FALSE UTOPIAS

All too often, lawyers receive bad press for their role in modern commercial society: They are regarded as the fount of all obstacles to innovation and improvement. Oftentimes I am happy to join a fifth column against the excesses of law, notwithstanding my own training and credentials. But although those charges are often warranted, sometimes they are not. What I hope to do in this short talk is to dispel the illusion that all lawyers are necessarily pitted against productive labor. Accordingly, I want to address the positive legal contribution to setting up the framework in which commercial transactions, especially those in the information age, take place. I shall outline my themes in a somewhat broader context than is appropriate for the technical panels that rightly dominate academic conferences and publications. My self-appointed task therefore is to view intellectual property as part of the broader species of property rights.

I want to begin with one note of caution. When people get together to talk about their common problems, they tend to make gloomy assessments of their shared future. In many ways, the intellectual property business is booming. Ironically, however, people within the industry dwell not on its successes but on its problems; then, to highlight their angst, they feel compelled to construct some alternative utopia, which from a distance looks so pure and so rhapsodic that we can only dare hope intellectual property will reach that same level of coherence, simplicity, and rationality. To carry out this program, intellectual property takes as its benchmark the law of property as it relates to land and commodities such as wheat. We have heard that this area displayed a remarkable simplicity in which all the major economic problems had been solved. Our task therefore is to figure out how to make the law of intellectual property resemble property in land.

Ironically, the history of land law shows that this subject has been heavily contended from the beginning of time. Fortunately, understanding those disputes helps explain why the law of intellectual property will always contain certain irreducible uncertainties that no amount of legal reform can dispel. The frictions that inhabit any dynamic system block the creation of any utopia in human affairs.

THE ORIGINS OF PROPERTY

To see how this theme plays out, it's instructive to think about property rights generally—how they're orga-
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This position is subject to powerful philosophical criticism, which usually runs as follows: Since property is a social relationship between one individual and the rest of the world, why should the unilateral action of a single individual bind everybody else on the face of the globe without their consent? How is it, in effect, that we can impose these obligations without consent, when promises and agreements are ordinarily used to create obligations? To escape the aggrandizement of some, society has to resort to a top-down system, one whose political processes allow for wide public participation. Consent is used to obviate the difficulties of unilateral action. But, of course, even a quick romp through history leads to the conclusion that, although this theoretical objection has been frequently voiced, it rarely prevails. Virtually every legal system contains a heavy bottom-up component.

Lacking perfection, you should adopt the following frame of mind: For every particular rule on the assignment and creation of property rights, identify its correlative imperfection. If you imagine a world devoid of imperfection, you have backed yourself into a form of utopian thinking. What you must recognize is that, no matter how property rights are structured, so long as resources are scarce, people will have to be disappointed; so long as enforcement costs are positive, some scheming individuals can get away with breaking the rules. The task of the legal system is to minimize these imperfections. Given finite human resources and finite human intelligence, these untoward results cannot be eliminated, only reduced.

So, having identified the central problem with organizing the world from the bottom up, we must put our finger on the weak point of the top-down approach. It is quite simply this: If, in fact, individuals are treated as owning property in common, then how, by agreement, will they allocate particular portions of that common property to various members of the group? Anyone who has ever co-owned a summer home with his or her siblings will realize that these tasks of common ownership are often extraordinarily ticklish to discharge even within the con-
fines of a single family that otherwise enjoys good relations. Seeking to allocate the planet earth among individuals who do not speak a common tongue and who do not live in similar communities leads you quickly to the result that John Locke himself identified with such great clarity: If we wait until we get unanimous consent to partition of the universe, we shall all starve first—a serious practical objection to common property regimes. The enduring advantage of a first-possession rule is, if you can eat what you grab, you won’t starve, preserving any option to deliberate over our collective future to another day.

LAND

Because both top down and bottom up are subject to powerful objections, neither can banish the other from the field. Therefore, we observe both systems working side by side simultaneously and often at cross-purposes. If that’s true as a generic proposition, it’s certainly going to be true for land. So, what would be an indication of a top-down system in land? The most conspicuous illustration comes from our feudal English origins; after William the Conqueror took over England, he quickly partitioned much of the land among his henchmen and lords in exchange for promises to supply an extensive feudal army. So the entire system of English property law started from the top down. Top-down systems have some real efficiencies, but in the end this natural historical experiment exposes its weaknesses.

Start with the positives. The great advantage of a top-down system is that it puts your friends in the right places with the right resources at the right time. The initial conditions have a tidiness and rationality absent from the chaotic world of bottom up. But this top-down system is not likely to prove stable over time. By linking together service obligations with property ownership, death creates serious imbalances. It is easy for property to go to heirs, harder for those same heirs to assume service obligations to their lords. The entire effort to bundle land and services into a single contract becomes rickety and inefficient. Over long periods of time, the English constantly compressed the structure by eliminating intermediate layers of the feudal hierarchy. Sometimes land was abandoned or service obligations were neglected. Strangers could enter the land without any title at all. It takes five hundred years for ownership to begin to collapse into a bottom-up system in which individuals become ordinary outright owners of land measured by meters and bounds.

Does that slimming down free us of all government regulation? The answer is, of course not. Land ownership is much more complicated to operate than ordinarily supposed. Whenever I attend land use conferences, the walls and the moans of the various participants are at least as loud as those heard at intellectual property meetings. What triggers these land-based walls? First off, boundaries aren’t as clear or as powerful as one might hope. In addition to occasional disputes about locations, protracted battles occur whenever activities on one plot of land negatively affect the neighbors. Unhappily, conveyancing of land is often extremely tricky, as accretions to title build up over time. Stabilizing the entire arrangement required a top-down system—recordation—to combat the pervasive risk of double-dealing, whereby X sells land to A, then to B, and then to C. Having partial interest in land (life estates, leases, mortgages) creates immense cataloging problems as well. Easements and restrictive covenants give individuals ownership claims in the lands of their neighbors, as do certain customary rights to hunt or gather shrubs and wood. Future interests in land (i.e., those which will or might fall into possession at some future time) can clog commerce and prevent current development. Suddenly, various rules restrict the types of interests that can be created in land and the mode of their sale or disposition. Secondly, the system is not self-sustaining; real estate taxes must be imposed for general upkeep and for special projects. Taxation requires the formation of governance units, blessed with coercive powers, to decide which local improvements are needed and how they are to be financed. Water rights run through land, and manifestly a bottom-up water system does not feature separate ownership but complex forms of common ownership, with correlative rights that vary from location to location by topography, technology, and custom.

So even before zoning, modern land use planning and environmental protection, seen from close up, is filled with glitches and warts. But if we step back a little bit to assess its overall achievements, our mixed system of rights in land is, in fact, highly successful, notwithstanding major errors at the margin. So from this quick trip I conclude that top down, bottom up is a false dichotomy introduced by an irresponsible speaker in order to intrigue his audience. For its part, the real world forces you to engage in mixed solutions. Nonetheless, the top-down/bottom-up dichotomy does not disappear. The results reached in seeking intermediate solutions are, to use a phrase from another line of business, heavily path dependent. If you start in the wrong place—usually top down—the errors are going to be larger and the corrections more chancy than by starting bottom up. In a perfect world, you could correct to the ideal, no matter what your point of departure. In an imperfect world, you’ll best start at that corner closest to the ideal solution to make your journey shorter and less complicated.

THE SPECTRUM

Now, another way to test my approach—and I’m moving a little bit closer to intellectual property—is to question a dichotomy that was presented by Paul Romer who is not a lawyer, merely a world-class economist. Romer’s thesis is that you could divide the universe into two sets, one of which is called objects and the other, ideas. Now, that’s not a bad first
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approximation for how the world works, but many assets fall embarrassingly right between them. One of them is the spectrum. Do we call that an object? well, not quite. Do we call it an idea? not quite; indeed, not at all. But classification aside, how is it to be allocated? The case is instructive because the spectrum forms a bridge between the easily understood, so-called tangible assets on the one hand and the more difficult intangible assets, of which intellectual property is one on the other. How is the spectrum to be allocated? Historically, I'm happy to report, both systems of allocation have been tried. The original allocations took place in a much shorter time frame, given the rate of technological advance between 1910 and 1930, but in fact the bottom-up system for the spectrum seemed to work fairly well in the brief period it was allowed.

What is this system like? It says that just like land, you obtain ownership of a bit of the spectrum by occupying it. What does it mean to occupy some portion of the spectrum? Well, it requires more than just passing through a frequency while twisting the dials. You've got to sit on that frequency for a while, which means that you have to establish some kind of repetitive broadcast pattern that allows both users and rivals to treat that bit of spectrum as your own. The moment that process begins it will be necessary to address physical interference between neighbors, just as there are spillovers between neighboring landowners from certain kinds of use. It thus becomes necessary to settle on some kind of a “live and let live” rule to determine the tolerable level of reciprocal interferences. Fortunately, by customary practice, broadcasters met that challenge in the period, say, between 1920 and 1926, before the whole bottom-up enterprise fell apart under the weight of federal intervention and regulation.

Note the key features of the bottom-up approach. Initially, it features acquisition by first possession, which is then protected against interference. Once the rights are protected, then the owners of the thing may subdivide it or use it in any way, shape, or form they choose. The law replicates for this bandwidth the property rights system for land.

Enter the United States government. The key mover in the adoption of top-down regulation was none other than the then secretary of commerce, Herbert Hoover—a point that we shall pass over to talk about the larger issues. That top-down system holds that the world will look simply chaotic if private rights are acquired by individual grabbing; what is now required is government ownership of the spectrum, which is then allocated in feudal style by a system of grants. And that’s the system that was basically forced on the entire spectrum with the Radio Act of 1927, which has survived various transformations to this very day.

Now, many of you might say, “Look, we've got the best radio and television and telecommunications system in the United States on broadcast. How could you complain?” The way you can complain is to ask, What are the defects of the system if you look at it up close? Let me mention just a couple of them for you. One structural problem is that government broadcast licenses don’t have indefinite time horizons. In consequence the renewal process is enormously costly while fairly inviting protest groups to exercise political leverage for their own benefit. Property rights are indefinite; rent seeking takes place. Such a cycle applies to the spectrum as it applies everywhere else.

Then the next question, “Exactly how do you use the spectrum?” If you receive a license, you're not allowed freely to subdivide the assigned spectrum as technology becomes more efficient. Under the present regime, no natural process pushes people to narrower bands for transmitting the same amount of information. Instead the lack of incentive, or even ability, to economize leaves huge amounts of waste inside the system. In addition, the initial central allocation rests on wild guesses as to what various sectors of the economy will require: so much spectrum to the military, so much spectrum to the weather service, so much spectrum for private industry, and so on. Of course these property right divisions by central government allocation do not correspond with
needed uses over time. The legislation needed to change frequency use takes place slowly, however, stand with much discontinuity and intrigue. Worse still, central allocation favors the large battalions: minorities, however described, find themselves locked out of the business because subleasing of spectrum space at market rates turns out to be illegal. Broadcasters by statute must supervise the content put out over their frequency and can't be so vulgar as simply to lease out spectrum slices, however defined, to the highest bidder. By degrees the whole system becomes encrusted, unresponsive, and bureaucratic. The grants are rarely outright, and the strings attached often are designed to clamp down on dissent, controversy, and innovation.

The last seventy years of regulation have exacted a high price to overcome physical interference between neighboring frequencies. It is, in my judgment, vastly inferior to the bottom-up system that could have flowered if federal intervention had not nipped it in the bud. It is all too easy in dealing with novel resources to retrace the arguments over ownership in land—and to come out in exactly the wrong place. The novelty of the spectrum does not require a novel legal response. Immitating private systems of land ownership works far better than vainly seeking from the center some magic test for the public interest, convenience, and necessity.

INTELLECTUAL PROPERTY, AT LAST

Now, to finish this talk with a grand flourish, I should say—ah-ha!—having made the case with the spectrum, simply carry it over to intellectual property; this system too should be predominantly, if not exclusively, bottom up. Once again, to create this system by government grants and control counts as a desperate mistake. Unfortunately, the train that leaves from this particular station has to follow a somewhat different track from the spectrum analysis. Here's why. The spectrum is a passive resource. It's a commodity. It is not, as it were, content. But once you deal with content and ideas, the institutions of property associated with their use will have to adapt to the changed subject matter. It may well be regrettable but true that we require a higher level of government intervention, including some top-down supervision, for this system to operate.

Let me just mention a couple of complications that call for caution in taking property rights regimes across different resources. The first question to ask yourself is this: How clear are the boundary conditions that separate the owner of the right from the rest of the world, that separate, as it were, me from thee? With respect to land, metes and bounds work pretty well most of the time. With respect to the spectrum, the system can be adapted by setting a permissible variation from some central frequency at some location and for some period of time. In intellectual property cases, stating the boundary conditions will be harder in some cases than in others. There's not much of a boundary dispute in figuring out whether or not some dialogue comes from Shakespeare's Hamlet. But in addressing whether one song is a knock off of another, the boundary conditions will become more indistinct than the simple copying analogy would suggest. When dealing with the scope of patents, expect endless difficulty in figuring out the breadth of a valid patent for an invention that has yet to be brought to commercial realization.

The moment a mild bit of functionality is injected into the analysis, Epstein's Law (as it is now dubbed) is true: Every ideal solution is met with a decisive objection—which means that you always land in the soup. What do I mean by that? Well, one approach is to define patents broadly, which has the very desirable feature of encouraging the holder of a patent to invest extensively in the patentable resource. To define the patent too narrowly, after all, leaves its holder uncertain as to its future commercial uses. Why would you invest in the patent if its domain is tiny? So it looks like there is no resistance to the broad definition of patents. But scratch the surface and the trade-offs appear. Let the patent definition be too broad, and the patent's primary function is no longer opportunity for development; now it forms a blockade against development by competitors. So what emerges is a world that makes patents either too broad or too narrow. Somebody who wants to ignore one form of error because he's worried about the second misunderstands the nature of the problem. Working out these boundary conditions cannot be done in the obvious bottom-up way, as with a bunch of stakes and a piece of land. It's a much more difficult process.

Duration, as is well known to intellectual property experts, also poses difficulties for patents, and copyrights, and trademarks. And it's clear that the same solution won't work for all of them. The most vexatious disputes probably arise with the patent law, mainly because everybody understands that technical innovation, if not done by A, can be done by B shortly thereafter; whereas most of us think that a Shakespeare sonnet, if not written by the first guy, is not going to be done particularly well by an impostor. So that suggests that you have shorter time limits for one thing than the other, but it doesn't tell you exactly how short it ought to be; it doesn't tell you whether or not patents ought to be renewed; and it doesn't tell you what to do with interlocking patents or follow-on patents.

In the end the problems with land reappear with intellectual property, but they are not amenable to the same solution. What do I mean by that? Define the rights too narrowly, and the lack of protection invites a second inventor to expropriate the labors of the first. Define them too broadly, and both the first and second inventors have blockade positions with respect to each other, which can make their negotiations both futile and protracted. It's just land. Either you risk expropriation or you risk coordination failure. You cannot eliminate both risks simultaneously, and you don't know which interior solution minimizes the sum of these two defects. Once you understand that this pattern holds across the length and breadth of intellectual property, then you realize that
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It's not a single field, save in opposition to land and wheat. Within its own domain, further subdivision is required; patents have to be broken off from other areas and then broken up into use patents, process patents, and perhaps other divisions of which I am unaware. Trademarks and copyrights will each require its separate regimes, subject to further subdivisions.

Even when all the doubts are ventilated, the bottom-up elements still come out strong. The government may determine the boundaries of patents and their duration, but it does not hold the patents or decide how they should be used or marketed. Indeed within the basic parameters set by the law, private initiative drives the system. Use the patent of another, and you are liable for infringement, just as if you trespassed against land. Own the patent, and you can sell or license it to another, with or without restrictions on its use or resale. The ability to create by agreement complex divisions of right by territory, by language, and by end use increases the flexibility of the system. So notwithstanding the injection of strong doses of government control, the dynamism in intellectual property still comes from the bottom up.

Yet it would be a mistake to assume that efficient use always requires the creation of intellectual property rights. As committed as I am to the institution of private property, it is easy to identify discrete contexts in which it is best to reverse field and assign certain things (e.g., ideas and mathematical theorems) to the public domain. Even though the law must create incentives for their creation, it has a still greater worry about the rate of their dissemination and use, which explains why intellectual property has wrinkles not found in the law of land and wheat, where it is relatively easy to embrace the proposition that he who sows shall reap because otherwise no one will plant at all. But what does it mean to reap when you leave the world of agriculture and enter the world of ideas? Once a great idea is out there, the marginal cost of its use by a second person is close to zero. Ideas are not like the crop, which can be eaten only once. Great ideas can be used over and over again, so that the agricultural metaphor fails to describe the intellectual landscape.

Now the basic difficulty is that, to set the right incentives for production, you have to distort the incentives on distribution. To get the proper incentives on use and dissemination after production, you must distort production. The theory of property law will not allow either of these problems to vanish. You will never reach a unique answer on the duration and scope of the rights as you can with land or wheat. The moment you accept the trade-offs, you acknowledge the errors. The moment you acknowledge the errors, you accept the necessity for estimating their scope and the inevitability of litigation in which both sides believe themselves correct. And once you recognize all this, you reluctantly accept the built-in undertow that no utopian vision can displace. It is part of the legacy of intellectual property.

So I end where I began. Knowing that some failures are the price of success, praise the success while seeking to limit the scope of the failures. And recognize that, no matter what view we take on the question of whether a patent should run for twenty or twenty-five years, the basic structure of the rights is, for the most part, as good as you're likely to get its perfect agreement on necessary trade-offs is not possible, even though improvement always is. So don't look for utopia; you're not going to find it. Don't take land as a perfect model because it has its own internal difficulties and, in any event, its evident grounds of distinction. For today celebrate your successes; tomorrow you can again lament your failures.

Richard A. Epstein is the James Parker Hall Distinguished Service Professor of Law. This speech, in an expanded form, will appear in Capital for Our Time: The Economic, Legal, and Management Challenges of Intellectual Capital, edited by Nicholas J. Imparato, and is reprinted here with the permission of the publisher, Hoover Institution Press. Copyright © 1998 by the Board of Trustees of the Leland Stanford Junior University.