

"Letters patent" served to legitimize theft and the creation of property. In the Old World, they were licenses to plunder. Even today, the term is still used to indicate a government grant conferring (private) title to public land. Whether anyone should have the right to bestow such titles is of course a matter of perspective.

The process of legitimizing usurpation and colonization - or to put a different spin on it - the process of legitimizing the transfer of property and the rights to its development - continues today. Today, however, the subject of legitimization is not so much a land rush as a gene rush. The prize is the ownership (and control) of life and the invasion this time, as Vandana Shiva tells us, is an invasion of the interior spaces of people, plants, animals, and microorganisms (2).

The new invasion looks remarkably like a second coming of Columbus to some of us. Rather than land-entitling letters patent, there are monopoly-entitling industrial patents on biological materials. Instead of rights descending from God, there are efficiencies contingent on the Market.

Standing in for church and priests to articulate the blessings for invasion are an assortment of government bureaucrats and university departments of technology transfer and bioethicists. (3) And in place of kings and queens and their ministers, there reign the corporations and their entourage -- the World Bank, the International Monetary Fund, the World Trading Organization, NAFTA, APEC, MAI, and even the Biodiversity Convention.

The association of patents and thievery did not end with Columbus. The tradition continued in the New World. Consider Samuel Slater, for example. The industrial development of the United States derives in a sense from his very skilled act of patent infringement (theft).

In the 1760s, the Englishman Richard Arkwright invented the water-powered spinning frame - a machine that brought cotton spinning out of the home and into the factory and made Britain a world-class power in the manufacture of cloth. To protect this competitive advantage and ensure the market for manufactured cloth in its own colonies, the English Parliament enacted a series of restrictive measures, including the prohibition of the export of Arkwright machinery or the emigration of any workers who had been employed in the factories using the Arkwright invention. From 1774 on, those who sent textile machines or their workers abroad from England were subject to fines of 200 English pounds and twelve years in jail. That's how serious they were about patent protection. (4)

In 1790, Samuel Slater, who had worked for years in the Arkwright mills, left England disguised as a farmer. He came to the United States and, with financing from Moses Brown, created from memory an entire Arkwright factory and all its equipment. He produced commercial grade cotton cloth and thereby put the United States on the road to Industrial Revolution grade manufacturing. His achievement was rewarded and honored and in his lifetime he became rich and was considered a great American hero. He is still acclaimed today as the father of American manufacturing.

In perspective, we can see that Samuel Slater was a patent infringer, an intellectual property thief. He became a hero to those whom his theft greatly benefited.

Titles then, as now, were matters of legal attitude and public "spin". Even Alexander Hamilton, always on the lookout for federal aid to U.S. industry, once argued that patent infringers -- he called them "introducers" -- people who introduced really useful foreign inventions into the country -- ought to be granted some kind of benefit in law, much as inventors and authors are benefited by the sections of the U.S. Constitution devoted to the protection of intellectual property. (5)

Attitude and spin have changed with time. Until the push for the inclusion of intellectual property rights -- patents, copyright, trademarks, and such -- in international trade agreements, it was understood, even accepted, albeit with grumbling, that countries did not enforce patent protection until it was in their national interest to do so. Intellectual property protections came very late even in some highly developed places. France, for example, only began to patent drugs in 1958, West Germany, in 1968, Japan, in 1976, and Switzerland in 1977.

When the young United States pirated the intellectual property of Europe -- and Slater wasn't the only infringer -- it congratulated itself and saw the theft as evidence of national virility. But by the early 1970's, the U.S. was a more mature industrial power which, like Britain before it, was looking for legal means to maintain a competitive advantage. (6). US industry, either because it wanted greater protection for its idea-based products -- where it still held the worldwide lead -- or because it wanted greater control of the markets and a higher level of return on investment -- pushed for inclusion of intellectual property clauses, including standards for patents, in trade agreements. This was a huge change in the way things had worked up until then. And it engendered a fight that is not over yet.(7)

Interestingly, both sides in the trade fights since the 1970's -- those who wanted intellectual property rules in trade agreements and those who didn't -- tried to "spin" the discussion with metaphors for theft.

The U.S. Trade Representative's office and the biotechnology industry explained the need for intellectual property rights in trade agreements with talk of 40-60 billion dollars of loss due to intellectual property piracy; they claimed that the quality of pirated products was lower than the real thing and that the piracy was costing lives; and they blamed all losses on Third World pirates.

Those who criticized TRIPs (Trade Related Intellectual Property Rights) in GATT (the General Agreement on Tariffs and Trade) or NAFTA (North American Free Trade Agreement) pointed out that the Third World and the Indigenous World also suffered losses due to piracy. They noted that many products made in the industrial world, almost all its food crops, and a high percentage of its medicines originate in plant and animal germplasm taken from the developing world. They observed that theft was two-fold: first was theft of knowledge of biological material and how to use it, and second was theft of the material itself. Noting that no royalties had been paid for the use of this

material, they called the unagreed to, unacknowledged appropriation of the material "biopiracy" and suggested that the World Trade Organization trade rules would likely be interpreted to make continuing theft of genetic material easier for the Industrial World.

In counterpoint, spin-meisters from the industrial world retorted that what was claimed to be biopiracy was in reality bioprospecting of raw materials.

Parrying the claim that "raw" materials collected in the developing world were "natural" materials and therefore did not qualify as patentable and worthy of industrial -style rewards, the developing world answered that the seeming "natural" materials stolen from them were the result of millennia of study, selection, protection, conservation, development, and refinement by communities of Third World and indigenous peoples and were therefore no less worthy of recognition and respect and compensation than the products of the industrial world. They also noted that to consider only the inventions of white men in white lab coats to be inventions worthy of recognition and reward is to hold a fundamentally racist view of human creativity -- it amounted to declaring land "empty" of inhabitants so that it may be claimed for the King and Queen of Spain. And, they further pointed out, by enclosing biological materials in patents, trade agreements were about to transform the rich creative interactions of cultures and biodiversity into a new economics of scarcity. Finally, they observed that the patent system of GATT and NAFTA -- and likely that of APEC as well -- is a system that benefits highly industrial societies and is not necessarily suitable, desirable, or healthy to less industrialized cultures or countries. They recognized -- much as the American colonies of England had recognized in the eighteenth century -- that no matter how the patent-holders and patent rule-makers chose to spin it, industrial-style patents would not necessarily lead to the transfer of new technologies to or a better life in the developing world but were much more likely to lead to the devastation of local industries, importation of high-cost products by small elites, and the exportation of (so-called) "raw" materials not protected by patents.

The injection of industrial-style patents into trade agreements, the critics claimed, was fundamentally an act of arrogance. Giving five to ten years to developing countries to adopt a correct attitude about patents -- that is the amount of time GATT gives -- giving a relative few years to adopt a system that the U.S. has been working on -- interpreting, reinterpreting, and altering -- since 1790 -- seems a bit cynical. (8) Further, the process that forced some people to adopt other 's notions of property and creativity -- that said thousands of years of ongoing experimentation and production did not deserve the same compensation as a few years of indoor laboratory tinkering -- is not only

insulting but also very, very costly: To a developing world whose creations may not necessarily result in patent royalties, there was first of all the cost of unrealized profit. Secondly, there was the cost of added expense. With the extension of patents to living organisms and human body parts and genes and with the extension of the industrial patenting system to the whole world via various trade agreements, Third World and indigenous communities faced a very legal, sizable, and collectable bill for royalties. Patents on seeds, for example, could result in 1) farmers denied their traditional rights to save seeds (planting seeds without paying royalties is making an unauthorized copy of a patented product), 2) farmers forced to pay royalties for every seed and farm animal derived from patented stock, and 3) farmers forced -given the current direction of research and the increasing ownership of seed companies by agro-chemical corporations - to become more dependent on fertilizers and herbicides made by the same companies who collected their traditional seeds in the first place and now sell back the chemically-dependent derivatives. The cost of patents on biologicals used in health care and medicines would be even higher and more horrific. In general, the whole patenting process would lead to greater and greater Third World indebtedness to the Industrialized World with little or no recognition of the enormous debt incurred in the other direction.

Thus by the end of the twentieth century sophisticated legal devices called patents were perceived in some place as tools leading to just rewards and in other places as mechanisms for allowing acts of piracy and imposing crushing costs. One side claimed patents were protection from thieves while the other side remarked that those who demanded patent protection from thieves were once and continued to be thieves themselves.

With such differing attitudes, the problem became how to know whose yardstick to use when deciding which is the proper spin and whose is the righteous wisdom? In the United States, the Supreme Court decision in *Diamond vs. Chakrabarty* might have greased the way for patenting "everything under the sun made by man" but even that decision gave the nation no guidance for acceptable behavior when meeting people for whom everything under the sun is sacred and therefore never to be considered property. (9)

The problem of yardsticks also depended on the answer to another question: Should the human relationship to the natural world be a commercial relationship? Most might say no and think the relationship should be a matter of ethics. However, in a world governed by trade, ethics may be seen as a barrier to trade and therefore not an allowable consideration.

Even an agreement intended to deal with the natural world -- the Convention on Biological Diversity (CBD) -- turned out to be a trade agreement and to engender the same commercial/ethical dilemmas and the same opportunities for legal spin. The CBD promised conservation and protection of biodiversity and created legal space for the recognition and enforcement of indigenous rights. But the Convention traded in return sustainable use of natural resources and equitable sharing of benefits, thereby legitimizing a market for owned species and genes and diminishing most biodiversity to the status of property of the master species. Other beings were not to be seen as honored fellow members of a greater ecosystem but were to be reduced to the rank of commodities, valuable gene pools, containers to be divided and spliced and owned and priced and sold.

In the rush for genes, theft hardly waited for spin in the case of the CBD. Even before rules of equitable sharing could be worked out, there were attempts to access and patent material collected from Third World and indigenous communities before the CBD came into force (and therefore not subject to its rules). There were accessions from public gene banks and botanical gardens containing colonial collections; there were bioprospectors offering inadequate bilateral agreements to communities in which they searched, there were agents freely bioprospecting national parks for corporate clients, and there were companies asking vacationing employees to bring home a spoonful of dirt because it might contain some microorganisms the company could use. (10)

The point of all the biospin, of course, was money. The burden of theft continued to fall so unevenly on Third World and indigenous communities because in the half millennium since the King and Queen of Spain gave letters patent to Columbus, indigenous and Third World peoples, had continued to live where the genetic diversity was richest and to act as its stewards. Having maintained and protected the wealth, they were now forced to hold off the thieves.

Whether the theft was of neem from India or endod from Ethiopia or the cells of a private citizen from Seattle or the cheek-scrapings of people in South America or the entire wealth of a Costa Rican rain forest or one important microorganism from the hot springs of Yellowstone National Park, the value of biodiversity was difficult to exaggerate. With the trade agreements extending patents to living organisms and their parts, life anywhere could be owned, manipulated and made worth investing in. And when a marketable product was teased out of what is patentable, the profits could be enormous.

Consider the potential of a few products derived from indigenous knowledge: According to Rural Advancement Fund International (11), neem, a plant that grows mostly in Southeast Asia and produces a kind of natural insecticide, could be worth about 50 million dollars a year. Thaumatin, a natural sweetener derived from a West African plant, might command a sizable portion of the 900 million dollar a year low-calorie sweetener market in the U.S. And endod, a perennial plant used by Ethiopian women for centuries, has multi-million dollar profit potential for controlling the zebra mussels that now clog pipes in the Great Lakes.

Modern spin-meisters continue to say the point in patents is not money but human progress. Without the protection of patents, they argue, no medical progress will be made; no one will be risk an investment unless they are guaranteed an eventual monopoly. And yet, inventions have been made in many communities and throughout all time without the protection of patents. Some communities never required the incentives of patenting to make innovation and sharing attractive.

It continues to be a matter of spin.

Several years ago, an industry analyst was asked about the case of Diamond versus Chakrabarty, where a patent was first granted for a living organism. The analyst was asked why the public outcry in the U.S. was not greater and why the environmental community did not see an ethical problem. He answered,

"The environmentalists, for one example, can be handled. When we went for life patents, they were kept quiet by the fact that the first patent applied for was for a microorganism that could eat oil. You think that was an accident? What environmentalist was going to get in the way of something that might clean up oil spills? So we obtained the right to own life. Now you're telling me they're going to get upset about the theft of other people's ideas and resources! Get real. With neem, we're giving them natural pesticides. The enviros will never object. They'll probably never even notice they've been handled....Everybody gets handled." (12)

A while ago, in Seattle, I attended an international conference on "The Future of Intellectual Property Protection for Biotechnology". The sponsors were generous enough to waive a \$1000 registration fee and I promised myself to behave. I was determined to go there to listen and learn, not to cause trouble or ask questions.... I heard many eminent speakers and a great deal of

discussion about patents. The third day of the conference, one of the panelists -- I forget his name -- bemoaned the situation in his country (where at that time it was nearly impossible to obtain a patent on any form of life). The panelist hoped that his colleagues in other places would not have to face the problems he faced with. . . "environmentalists and those who would bring ethics and other irrational considerations to the table." Those were his words: "ethics and other irrational considerations". Not one eminent speaker challenged the pairing of "ethics" and "other irrational considerations". Not one lawyer. Not one official. Not one academic. (13)

Spin.

#### Endnotes:

1 Her analysis was made in the context of a lecture she gave January 16, 1996 in Kane Hall on the University of Washington campus in Seattle. The lecture was entitled, "Biodiversity and Biopiracy".

2 Ibid.

3. In the U.S., exchange of ideas, information and staff between industry and academia was facilitated by the passage of the Bayh-Dole Act in 1980. The act allowed universities to obtain patents for discoveries made in federally-supported laboratories. Before the act, the federal government usually held title to discoveries made with the help of public funding. After the act, universities could transfer to private companies via license agreements exclusive rights to technologies developed with public monies.

4 See White, George S., *Memoir of Samuel Slater, The Father of American Manufactures* (1836), Reprints of Economic Classics, Augustus M. Kelley, New York, 1967 and Simonds, Christopher, *Samuel Slater's Mill and the Industrial Revolution*, Silver Burdett Press, Inc. New Jersey, 1990.

5 Hamilton's recommendations are quoted in White, *Op. cit.*, p. 86.

6 According to a 1995 Pfizer Pharmaceutical advertisement in *The Economist*, by this time "it became clear that tougher global competition lay ahead for the US". (Pratt, Edmund T., Jr., Pfizer Forum: "Intellectual Property Rights and International Trade", *The Economist*, May 27, 1995, p. 26.)

7 The inclusion of intellectual property rights in international trade agreements was clearly the victory of transnational corporations headquartered in the industrial world. The corporations bragged openly that they were the ones who pushed Trade Related Intellectual Property Rights (TRIPs) onto the GATT agenda. The 1995 Pfizer advertisement in *The Economist* mentioned in footnote 6 made clear:

"In conjunction with more than a dozen companies from all the relevant sections of US business, Pfizer and IBM co-founded the Intellectual Property Committee or IPC. The U.S. Trade Representative was impressed and suggested that we increase our effectiveness internationally by joining forces with UNICE, the principal pan-European business group, and its counterpart in Japan, Keidanren. . . Working together. . . our combined strength enabled us to establish a global private sector network which lay the groundwork for what became 'TRIPs'."

8 1790 is the date the U.S. Congress passed the first U.S. copyright and patent law, pursuant to Article 1, Section 8 of the U.S. Constitution. Interestingly, intellectual property law was passed a year before the Bill of Rights became the first ten amendments to the U.S. Constitution.

9 *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

10 In Europe recently, transnational corporations have been looking for ways to avoid negotiating with well-informed Third World and indigenous negotiators by getting their biological samples from European botanical collections containing Third World and indigenous materials collected before the Convention on Biological Diversity came into force. The companies are asking the towns that hold these collections to take small payments in return for guaranteeing that the sampled material is really the property of the local collection. Thus, according to the analysis of German activist Christine von Weizsacker, unknowing communities are being asked to condone the historical biopiracy of colonization and to make themselves accessory to a new double-layered biopiracy that violates the spirit of the CBD.

11 See, e.g., *An Overview of Bio-Piracy Prepared by RAFI: Biodiversity, Intellectual Property Rights and Indigenous Peoples*, 28-30 September, 1994, Santa Cruz de la Sierra, Bolivia.

12 The analyst, originally interviewed in 1994 for an article that later appeared in *Boycott Quarterly*, asked for anonymity.

13 The incident occurred during a panel discussion that was part of an international conference on "The Future of Intellectual Property Protection for Biotechnology", held October 23, 1993 at the University of Washington School of Law in Seattle.