Property is Nothing More than Persuasion

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I am not persuaded that the U.S. system of intellectual property rights (IPR) makes sense, especially as it pertains to plants. I wonder: *if many people are like me and are not persuaded by our property rights, does the system really exist?* It is a bit like that age-old question: if a tree falls into the wood and no one is there to hear it, does it make a sound?

My library includes a new (1994) but already dog-eared book, *Property and Persuasion,* by Carol Rose. Rose is fascinated by the ways "people make up and change their minds about property and the strategies and arguments they use in persuading others to do the same." The book cover is a photograph of a rickety fence held up by string. Rose points out that anyone could topple the fence but because people are persuaded of the property right, the fence is respected and the property right coffered. Force and violence are signals that a property regime is faltering. Her conclusion is the underlying basis of property must be persuasion.

The Indictment

Why am I not persuaded? I could approach the patent issue many ways and raise questions. But since this is a meeting with many researchers participating, most from public universities, let me step inside your shoes and consider three facts.

Fact: *Patents influence university research agenda.* University researchers are under pressure to supplement dwindling budgets with industry-sponsored projects and pursue joint university-industry IPR efforts. Nowhere is this pressure more evident than in the field of weed science. Weed science departments receive a minimal share of university budgets since scientists are expected to raise their own funds from industry sources eager to "buy" university time to develop herbicide-tolerant crops. As a result, weed scientists have few resources to dedicate to nonchemical weed control research. Patent seeking can also

lead to unintended conflict-of-interest problems. For many years 1 served as the principal staff person dealing with bST (recombinant bovine somatotropin) in the U.S. Senate. When safety questions were raised and the Government Accounting Office (GAO) began its inquiry, it was a struggle to find a single university expert who had not, at one time or another, been on the industry dole. By the way, do include Jane Smiley's new novel *Moo* on your reading list. A central theme is the effect of industry sponsorship on land-grant university research.

Fact: *Overly broad patents stifle research.* Most researchers argued that the European Union soybean and Agracetus cotton patent awards were too broad. Researchers were also upset by the Ventor/NIH sequencing patent because of its lack of utility. These are just some better known examples of misapplied patent authority that had the potential to stifle research and development worldwide.

Fact: *Patents lead to increased research costs.* Patents carry high transaction costs and the people pocketing most of the profit are lawyers. Patents can also be viewed as research and development (R&D) taxes, with the oncogene mouse serving as a prime example. Rather than improving research conditions as advertised, the mice sell at such exorbitant prices that they have, in turn, raised the price tag of scientific inquiry throughout the system.

Since 1 am only looking at patent problems from the research vantage point, my indictment has merely scratched the surface of what will be an extensive discussion to follow. My basic point is that the U.S. IPR system has so many problems that I am not persuaded it is a system worth supporting. And 1 am not alone in this skepticism.

Problem 1: **U.S.** Citizens Are Not Persuaded

I am a member of a tiny club of people who have sat in the patent library studying plant patents. How tiny you ask? I spent a summer reviewing more than 2,000 plant patents and only once did I come across another human being. I remember the day well. I was so excited — could this be a compatriot in plant patent inquiry? No, explained the man as he pulled a box of patents from the shelf, just a guy in search of a nice rose sketch to photocopy for his mom's birthday card.

The public is hardly persuaded that our current system of IPR is a good one. Since passage of the first U.S. plant patent law more than six decades ago, the issue of plant IPR has received little public attention in this country. In a playful but instructive exchange, biotechnology watchdog Jack Doyle once said, "Nine out of ten people walking down the street do not even know you can patent a plant." To which biotechnology gadfly Steve Witt responded, "Frankly, nine out of ten don't know what a patent is!" The lack of public interest and knowledge about patenting and biotechnology is dark cloud hovering over researchers, industry and public interest groups alike.

The legislative history of plant IPR is telling. Despite its importance, plant 1PR issues have received no more than cursory attention from our policy-makers. In 1930, finally responding to the pleas of Thomas Jefferson, the U.S. Congress passed the Plant Patent Act after little debate and by voice vote. In 1967, President Lyndon Johnson appointed a commission to study the entire patent system. Ironically, just three years after the commission concluded that the patent system was not the proper vehicle for plant protection, the U.S. Congress passed the Plant Variety Protection Act following only one hour of debate. In 1980, the Supreme Court ruled in Diamond v. Chakrabarty that patents are to be allowed on all living matter. Following this decision, the U.S. Department of Agriculture (USDA) commissioned a study to evaluate the implication of the Court's ruling for agriculture. The study uncovered little relevant data and recommended that the USDA undertake additional analysis; work that has never been done.

Given the limited public debate, I was amazed at the fervor with which the Bush Administration argued for plant IPR during the Earth Summit and the Clinton Administration fought for interpretative statements to accompany the Convention on Biological Diversity. You would think that all of America was up in arms on the topic. However, the sad truth is that most Americans were oblivious to the fact that these fights took place; "our" position was defined by a few industry leaders. U.S. policymakers would be wise to review domestic laws and engender a public discussion about appropriate IPR systems before leaping onto the international scene to impose "our" answers on the rest of the world.

Problem 2: Our Southern Neighbors Are Not Persuaded

I was asked to comment on gene mapping. Richard Flavell has done so well in covering the topic (see paper, page 51) that 1 would like to turn the assignment around and ask you to think of gene mapping in a more literal way. Politically, the most interesting gene map is the map of the world produced by good old *Rand and McNally*. If we plot the worlds germplasm resources on this map we discover that most of the world's genetic wealth is concentrated in developing countries near or below the equator. This has led to what many of us refer to as the "North-South conflict." The North has wealth; the South has germplasm. Developed countries in the North recognize IPR and push for worldwide adoption of such systems. Developing countries in the South reject Northern ways and are in search of property regimes better suited to their needs.

To avoid conflict and woo the South toward Northern IPR arrangements, three "lucrative deals" have been offered in exchange for access to Southern germplasm. I think it is important to reflect upon these deals because I have come to believe, with more time and information, that even popular game show host Monty Hall could not give them away.

Behind door number one, we have the most popular deal — formal exchange between a developing country and a private company. Such a deal was struck between Costa Rica and Merck & Co., Inc., in 1992. Costa Rica agreed to provide Merck exclusive access to the country's germplasm in exchange for one million dollars and royalties on commercially viable products produced from Costa Rican sources. Many analysts, including my colleagues at the World Resources Institute, hailed this as a breakthrough and have urged developing nations to replicate this model. To me, this is neither a good nor lasting deal. First, it outraged other Latin American countries who suspect that some of their germplasm resources are closely related, if not identical, to the germplasm found in Costa Rica. Therefore, the Merck deal may hinder the ability of neighboring countries to develop their own property. Second, the deal provides no assurance that traditional knowledge and resources will be preserved. Rather, it will likely lead to the preservation of certain resources over others, thereby accelerating the loss of biodiversity. Finally, it is inconceivable to me that a country with as many riches as Costa Rica would sell out for a measly one million dollars. Maybe the moral of the story is that poor countries sell cheap. However, I anticipate trouble in paradise if Merck makes billions of dollars from Costa Rican germplasm.

Behind door number two is the deal of extending "farmers' rights" worldwide. Farmers' rights are the developing world's response to our IPR. Rather than concede to Northern IPR demands, developing countries have devised a system that recognizes the contribution of farmers to the development of improved germplasm by allowing farmers free access to protected materials. This deal is a token payment for the decades of professional breeding provided by farmers and it interferes with the nonmarket logic for maintaining biodiversity among most indigenous communities. While some Southern leaders may now argue for farmers' rights, convinced it is the best they can hope for, this deal is a cheap payoff and it fails to address fundamental equity issues.

Behind door number three is my favorite deal — a worldwide compensation fund. To remedy years of Northern harvesting of Southern germplasm and to placate any outstanding Southern ownership claims, an international fund has been established. Northern countries and industries are expected to contribute to this fund to preserve biodiversity in developing nations. I chuckle when I hear anyone assert that this fund will accumulate more than a few million dollars. Sure, industry may contribute some money, but resources are tight everywhere. Seed companies, for example, generally operate at a five percent profit margin and biotechnology companies remain long-term investments. In Washington, Congress is cutting budgets left and right. Where will the money for this fund come from? The conclusion I draw is that this deal is nothing more than an empty promise.

It is only a matter of time before Southern leaders recognize that these deals are not worth the trade of their germplasm. Unless persuaded otherwise, it is

unlikely that Southern leaders will go out of their way to enforce current deals that primarily benefit transnational corporations. Actually, if I was a Southern leader, I would argue that countries in the South should band together and close off borders to Northern plant prospectors. A germplasm embargo, modeled after the successful Ethiopian embargo on coffee, would bring the North back to the bargaining table and give the South more time to develop its own property protection strategies.

The world would be well served if the South sorted out its position on IPR sooner rather than later. That way we would all know where we stand. To encourage this, 1 suggest two actions. First, Southern nations need to hold a series of intensive meetings to address plant IPR issues and to develop alliances between Southern countries. Second, additional leadership is needed from non-governmental organizations (NGOs) on this topic. For example, I can count on one hand the number of U.S.-based NGOs with sufficient expertise to engage in the plant IPR debate. The foundation community would provide a great service by funding NGO staff hires for IPR and supporting an international IPR summit for environmental, rural advocacy, progressive farm, and biodiversity NGOs.

Problem 3: The Experts Are Not Persuaded

I like nothing better than a good book. 1 sometimes rush through, wanting desperately to know how the story ends. Once in a while I am disappointed. Maybe you have had this experience. You read hundreds of pages anticipating a grand ending, but the author seems to run out of steam at the last minute, leaving the reader a hurried, unsatisfactory conclusion.

This experience happened to me a couple years back in reading the National Academy of Science (NAS) report, *Global Dimensions of Intellectual Property Rights in Science and Technology.* After years of study and almost 400 pages of analysis, the book "concluded" with a list of issues for future research. Described by the authors as a "coda" to the main body of the report, they raised questions at the very heart of the biodiversity struggle. For example, the authors wonder the extent to which IPR can have detrimental consequences for innovation. They also worry that few have really studied the effect of high levels of IPR on the economies of developing countries. The NAS study team suggests closer scrutiny of the non-Western styles of property protection:

> The introduction of IPRs throughout the world has involved propagating as broadly as possible a Western cultural view of the concepts of owner-ship and rights. Some non-Western countries have voluntarily adopted Western-style IPR laws in the process of modernization. Western countries cannot necessarily count on a continuation of this pattern of adoption.... Other cultures and legal traditions, including those in Asia and throughout the Islamic world, may have different concepts of optimal ways to encourage creative participation in society. These alternative cultural traditions and practices must be better understood in building a new global IPR paradigm.

It seems that after all their work, even the experts at the Academy are not persuaded that our system is the right one. My role is to raise questions — to provide a counterpoint to help stimulate our discussions during the next two days. I begin by issuing a challenge — let us leave Friday, not with a handful of good questions that will be shelved or compiled in a coda, but with action plans!

Let me give you an example of a specific action plan that appeals to me. While the emerging common property resource literature has exposed some diversity in existing property management schemes, I think that it is only a small beginning of the needed scholastic effort. My action plan would be to set up a Global IPR Dialogue. Foundations, universities, the NAS and other nonpartisan scientific institutions would pool resources to organize and fund a dialogue among scholars. The Dialogue would bring together 100 "Fellows" — individuals who are creative idea-generators. Geographic diversity is important and half of the Fellows would hail from developing countries to enrich the Dialogue with nonwestern IPR perspectives. The Dialogue would last three years, with much of it taking place over the Internet. However, Fellows would meet in six seminars to provide an opportunity for group exchange. Selected resource people from a variety of disciplines and professions would participate. The location of each seminar would be carefully chosen to fit the issues discussed. For example, resource conservation issues might be considered in Brazil where the riches of the Amazon are under dispute. Western patent law might be discussed in Washington, D.C., where direct access to the U.S. patent and agricultural libraries is available. Fellows would receive general research support during the three-year period and travel expenses to attend Dialogue seminars. In exchange for this support, Fellows would be responsible for rigorous reading and writing assignments, public presentations in their home countries, team-research projects with other Fellows, and publication of a final paper in an edited volume produced and distributed by the Dialogue.

At the very least the Dialogue would help bring attention to IPR issues, expose non-Western systems of IPR to greater scrutiny, and encourage more scholars to enter the field. At best, the Dialogue would begin to answer the questions raised by the NAS coda.

That is my attempt at an action plan. What is yours?

Confronting **QWERTY**

To conclude my recommendations for summer reading, I suggest Paul Krugman's new book — *Peddling Prosperity: Economic Sense and Nonsense in the Age of Diminished Expectations.* Krugman reflects back to a paper by Paul David and Brian Arther of Stanford in which they introduce the idea of QWERTY. Krugman describes QWERTY as "the economics of getting locked in" and defines it as aversion to change. It sounds like an odd word, but we have all stared at QWERTY a thousand times . . . QWERTY spells out the letters on

the top left row of the typewriter keyboard. When the typewriter was first developed, the letters were arranged deliberately to slow people's typing to avoid jamming the machine. Today however, machines can go much faster and yet people refuse to throw out the old keyboard and learn better ways.

1 conclude with QWERTY because I think we are stuck with an 1PR system that does not meet today's needs. We need to radically change how we think about property. Until we are all persuaded that we have it right, our system is precarious at best.