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WHAT KIND OF PROPERTY IS INTELLECTUAL PROPERTY?

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ABSTRACT

This Article considers the historical, conceptual, and doctrinal implications of applying the "property" label to rights in intellectual goods.

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I. INTRODUCTION

Consider two questions: First, are copyrights and patents property? Second, when you hear the word property, what is the first thing that comes to mind? I'd be willing to bet that for most

* © 2014 Julie E. Cohen. Professor, Georgetown Law. Thanks to Craig Joyce and to the Baker Botts firm for their generous hospitality, and to Scott Partridge of Baker Botts for his thoughtful comments on my lecture. This lecture draws on portions of a much longer work-in-progress, tentatively titled *Post-Industrial Property*.

lawyers, including most intellectual property lawyers, the answer to the first question is that copyrights and patents are property, but the answer to the second question is land. An intellectual property lawyer's clients think of their copyrights and patents, and for that matter their trademarks and trade secrets, as their property, and there are good reasons for that. In our culture, the label "property" is a way of referring to things that have substantial economic or personal value. In our system of political economy, "property" denotes a type of institutional solution for managing valuable resources. But when lawyers—even intellectual property lawyers—hear the word property in a more general context, they think first and automatically of real property: of the legal rules learned in the first-year course on property and perhaps the policy debates about how productive development of real property is best promoted.

In this lecture, I will argue that our deeply ingrained habit of treating land as the paradigm case of property is a problem. It's descriptively inaccurate and backward-looking, and that makes it an outright liability where intellectual property is concerned. The resources that are the subjects of real property law and intellectual property law behave very differently from one another. Intellectual resources are used and reused, sliced and diced, and aggregated and fractionated in ways that land is not and could not be. Yet we come to the topic of intellectual property laden down with so much conceptual baggage about the primacy of real property law that intellectual property's differences can be very difficult to see.

Part II identifies four important ways that intangible intellectual goods differ from land. In Part III, I'll make some more abstract observations about the nature and function of property rights generally, with the goal of suggesting a different big-picture perspective on what property law is really about. I'll talk about how that alternative perspective, if taken seriously, challenges some of the most basic stories that lawyers and law professors like to tell about the design of good legal institutions for property rights. Part IV briefly considers some of the lessons this change in perspective suggests for the structure of intellectual property rights and remedies.

II. HOW INTELLECTUAL PROPERTY IS DIFFERENT

As a resource, intellectual goods differ from real property in four important ways that (ought to) bear on the design of legal institutions for intellectual property. Those differences flow from the fact that intellectual goods manifest complexity and heterogeneity both in their production and in their use.

The first difference between intellectual goods and real property has to do with incentives to produce intellectual goods. Many people, and especially many law professors, like to talk about intellectual property rights in terms of the incentives they provide to create or to invent. When we teach law students about why we have intellectual property rights, we tell them that exclusive rights in intangible goods are necessary because intangible goods are so easy for others to appropriate, and this creates a risk that valuable innovations will be underproduced.[1] Intellectual property rights correct for potential underproduction of intangible intellectual goods by providing economic incentives to produce them and, generally speaking, this benefit exceeds the cost of recognizing property rights in intellectual goods.[2] When confronted with the objection that creative people often don't seem to respond predictably to economic incentives, we quickly shift gears. We point out that intellectual property rights also provide incentives for technology firms, publishers, motion picture companies, and other production intermediaries, all of which are indisputably profit-motivated.[3]

I tend to think that both of these incentive stories are a little too simplistic, and I'll say more about that later on.[4] For now, however, simply note this: Motivation to engage in intellectual production is not a unitary phenomenon. When we talk about how to make sure that intellectual goods are not underproduced, we're inevitably talking about the motivations of two different groups of parties: creators and production intermediaries. Intellectual property is complicated from the beginning by a multiple-incentives problem.

Talking about production incentives leads to a second way that intellectual goods differ from land: they need to be produced in the first place. For obvious reasons, real property law and theory don't have much to say about the problem of where land comes from. In the case of intellectual property, we think a lot about production. One reason is the multiple-incentives problem

1. In the language of economics, this is known as the public goods problem. For a good explanation of the public goods problem and its implications for intellectual production, see Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 994–96 (1997).

2. On the costs and benefits flowing from regimes of intellectual property rights, see WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 12–24 (2003).

3. For representative examples of this argument, see *id.* at 53; Jonathan M. Barnett, *Copyright Without Creators*, 9 REV. L. & ECON. 389 (forthcoming 2014); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 266, 276–77 (1977).

4. *See infra* Part IV.

that I've already mentioned, but another reason is that production arrangements for intellectual goods are astonishingly varied.

Consider all of the different arrangements through which intangible intellectual goods are produced. Some intangibles are produced by individuals and exchanged in arms-length market transactions; an example of this sort of production might be a novel sold to a publishing house. Other kinds of intangibles are more capital-intensive and so more effectively produced within firms—think, for example, of pharmaceutical development or blockbuster motion pictures. Still other kinds of intangibles are produced in a way that Yochai Benkler has called commons-based peer production: nobody claims ownership of either the inputs or the outputs, and production is done by a community of equals.[5] Examples here include basic science and culture. Finally, some kinds of intangibles are produced in ways that cut across these different production modalities. Software, for example, is produced both within firms and by distributed communities using the peer production model.

Again, I'll come back to the complexity of intellectual production later on.[6] For now, I just want to note it, and to invite you to pause for a moment over how and why it might matter. Narratives about the relationship between exclusive ownership and incentives for land development tend to be quite simple. The landscape of intellectual production is so complex that we might want to be skeptical about correspondingly simple, linear narratives about the relationship between intellectual property rights and development. Without question, intellectual property rights play important roles in the evolution of technical and creative progress, but the complexity of the production landscape suggests the need for a more detailed explanation of intellectual property's effects.

The third way that intellectual goods differ from land takes us away from the problem of production to consider uses of intangible goods. In the twenty-first century information economy, many productive uses of intangibles depend heavily on intermediaries to make them possible. Here I am not talking about first-order production intermediaries like pharmaceutical manufacturers and movie studios, but rather about other, second-order intermediaries who enter the picture to move copyrighted works and patented inventions to their full range of

5. YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM 60 (2006).

6. *See infra* Part IV.

uses. In the domain of patent law, second-order intermediaries include patent pools and standards organizations, and both types of organizations work by aggregating patents and relaxing rightholder control over licensing.[7] Turning to copyright, many uses of music, texts, and photographic images would not be possible without second-order intermediaries such as performing rights organizations and reproduction clearinghouses to administer the various rights, and again the process typically works by aggregating copyrights and relaxing rightholder control.[8] In addition, copyrighted content often is licensed on a fractional basis. For example, portions of songs appear in films and advertisements, and excerpts from old movies and television broadcasts appear either as featured content or as background material in newer works.

By comparison, consider land markets and uses. Mortgage lending provides an important first layer of intermediation in land markets. The emergence of national mortgage markets over the course of the twentieth century enabled broadly distributed home ownership.[9] Recent events have shown, however, that adding more than one layer of intermediation can get us into trouble. The emergence of pervasive second-order intermediation via collateralized debt obligations has been a spectacular failure. Too much intermediation—too much slicing and dicing of interests in real property—both harmed real property owners and jeopardized the long-term economic health of society as a whole.[10] With respect to land uses, zoning boards and common interest communities perform essential intermediation functions, but the benefits of such schemes are (mostly) concentrated within communities of owners and tend to be understood as of secondary importance.[11] In contrast, the second-order intermediation that

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7. *See, e.g.*, Daniel A. Crane, *Intellectual Liability*, 88 TEX. L. REV. 253, 268 (2009); Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1901–06 (2002); Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CALIF. L. REV. 1293, 1340–58 (1996).

8. *See, e.g.*, Merges, *supra* note 7, at 1328–40. In the music industry, where copyright law is especially complex, the background law shapes licensing processes in correspondingly complex ways. *See* Peter DiCola & David Touve, *Licensing in the Shadow of Copyright*, 17 STAN. TECH. L. REV. 397, 409–10 (2014).

9. For a general overview of federal enactments designed to increase home ownership, see JOSEPH WILLIAM SINGER, PROPERTY LAW: RULES, POLICIES, AND PRACTICES § 12.4, at 901–04 (5th ed. 2010).

10. For a good general discussion of the origins and effects of the mortgage crisis, see Adam J. Levitin & Susan M. Wachter, *Explaining the Housing Bubble*, 100 GEO. L.J. 1177, 1237–42 (2012).

11. For a provocative argument that second-order land uses should be taken much more seriously, see generally LEE ANNE FENNELL, THE UNBOUNDED HOME: PROPERTY VALUES BEYOND PROPERTY LINES 67–76 (2009).

makes aggregated and/or fractional licensing possible is a core component of a functioning intellectual property system.

A fourth and final way that intellectual goods differ from land is in the pervasive use of licenses to structure relationships. Many intellectual property licenses are quite simple; for example, I grant you the right to publish my book manuscript and you agree to publish it and pay me royalties based on the sales. Some licenses, though, such as software end user license agreements (EULAs) and open source software licenses, create hybrid arrangements that seem to exist uneasily at the boundary between property and contract, and courts and commentators often have struggled to determine how to make the best sense of them.[12]

Real property owners use contracts to structure relationships too, of course, and servitudes in common interest communities can be very complex, but still there are important differences. Because land is rivalrous, one generally cannot lease any particular space to more than one tenant at a time. Working within the confines of the land analogy, some legal scholars have compared intellectual property licenses to servitudes, but the comparison doesn't quite add up: hybrid arrangements in intellectual property are almost trivially easy to create and seem to run in gross in ways that the law of real property generally would not allow.[13] A different way of putting this point is that servitudes regulate relationships within defined communities, but intellectual property licenses create relationships that reach more broadly. Agreements such as the intellectual property EULA, the open source software license, and the Creative Commons license have become ways of mediating between the intellectual property owner and the general public. Again, I'll say more about all of this later;[14] for now, simply take note of the difference: Intellectual property markets don't look like land

12. For representative cases, see Jacobsen v. Katzer, 535 F.3d 1373, 1379 (Fed. Cir. 2008); Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1323 (Fed. Cir. 2003); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996); Nat'l Car Rental Sys., Inc. v. Computer Assocs. Int'l, Inc. 991 F.2d 426, 430–35 (8th Cir. 1993). For a sampling of the commentary, see Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93, 96–98 (1997); Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 111, 124–32 (1999); Michael J. Madison, *Reconstructing the Software License*, 35 LOY. U. CHI. L.J. 275, 306 (2003); Maureen A. O'Rourke, *Copyright Preemption After the ProCD Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 53, 71–73 (1997).

13. *See* Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1478 (2004); Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885, 926–27, 934–35 (2008).

14. *See infra* Part IV.

markets, and intellectual property transactions and relationships are very different from land transactions and relationships.

III. FROM CATEGORIES TO INSTITUTIONS: WHY INTELLECTUAL PROPERTY'S DIFFERENCES MATTER

So far, I trust that I haven't said anything particularly surprising about the intellectual property landscape. So why does it matter so much whether we call it property, and what cognitive reflexes that label triggers? It matters because the law's categories, and especially root categories like property (or contract or tort), can powerfully shape our thinking. And our categorical thinking about property often seems to be fixed in amber, trapped by language, assumptions, and reasoning developed for a different resource and a different economic era.

We've come to the middle part of the lecture, which I promised would offer an alternate big-picture perspective on what property law is about. Consider an understanding of property tied to the emergence of different kinds of valuable resources as focal points for economic and social activity.[15] In the pre-industrial era, the most valuable resource was land, and property law was the law of real property. Next came the industrial economy: an economy organized not around land-based wealth but around ownership of the means of production. In response to the needs of the industrial age for large-scale capital-intensive production and development, people began to form artificial entities—partnerships and corporations.[16] And the law evolved too, developing formal mechanisms for aggregating assets and separating ownership from control so things could get done.[17] Corporate law isn't the common law of property but it is nonetheless a form of property law: a legal regime within which ownership of assets is assumed and maintained so that resources can be effectively managed.

Special rules also began to develop for natural resources like water and oil. The common law had rules about ownership of fugitive natural resources, but those rules turned out to be poorly suited to an era of heightened demand and impending scarcity, and so they began to evolve in a way that was more amenable to recognizing and ordering the entitlements of competing

15. For a preliminary version of this argument, see Julie E. Cohen, *Copyright as Property in the Post-Industrial Economy: A Research Agenda*, 2011 WIS. L. REV. 141, 149–50.

16. William W. Bratton, Jr., *The New Economic Theory of the Firm: Critical Perspectives from History*, 41 STAN. L. REV. 1471, 1487–88 (1989).

17. *See* ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 68–72 (1932); Bratton, *supra* note 16, at 1487–88, 1492–98.

claimants.[18] Particularly in the case of water, common law rules increasingly are superseded by more complex regulatory structures.[19] Water rights litigation here in Texas has been a flashpoint for debates about the legitimacy of these newer regimes.[20]

Chronologically speaking, intellectual property law is older than corporate law—patents and copyrights and their precursors have existed for hundreds of years. But intellectual property has truly come into its heyday in the post-industrial information economy in which we now live. In the 1970s, sociologist Daniel Bell coined the term "post-industrial society" to refer to a society in transition away from an economy based principally on manufacturing to one based primarily on the production of information and the delivery of services.[21] These activities, of course, can be and are performed by industrial firms, but in a post-industrial society the corporate form is itself redirected toward information-based and service-based activities. According to social theorist Manuel Castells, our political economy is undergoing a transition from industrial capitalism to informational capitalism.[22] Our basic political economy is capitalist, and this means simply that the favored mode of production is based on private control of the means of production and the extraction of surplus to maximize profits. But the favored mode of development is becoming overwhelmingly informational—that is, it is based on the accumulation of knowledge and on ever-increasing levels of complexity in information processing. Within this emerging system of political economy, the rules governing property rights in information and intangible intellectual goods assume great importance. These resources have emerged as central to the economic activity of post-industrial society.

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18. *See generally* Joseph L. Sax, *The Constitution, Property Rights, and the Future of Water Law*, 61 U. COLO. L. REV. 257, 267–77 (1990). For an example close to home, see Amy Hardberger, *World's Worst Game of Telephone: Attempting to Understand the Conversation Between Texas's Legislature and Courts on Groundwater*, 43 TEX. ENVTL. L.J. 257, 282 (2013) (providing an example of the evolution of common law rules relating to ownership of groundwater in Texas).

19. *See, e.g.*, JOHN W. JOHNSON, UNITED STATES WATER LAW: AN INTRODUCTION 61–69 (2009); 3 WATERS AND WATER RIGHTS § 20.01 (Robert E. Beck ed., 1991 ed., repl. vol. 2003 & Supp. 2008).

20. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 832 (Tex. 2012); Augustus L. Campbell, *Underground, Downstream, and Increasingly Regulated: Dramatic Changes in Texas Water Law and Planning*, 14 TEX. TECH ADMIN. L.J. 271, 274–77, 287–93 (2013); Hardberger, *supra* note 18, at 291–92.

21. DANIEL BELL, THE COMING OF POST-INDUSTRIAL SOCIETY: A VENTURE IN SOCIAL FORECASTING 13 (1973).

22. MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 14–18 (1996).

Within a capitalist political economy, property law has a dynamic function. Its purpose is to provide legal institutions for organizing and ordering the use of valuable resources within society. And just as the stuff of property isn't static, neither are the legal arrangements that people develop to make property work in practice. It is reasonable to expect property institutions to differ in ways that respond to the underlying resources, and to the social, technological, and economic changes that have made those resources important. This perspective has important implications for how we should think about the design of intellectual property law. Intellectual property is property, but it is different from both pre-industrial resources, like land, and industrial resources, such as ownership shares in artificial legal entities. It requires legal institutions that are tailored to the particular resource coordination problems that intangible intellectual goods present.

So why does this matter? There are three stories that are often told about the optimal design of property law, by people who are thinking mostly about land. I'd like you to pay attention to what happens when we consider these stories using the perspective on property and property law that I've just outlined.

The first story is a story about why exclusivity is an essential feature of property rights. You may be familiar with the term "tragedy of commons," which was first coined by an ecologist and then imported into the economics of property rights.[23] In property theory, the tragedy of the commons is shorthand for what can happen when a valuable resource is not subject to exclusive control and instead is there for the taking. Often (though not always[24]), lack of exclusive control results in overuse. Economic theories of property rights typically conclude that only with control in the form of property rights will appropriate stewardship of the resource be exercised. The language of property as exclusivity, of course, is far older; it dates back to Blackstone and the idea of the property owner as mini-despot, in sole control over all that occurs in his domain.[25] We all know that the ideal of sole and despotic dominion is wishful thinking; modern real property law contains a number of exceptions. But for many, the very modern tragedy story confirms the inherent rightness of the Blackstonian ideal:

23. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968); *see* ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 2 (1990).

24. *See* OSTROM, *supra* note 23, at 6.

25. *See* 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 2 (9th ed. 1783).

Dominion is the rule, and exceptions should be framed very clearly as exceptions.[26]

Is this story about exclusivity right? Well, it turns out to depend a lot on what the resource is. Think about corporations and other artificial entities. Corporate law is all about the surrender of exclusive control. It supplies a legal mechanism for aggregating assets and freeing them from the stickiness of control by individual owners. Or think about modern regulatory regimes for administering water rights, which limit individual control in the interests of long-term sustainability. With those two examples firmly in mind, now think about intellectual property. Should we simply presume that the Blackstonian ideal of dominion with only limited exceptions is a good fit, or should we consider more carefully the way the resource behaves and what it is used for?

The second story is a story about remedies, and it's told to explain why property rights need to be protected by property rules guaranteeing injunctive relief as a first resort. The story goes that if a right, such as a patent or a copyright, is protected only by a liability rule—i.e., a right to receive compensation when the right is exploited—the right will be at the mercy of multiple takers. The owner who wants exclusivity will need to keep paying people off, and that process will be costly and inefficient.[27] The implication of this story is that collective licensing via liability rules is, theoretically speaking, disfavored.

The story about the importance of property rules as remedies presumes that the optimal exercise of a right is exclusive. For land, this probably is true more often than not.[28] But if it's intellectual property we're talking about, once again it's not so clear that the story is always right. Consider, again, the extent to which the marketplace actually has shifted toward aggregation, fractionation, and the collective licensing of inputs. Property rules may be the right answer for some kinds of uses, but it's not clear that they're the right answer for all kinds of uses.[29]

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26. *See, e.g.*, Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (PAPERS & PROC.) 347, 354–58 (1967); Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453, S457–58 (2002).

27. *See* Louis Kaplow & Steven Shavell, *Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley*, 105 YALE L.J. 221, 224 (1995); Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713, 722–23 (1996); Kitch, *supra* note 3, at 276–77; Merges, *supra* note 7, at 1304.

28. Subject to the proviso that "exclusive" does not mean "unregulated."

29. Thoughtful explorations of the potential utility of liability rules in intellectual property include WILLIAM W. FISHER III, PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT (2004); Neil Weinstock Netanel, *Impose a Noncommercial*

The third story is a story about where property rights come from. Half a century ago, an economist named Harold Demsetz wrote an article about how the arrival of European fur traders in Canada in the seventeenth century spurred the emergence of property systems among the native tribes.[30] When furs became valuable, each family began to control the trapping of fur-bearing animals on its land, and this enabled better management of wildlife stocks.[31] Among legal scholars who study the law and economics of property rights, Demsetz's article has become the basis for a sort of folk history of the evolution of property rights, which holds that systems of property evolve organically as the need for them arises. Property rights are understood as the outgrowth of a natural evolutionary process that occurs as primitive societies become modern ones.[32]

Now, we all know that as a descriptive matter this story is far too simple. The property systems that we have aren't natural phenomena like the Grand Canyon or the Rocky Mountains. We don't know how the tribes decided who got which land back in seventeenth-century Canada, but we'd probably all be willing to bet that power and intratribal politics had something to do with it.[33] More important for my purposes today, the story about the natural, organic evolution of property rights has an implicit teleology—an assumed developmental arc that posits exclusivity as the apex of evolutionary achievement.[34] Once again, if we're talking about property rights in land, that may be right. There's historical evidence about the linkages between exclusive control and productive development,[35] and the general idea seems sensible enough. But now let's do a brief thought exercise. Imagine that you tell your family and friends you're interested in the history of air travel, and one of them gives you a book about it that was written sometime in the early twentieth century. It

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Use Levy to Allow Free Peer-to-Peer File Sharing, 17 HARV. J.L. & TECH. 1 (2003); J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432 (1994).

30. Demsetz, *supra* note 26, at 351–52.

31. *Id.* at 352–53.

32. *See* Katrina Miriam Wyman, *From Fur to Fish: Reconsidering the Evolution of Private Property*, 80 N.Y.U. L. Rev. 117, 121–25, 128 (2005).

33. *See* Saul Levmore, *Two Stories About the Evolution of Property Rights*, 31 J. LEGAL STUD. S421, S427 (2002) (advancing a public choice explanation for the evolution of property rights); *see also* WILLIAM CRONON, CHANGES IN THE LAND: INDIANS, COLONISTS, AND THE ECOLOGY OF NEW ENGLAND 56–59 (1983) (identifying property rights recognized by Native American communities and describing differences between those rights and the ones conceptualized by Europeans).

34. See, for example, Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 740–52 (1998).

35. *See* Wyman, *supra* note 32, at 128 n.31 (collecting citations).

begins with gliders and hot air balloons and culminates with great fanfare in the invention of the propeller plane. That's a teleology too, but you would recognize immediately that the developmental arc is incomplete. The propeller plane is an important milestone, to be sure, but the story doesn't stop there. There are chapters still to be written.

So, turning back to intellectual property, which is it? Are exclusive rights modeled on the paradigm case of land, the apex of evolutionary achievement for intellectual property law, or are they more like aviation by propeller plane—an intermediate step in a journey to something more streamlined and effective? I can't tell you where we're going to end up, of course. But when you look at all of the differences in how intellectual property is produced, how it behaves, and how it is used, I tend to doubt that we're all the way there yet. The property institutions of the post-industrial information economy are still under construction. Maybe legal institutions for intellectual property should resemble legal institutions for real property, but that shouldn't simply be assumed. The question we need to focus on is what legal institutions for post-industrial property ought to look like.

IV. (RE)DESIGNING INSTITUTIONS FOR POST-INDUSTRIAL PROPERTY

In this final part of the lecture, I want to return to the four ways that intellectual property is different from land, and ask whether we can draw some preliminary conclusions about ways to optimize the design of legal institutions for intellectual property.

The first difference was what I called the multiple-incentive problem—the fact that intellectual production often involves two sets of parties: creators and production intermediaries. The second difference was that landscapes of intellectual production are extraordinarily complex, involving individuals, markets, firms, and commons-based peer production arrangements. Both of these differences indicate a need to pay more careful attention to what economists and IP scholars call spillovers—benefits that flow beyond rightholders to other participants in creative production and to society generally.[36] And that inquiry powerfully suggests that intellectual property rights accommodate the complex mix of motivations and production arrangements most effectively when they are leaky and incomplete.

36. *See* Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 258–59 (2007).

Consider first individual creators. An increasing amount of research suggests that creative people aren't motivated primarily by economic incentives.[37] Instead of taking our talking points about creativity and innovation from work on the economics of real property rights, intellectual property lawyers and scholars should pay attention to contemporary studies of creativity and to the history of art and science. Those resources tell us that creative people draw inspiration from what they find in the cultural landscapes that surround them, and that inspiration is not a moment but rather a process that involves iterating and riffing off of the work of others.[38] We have managed to construct a body of intellectual property doctrine that often penalizes this behavior rather than rewarding it. On the technical side of the ledger, the history of science and technology tells us that invention is very much a hands-on process: Inventors are improvers first, and improvers tinker.[39] The absence of a broad experimental use rule in patent law makes this quite risky.[40] On the artistic side, people don't just copy ideas and facts; they copy expressions, but this risks infringing a broadly defined right to prepare derivative works.[41] In my Copyright class I show slides that come straight from Art History 101, and I ask the students whether modern copyright doctrine would find infringement. When Saul Steinberg sues the producer of a movie poster for imitating his signature style, we look at Manet imitating Goya; when we talk about Richard Prince and Jeff Koons and image remix, we look at old Picasso collages; when we talk about songwriters borrowing melodies, we listen to the third movement of Mahler's First Symphony, which remixes the children's song

37. *See, e.g.*, JESSICA SILBEY, THE EUREKA MYTH: CREATORS, INNOVATORS, AND EVERYDAY INTELLECTUAL PROPERTY 35–46 (2014); Gregory N. Mandel, *To Promote the Creative Process: Intellectual Property Law and the Psychology of Creativity*, 86 NOTRE DAME L. REV. 1999, 2007–08 (2011); Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513, 520, 522–25 (2009).

38. For discussion, see JULIE E. COHEN, CONFIGURING THE NETWORKED SELF 81–99 (2012); MIHALY CSIKSZENTMIHALYI, CREATIVITY: FLOW AND THE PSYCHOLOGY OF DISCOVERY AND INVENTION 28–29 (1996); SILBEY, *supra* note 37, at 46–52; J. Peter Burkholder, *The Uses of Existing Music: Musical Borrowing as a Field*, 50 NOTES: Q. J. MUSIC LIBR. ASS'N 851, 852–53 (1994).

39. On the centrality of tinkering and improvement in technical practice, see generally ROBERT FRIEDEL, A CULTURE OF IMPROVEMENT: TECHNOLOGY AND THE WESTERN MILLENNIUM (2007).

40. For discussion of this problem, see Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1672–74 (2003); Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 92–93.

41. *See* 17 U.S.C. § 101 (2012) (defining "derivative work"). On the centrality of copyright to creative practice, see generally CORNELIA HOMBURG, THE COPY TURNS ORIGINAL (1996); Burkholder, *supra* note 38, at 852–53.

Frere Jacques.[42] And I ask whether we're constructing copyright doctrine that would make infringers out of the great artists of the Western canon. If so, we should worry.

Production intermediaries are commercially motivated, and here intellectual property rights do supply valuable incentives. More generally, stable intellectual property entitlements are a major factor facilitating the emergence of the political economy of informational capitalism that I talked about earlier.[43] They enable predictability in the organization of cultural and technical production, and that's a good thing.[44] But production intermediaries also benefit enormously from spillovers. First and most basically, production intermediaries have an interest in not killing the geese that lay the golden eggs. Whether they benefit from the work of creative employees, buy inputs in the market, or elect to pool their creative resources in constructed commons, leveraging creativity requires copying, appropriation, and iteration.[45] This requires a continual flow of cultural and technical inputs, and over the centuries many of the best and most valuable fruits of that process have been the ones that were unpredicted. Production intermediaries also cannot build and sustain markets in intellectual goods without help. Markets for intellectual goods require the participation of tastemakers, educators, and licensing intermediaries.[46] Finally, production intermediaries benefit from complexity in ecologies of production. When you look around, it's easy to find dozens of examples of production that span boundaries: software systems containing both proprietary and open elements, research consortia formed to manage technical innovation as commons, mass culture industries drawing inspiration from folk tales, and so on. All of

42. *See* Cariou v. Prince, 714 F.3d 694, 699 (2d Cir.), *cert. denied*, 134 S. Ct. 618 (2013); Blanch v. Koons, 467 F.3d 244, 246 (2d Cir. 2006); Swirsky v. Carey, 376 F.3d 841, 843 (9th Cir. 2004); Rogers v. Koons, 960 F.2d 301, 304 (2d Cir. 1992); United Feature Syndicate, Inc. v. Koons, 817 F. Supp. 370, 372 (S.D.N.Y. 1993); Steinberg v. Columbia Pictures Indus., Inc., 663 F. Supp. 706, 708 (S.D.N.Y. 1987); Dave Itzkoff, *Joe Satriani Drops Lawsuit Against Coldplay*, N.Y. TIMES (Sept. 16, 2009, 11:17 AM) http://artsbeat.blogs.nytimes.com/2009/09/16/joe-satriani-drops-lawsuit-against-coldplay/.

43. *See supra* Part III.

44. *See* COHEN, *supra* note 38, at 100–03.

45. *See* Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2007 U. ILL. L. REV. 575, 591, 607–08; Anthony J. Casey, *Mind Control: Firms and the Production of Ideas*, 35 SEATTLE U. L. REV. 1061, 1068–69 (2012); Peter Lee, *Transcending the Tacit Dimension: Patents, Relationships, and Organizational Integration in Technology Transfer*, 100 CALIF. L. REV. 1503, 1529–30, 1534 (2012); Michael J. Madison, Brett M. Frischmann & Katherine J. Strandburg, *Constructing Commons in the Cultural Environment*, 95 CORNELL L. REV. 657, 669–75 (2010).

46. *See* HOWARD BECKER, ART WORLDS 1 (1982); RICHARD E. CAVES, CREATIVE INDUSTRIES: CONTRACTS BETWEEN ART AND COMMERCE 7–8 (2000).

this works better when entitlements are leaky: when benefits spill over. This means that we should not always say yes when rightholders try to recapture those benefits.

Now let's turn to the third and fourth ways that intellectual property is different from land. The third difference was the importance of intermediation in intellectual property markets. The fourth difference was the widespread reliance on licensing to tailor relationships in ways that the basic intellectual property framework doesn't describe. Both of these differences are about the reconfiguration of control. They signal an ongoing process of entitlement (re)design based on the nature and uses of post-industrial property.

Let's begin with intermediation. Recall that intermediation and re-intermediation are essential to managing the processes of aggregation, blanket licensing, and fractional licensing that play such significant roles in the twenty-first century information economy. This suggests that perhaps collective licensing ought to be even more widespread than it is, and should extend to more uses and more types of rights. Within the land-centric rhetoric of property, terms like collective licensing and compulsory licensing are viewed with great suspicion. From the perspective I've outlined, I think that is probably a mistake. Think again about industrial property—about corporate law as the salient example. Corporate law provides a framework for separating ownership from control, so that valuable productive activity can occur. Many intellectual property markets also rely on an initial separation of creatorship from control, which occurs when control is transferred to first-order production intermediaries either by assignment or by operation of law.[47] Intermediation within intellectual property markets separates ownership from control a second time, so that different kinds of productive activity can occur. Many intellectual property markets rely importantly on such intermediation, and this suggests that intellectual property law should embrace and explore the full range of legal institutions for intermediation to a far greater extent than it has done.

The creation of hybrid arrangements through licensing redistributes control in a way that is about both uses and relationships. Hybrid arrangements between property and contract are sprinkled throughout the different areas of property law, and where they occur they signal a kind of relationship that has become so widespread and so significant that it demands its

47. The principal example of a transfer by operation of law is copyright's works made for hire doctrine. *See* 17 U.S.C. § 101 (2012) (defining "work made for hire").

own rules.[48] Those rules originate in contracts, where they functioned and were intended to function as private risk shifting devices. But as the relationship becomes more widespread and more significant, the risk shifting activity has public implications as well, and what we see is that the law's tolerance for private risk shifting has limits.

Consider two examples from other types of property regimes. The first is landlord-tenant law. As we all remember from law school, in the mid-twentieth century landlord-tenant law underwent a shift from a regime emphasizing the landowner's dominion to one emphasizing contract duties of good faith and fair dealing.[49] In residential landlord-tenant law, however, some contracting behavior struck courts and legislatures as abusive. So courts and legislatures gradually added into the mix some immutable, tenant-protective rules, such as the implied warranty of habitability and the general prohibition on landlord self-help.[50] The second example is the law of security interests. In the early days of secured financing, the parties looked to their agreements to define their rights. Gradually, though, courts and legislatures added various protections designed to mitigate regularly occurring problems. These included recording and priority rules to protect absentee lenders and remedial rules designed to protect borrowers from lender overreaching.[51] In both of these examples, legal decisionmakers adapted existing rules to counteract the adverse effects of certain systematic private behaviors.

Turning back to intellectual property, we can identify situations where particular licensing practices have become widespread and significant, and have cohered to the point where they are beginning to seem like sui generis arrangements—think, for example, of software end user license agreements or the open source licensing regime. In examining the legal validity of such arrangements, it's time we moved past questions about

48. *Cf.* Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 850–51 (2001) (characterizing these arrangements as methods of correcting for uneven distribution of information costs in certain types of interactions).

49. *See* Mary Ann Glendon, *The Transformation of American Landlord-Tenant Law*, 23 B.C. L. REV. 503, 542 (1982); Alex M. Johnson, Jr., *Correctly Interpreting Long-Term Leases Pursuant to Modern Contract Law: Toward a Theory of Relational Leases*, 74 VA. L. REV. 751, 763 (1988).

50. *See* Robinson v. Diamond Hous. Corp., 463 F.2d 853, 863–64 (D.C. Cir. 1972); Javins v. First Nat'l Realty Corp., 428 F.2d 1071, 1072–73 (D.C. Cir. 1970); UNIF. RESIDENTIAL LANDLORD & TENANT ACT §§ 1.403–1.404, 2.104, 4.101, 4.104, 4.105, 5.101, 7B U.L.A. 289, 313–15, 326, 375, 383, 387, 411 (1972).

51. *See* U.C.C. art. 9 (2010); 1 ELDON REILEY, GUIDEBOOK TO SECURITY INTERESTS IN PERSONAL PROPERTY, §§ 1:3–1:8, 3:1–3:8 (3d ed. 1999).

contract validity, preemption, and misuse to take a more considered look at systemic effects. In particular, we ought to consider both the kinds of relationships these arrangements make possible and the risk shifting behaviors that they seek to validate. Some arrangements may require new rules to supplement or supplant the rules that the background framework of intellectual property law provides.

V. CONCLUSION

The need for reform has been a recurring theme in debates about intellectual property law and policy. Before we can have meaningful discussions about intellectual property reform, however, we need a good understanding of our own conceptual baggage. My purpose in this lecture has been to disentangle intellectual property from the perceived inevitability of our real property narratives, so that we can have a more constructive conversation about what legal institutions for intellectual property ought to look like. Optimizing legal institutions for intellectual property requires careful examination of the distinctive characteristics of intellectual goods as post-industrial resources. The horizon for creative institution-building is broader than we have been accustomed to thinking, and that is very good news indeed.