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ARTICLES

AN ECONOMIC ANALYSIS OF CIVIL VERSUS COMMON LAW PROPERTY

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Common law and civil law property appear to be quite different, with the former emphasizing pieces of ownership called estates and the latter focusing on holistic ownership. And yet the two systems are remarkably similar in their

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broad outlines for functional reasons. This Article offers a transaction cost explanation for the practical similarity and the differing styles of delineating property and ownership in the two systems. As opposed to the "complete" property system that could obtain in the world of zero transaction costs, actual property systems employ structures characterized by shortcuts in order to achieve property's substantive goals of protecting interests in use. Overlooking this structure leads to the bundle of rights picture of property, even though property is a structured bundle of relationships. The architecture of property consists in part of four basic relationships, and a number of characteristic features of property automatically arise out of this architecture, including exclusion rights, in rem status, and running to successors. Where civil law and common law differ is in their style of delineation, which reflects the path dependence and network effects from a common mode of legal communication and initial investment in feudal fragmentation in the common law and Roman-inspired holistic dominion in civil law. This transaction cost explanation for the functional similarities but different delineation process in the two systems promises to put the comparative law of property on a sounder descriptive footing.

INTRODUCTION

Fragmentation is a theme in property theory, but the theory of property itself is deeply fragmented. At first blush, a major fault line in property lies between common and civil law. As is well known, civil law systems tracing back to Roman law place heavy emphasis on ownership (dominion) and are highly grudging in giving in rem effect to lesser interests like leaseholds. By contrast, the common law emphasizes the estate system and its many methods of carving up property, from life estates to defeasible fees and various future interests. And in the common law tradition in a broader sense, the equity courts developed the trust, which is largely unknown in traditional civil law. Sometimes this conventional wisdom about the gulf between common and civil law of property goes so far as to claim that there is no such thing as ownership in the common law.¹ Feudalism lives!

¹ See, e.g., J.W. HARRIS, PROPERTY AND JUSTICE 69 (1996) ("Since what is conveyed is always an estate in the land, it has been widely assumed that 'ownership' of land, as such, is not a conception internal to English land law."); see also 2 WILLIAM BLACKSTONE, COMMENTARIES *105 ("This allodial property no subject in England has; it being a received, and now undeniable, principle in the law, that all the lands in England are holden mediately or immediately of the king. The king therefore only hath *absolutum et directum dominium*; but all subjects' lands are in the nature of a *foedum* or fee" (internal citations omitted)).

This stark cleavage between common and civil law has taken on a new life with the so-called “legal origins” literature,² which has influenced the World Bank’s pronouncements on development.³ Supposedly, having a common law rather than a civil law system correlates with economic growth. Different versions of the literature posit different causal mechanisms as lying behind the correlations (to the extent that they have persisted in the face of continued testing and methodological questioning).⁴ Despite the favorable attention for their tradition, common law legal theorists have been quite unreceptive to this branch of economic literature, partly because they doubt that the kinds of doctrines that distinguish civil from common law could possibly have real world effects, much less effects on the scale that the legal origins literature purports to find.⁵

How, if at all, is the distinction between civil and common law property important? Life goes on in the two systems in strikingly similar fashion. Putting aside for the moment special features like the trust, ownership under the civil law and fee simple ownership of land in the common law system (and for the most part the respective notions of full ownership of personal property) coincide to a remarkable extent in their basic features: a possessory right to prevent invasions subject to qualifications such as for necessity, and supplemented

2 See, e.g., Rafael La Porta et al., *The Economic Consequences of Legal Origins*, 46 J. ECON. LITERATURE 285, 285–87, 291–98 (2008); Rafael La Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113, 1113, 1116 (1998); see also Paul G. Mahoney, *The Common Law and Economic Growth: Hayek Might Be Right*, 30 J. LEGAL STUD. 503 (2001) (finding higher growth in countries of common law origin and attributing effect to judicial independence).

3 Most notably, legal origins and normative conclusions based on them have featured prominently in the World Bank’s *Doing Business* reports. See, e.g., WORLD BANK, *DOING BUSINESS IN 2004*, at xiv (2004), available at <http://rru.worldbank.org/Documents/DoingBusiness/2004/DB2004-full-report.pdf> (relying on legal origins literature). For critiques, see, for example, Benito Arruñada, *Pitfalls to Avoid when Measuring Institutions: Is Doing Business Damaging Business?*, 35 J. COMP. ECON. 729 (2007).

4 See, e.g., Daniel Klerman et al., *Legal Origin or Colonial History?*, 3 J. LEGAL ANALYSIS 380, 380–83 (2011); Ralf Michaels, *Comparative Law by Numbers? Legal Origins Thesis, Doing Business Reports, and the Silence of Traditional Comparative Law*, 57 AM. J. COMP. L. 765, 774 (2009); Holger Spamann, *Large-Sample, Quantitative Research Designs for Comparative Law?*, 57 AM. J. COMP. L. 797, 805 (2009).

5 See, e.g., Mark J. Roe, *Legal Origin and Modern Stock Markets*, 120 HARV. L. REV. 460 (2006) (arguing for the greater importance of politics than legal origins as a cause of economic performance); see also Curtis J. Milhaupt, *Beyond Legal Origin: Rethinking Law’s Relationship to the Economy—Implications for Policy*, 57 AM. J. COMP. L. 831 (2009) (outlining an analytical framework that emphasizes the relationship between law and markets). The importance of the rule of law is a related but distinct question. See, e.g., KENNETH W. DAM, *THE LAW-GROWTH NEXUS* 31–32 (2006).

by duties (for example, for lateral support or to shovel sidewalks). Lesser interests, like leases and easements, despite some differences, bear a close resemblance in the two systems. So is the supposed difference between the two systems non-existent at the functional level, putting labels like “dominion” and “estate” aside?

Upon closer inspection, the fault lines between common law and civil law are more subtle than conventionally thought, although in a sense they are more important and interesting. This Article will identify these more subtle fault lines and offer a transaction cost explanation for them.

One reason the fault lines between common and civil law are both less and more apparent than they should be stems from a failure to make some basic distinctions. First, property’s purpose of protecting interests in use differs from the structure it employs to achieve this purpose. Property serves our interests in using things—this is the reason we have property. Other desirable features of property—its promotion of stability, autonomy, investment incentives, fairness, and efficiency—all trace back to this basic interest in the use of things.⁶ But property law serves these substantive purposes and the overarching interest in use in an indirect fashion, through a particular structure. To see this, consider the zero transaction cost world of Coase’s thought experiment.⁷ In that world, we could serve each individual’s interest in use vis-à-vis every other individual’s potential use interest by specifying the rights and duties (privileges and so forth) that hold pair-wise between all the members of society with respect to the most articulated uses of the smallest fragments of things. This is intractable in our world. So instead, property uses shortcuts and strategies—what we call “structure” here—to achieve an approximation.⁸ In an exclusion strategy, property law delineates lumpy things and defines rights to them using crude proxies of boundary invasion and touching: this roughly corresponds to trespass and conversion (keep off or don’t touch without permission). For certain important conflicts the law uses governance strategies to mediate them—think devices such as nuisance or covenants designed to prevent odors or excessive building height. The point is that, in our world, the structure based on exclusion and governance is not as transparent to the use interests of prop-

6 See, e.g., J.E. PENNER, *THE IDEA OF PROPERTY IN LAW* 68–74 (1997); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 *YALE L.J.* 1742, 1751 (2007).

7 R.H. Coase, *The Problem of Social Cost*, 3 *J.L. & ECON.* 1, 15 (1960).

8 See Thomas W. Merrill & Henry E. Smith, *Making Coasean Property More Coasean*, 54 *J.L. & ECON.* S77, S77 (2011); Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 *J. LEGAL STUD.* S453, S453 (2002).

erty as it could be if transaction costs—and delineation costs in particular—were lower.

Both property's use interests and structure can be distinguished from what we will call the *style* of property delineation. The same use interests, and even the same structures, can be implemented in a number of ways. To take a familiar example, we can achieve roughly the same result by carving out an easement as a right to use from full ownership on the one hand or endowing contracts (covenants) with the ability to bind successors and third parties on the other. The result is the same—a use right in the owner of the dominant tenement and a corresponding duty in the owner of the servient tenement—but the *route* there is different.

A similar contrast of top-down versus bottom-up routes can be seen on a far grander scale in civil versus common law property, when they employ different *styles* of delineating property. As a first approximation, civil law starts with a strong notion of full ownership—dominion—and then grudgingly carves lesser interests out of it (*iura in re aliena*). By contrast, the common law defines estates from the bottom up: they are carved out of larger estates, but their definition in terms of length and various features is not seen as tightly bound up with full ownership. Technically, under the full feudal interpretation of the common law, only the monarch has full ownership. Title too is relative, such that A can have better title than B and C, and B can have better title than C. The basic contents of these carved out interests are roughly similar in common and civil law when it comes to the types of discretion over uses that it gives the holder of the interest. And property law in the two systems affords similar contours of protection in terms of possessory actions and trespass. But the method of getting there—the *style*—is different.

At this point one might ask whether style is trivial.⁹ We say no, for several reasons. First, from the internal point of view, what we are calling style closely corresponds to the theory behind the two systems, and is very real to participants. Thus, style has a certain reality from an internalist perspective. The internal perspective is not one to which law and economics has paid much attention, but our second goal is to show that style is amenable to economic analysis. Third and finally, style does matter at least around the edges, and our economic

9 Cf. Bernard S. Black, *Is Corporate Law Trivial?: A Political and Economic Analysis*, 84 Nw. U. L. REV. 542, 544 (1990) (“I . . . develop the ‘triviality hypothesis’ that, appearances notwithstanding, state corporate law is trivial: it does not prevent companies—managers and investors together—from establishing any set of governance rules they want. After a century of erosion through competition for corporate charters, what is left of state corporate law is an empty shell that has form but no content.”).

analysis can explain how style matters. In certain pockets of property law, even a slight push from style can make a difference, particularly in areas on the borderline between property and contract such as landlord-tenant. Moreover, style interacts with use interests and structure in predictable ways.

Returning to civil versus common law property, we take as our starting point the growing attention to how civil and common law are more congruent in their major structures for functional reasons than traditional theory would have it.¹⁰ We argue that civil and common law property systems have been perceived to be separated by an unbridgeable gap, because the two traditions have each failed to distinguish sufficiently between property's structure and its style. As long as property responds to functional needs and those needs are somewhat similar across modern societies, various systems of property law will bear a strong resemblance to each other.¹¹ The basic indirect relationship between interests in use and the legal interests (as with the life estate and the *superficies*) is an inevitable feature of the overwhelming transaction costs of the "complete" property system envisioned on many versions of the bundle of rights theory. In short,

10 See, e.g., KONRAD ZWEIGERT & HEIN KÖTZ, AN INTRODUCTION TO COMPARATIVE LAW 34 (Tony Weir trans., 3d rev. ed. 1998).

11 We leave open the question whether the common law style of delineation is a consequence or only contingently related to a greater role for judges in the common law or a greater degree of judicial independence. The range of opinions could hardly be wider. Compare 5 J. BENTHAM, THE WORKS OF JEREMY BENTHAM 235 (Russel and Russel, 1962) (reproduction of 1843 original) ("Do you know how they make [the common law]? Just as a man makes laws for his dog. When your dog does anything you want to break him of, you wait until he does it and then beat him. This is the way you make law for your dog, and this is the way judges make laws for you and me."), with Benito Arruñada & Veneta Andonova, *Common Law and Civil Law as Pro-Market Adaptations*, 26 WASH. U. J.L. & POL'Y 81 (2008) (arguing that common and civil law are both pro-market adaptations, with nineteenth-century civil-law codes as a mechanism to restrain anti-market judges), and Nicholas L. Georgakopoulos, *Predictability and Legal Evolution*, 17 INT'L REV. L. & ECON. 475 (1997) (arguing that common law is more adaptive because of judges' greater role), and Mahoney, *supra* note 2 (presenting result as supporting argument that common law is superior to civil law because of judicial independence). One reason to defer this issue is that even in common law countries, courts have refrained from innovating in the most basic aspects of property. See *infra* notes 54–56, 66, and accompanying text. Also, it is an open question exactly how much courts' decision making really does differ in the two systems, both because case law and precedent play an often underappreciated role in civil law systems and codification (in the area of property in particular) plays an important and growing role in common law countries. See generally Nuno Garoupa & Carlos Gómez Ligüerre, *The Syndrome of the Efficiency of the Common Law*, 29 B.U. INT'L L.J. 287, 321–34 (2011) (discussing courts in civil and common law countries as part of argument that civil law has not been shown to be less efficient than common law).

because of transaction costs, the basic contours of the use interests and structure in civil and common property laws are similar.¹²

The perceived differences between civil and common property laws lie in their different styles of delineating property rights. Civil law starts with ownership, the legal interest that corresponds to the fullest use interest we can have in dealing with things—the greatest degree of control one can have—and then evaluates each lesser interest and the various devices for protecting them, in terms of how it does or does not promote this full type of interest. By contrast, the common law system grew out of feudalism and has always focused on the various lesser estates, which people might employ to protect various specific smaller classes of uses. Pushed to the limit, the common law then projects this fragmented picture back on the question of use itself and sees only a welter of specific uses and ignores the importance of the full reservoir protected by a simple exclusionary strategy. The “bundle of rights” is in a sense the theory implicit in the common law system taken to its extreme, with its inherently analytical tendency, in contrast to the dogged holism of the civil law. In transaction cost terms, both the civil and common law systems need an indirect relation between use interests and the legal interests and associated devices that serve them, but for historical reasons, civil law overemphasizes the overall interests in use, whereas the common law overly stresses the particular legal interests. Civil law is preoccupied with assimilating the pieces (interests) to the whole, whereas common law tries to articulate more specific uses corresponding to lesser interests and the devices that serve them. If the distinction between use interests on the one hand and legal interests on the other is not made, then it is easy to under-articulate the lesser interests (civil law) or over-articulate them (common law).

Our theory points out that the styles of civil and common property law have both persisted for transaction cost reasons. Style, more than use interests or structure, is subject to path dependence. On the cost side, the style of a system involves large fixed costs that only organized actors (like revolutionaries or authoritarian rulers) can accomplish in moments of political crisis. On the benefit side, because style itself matters only around the margins, it is difficult to change at other times because there is not much pressure for doing

12 It is also worth noting that certain functionally important structural aspects of property in land cut across the civil versus common law divide. Importantly, registration of title can be found in Germany (civil law) and Australia (common law), and recordation features in France (civil law) and the United States (common law). See BENITO ARRUÑADA, INSTITUTIONAL FOUNDATIONS OF IMPERSONAL EXCHANGE 43–75 (2012).

so, unlike with the contents of particular legal interests or structure. Further, the style of property delineation is subject to strong network effects as reflected in the internalist perspective just mentioned. A style is more useful the more people are using it, and so should show scale effects on the demand side, i.e., network effects.¹³ The style of delineation is an aspect of communicating entitlements, and sharing a style makes that communication easier. Particularly in property, where not only officials and transactors but in many situations potential tortfeasors and non-official third party enforcers all need to process information about entitlements, a shared format and method of presentation of legally relevant information about property is particularly beneficial.

Because of their different histories, civil and common law face different costs of delineating property rights. In civil law, the starting point for the creators of the modern codes is the Roman-inspired undivided dominion and further division is a costly departure. These costs include the information costs of keeping track of the divisions and the need for third parties to process in rem rights.¹⁴ When Roman law came to be elaborated in the process of creating the modern codes, the implicit limitation on the proliferation of new types of lesser property rights took the form of strong standardization of property rights into a limited list (*numerus clausus*). By contrast, the common law of property originated in feudalism, in which the focus was on personal relationships and reciprocal services. Thus, the fixed costs of a highly fragmented system were incurred long ago under circumstances in which they were worth incurring for political reasons. The result has been the persistence in the common law of a more articulated system than strictly necessary, especially given that a small number of combinable forms can achieve most parties' objectives. Accordingly, part of this path dependence takes the form of a looser version of the *numerus clausus* in common law than in civil law countries.¹⁵

Part I will argue that property's structure is distinct from the use interests that it serves. Property employs strategies of delineation

13 See, e.g., Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70, 70–71 (1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 426–27 (1985).

14 See generally Henry E. Smith, *Standardization in Property Law*, in RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW 148 (Kenneth Ayotte & Henry E. Smith eds., 2011) (discussing the *numerus clausus* principle); Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1 (2000) (same).

15 Merrill & Smith, *supra* note 14, at 8–12, 20–24.

(exclusion and governance) to serve people's interests in use. Common law and civil law property are similar in their broad outlines, most probably for functional reasons. We will concentrate on explaining the origins and persistence of different "styles" of delineating property in the two types of systems, and we draw out some implications for property versus contract, especially in mixed systems of civil and common law. As predicted, style in property law is much more resistant to change than in contract law, and more in rem aspects of property are more stable in terms of style than more in personam aspects of property law. Part II will set out an alternative to the conventional bundle of rights picture of property: property as a structured bundle of legal relations. The four prototypical property relations we identify follow from the exclusion-governance structure of property. In addition, because this exclusion-governance structure explicitly (as in civil law) or implicitly (as in the common law) employs "things" as part of the basic set-up of delineating property,¹⁶ three "features of property" follow more or less automatically from the process of delineation. These three features are the right to exclude, in rem status, and running with assets. In Part III, we show that common law property tends to emphasize estates and other mechanisms to serve fine-grained uses, at the expense of attention to the holistic nature of full ownership. We then offer a transaction cost explanation based on the high fixed costs of setting up the estate system, large network effects, and high switching costs—all of which lead to path dependence. In Part IV, we turn to civil law and demonstrate that its preoccupation with dominion and things causes difficulties in marginal areas of propertized contracts, like leases. Civil law too exhibits strong path dependence for similar reasons to the common law, but with the costs incurred in Roman times and at the creation of the modern codes, when it was possible to incur high fixed costs. Despite marginal inconveniences, strong network effects and high switching costs combined with the low functional costs of maintaining the civil law style lead to path dependence in the civil law world as well. Part V concludes with some thoughts on how economic theory can serve to put comparative work about property on a sounder footing.

I. STRUCTURE AND STYLE IN PROPERTY

Property ultimately serves our interests in use. To do so in a world of positive transaction costs, property law employs an exclusion-governance structure that forms important shortcuts over the fully

16 See Henry E. Smith, *Property as the Law of Things*, 125 HARV. L. REV. 1691, 1691 (2012).

articulated set of uses and potential use conflicts holding between pairs of members of society. Conflating property's use interests and structure is quite common in property theory and nowhere more so than in the bundle of rights picture of property, which is the conventional wisdom in the United States and to a lesser extent in the common law world.

A. *Structure: The Indirect Relation between Use Interests and Legal Interests*

What are our interests that the law of property serves? We adopt the view that people's primary interest in things is to *use* them, in the broadest sense. The notion of use includes non-consumptive uses like preservation, aesthetic and existence value, and non-possessory contingent use (as in the security provided by mortgages and liens). By contrast, people have no socially recognized interest *per se* in excluding others from things, and someone who excludes for its own sake—without any reason other than to see someone else excluded—may be able to do so but would be considered somewhat odd. How is it then that, for many people, some version of the right to exclude is the centerpiece of property?¹⁷

Here we need to turn to the indirect relation between use interests and the legal interests (and their contours) that property employs to serve people's interests in use. Again, take the law of trespass, which instantiates in a fairly pure form the exclusion strategy for protecting use interests: by being able to exclude others who do not have permission, the possessor (and by extension owners) can go about using property for many different purposes they might have, as noted earlier. In the absence of further refinement through covenants, zoning, and the like, the owner enjoys a "reservoir" of uses that are protected by the law of trespass. All sorts of meddlers and thieves can be prevented from interfering with the uses because their access can be denied. The owner is not obligated to exercise exclusion rights, and the owner is free to offer conditional access, which conduces to all sorts of projects involving uses best undertaken in a joint manner.

The key here is that some strategies for protecting uses are highly indirect, because the proxies they employ (for example, the crossing of the boundary of a parcel) are only roughly correlated with harm to

¹⁷ See, e.g., HARRIS, *supra* note 1, at 30–32 (analyzing property as an "open-ended set of use-privileges" protected by "trespassory rules"); PENNER, *supra* note 6, at 68–74; Larissa Katz, *Exclusion and Exclusivity in Property Law*, 58 U. TORONTO L.J. 275, 277 & nn.6–8 (2008); Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 739 (1998).

the owner's interests.¹⁸ The law of trespass studiously avoids making reference to particular uses, and does not even require a showing of harm to any use whatever. Moreover, the law of trespass (like the law of ejectment, replevin, and the like) does not require the owner to justify the owner's uses, or even to show that they are more valuable than the uses that the defendant would like to undertake. One simple strategy based on a message of "keep off" or "don't touch" protects a large and indefinite class of interests in use in a wide variety of resources.

The indirectness between use-interests and the legal interests that serve them arises for transaction cost reasons, and will, we argue, be the key for unlocking the difference between the common and civil law traditions in property. Why are legal interests more coarse-grained than use interests? And why are the devices employed to protect legal interests (such as trespass) only indirectly related to the use-interests they protect, or put differently, why aren't property doctrines more tailored to the interests they serve?

In the broadest sense, the indirectness of property stems from positive transaction costs. In a zero transaction cost world, the Coase Theorem shows that we could use any devices with any degree of tailoring to protect use interests, and if such devices were not optimal for those concerned—however many they are—they would transact costlessly toward the efficient result.¹⁹ Or, if we think of transaction costs as the costs of institutions,²⁰ the most articulated bundle of rights imaginable—every right with respect to every conceivable fine-grained use as between every pair of people with respect to every contingency—could be effected without cost.²¹ In the real world, legal interests clump together use interests, and the devices like trespass employed to protect the legal interests can be blunt and simple in

18 See, e.g., Henry E. Smith, *Mind the Gap: The Indirect Relation between Ends and Means in American Property Law*, 94 CORNELL L. REV. 959, 963 (2009) ("Exclusion rights serve interests in use only indirectly, but . . . [c]onstant reference to these interests would undermine property's advantages of solving problems wholesale and coordinating the activities of often non-anonymous actors.").

19 Coase, *supra* note 7, at 15.

20 See Douglas W. Allen, *What Are Transaction Costs?*, 14 RES. L. & ECON. 1, 3 (1991) (arguing that transaction costs are better defined as the costs of establishing property rights, in the economist's sense of a de facto ability to derive utility from an action, rather than narrowly as the costs of exchange); see also RICHARD O. ZERBE, JR., ECONOMIC EFFICIENCY IN LAW AND ECONOMICS 168 (2001) (adopting Allen's definition); Steven N.S. Cheung, *The Transaction Costs Paradigm*, 36 ECON. INQUIRY 514, 515 (1998) (defining transaction costs as costs that do not exist in a Robinson Crusoe economy).

21 See Merrill & Smith, *supra* note 8, at S79.

order to avoid transaction costs. Use interests can as a result be left largely implicit; they need not be spelled out (as they would in a world of only separately defined use rights). Legal interests and the strategies property law employs to protect them are a shortcut over the hypothetical “complete” system of property rights that could be achieved in a zero transaction cost world.²² In our world, we need to make do with a property system that uses a basic exclusion strategy and reserves more fine-grained regulation of uses to more direct devices such as covenants, nuisance, zoning, and custom in a variety of governance strategies.²³

B. *Style and the Path Dependence of Property*

The structure of property systems tends to show common contours for functional reasons, but transaction costs of a different sort explain why civil and common law differ greatly in terms of their style of delineating property rights. Our basic explanation of the persistence of the respective styles rests on path dependence.²⁴

What is a style of property? In general, a style is a manner of doing things that is characteristic of a particular culture. Often the same function can be served by artifacts exhibiting different styles (think of the design of pots or the shape of automobiles). Common and civil law can be thought of as families of legal cultures,²⁵ in which a function, here delineating property rights and setting up interlocking property doctrines, can be served in multiple ways. We will focus on the process of delineating property rights. Later we will return to

22 An analogy can be drawn to incomplete contracts, with property operating on a larger and more impersonal scale. See, e.g., Oliver Hart & Bengt Holmstrom, *The Theory of Contracts*, in *ADVANCES IN ECONOMIC THEORY* 71, 71–155 (Truman F. Bewley ed., 1987) (arguing that incomplete contracts are necessary because transaction costs prevent parties from making their agreements completely contingent).

23 Smith, *supra* note 8, at S456.

24 See, e.g., DOUGLASS C. NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE* 93–94 (1990); S. J. Liebowitz & Stephen E. Margolis, *Path Dependence, Lock-in, and History*, 11 *J.L. ECON. & ORG.* 205 (1995) (discussing the three different forms of path dependence); see also Paul A. David, *Path Dependence, Its Critics and the Quest for “Historical Economics,”* in *EVOLUTION AND PATH DEPENDENCE IN ECONOMIC IDEAS* 15 (Pierre Garrouste & Stavros Ioannides eds., 2001) (making a case for the economic significance of path dependence); W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 *ECON. J.* 116, 117 (1989).

25 Anthony Ogus, *The Economic Basis of Legal Culture: Networks and Monopolization*, 22 *OXFORD J. LEGAL STUD.* 419 (2002); see also Nuno Garoupa & Thomas S. Ulen, *The Market for Legal Innovation: Law and Economics in Europe and the United States*, 59 *ALA. L. REV.* 1555, 1615–16 (2008) (discussing monopolizing tendency of legal culture in Ogus’s sense).

the details of how common and civil law styles of delineating property differ, but we outline here what is at stake.

One basic choice in delineating property rights is how explicitly thing-based delineation should be. In functional (structural) terms, property systems can differ as to whether they rely on thing-based exclusion from parcels in the case of land or more on overlapping governance rights (as in many indigenous property systems). But even in property systems that give wide discretion to owners over defined things, the thing can be an explicit starting point as it is in civil law, especially German law (in which the thing must be tangible). In a sense, the delineation of estates in the common law focuses more on persons and activities, with thing ownership left implicit.²⁶

Corresponding to the differential focus on things, systems of property law differ in their approach to ownership and title. For the civil law, as we will see, it is always important as a matter of theory to identify, as far as possible, *the* owner of a thing. By contrast, common law notions of ownership are looser and sometimes extend to the holder of any interest.²⁷ The common law pushes the notion of relativity of title much further, under which B can have better title than C even though A has better title than both.²⁸ For many purposes someone like B is treated as a lesser owner, and by the same token A's status as true owner is put on the same plane as the relation of B and C, etc. Perhaps the most famous example of the common law allowing relationships to trump the unity of ownership is the trust, in which a settlor transfers legal title to a trustee, who is obligated to manage it for the beneficiary. Controversy has flared up from time to time over whether the trust is contract or property (or both), but the main point is that the common law tolerates this type of fragmentation in the gray area between property and contract.²⁹

26 Or, as Antonio Gambaro puts it, "ontological" approaches to property are favored in Europe, but the "relationship" approach has prevailed in the U.S. Antonio Gambaro, *Property Rights in Comparative Perspective: Why Property Is So Ancient and Durable*, 26 TUL. EUR. & CIV. L.F. 205, 214 (2011).

27 RESTATEMENT (FIRST) OF PROP. § 10 (1936) (defining "owner" as "the person who has one or more interests").

28 Sukhinder Panesar, *The Importance of Possession of Land*, 33 HONG KONG L.J. 569, 572 (2003) ("The idea of relativity of title and ownership holds that there is no such thing as absolute title to land and as such, a claim to land, and for that matter other property such as chattels, depends on the non-existence of a better claim to the same thing.").

29 The recent disagreement—compare John H. Langbein, *The Contractarian Basis of the Law of Trusts*, 105 YALE L.J. 625, 627, 669 (1995) (acknowledging that "[t]rust is a hybrid of contract and property," but maintaining that at bottom "[t]rusts are contracts"), with Henry Hansmann & Ugo Mattei, *The Functions of Trust Law: A Compara-*

As a result of these differences in delineation, property can look more or less distinct from contract. In the civil law system, and the German version in particular, there is a strict separation of property from obligation (including contract). By contrast in the common law, many of the lesser estates look something like very long term relational contracts (which under feudalism they were in a sense). Substantively, we can reach a particular result, like an easement or a lease, by taking thing ownership and separating out some sticks for the easement holder or the lessee. Or we could start with a contract over certain kinds of uses of a thing and give them more property protection against third parties (and in the case of leases, possessory protection) and the ability to bind successors of the holder of the dominant tenement or reversion.

Our account of civil and common law takes as a starting point the observation that, in a sense, the difference between civil and common law is like these two paths to a servitude, writ large. As is well known, the common law defines ownership as a robust and enduring form of possession (possession plus), whereas civil law defines ownership directly in terms of “full rights” to things, in terms of which lesser interests of a possessory sort can be defined.³⁰ In the common law, ownership historically grew out of the robust protection of possession-like seisin, and even today, possession gives a presumption of ownership.³¹ The emphasis on possession, which is in the first instance a de

tive Legal and Economic Analysis, 73 N.Y.U. L. REV. 434, 434 (1998) (showing that trust cannot be replicated by contract)—echoes the famous Maitland-Scott debate. *Compare* FREDERIC W. MAITLAND, *EQUITY: A COURSE OF LECTURES* 110–11 (John Brunyate ed., 2d ed. 1936) (arguing that trusts are fundamentally contracts enforced in equity), with Austin Wakeman Scott, *The Nature of the Rights of the Cestui Que Trust*, 17 COLUM. L. REV. 269, 269 (1917) (arguing that trusts are quite different from contracts). For economic arguments about how trusts are and are not like property, see M.W. LAU, *THE ECONOMIC STRUCTURE OF TRUSTS* 103–83 (2011); Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 843–49 (2001).

30 We do not enter here into the raging debate in English legal history as to the extent of the influence of Roman law and the *ius commune* on the common law. *Compare* 2 SIR FREDERICK POLLOCK & FREDERICK WILLIAM MAITLAND, *THE HISTORY OF ENGLISH LAW BEFORE THE TIME OF EDWARD I*, at 33–62 (2d ed. 1968) (arguing that in English common law *ius* and *seisina* were equivalent to Roman-inspired *proprietas* and *possessio*), with S.F.C. MILSOM, *THE LEGAL FRAMEWORK OF ENGLISH FEUDALISM* 39–40 (1976) (arguing that common law system of seisin is rooted in feudalism and not Roman law). Roman law influenced the ecclesiastical courts and may have crept into the common law with heavy adaptation. See Joshua C. Tate, *Ownership and Possession in the Early Common Law*, 48 AM. J. LEGAL HIST. 280 (2006) (analyzing possessory actions in the context of advowsons).

31 Even Pollock and Maitland see seisin as central to the development of common law:

facto relation, is sometimes said to reflect the concreteness and empiricism of the common law.³² What is meant by statements like this regarding ownership/dominion and possession we will try to specify more precisely under the heading of legal style. The styles of civil and common law property are to a large extent organized around these respective starting points.

Although different styles may be employed to achieve similar functional ends, they may not be equally costly, especially as time passes. We hypothesize that styles of property delineation are highly subject to path dependence. This is more than simply that “history matters.” Specifically, the type of path dependence identified by Douglass North as important in explaining institutions and their persistence is likely to play a large role in keeping styles of property delineation in place.³³ North argues that the features of technologies identified by Brian Arthur as promoting path dependence all apply to institutions: high start-up costs, learning effects, coordination effects, and adaptive expectations. Institutions involve increasing returns over time for these reasons, which make them harder to change using routine methods.³⁴ Politically provided public goods like law can be expected to show increasing returns and be subject to path dependence because they are meant to be used widely (they are nonrival and nonexcludable).³⁵ This leads to reliance on collective production involving large start-up costs, as well as learning effects, coordination effects, and adaptive expectations on the part of producers and consumers. As a prime example, North offers the Northwest Ordinance of 1787, which adopted a framework of property rights, a bill of rights, and procedures for admission as a state.³⁶ The Ordinance profoundly shaped Western land development, despite the availability of very different frameworks at the time. Finally, law reflects and creates a mental construct, which is at the heart of this and other examples of

[I]n the history of our law there is no idea more cardinal than that of seisin. Even in the law of the present day it plays a part which must be studied by every lawyer; but in the past it was so important that the whole system of our land law was law about seisin and its consequences.

POLLOCK & MAITLAND, *supra* note 30, at 29.

32 For an extreme articulation of this point of view, see Kevin Gray & Susan Gray, *The Idea of Property in Land*, in *LAND LAW: THEMES AND PERSPECTIVES* 18, 18 (Susan Bright & John Dewar eds., 1998).

33 NORTH, *supra* note 24, at 92–104.

34 *Id.* at 94.

35 Paul Pierson, *Increasing Returns, Path Dependence, and the Study of Politics*, 94 *AM. POL. SCI. REV.* 251, 258 (2000).

36 NORTH, *supra* note 24, at 97–100.

institutional path dependence.³⁷ Likewise, Marcel Kahan and Michael Klausner explain that path dependence and standardization in corporate contracting, a private law-making context, can be explained in part in terms of increasing returns, based in turn on learning and network effects.³⁸ Finally, at a very high level, Anthony Ogus defines “legal culture” as “a combination of language, conceptual structure and procedures,” and argues that the commonality of usage in such a legal culture reduces the cost of interaction, leading to network effects.³⁹ Legal styles are an important aspect of legal institutions and cultures, which we should expect to show path dependence for similar reasons.

The styles of delineation show path dependence because they require large fixed costs to set up and have large network effects. Large fixed costs create scale effects on the supply and the demand side. On the supply side, a state setting up a property system can spread its costs based on the size of the jurisdiction over which the property system extends.⁴⁰ Further, because the state is involved in enforcing property rights, there are probably economies of scope in the state’s taking on the role of defining property rights as well.⁴¹ Legal styles as a feature of the property system partake of these economies of scale and scope on the supply side, but we will focus on how their path dependence arises from network effects—scale economies on the demand side.⁴²

Network externalities arise because a user finds a system or product more valuable the more other users there are, the telephone system being the classic example. On the demand side, a property

37 *Id.* at 95–96.

38 Marcel Kahan & Michael Klausner, *Path Dependence in Corporate Contracting: Increasing Returns, Herd Behavior and Cognitive Biases*, 74 WASH. U. L.Q. 347, 348, 350–53 (1996). On increasing returns and other aspects of substantive law, see, for example, Oona A. Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 IOWA L. REV. 601, 604 (2001); Mariana Prado & Michael J. Trebilcock, *Path Dependence, Development, and the Dynamics of Institutional Reform*, 59 U. TORONTO L.J. 341, 350–51 (2009). See generally Raghuram Garud & Peter Karnøe, *Path Creation as a Process of Mindful Deviation*, in *PATH DEPENDENCE AND CREATION 1* (Raghuram Garud & Peter Karnøe eds., 2001) (arguing that entrepreneurs play an active role in the creation and development of path dependence); James Mahoney, *Path Dependence in Historical Sociology*, 29 THEORY & SOC. 507, 507 (2000) (“[P]ath dependence characterizes specifically those historical sequences in which contingent events set into motion institutional patterns or event chains that have deterministic properties.”).

39 Ogus, *supra* note 25, at 420.

40 Merrill & Smith, *supra* note 14, at 51.

41 *Id.*

42 See *supra* note 13 and accompanying citations.

system is more cost-effective if its features cohere, and this coherence is the focus of much doctrinal work in law, especially in the civil law world. Although economists are not known for taking doctrine very seriously on its own terms, doctrine aiming at legal coherence can be a worthy subject of economic analysis itself. To the extent that doctrine, including the legal style of delineation, does cohere, one can form expectations that certain features go together. To take an example, the strict separation of property from obligation (contract, tort, unjust enrichment) in civil law, and German law in particular, gives rise to at least weak expectations about the form that doctrine will take in areas like leases and easements.

The various features of a legal style thus are complements, and people will find it advantageous to converge on one style or another. Although rules that fit uneasily with the prevailing style can be imported, they are harder to communicate and can cause costly misunderstanding. At the least, a legal style is a mode of communication, and as with other modes of communication, demand-side scale economies are to be expected. For one thing, in many instances, those making property claims will want to be clear to others about the nature of the claim, and legislators have an interest in avoiding "network confusion effects" of excessively idiosyncratic property rights.⁴³ Network effects thus lead to standardization in property as elsewhere, and we argue that network effects give rise to large-scale adoption of a single style of delineation.

With network effects in place, switching costs are then high, and the result is the persistence of the original standard, even if it is not what one would choose *ex post*. The controversies surrounding path dependence focus on different strengths of path dependence and how susceptible markets are to suboptimal lock-in.⁴⁴ In the weakest form of path dependence, "first-degree path dependence," a system is chosen, say driving on the right rather than the left, but either is roughly as good as the other (as long as everyone sticks to the same side).⁴⁵ Initial conditions of a choice, or even who started driving first, might tip things one way or the other and the choice will persist, but (for the sake of argument) it is a matter of indifference. No inefficiency is involved. Second-degree (or semi-strong) path dependence involves a choice that we would make differently now but cannot

43 See Merrill & Smith, *supra* note 14, at 45–49.

44 See Stan J. Liebowitz & Stephen E. Margolis, *Path Dependence*, in 1 ENCYCLOPEDIA OF LAW AND ECONOMICS 981, 985 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000); Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 642 (1996).

45 Liebowitz & Margolis, *supra* note 44, at 985.

because it is too costly to change.⁴⁶ Given that information *ex ante* is costly and change is costly *ex post*, there is still not much to regret. Third-degree (or strong) path dependence involves persistence of a choice that is regrettable and could be changed, say with cost-effective collective action.⁴⁷ The most controversial examples are the QWERTY typewriter keyboard and the VHS video system.⁴⁸ In both cases, it has been argued that there is a superior system that lock-in has prevented markets from converging to (Dvorak keyboards and Betamax, respectively).⁴⁹ The examples have been challenged, either as not involving a superior system (QWERTY is no worse than Dvorak) or as ignoring the cost-effectiveness and superiority of a system for ordinary users (VHS is more cost-effective than Betamax for non-professionals).⁵⁰

But even the skeptics of these examples note that path dependence is more likely in the case of political choice: it is not all that surprising that political choices resulting from one-time collective action are hard to undo.⁵¹ Moreover, public goods provided through politics are especially prone to increasing returns.⁵²

Our path dependent story is political and involves “weak” lock-in. Political actors can set up a new legal style in the course of reworking the legal system for political reasons, such as setting up Norman feudalism in the common law and creating codes as part of building a post-feudal nation-state in the case of the civil codes.⁵³ As with driving on the right and using the QWERTY keyboard (on the skeptical view), the legal style most of the time does not have major functional impacts, but it is very important that people in a society converge on such a style, leading to large network effects. Moreover, the weakness

46 *Id.*

47 *Id.*

48 *See id.* at 987–88.

49 *Id.*

50 *Compare* STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS & MICROSOFT 125 (1999) (arguing that the consumer’s preference for VHS over beta is not a story of lock-in), *and* S. J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J.L. & ECON. 1, 21–23 (1990) (arguing that the claims of the superiority of the Dvorak keyboard are flawed), *with* Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985) (arguing that QWERTY is inferior to Dvorak and QWERTY’s popularity is a result of path dependence and lock-in).

51 *See* Liebowitz & Margolis, *supra* note 44, at 994–95.

52 Pierson, *supra* note 35, at 257.

53 Our approach is thus similar to the “Critical Junctures Framework.” RUTH BERINS COLLIER & DAVID COLLIER, *SHAPING THE POLITICAL ARENA* 27–39 (1991). But, the legal styles that we are concerned with are more of a by-product of activity at a critical juncture.

of the lock-in—in the sense that most of the time a legal style does not lead to major inefficiencies—lessens the pressure to change.

Constituencies who might want changes in legal style face institutional obstacles as well. Because property is in rem, judges are reluctant to make major changes to the property system, particularly when it comes to the set of basic forms of property or methods of fragmenting property.⁵⁴ In the civil law this principle is crystallized into the *numerus clausus*, but a more implicit norm works similarly (although less strongly) in the common law.⁵⁵ The *numerus clausus* directs courts to defer to legislatures, which are in a better position to supply the clarity, universality, comprehensiveness, stability, prospectivity, and implicit compensation, which major changes to the property system require.⁵⁶ Indeed, for changes to an entire style of property delineation, we find that the costs are larger than are typically incurred in routine legislation.

Crucially, this account rests on the distinction we made earlier between the interest in use and the devices property law employs to serve them. The functional aspects of property that are familiar—the basic right to exclude, running to successors, in rem effect, and other aspects like trespass, nuisance, necessity, and adverse possession—implicate efficiency and are somewhat similar across the systems.⁵⁷ Proving this is not our point here; rather, the fact that legal style can operate somewhat independently of these functionally important features *promotes* path dependence and lock-in of the legal style. The style of a property system does have functional implications at the fringes of property (such as leases), so the path dependence is not the weakest of the weak. But legal style is a matter of political path dependence, and in most legal systems, there is no major constituency for change of legal style. A combination of initial conditions with high fixed costs, high switching costs, low switching benefits, and network effects creates the conditions for path dependence.⁵⁸

54 Cf. Merrill & Smith, *supra* note 14, at 59 (“The *numerus clausus* requires courts to respect the status quo with respect to the menu of available property rights.”).

55 *Id.* at 9–24.

56 *Id.* at 58–68.

57 For a functional theory that predicts that civil and common law will eventually converge on the relative reliance on judge-made and statutory law, see Giacomo A. M. Ponzetto & Patricio A. Fernandez, *Case Law Versus Statute Law: An Evolutionary Comparison*, 37 J. LEGAL STUD. 379 (2008).

58 See, e.g., NORTH, *supra* note 24, at 94 (explaining the mechanisms for why inferior technologies will beat out more advanced successive technology); David, *supra* note 24, at 18–19; Kahan & Klausner, *supra* note 38, at 353–55. For a skeptical view that claims of path dependence are “some version of ‘history matters,’” see Stephen E. Margolis & S.J. Liebowitz, *Path Dependence*, in 3 THE NEW PALGRAVE DICTIONARY OF

C. *Some Implications*

We now turn to some general implications of an information cost theory of property for the distinction between civil and common law property. In terms of property's structure, we expect that functional pressures will tend to cause the systems to converge, but that is not our focus here. When it comes to style, we predict differential resistance to change, both between property and other areas of law and between in rem and in personam aspects within property law. First, if fixed costs are non-trivial in any area of law, we might expect some inertia. Where property is the most different from other areas of private law (such as contract) is on the demand side: in rem rights give rise to greater information costs, and the network effects of impersonal communication can be expected to be greater for property. And it is indeed the case that property is more resistant to change from outside influence than public law and even contract. The family of legal systems sometimes known as "mixed" or "hybrid" tends for historical reasons to consist of systems that start out as civil law and acquire common law influences. In such systems one striking pattern is that property is most resistant to change, or in one well-known assessment, property law is the "most unassailable stronghold of civilian jurisprudence."⁵⁹ Indeed, in a recent study of mixed jurisdictions, no jurisdiction showed common law influence on property but not contract, but four showed the reverse pattern of common law influence on contract but not property.⁶⁰ (Public law was even more subject to change in a common law direction.) No mixed jurisdiction for which data was available showed a common law type of property law.⁶¹ And some jurisdictions featured a mixture of civil and common law within the law of contracts, which apparently happens far less in property law.⁶²

Furthermore, if network effects relate to property's in rem aspect, we should expect that hybrid legal systems and transplants should show a pattern in which the in rem parts of property—those which form part of the content of in rem duties and affect the state of title—

ECONOMICS AND THE LAW 17 (Peter Newman ed., 1998) and Liebowitz & Margolis, *supra* note 24, at 222–23.

59 Vincent Valentine Palmer, *Introduction to the Mixed Jurisdictions*, in *MIXED JURISDICTIONS WORLDWIDE: THE THIRD LEGAL FAMILY* 3, 57 (Vernon Valentine Palmer ed., 2001).

60 Kenise Kim, *Mixed Systems in Legal Origins Analysis*, 83 S. CAL. L. REV. 693, 714 (2010). Guyana also showed this pattern but was not included in the study because of a lack of GDP data. *Id.* at 707 n.79.

61 *Id.*

62 *Id.* at 711–12.

should be the most resistant to innovation. This also appears to be the case. While we leave this implication for further work, some anecdotal evidence is suggestive. Scots law has a *numerus clausus* of largely civilian types of in rem rights, but innovation, including some reflecting common law origins, tends to come in where property is not at its most in rem (as in servitudes).⁶³ In a similar fashion, English law has been influenced by Scots law mainly in the areas of fixtures and easements.⁶⁴ In general, standardization is greater where property is in rem rather than “intermediate” between in rem and in personam (as in trusts, leaseholds, bailments, and security interests),⁶⁵ and we can expect for similar information cost reasons that influence from another legal system’s style would be easier in less standardized aspects of property law. Indeed, the history of English law provides a familiar example: when law and equity were separate, England was in a sense a mixed jurisdiction. The civilian influences that came in through the equity courts were not supposed to alter in rem property rights provided by the common law, and equity was limited to act in personam.⁶⁶

II. PROPERTY AS A STRUCTURED BUNDLE OF RELATIONS

It is necessary to distinguish the structure of property law from its style, and common and civil law property systems differ more in style than structure. Before we can turn to style, we first offer a more articulated alternative to understanding property’s structure. The nature of property rights is best captured as a structured bundle of relations, which follows from the exclusion-governance structure.

63 See Roderick R.M. Paisley, *Real Rights: Practical Problems and Dogmatic Rigidity*, 8 EDINBURGH L. REV. 267, 277–81 (2005).

64 See C.G. van der Merwe, *Interpretation of Common Law and Civil Law as Experienced in the South African and Scottish Law of Property*, 78 TUL. L. REV. 257, 274–89 (2003). South African Law appears to be more susceptible to influence by common law in less than fully in rem contexts, but there appears to be some more systematic accommodation of the systems through interpretation. *Id.*

65 Merrill & Smith, *supra* note 29, at 809–51.

66 See 1 JOSEPH STORY, COMMENTARIES ON EQUITY JURISPRUDENCE AS ADMINISTERED IN ENGLAND AND AMERICA §§ 26–27, 30, 64 (Melville M. Bigelow ed., Fred B. Rothman & Co. 13th ed. 1999) (1853); Howard W. Brill, *The Maxims of Equity*, 1993 ARK. L. NOTES 29; Charles M. Gray, *The Boundaries of the Equitable Function*, 20 AM. J. LEGAL HIST. 192, 202–06 (1976) (illustrating how courts of equity were prohibited from addressing real estate disputes); Roger Young & Stephen Spitz, *SUEM—Spitz’s Ultimate Equitable Maxim: In Equity, Good Guys Should Win and Bad Guys Should Lose*, 55 S.C. L. REV. 175, 177 (2003) (listing nine traditional equitable principles used by the South Carolina courts, including “[e]quity follows the law” and “[e]quity acts in personam, not in rem”).

How this structured bundle of relations is achieved leaves room for alternative methods, which we call the style of delineation of property. The style of delineation is subject to path dependence. The relation of use interests, legal interests, structure, and style will form the basis of our transaction cost explanation for the similarities and differences between common and civil law property.

In American property law, a property right has long been described as a collection of legal relations between parties with respect to things (or resources).⁶⁷ This characterization is less acceptable to property scholars in civil law countries.⁶⁸ The classical, mainstream theory in civil law countries treats a property right as a relation between a person and an object.⁶⁹ While we embrace the American version of property theory and will criticize the civil law idea in Part IV, we are also unsatisfied with the de-emphasis on things in common law and with the fact that the nature or the typology of the property relationship has not been clearly spelled out.

Property theory typically fails to distinguish the use interests in property and the structure provided by property law. Nowhere is this more true than in the bundle of rights picture of property. In the common law world, and especially in the United States, the mainstream view looks at property as a bundle of rights—or more metaphorically as a “bundle of sticks”—holding between right holders and duty bearers with respect to a thing.⁷⁰ Thus, with respect to Blackacre,

67 “The word ‘property’ is used in this Restatement to denote legal relations between persons with respect to a thing.” RESTATEMENT (FIRST) OF PROP. ch. 1, intro. note (1936); see also JOSEPH WILLIAM SINGER, PROPERTY 2 (3d ed. 2010) (“Because ownership concerns a package of distinct entitlements, we should understand it as comprising a bundle of rights.”); WILLIAM B. STOEBUCK & DALE A. WHITMAN, THE LAW OF PROPERTY 3 (3d ed. 2000) (“[P]roperty is comprised of legal relations between persons with respect to ‘things.’”); Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1191 (1999); Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 357–58 (2001) (“Property is a composite of legal relations that holds between persons . . .”). This relation denoted “property” is more robust than possession, which is also a relationship among persons with respect to resources. See, e.g., Merrill, *supra* note 17, at 733 (“[T]here is a general consensus that property refers to particular rights of persons or entities with respect to scarce tangible and intangible resources; that property is distinct from and superior to the mere possession of resources . . .”).

68 See BRAM AKKERMANS, *THE PRINCIPLE OF Numerus Clausus in EUROPEAN PROPERTY LAW* 13–14, 399, 409 (2008).

69 See *id.* at 409; EVA STEINER, *FRENCH LAW* 378 (2010).

70 See, e.g., BRUCE A. ACKERMAN, *PRIVATE PROPERTY AND THE CONSTITUTION* 26–27 (1977) (reporting that the bundle-of-rights conception of property is so pervasive that “even the dimmest law student can be counted upon to parrot the ritual phrases on command”); Tom Grey, *The Disintegration of Property*, in *NOMOS XXII* 69 (J. Roland

A might have the right to exclude B, the right to use the land for growing corn, the right to cross over C's neighboring land, etc. What the bundle picture denies is that there is some essence or core of property.⁷¹ On the bundle picture, "property" is a label that we can affix to any collection of these various use rights with respect to a resource. The traditional notion that property is a right to a thing availing against others generally—an in rem right—is considered an inconvenient obstacle to clear thinking and to badly needed reforms in the configurations of legal rights and duties, which will require owners to give way increasingly often to collective decision-making.⁷² Even where the bundle picture holds less sway, property theorists and lawyers tend to emphasize the process of carving out interests, using forms tracing back to feudalism. One way or another the common law world emphasizes types of fragmentation. Even Blackstone—who is famous for describing property as that "sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe"—then immediately went on to describe in voluminous

Pennock & John W. Chapman eds., 1980). The bundle of rights theorists took some inspiration from the work of Wesley Newcomb Hohfeld. See Max Radin, *A Restatement of Hohfeld*, 51 HARV. L. REV. 1141, 1150–52 (1938) (interpreting the Hohfeldian scheme from a Legal Realist's point of view); see also Arthur Linton Corbin, *Taxation of Seats on the Stock Exchange*, 31 YALE L.J. 429, 429 (1922) ("Our concept of property has shifted . . . '[P]roperty' has ceased to describe any *res*, or object of sense, at all, and has become merely a bundle of legal relations—rights, powers, privileges, immunities."). The bundle metaphor seems to have been first used in the late nineteenth century. See GREGORY S. ALEXANDER, *COMMODITY & PROPRIETY* 455 n.40 (1997) (citing JOHN LEWIS, *A TREATISE ON THE LAW OF EMINENT DOMAIN IN THE UNITED STATES* 43 (1888)). The bundle picture has had a mixed reception in England. Compare A.M. Honoré, *Ownership*, in OXFORD ESSAYS IN JURISPRUDENCE 107, 112–28 (A.G. Guest ed., 1961) (analyzing ownership in a "mature legal system" into eleven elements), with J.E. PENNER, *supra* note 6, at 29–30, 71 (arguing against bundle of rights picture of property).

71 See, e.g., Wallace H. Hamilton & Irene Till, *Property*, in 12 ENCYCLOPEDIA OF THE SOCIAL SCIENCES 528, 528 (Edwin R.A. Seligman & Alvin Johnson eds., 1934) (defining "property" as "a euphonious collocation of letters which serves as a general term for the miscellany of equities that persons hold in the commonwealth"); see also Radin, *supra* note 70, at 1149–51.

72 For critiques of the bundle theory, see, for example, Merrill & Smith, *supra* note 67, at 357–58, and J.E. Penner, *The "Bundle of Rights" Picture of Property*, 43 UCLA L. REV. 711, 714 (1996). But see Robert C. Ellickson, *Two Cheers for the Bundle-of-Sticks Metaphor, Three Cheers for Merrill and Smith*, 8 ECON J. WATCH 215, 216–17 (2011) (arguing that the bundle of rights metaphor still has some merits); Richard A. Epstein, *Bundle-of-Rights Theory as a Bulwark Against Statist Conceptions of Private Property*, 8 ECON J. WATCH 223, 224 (2011) (arguing for the bundle of rights analogy and arguing that rightly understood, the bundle of rights analogy preserves limited government).

detail the various ways of fragmenting and qualifying property rights.⁷³

By contrast to the common law, the civil law theory of property is all about in rem rights, and property—ownership in particular—is seen as inherently undivided. The mainstream civil law tradition generally has no place for and no interest in the bundle of rights picture of property.⁷⁴ Countries with civil law systems may favor a large degree of government regulation, but this impulse has never expressed itself, as it did from the 1930s onward in the United States, in the bundle picture of property. This divergence in receptivity to the bundle is all the more striking because certain late nineteenth- and early twentieth-century legal theorists in Europe did advocate something like Realism and even a proto-version of the bundle theory, and these European sources inspired some of the American proto-Realists.⁷⁵

73 2 WILLIAM BLACKSTONE, COMMENTARIES *2.

74 See Merrill & Smith, *supra* note 67, at 358–59. A potential counterexample is Scandinavian Legal Realism. See, e.g., AXEL HÄGERSTRÖM, INQUIRIES INTO THE NATURE OF LAW AND MORALS 1–6 (Karl Olivecrona ed., C.D. Broad trans., 1953) (“It is plain that there are insuperable difficulties in determining the fact which corresponds to that which we call a right to property.”); A. VILHELM LUNDSTEDT, LEGAL THINKING REVISED: MY VIEWS ON LAW 103–04 (1956); KARL OLIVECRONA, LAW AS FACT 171 (2d ed. 1971) (arguing that rights are “psychological phenomena”); ALF ROSS, ON LAW AND JUSTICE 189–90 (1959) (assigning different definitions to *in rem* and *in personam* both in terms of content and of privilege); Alf Ross, *Tü-Tü*, 70 HARV. L. REV. 812, 821–22 (1957) (describing “ownership” as meaningless, yet serving a purpose of presentation). But Scandinavian systems are sometimes classified by themselves, apart from the French and German families, and the Scandinavian systems partake of some of the case-specific pragmatism of the common law. See Jes Bjarup, *The Philosophy of Scandinavian Legal Realism*, 18 RATIO JURIS. 1, 1–2 (2005) (describing the impact of Hägerström); Heikki Pihlajamäki, *Against Metaphysics in Law: The Historical Background of American and Scandinavian Legal Realism Compared*, 52 AM. J. COMP. L. 469, 469–70 (2004) (noting the comparisons between American and Scandinavian realism); ZWEIGERT & KÖTZ, *supra* note 10, at 277 (“[T]he Nordic states have as yet no codes like the civil codes of France or Germany.”).

75 The notion that all law (including property) can only regulate relationships between human beings and that legal relationships are the only basic legal concepts can be traced from the Realists back to Hohfeld and further back to Bierling. See Gambaro, *supra* note 26, at 220 (citing ERNST RUDOLF BIERLING, ZUR KRITIK DER JURISTISCHEN GRUNDBEGRIFFE 174, 181 (Gotha 1877)). Indeed Roscoe Pound thought that Hohfeld drew on Pound’s own German-inspired work and that of Salmond rather than that of his Yale colleagues. See Roscoe Pound, *Fifty Years of Jurisprudence*, 50 HARV. L. REV. 557, 572 (1937); N.E.H. Hull, *Vital Schools of Jurisprudence: Roscoe Pound, Wesley Newcomb Hohfeld, and the Promotion of an Academic Jurisprudential Agenda, 1910–1919*, 45 J. LEGAL EDUC. 235, 278–79 (1995), (quoting Letter from Pound to Powell (Mar. 22, 1919), Pound Papers 78–6). Pound is clearly referring to Ernst Rudolf Bierling (1841–1919), author of *Zur Kritik der juristischen Grundbegriffe*, and not

This differential receptivity to the bundle picture is a key to the first fault line between common and civil law property. Common and civil law property focus on different aspects of an important distinction between property's use interests, legal interests, and structure. In the common law system, the bundle of right theory focuses on the use interests and the estate system directs our attention only to certain legal interests. By contrast, the central place of ownership and its in-remness in the civil law lead theorists there to stress only the overall legal interest and the exclusion side of the property structure.

It is worth noting that some may point to the elasticity or flexibility of ownership in civil law—when a lesser property interest is extinguished, the bare owner recaptures the value and becomes the full owner again⁷⁶—as evidence that ownership is quite different from fee simple absolute in common law. Nevertheless, in common law vocabulary, the elasticity just means that the original owner always keeps the remainder or reverter.⁷⁷ Hence, the elasticity does not reflect a fundamental or structural difference between fee simple absolute and ownership. Rather, it suggests that civil law limits the owner's alienability of property more than the common law does.

In this Section we offer an alternative to the bundle picture that will serve as a basis for our analysis of civil versus common law property. In Subpart A, we argue that a property right contains *a structured bundle of relations* with four prototypes.⁷⁸ Our thesis can clarify the

Friedrich Wilhelm Bierling (1676–1728), as Hull asserts. More generally, the Realists were influenced by the Free Law School in Germany, which did not become the dominant paradigm there. See Kristoffel Grechenig & Martin Gelter, *The Transatlantic Divergence in Legal Thought: American Law and Economics vs. German Doctrinalism*, 31 HASTINGS INT'L & COMP. L. REV. 295, 295–97 (2008); see also James E. Herget & Stephen Wallace, *The German Free Law Movement as the Source of American Legal Realism*, 73 VA. L. REV. 399 (1987) (noting that the German “free law” movement was a major source of Legal Realist theory in America); Anna di Robilant, *One Property, Many Properties: Common Ownership & Equality of Autonomy* 30 (unpublished draft) (discussing strain of Realist property commentary in France and Italy).

76 See UGO MATTEI, *BASIC PRINCIPLES OF PROPERTY LAW* 78 (2000); Sjef van Erp, *Comparative Property Law*, in *THE OXFORD HANDBOOK OF COMPARATIVE LAW* 1043, 1056 (Mathias Reimann & Reinhard Zimmermann eds., 2006).

77 When the retained reversionary future interests were not alienable, one solution was to call the “eventual” possessor the owner. Now that future interests tend to be more freely alienable, this solution is still available but its artificiality is more apparent.

78 While the description of property as a bundle (or aggregate) of relations is not new, no literature seems to have pointed out the typology of property relations. And the literature's use of “bundle of relations” seems to be coterminous with the “bundle of rights.” For such description, see, for example, SUKHNINDER PANESAR, *GENERAL PRINCIPLES OF PROPERTY LAW* 19 (2001); Heller, *supra* note 67, at 1193–94 (criticizing

nature of property rights as relations and also helps to illuminate the difference between contractual relations and property relations. In Subpart B, we re-visit the necessary elements of a property right and show how a focus on the “things” of property links them with the four prototypical relations.

A. *Four Prototypes of Property Relationship*

As argued above, legal systems facing positive transaction costs of delineating property rights tend to employ some version of the exclusion-governance structure. The exclusion strategy is the default and backbone of the structure, setting up an indirect relation between legal interests and use interests. Sometimes, the governance strategy is employed when a more direct delineation of use interests is necessary. In this Subpart, we argue that four prototypical property relations should be distinguished because each employs different combinations of the exclusion and governance strategies. There are four prototypes of property relations: property right holders versus the government, property right holders versus other property right holders, property right holders versus some specific others, and property right holders versus all others.

In the first prototypical property relation, holding between the holder of an interest and the government, the government underwrites the interest (promising protection), but the interest is held subject to the government’s police power and the power of eminent domain.⁷⁹ This relation is “exceptional” in that the eminent domain power is not a necessary element in structuring property rights; rather, it is a convenient tool, recognized around the world, for the government to re-allocate titles of properties to itself.

The second prototypical property relation, holding between property right holders and other property rights holders, can be divided into two sub-types depending on who those others are. In the first sub-type, a voluntary governance strategy is used, under which the owners or tenants of fee simple absolute voluntarily agree not to exercise their exclusion rights, allowing holders of “lesser” property interests (such as an easement) to use the properties in the negotiated way.

the bundle metaphor); 6 AMERICAN LAW OF PROPERTY § 26.1 n.1 (A. James Casner ed., 1952).

⁷⁹ Constraining the eminent domain power is not the only method that the state can employ to foster stability of expectations among owners: these include procedural due process, vested rights, stare decisis, and the rule of law generally. See THOMAS W. MERRILL & HENRY E. SMITH, *THE OXFORD INTRODUCTIONS TO U.S. LAW: PROPERTY* 223–58 (2010).

In the second sub-type, one holder of a lesser property interest can “exclude” the holder of another lesser property interest but only when the two interests conflict (as with a mortgage and a later-created easement). The second prototypical property relation (of both sub-types) arises in both systems only upon creation of lesser interests out of the largest or “full” package ownership.

The third prototypical property relation, between holders of property rights and specified others, features involuntary governance and limited exclusion. Here, property interest holders cannot always determine how their things are used if the law has prescribed the things to be used in a certain way at a certain time by a certain party. Not all instances of property contain this type of relation, though.

The fourth property relation, between holders of property rights and all others generally, is of a more purely exclusionary nature. This relation is especially important because every holder of property interests has this relation with all human beings in the world except for those who are in the second or third prototypical relations. The (automatic) existence of this relation saves transaction costs and thus is omnipresent in some form in the property structure in a world of positive transaction costs.

1. Property Right Holders vs. the Government

The first prototype of property relation exists between property right holders and the government. This relationship is more a matter of public law than the other three relationships. Despite the difference that in the common law traditionally everyone ultimately held of the monarch, states in both civilian and common law jurisdictions use similar devices, sounding in due process and the rule of law, to trade off the flexibility needed to address changed conditions and the pre-commitment to existing property holders required in order to promote owner autonomy, elicit investment, and so on. Of particular significance to the internal workings of the law of property is the role of the government as user of eminent domain. This relation should be independent of other relations because the government’s eminent domain power causes the property rights, as against the government, to be only protected by liability rules, while property right holders’ interests are generally protected by property rules as against all others without authorized eminent domain power. Indeed, in setting out the framework of liability rules, under which an entitlement can be taken upon the payment of officially determined damages, as opposed to property rules, under which entitlements receive robust protection aimed at requiring an owner’s consent, Guido Calabresi and A. Doug-

las Melamed discussed eminent domain as an example of a liability rule.⁸⁰

If the relations with the government and those with non-governmental entities are mixed, as the traditional account seems to assume, eminent domain as a liability rule is like an exception to the general property rule protection. We contend that it is clearer to think of the liability rule as the general rule in property right holders' relation with the government insofar as the issue is eminent domain, and the property rule as the general rule (with very few, sometimes unjustified,⁸¹ exceptions) in property right holders' relation with others generally. These include non-governmental parties (that is, the second, third, and fourth type of relation), and the government outside the context of eminent domain.

2. Property Right Holders vs. Other Property Right Holders in the Same Asset

The second prototypical property relation is among property right holders in the same asset. A typical example is the relations between estate holders, say, between A with a life estate and B with the remainder. The relation contains two sub-types. The first sub-type is the relation between the "bare owner"⁸² and the holders of "lesser property interests," such as between a mortgagor and a mortgagee. The second sub-type is the relation among holders of lesser property interests, such as between a mortgagor and another person who holds an easement over the same land.

In the first sub-type of relation, a property interest holder voluntarily changes her relation with someone from exclusion (the fourth type) to sharing property rights. In other words, the voluntary governance strategy is used to adjust the property interests between two parties. The extent of adjustment is limited by the *numerus clausus* principle.⁸³ Thus, a property interest holder can only enter into a

80 Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1122-23 (1972); see also Richard A. Epstein, *A Clear View of The Cathedral: The Dominance of Property Rules*, 106 YALE L.J. 2091 (1997) (noting that eminent domain is associated with ex ante procedural protections).

81 See Yun-chien Chang, *The Inefficiency of the Accession Doctrine: A Case for the Property Rule* (working paper, 2010), available at <http://ssrn.com/abstract=1576426>.

82 This is the "nu-propriétaire" in French law. See Laurent Aynès, *Property Law*, in INTRODUCTION TO FRENCH LAW 147, 161 (George A. Bermann & Etienne Picard eds., 2008).

83 See Merrill & Smith, *supra* note 14, at 69 ("[N]umerus clausus defines a fixed universe of property rights, and the principle is rigorously enforced."). For critiques

limited number of types of property relations.⁸⁴ And the rights and obligations of the relations between property rights holders are determined by civil codes or common law doctrines.⁸⁵

In the second sub-type, lesser property interests are governed by the doctrine *prior tempore potior iure*, or “prior in time, prior in right.”⁸⁶ In other words, the right to exclude still applies, but the right to exclude can only be exercised when the earlier lesser property interests would otherwise be hampered by the later lesser property interests. For example, the mortgagor (who is earlier in time) can request the court to remove a later-created easement when the mortgaged land parcel is auctioned, because an existing easement would decrease the auction value.

3. Property Right Holders vs. Some Specific Others

The third type of relation is where civil codes, regulations, or court-made doctrines adopt a governance strategy and thus the property right holder’s right to exclude is limited. For example, in nuisance law, property owners cannot always require their neighbors to stop producing noise or odor if their neighbor’s activity level is reasonable. In boundary encroachment disputes, property owners sometimes will be required to tolerate a good-faith neighbor’s encroachment and receive only damages. Also, landlocked owners can pass through their neighbors’ land to access public roads under certain circumstances.⁸⁷ The list can go on.

of both theories and discussions of the application of this principle in China and Taiwan, see Yun-chien Chang, *Is Freedom of Property Form Principle Efficient?: Interpretations of Article 757 of the Taiwan Civil Code and the Underlying Theory*, 7 *TECH. L. REV.* 119 (2010) (in Chinese).

84 This corresponds to the *Typenzwang* idea in German law. See NIGEL FOSTER & SATISH SULE, *GERMAN LEGAL SYSTEM AND LAWS* 493 (4th ed. 2010).

85 This is called *Typenfixierung* in German law. See *id.* at 493–94. In countries where lease is a type of property and there is rent control, one can think of rent control as an involuntary governance superimposed upon the voluntary governance. Fixed rent can also be thought of as the unchangeable content in the *numerus clausus* principle. Nevertheless, note that rent control is not universal; thus, a theory of property rights need not embed rent control.

86 See, e.g., W.M. Kleijn et al., *Property Law*, in *INTRODUCTION TO DUTCH LAW* 103, 109 (Jeroen M.J. Chorus et al. eds., 4th ed. 2006).

87 See Yun-chien Chang, *A Comparative and Economic Analysis of Access to Landlocked Land: A Case for a Hybrid of Property and Liability Rules 7–8* (2012) (unpublished article), available at <http://ssrn.com/abstract=1986739>.

4. Property Right Holders vs. All Others

The shadow example in the previous literature on property relationships is the relations between property right holders (say, owners) and most people in the world. The in rem nature of property rights discussed in the literature refers to this type of relation. Some commentators seem to consider the fourth type of relation as *the* property relation.⁸⁸ A vast (and increasing) number of relations are created *automatically* every time any kind of property right is created. The nature of these relations is simple and clear—property right holders have a right to exclude anyone who does not have either of the other three prototypical relations with the property right holders. In other words, entitlements of property right holders are generally protected by property rules.

This fourth relation—property right holder versus others generally—is the default one, which can be displaced in various contexts by the third relation—property right holder versus specified others. For this reason, we might expect the fourth “in rem” relation to show more similarity across systems. That is, both civil and common law employ the exclusion-governance architecture and are similar in their law of trespass, but various legal systems differ in when and to what extent relations of the third type involving specified others will displace the background relation to the rest of the world. Exceptions to trespass and the content of doctrines like nuisance can be expected to vary more, as different jurisdictions face different situations more toward the in personam end of the spectrum and evaluate them differently.

B. *The Sine Qua Non of Property*

Some theorists have looked for a *sine qua non* of a property right, although on the most extreme bundle of rights view no stick is more privileged than any other. The most frequent candidate for the essential feature of property is the right to exclude, and even some prominent bundle theorists have given it a special prominence.⁸⁹ Our argument is that all of these views come up short. For information cost reasons, the right to exclude and allied features “fall out” of a thing-based approach to property—they simply follow from the basic set-up.

88 See Sijf van Erp, *Deconstruction and Reconstruction of European Property Law: A Research Agenda*, in LEGAL ENGINEERING AND COMPARATIVE LAW 105, 117 (Eleanor Cashin Ritaine ed., 2009).

89 See, e.g., Felix S. Cohen, *Dialogue on Private Property*, 9 RUTGERS L. REV. 357, 370–71 (1954).

What is a thing? This sounds like a metaphysical question, but we will follow both the Romans and the common-law lawyers in invoking philosophical notions only as they are required for practical reasons.⁹⁰ In particular, we argue that property is a law of things—that we have a law of things in the first place—for transaction cost reasons. In what might be termed the Coase Corollary, in a zero transaction cost world property could take on any contours without any effect on the efficiency of the resulting pattern of use.⁹¹ This includes defining its basic scope. A “complete” property system, in which property was defined with “full” precision on all dimensions, would be costlessly achievable; in such a system rights would refer to the tiniest uses over the shortest times availing between each pair of members of society, existing and unborn, and would incorporate every conceivable contingency.⁹² In other words, the property system could rely completely on the governance strategy.

In our world property rights are “incomplete” so as to save transaction costs.⁹³ Note that property rights can be incomplete in at least two senses. Incomplete property rights in the literature refer to the incomplete delineation of property rights. That is, some resources, like the high seas, are held in an open-access commons, or not propertized, more generally.⁹⁴ Our notion of incomplete property rights here refers to the lumpy legal interests and indirect devices employed to manage propertized resources. The law does not (cannot, for transaction costs reasons) stipulate every tiniest use of each property. Instead, the law designates an owner who has a presumptive right to exclude others to determine the use of a defined thing.⁹⁵ By

90 On the highly practical use of philosophy by the Romans in the area of *specificatio*, a form of accession, in which schools of thoughts differed in terms of how to conceive of the persistence of a thing over time, see J.A.C. Thomas, *Form and Substance in Roman Law*, in 19 CURRENT LEGAL PROBLEMS 145, 147–60 (George W. Keeton & Georg Schwarzenberger eds., 1966).

91 Merrill & Smith, *supra* note 8.

92 By the same token, in a zero transaction cost world, we would not need property rights at all. See Cheung, *supra* note 20, at 518–20; see also R.H. COASE, THE FIRM, THE MARKET, AND THE LAW 10, 14–15 (1988) (agreeing in principle with this observation).

93 On the other hand, when transaction costs are high, we have to adopt the exclusion strategy, thus making property rights incomplete.

94 See, e.g., Antonio Nicita, *On Incomplete Property: A Missing Perspective in Law and Economics?*, in PROPERTY RIGHTS DYNAMICS 77, 77–90 (Donatella Porrini & Giovanni Battista Ramello eds., 2007).

95 A presumptive right to exclude in property law is like a majoritarian default rule in contract law. They both serve to save transaction costs. For default rule theory in contract law, see, for example, Ian Ayres & Robert Gertner, *Filling Gaps In Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 89 (1989) (discussing

defining a thing in the exclusion strategy, people's interests in use can be managed at relatively low cost. The owner will decide how to transact with others to share the use.

How the thing is defined will give rise to many features of property without any extra definition. This is what makes property rights special and gives them their "residual" character. John Austin noticed this aspect of property when he said of property that "indefiniteness is of the very essence of the right; and implies that the right . . . cannot be determined by exact and positive circumscription."⁹⁶ Particularly with respect to uses, the basic way that property is set up obviates the need to spell out uses. The result is that an owner has control over an indefinite reservoir of uses.⁹⁷ Not having to spell out the uses in this reservoir saves on transaction costs. Only for particularly contested uses does it make sense to separately delineate legal relations in terms of such uses. For access to a driveway or the rights and duties with respect to odors and the like, it makes sense to incur the costs of a governance regime to "fine tune" these salient use conflicts.

Let us consider how some features thought to be characteristic of property follow from this basic transaction cost-saving move of defining a thing through an exclusion strategy. They include in rem status, the right to exclude, and running with assets. As shall be clear from the discussions below, these three essential features are concepts at different levels: being in rem refers to the automatic creation of property relations between property interest holders and all others (the fourth prototypical relation); the right to exclude describes the nature of the second and fourth prototypical relations (property right holders versus other property right holders in the same asset, and property interest holders versus all others), and, to a lesser extent, the third prototypical relation (property right holders versus some specific others); and running with assets means that when a party to a property relation transfers her rights to another person, the new interest holder just steps into the shoes of the original interest holder without

the difference between default rules and immutable rules in contract law and explaining how economists advocate for greater use of default rules); Ian Ayres & Robert Gertner, *Majoritarian v. Minoritarian Defaults*, 51 STAN. L. REV. 1591 (1999) (explaining how an understanding of the underlying causes for contractual incompleteness would better inform the optimal choice of default rules).

96 2 J. AUSTIN, LECTURES ON JURISPRUDENCE 799 (Robert Campbell ed., 5th ed. 1911).

97 RESTATEMENT (FIRST) OF PROP. § 5 cmt. e, § 10 cmt. c (1936); Bernard E. Jacob, *The Law of Definite Elements: Land in Exceptional Packages*, 55 S. CAL. L. REV. 1369, 1388 (1982) (discussing how the Restatement definition of complete ownership requires "not only reasonably exclusive present control, but also an indefinite reservoir of potential uses").

disturbing the existing property relations.⁹⁸ The fact that these three features are essential yet conceptually entwined is probably why the prior literature has been unclear about their conceptual relationship. These three features are embedded in the exclusion-governance structure.

1. In Rem

Property is an in rem right. Etymologically this means a right to a thing, and historically there is a connection between property being a right to a thing and its being in rem in the sense of availing against others generally. The concept of in rem in German law, and its progeny, is very prominent,⁹⁹ and it means that the right is good against the world—usually called “the principle of absoluteness (*Absolutheitsprinzip*)” in German law.¹⁰⁰ In both civil and common law property, the thing mediates the relation between the owner and the duty bearers, who are largely told to keep out or not to interfere, unless they have the owner’s permission.

Communicating with a large and indefinite class of persons whose main contribution to the value of property is not to interfere saves on transaction costs.¹⁰¹ In our world of positive transaction costs, contracting with all others to keep them off one’s property is prohibitively costly. Automatically creating a right to exclude all others thus saves immensely on transaction costs. Delineating the right based on the thing makes the right impersonal in the sense that contextual information about the owner and the duty bearers is generally not relevant to the nature of the right (duty). When more specific parties are involved, the further delineation of legal relations can use the thing as a platform for getting more specific. Thus, the law of nuisance prescribes proper use as between neighbors, and covenants and contracts can deal with very specific uses. As we will see, the civil law places particular emphasis on the in rem rights of a full owner.

98 The first prototypical relation is not closely linked with the three essential features, because liability-rule protection of property rights against the government is *not* the nature of property rights. In fact, property rights in a jurisdiction without eminent domain power are, in a sense, purer, stronger, and more property-like.

99 See MURRAY RAFF, *PRIVATE PROPERTY AND ENVIRONMENTAL RESPONSIBILITY* 186 (2003).

100 See FOSTER & SULE, *supra* note 84, at 494.

101 Henry E. Smith, *The Language of Property: Form, Context, and Audience*, 55 *STAN. L. REV.* 1105, 1153–57 (2003).

2. Right to Exclude

As noted earlier, many, including a number of Legal Realists, have given prominence to the right to exclude in property. Various commentators mean different things about the right to exclude and exclusion. We agree with those who argue that our interest in property is one of use that is formally protected by a right to exclude implemented through devices like trespass.¹⁰² Nonetheless, when one says that the right to exclude is the essence or of special importance in property, what does this mean?

Again, the importance of the right to exclude and its limits follow from the transaction cost theory that sees in exclusion a shortcut over a “complete” property system defined in terms of uses in as fine-grained a way as possible.

The transaction cost theory suggests that the right to exclude is not a “stick in the bundle,” despite the frequent pronouncements to that effect by, for example, the United States Supreme Court.¹⁰³ Rather the exclusion strategy sets the baseline—it is a platform or starting point—from which we know what a thing is and from which departures in both directions—subtractions from the owner’s rights and additions to the package—can take place. For example, the doctrine of necessity and antidiscrimination law withdraw sticks from the exclusion-based baseline of rights, and easements and rights of lateral support add to it.

For transaction cost reasons it is important to distinguish between interests and the devices that serve them. If exclusion is the starting point for defining thing-based packages of rights—property—this is not to say that there is an interest in exclusion or that such an interest is more important than the interests in (and policies for) saving life and limb (necessity) or promoting racial equality (antidiscrimination law) that are served by more specific laws. On the contrary, exclusion and governance are simply different, with the former supplying the rough platform for the latter. Common and civil law both take exclusion strategies as a starting point but differ in the kind and extent of departures in the direction of governance—and, as we will soon see, in their styles of delineation.

102 See, e.g., PENNER, *supra* note 6, at 68–74; Merrill & Smith, *supra* note 67, at 394–97; Smith, *supra* note 18, at 963–64.

103 *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979) (“[For a property owner] the right to exclude others [is] one of the most essential sticks in the bundle of rights that are commonly characterized as property.”).

3. Running with Assets

Others have identified another candidate for the essence of property: the ability of a right to run *automatically* with an asset into remote hands.¹⁰⁴ That B can succeed to A's interest when A holds a fee simple, other present and future interests, an easement, etc., is unremarkable and correlates very closely with what we might call property. Even more telling, when a contract between neighbors runs to successors, it is placed with easements in the supercategory of servitudes and comes close to being treated as a property right. The theoretical difference between an easement and a running covenant is that the former but not the latter binds third parties (in rem), but in the context of neighbors it is the parties and their successors that are important. Thus, if A covenants with B that A will not build more than a two-story building, and both intend for the covenant to run, and it touches and concerns the land, it will run to successors.¹⁰⁵

Again, the running of the covenant is not a detachable feature and certainly not a stick in the bundle. Rather, to the extent that the right is embedded in the baseline package of rights associated with a thing, then it is natural for it to run. For this reason, appurtenant easements, which are explicitly carved out property rights, "run" without controversy. More specifically, the baseline is (consistent with the notion of a thing) meant not to contain contextual information about persons, and so who holds the right and the duty is irrelevant. From there it is a short step to saying that successors are bound. In general, de-contextualizing a right is a predicate for its alienability. The same is true for rights that run to successors.

There is thus a tendency for property rights to run to successors more easily than contract rights. That is true of both common and civil law, but, as discussed in Part IV, the systems differ in where to draw the line, partly for "stylistic" reasons.

104 See, e.g., Henry Hansmann & Reinier Kraakman, *Property, Contract, and Verification: The Numerus Clausus Problem and the Divisibility of Rights*, 31 J. LEGAL STUD. S373, S374 (2002). Here we consider running with assets as a *sine qua non* of property. In terms of following from thing definition, another candidate for basic feature would be the residual claim. See Smith, *supra* note 16, at 1710; see also Thomas W. Merrill, *The Property Strategy*, 160 U. PA. L. REV. 2061 (2012) (arguing that residual managerial authority and residual accessionary rights yielded by the right to exclude are the essential features of property).

105 See THOMAS W. MERRILL & HENRY E. SMITH, PROPERTY 1026–34 (2007). The *Restatement (Third) of Property* would replace touch and concern with a more contractarian approach, subject to constraints such as reasonable alienability and public policy. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 3.2 cmt. a (2000). So far no court has explicitly adopted this innovation.

III. COMMON LAW PROPERTY

Although the common law shares with the civil law the basic exclusion-governance architecture, the common law employs a style that results in less of a focus on the "things" of property. The common law of property is not usually thought of as a law of things, and the bundle of rights picture has only brought things further out of the focus for property theorists. Much of the de-emphasis on things can be laid at the door of the estate system. One can say that whereas the land law in civil law systems is one of ownership, it is one of *estate* in the common law countries.¹⁰⁶

A. *Focus on the Estate System to the Exclusion of Other Lesser Property Interests*

What is an estate? It is a piece of ownership. Originally, in the feudal system that William the Conqueror introduced into England after 1066 and Henry II reformed greatly, the King himself was the only full owner.¹⁰⁷ Out of full ownership were carved lesser legal interests: in return for rights to land, the tenant ("holder" of the interest) would be obligated to provide service to the lord. These services started out as military but were gradually supplanted by monetary obligations.¹⁰⁸ A tenant could turn around and subinfeudate all the way down to land holding peasants. The feudal obligations were abolished in 1660 with the Statute of Tenures,¹⁰⁹ but the system of dividing property rights in the United States tracks the feudal system, with modifications. (The 1925 land reform legislation in England largely did away with the system of legal estates.¹¹⁰) Now the system of estates basically measures property interests by time (which includes conditions and limitations that can cause an interest to end).

These days, interests are rarely carved up using the estate system directly. Instead, other than leases, interests less than fee simple absolute or full ownership are created in trust, a device tracing back to the activities of the courts of equity and the desire of feudal tenants to avoid certain monetary obligations. The conventional view of the

106 John Henry Merryman, *Ownership and Estate (Variations on a Theme by Lawson)*, 48 TUL. L. REV. 916, 918 (1974).

107 See A.W.B. SIMPSON, A HISTORY OF THE LAND LAW 47 (2d ed. 1986).

108 *Id.* at 6-24.

109 12 Car. II, c. 24 (1660).

110 C. Dent Bostick, *Land Title Registration: An English Solution to an American Problem*, 63 IND. L.J. 55, 78 (1987).

trust is that it splits ownership into legal and equitable sides.¹¹¹ The trustee holds the legal title and therefore can deal with the property and, if there are no instructions to the contrary, can alienate the trust corpus, managing the corpus and its substitutes over time in a fashion consistent with fiduciary duties. The beneficiary holds equitable title, meaning that the fiduciary duties are owed to the beneficiary and that the beneficiary has the right to the proceeds of the corpus according to the terms of the trust when it was set up by the settlor. Also, if the trustee wrongfully alienates trust assets, the beneficiary can follow them into the hands of purchasers who had notice or did not give value.

The flip side of the great attention to divisions by time and the extensive use of the trust is that the common law system does not regard as central to property a variety of other types of division. Security interests are a type of conditional property right that tends to be covered more in commercial law than in property courses. Even the status of leases as both contract and property has been cloaked in some confusion: leases give possessory rights and are somewhat standardized as to subtypes, but they are otherwise customizable.¹¹² And crucially while they “run” to successor landlords, they are avoidable in bankruptcy like contract rights. Likewise, bailments have not received much attention, despite being widespread, as in coat checks, parking, and the like. But again, bailments sit uncomfortably at the intersection of the *in rem* and the *in personam*.¹¹³

B. *Transaction Cost Explanations*

Our transaction cost theory of the common law has a practical and theoretical aspect. The common law of property is not as different from civil law as conventional wisdom would have it. In both systems the broad contours of the system and their basic architectural features are dictated by the overwhelming transaction cost savings of a property system featuring the structured relations and essential features discussed in Part II. Nonetheless, in terms of style, civil law and common law take different starting points in their delineation of legally protected interests less than full ownership.

The combination of possibly large fixed costs and the original needs of the conquering Normans lent the common law system its

111 This view has recently been questioned by those who see equitable property as rights against rights. See Ben McFarlane & Robert Stevens, *The Nature of Equitable Property*, 4 J. EQUITY 1 (2010).

112 Merrill & Smith, *supra* note 29, at 811–20.

113 *Id.*

particular character. Originally, the goal of the system was to buy loyalty for the new Norman ruling class and above all for the King.¹¹⁴ The mechanism of time- and condition-based infeudation fit the bill nicely. Much delineation effort in the form of fixed costs went into setting up the system. (To the extent that pre-Norman law was consistent in terms of style of delineation with the full feudal system, no change was necessary.) Once the original feudal motivation disappeared the question was what to do with the system. The fixed costs of a highly articulated system had already been incurred. The degree of fragmentation—or more accurately the types of fragmentation—is the reflection of path dependence. We can see this at work these days; it is widely acknowledged that we do not need as many defeasible fees as we have, but there is little constituency for reform. We would never set the system up with as many interests as we currently have, but inertia (possibly helped along by the self-interest of lawyers) keeps it that way.¹¹⁵

114 Again, we do not assume that the feudal system was produced out of whole cloth with the Norman Conquest (or the reforms of Henry II). The exact mechanism might shed some light on whether common or civil law might be part of political packages that have had consequences in the past. In particular, it is worth asking whether the common law approach might reflect (or facilitate) fragmentation, collation building, and constraints on rulers. *See, e.g.*, YORAM BARZEL, A THEORY OF THE STATE 113–37 (2002) (developing theory of state that enforces and therefore delineates property rights, as resulting from members of group giving power to the state subject to collective action mechanisms against exploitation by state actors); RAGHURAM G. RAJAN & LUIGI ZINGALES, SAVING CAPITALISM FROM THE CAPITALISTS 129–56 (2003) (arguing that democratic institutions are a consequence of dispersed ownership and discussing the transformation of the English monarchy); Mark F. Grady & Michael T. McGuire, *The Nature of Constitutions*, 1 J. BIOECONOMICS 227, 238 (1999) (arguing that constitutions are product of coalitions of weaker group members to resist coercion by stronger members); Douglass C. North & Barry R. Weingast, *Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England*, 49 J. ECON. HIST. 803 (1989) (arguing that reforms in the course of the Glorious Revolution led to a credible commitment mechanism that enabled secure property rights).

115 For some proposals to simplify the system of estates and future interests, see, for example, RESTATEMENT (THIRD) OF PROP.: WILLS & OTHER DONATIVE TRANSFERS § 24.3 cmt. a (2011) (“Continued differentiation among these subcategories [of fee simple estates] is no longer useful . . . [T]his Restatement recognizes only one defeasible fee simple estate.”); T.P. Gallanis, *The Future of Future Interests*, 60 WASH. & LEE L. REV. 513 (2003). *See generally* Lawrence W. Waggoner, *Reformulating the Structure of Estates: A Proposal for Legislative Action*, 85 HARV. L. REV. 729 (1972) (proposing a structure based on the premise that the only appropriate distinctions are between certainty and uncertainty as to the termination of possessory interests and between certainty and uncertainty as to the ultimate possession of future interests).

Importantly, the generative quality of the basic estate system means that much can be accomplished with a very small set of interests, and the larger set that we have is mostly a matter of inconvenience. Functionally complex structures of multiple future interests are possible because the various methods of decomposition can feed themselves (for instance, a life estate, followed by a remainder in life estate, followed by a remainder in fee simple).¹¹⁶ Thus, as argued above, the common law system is a (somewhat complex) common form of legal communication with attendant network effects.

The common law system never invested more than other systems in articulating other dimensions of division, except for the trust. And the trust relieved a lot of the pressure from the inadequacies of these divisions; property rights could be divided in unconventional ways (conditioned on various events and according to the limited discretion of the trustee) without needing to involve significant in rem effects. (It thus also made the estate system easier to use as well.) So path dependence offers an explanation for why the common law is flexible about divisions without needing an elaborate theory of *iura in re aliena* (rights in the property of another) along the lines of the civil law.

England's different history also receives an explanation. In England, land records were quite inadequate, partly because of privacy concerns and an inability to mandate registration.¹¹⁷ In 1925, the reform of land records meant that with not that much additional effort, a nationwide reform of the estate system could be undertaken. In the United States, land records go back to Colonial times, and any reform effort would have to be a state-by-state affair, helped along by uniform acts. Such an effort is underway, but it is too early to tell what headway it will make.

IV. CIVIL LAW PROPERTY

Civil law jurisdictions differ in their law of property, just as American property law and English property law are not clones of each other. Indeed, the property laws of France and Germany are conceptually different in many ways.¹¹⁸ As explained earlier, our account can explain mixed systems (in a sense, "mixed" is a matter of degree). In a comparative discussion of civil law property systems, this Article for

116 Smith, *supra* note 14, at 164–65.

117 See Bostick, *supra* note 110, at 75–76.

118 Nevertheless, "some overriding similarities remain [in German civil code and French civil code]." JOHN HENRY MERRYMAN & ROGELIO PEREZ-PERDOMO, *THE CIVIL LAW TRADITION* 32 (3d ed. 2007).

obvious reasons cannot handle civil codes in every country. In this Part, we will use civil codes from six countries as our major targets: Germany, France, the Netherlands, Japan, China, and Taiwan. Germany's civil code, the *Bürgerliches Gesetzbuch* (*BGB*), is probably the most influential civil code in the world, and has been taken as a model by many other countries like Japan, China, Taiwan, Korea, Greece, Switzerland, and Austria.¹¹⁹ France's *Code Napoléon* was promulgated in 1804 and has also influenced many countries such as Spain, Portugal, and Romania.¹²⁰ The Netherlands passed a brand new and highly-praised civil code, *Burgerlijk Wetboek* (*BW*), in 1992. Japan borrowed heavily from Germany,¹²¹ but invented some new ideas. China's domestically highly contentious Property Law came into force in 2007.¹²² China inherited the German model through Taiwan's civil code and modified it with the legal tradition of the former U.S.S.R. to accommodate state- or collectively-owned land.¹²³ Taiwan's property law is a mixture of elements from Germany, Japan, and Switzerland, as well as customary law from before the codification in 1930. Local variations do exist, but in terms of the style of delineating property rights, civil codes regarding property are more similar to each other than they are to common law property regimes. In the following, we will demonstrate how civil law property regimes are based on ideas that are internally inconsistent or theoretically difficult. We will also offer a transaction cost explanation.

A. *Dependence on the Notion of the "Thing"*

The dependence of civil law property on the notion of things is immediately apparent in the title of the law. Property law in Germany is called "*Sachenrecht*," literally translated as the law of things.¹²⁴ *Sachen* (things) only include corporeal objects, thus excluding claims

119 See RAFF, *supra* note 99, at 9, 16–17; Albert H.Y. Chen, *The Law of Property and the Evolving System of Property Rights in China*, in THE DEVELOPMENT OF THE CHINESE LEGAL SYSTEM 81, 89–93 (Guanghua Yu ed., 2011).

120 William Tetley, *Mixed Jurisdictions: Common Law v. Civil Law (Codified and Uncodified)*, 60 LA. L. REV. 677, 687–88 (2000).

121 See, e.g. R.C. VAN CAENEGEM, AN HISTORICAL INTRODUCTION TO PRIVATE LAW 158 n.26 (D.E.L. Johnston trans., Cambridge University Press 1992) (1988).

122 For an economic analysis of China's property law, see Yun-chien Chang, *Property Law with Chinese Characteristics: An Economic and Comparative Analysis*, 1 BRIGHAM-KANNER PROP. RTS. CONF. J. 345 (2012).

123 See Chen, *supra* note 119.

124 See FOSTER & SULE, *supra* note 84, at 493.

corresponding to intellectual property rights.¹²⁵ One can only have a true right of ownership in a corporeal object, but not an incorporeal object. Property systems in the Netherlands,¹²⁶ Japan,¹²⁷ China, and Taiwan¹²⁸ use basically the same conceptual framework. Nevertheless, in French law, incorporeal objects are considered movable properties.¹²⁹ (Similarly, in common law property, “things” include incorporeal objects.¹³⁰)

Civil law property theory is structured on the ownership of corporeal things. The concept of property derived thus, at the theoretical level, fits uneasily with security-interest property rights such as mortgages, not to mention intellectual property rights¹³¹ and trusts,¹³² both of which are of increasing importance in the modern property

125 See *id.* Section 90 of the *BGB* states: “Only corporeal objects are things as defined by law.” BÜRGERLICHES GESETZBUCH [BGB] [CIVIL CODE] Aug. 18, 1896, BUNDESGESETZBLATT [BGBL.] I 1600, § 90 (Ger.), available at http://www.gesetze-im-internet.de/englisch_bgb/englisch_bgb.html#BGBEngl_000P90.

126 3 BURGERLIJK WETBOEK [BW] [CIVIL CODE] art. 2 (Neth.). See AKKERMANS, *supra* note 68, at 258. The Dutch Civil Code, however, includes incorporeal things under the “patrimonial rights (*vermogensrechten*),” which, along with things, form the “assets (*goederen*).” See CHRISTIAN VON BAR & ULRICH DROBNIG, THE INTERACTION OF CONTRACT LAW AND TORT AND PROPERTY LAW IN EUROPE 319 (2004).

127 See HIROSHI ODA, JAPANESE LAW 164–65 (3d ed. 2009); MINPO [CIVIL CODE] art. 85 (Japan), available at <http://www.japaneselawtranslation.go.jp/law/detail/?re=02&yo=%E6%B0%91%E6%B3%95&ft=2&ky=&page=2> (“The term ‘Things’ as used in this Code shall mean tangible thing.”).

128 China’s Property Law and Taiwan’s Civil Code are unclear about the inclusion of incorporeal objects. The leading opinion in Taiwan is that although claims are not objects of property rights, natural forces can be. See TZE-CHIEN WANG, TAIWAN’S PROPERTY LAW 51 (2010) (in Chinese). In China, most scholars, probably following German law, contend that only corporeal objects can be owned. See, e.g., HUI-XING LIANG & HUA-BIN CHEN, CHINA’S PROPERTY LAW 8 (2007) (in Chinese). Note that Article 2 of China’s Property Law allows rights to be objects of property law.

129 See AKKERMANS, *supra* note 68, at 409; STEINER, *supra* note 69, at 382; see also MATTEI, *supra* note 76, at 75 (observing that in France and Italy a property right may have an intangible thing as its object).

130 See JOHN SPRANKLING ET AL., GLOBAL ISSUES IN PROPERTY LAW 1 (2006) (“In the United States, we broadly define ‘property’ as legally enforceable rights among people that relate to ‘things.’ The particular ‘thing’ might be land, or a tangible object . . . , or an intangible item.”); VON BAR & DROBNIG, *supra* note 126, at 319.

131 In the German model, intellectual property rights are not typical property rights, because intellectual properties are not corporeal. See JÜRGEN BAUR & ROLF STÜRNER, SACHENRECHT 11 § 2 Rn. 2 (18th ed. 2009). French law, however, treats intellectual properties as movable properties. See Aynès, *supra* note 82, at 151; HENRY DYSON, FRENCH PROPERTY AND INHERITANCE LAW 15 (2003).

132 For trust law in Germany (*Treuhandeigentum*), see BAUR & STÜRNER, *supra* note 131, at 24–26 § 3 Rn. 34; AKKERMANS, *supra* note 68, at 184–86; FOSTER & SULE, *supra* note 84, at 499. For trust law in France (*propriété fiduciaire*), see STEINER, *supra* note

world. Below we focus our discussions on lesser property interests, as trust and intellectual property have not been fully embraced in common and civil law countries as typical property rights.¹³³

Civil law countries, at least those influenced by the German model, conceptualize property as dominion of things.¹³⁴ This conceptualization is closely related to the choice for limiting the objects of property law to corporeal objects and theorizing property rights as holding between persons and things (rather than persons versus persons about things). Conceptualizing property as dominion can explain the most prominent type of property right, ownership, regarding the owner's relationship with "all others" (the fourth proto-typical property relation). Nevertheless, even civil lawyers meet problems when explaining the second prototypical property relation, especially the relations between owners and holders of "lesser property interests."¹³⁵

In the German model, followed by Japan, China, and Taiwan, lesser property interests can be further divided into two groups: use rights and security rights.¹³⁶ In the French model, lesser property interests are divided into "principal property rights" and "accessory property rights."¹³⁷ The former corresponds to the use right in the German model, while the latter corresponds to the security right in the German model. Accessory property rights (or security rights) have posed theoretical problems for the French and German model, which both over-emphasize ownership of things in defining property rights. French law (followed by Dutch law¹³⁸) uses the *démembrement* method to create lesser property interests. *Démembrement* is subtrac-

69, at 387–89; Aynès, *supra* note 82, at 161. For a comparison of common law and civil law trusts, see van Erp, *supra* note 88, at 118–19.

133 *But cf.* MATTEI, *supra* note 76, at 76 (observing that intellectual properties in all legal systems are handled within a proprietary paradigm).

134 The German literature is fond of using "Zuordnung" (allocation) and "Herrschaft" (control) to describe the nature of property rights. See Yong-qin Su, *Freedom of Transaction for Goods That Can Be Registered*, 2010 NANJING UNI. L. REV. 16, 18 (in Chinese); MANFRED WOLF, SACHENRECHT § 1 Rn. 4 (26th ed. 2011); BAUR & STÜRNER, *supra* note 131, at 307 § 24 Rn. 5.

135 This concept has been alternatively translated as "lesser proprietary interests," "limited real rights," or "secondary rights." In German law, *das beschränkte dingliche Recht*. For a discussion of translating this term to English, see Sjeff van Erp, *European Property Law: A Methodology for the Future*, in EUROPEAN PRIVATE LAW 227, 235 (Reiner Schulze & Hans Schulte-Nölke eds., 2011).

136 See FOSTER & SULE, *supra* note 84, at 510; RAFF, *supra* note 99, at 188.

137 See AKKERMANS, *supra* note 68, at 165.

138 See *id.* at 270–71, 414.

tion or taking away parts of the whole and complete ownership.¹³⁹ In other words, “the limited property right comprises a fragment of the right of ownership.”¹⁴⁰ Because modern French legal scholarship only recognizes three elements of ownership—*usus*, *fructus*, and *abusus* (that is, the right to use, enjoy, and dispose),¹⁴¹ not including security rights—it is unclear whether security rights are property rights, and there has been fierce debate about this issue.¹⁴² On the other hand, the German model has problems of its own. In German law, ownership is absolute, always unitary, and not fragment-able. The existence of limited property rights only burdens the exercise of the powers of ownership, but the right of ownership itself remains whole.¹⁴³ This seems to be an unnecessarily complicated theory.¹⁴⁴ What is more problematic is that the insistence of the German model on property as dominion of corporeal things is inconsistent with the fact that claims, which are incorporeal and not things, can be the object of pledge,¹⁴⁵ a type of lesser property interest recognized in the German Civil Code.¹⁴⁶

In summary, the key to understanding the problems of the German and French models is that when civil law property scholars define property rights, they think of only ownership and equate the concept of ownership with property. And because they define ownership too stringently and narrowly (in terms of dominion), they have to allow exceptions in the family of property rights to accommodate security rights.

The correct way to conceptualize property rights and ownership is to treat them separately. Property is not coterminous with fee sim-

139 See *id.* at 413.

140 See *id.* at 116.

141 See *id.* at 93.

142 See *id.* at 165–66.

143 See *id.* at 179, 191–99, 415–16.

144 This “external-cumulative approach” in the German model, however, makes it easier to explain why one person can be the mortgagor and mortgagee at the same time. See van Erp, *supra* note 76, at 1056.

145 WOLF, *supra* note 134, § 1 Rn. 12.

146 For the same criticism, see VON BAR & DROBNIG, *supra* note 126, at 317. Quite a number of civil law countries adopt a broader definition of things, thus including incorporeal objects. These countries include Portugal, Italy, Austria, Belgium, etc. See *id.* at 317–18. For discussions of claims as subject matters of property rights, see Sjef van Erp & Bram Akkermans, *Property Rights: A Comparative View*, in PROPERTY LAW AND ECONOMICS 31, 34, 45–46 (Boudewijn Bouckaert ed., 2010). Some property scholars in Taiwan, on the other hand, have stuck to dominion of corporeal things and treated such pledges as merely quasi-properties. See, e.g., TSAY-CHUAN HSIEH, 1 TAIWAN’S PROPERTY LAW 13–14 (5th ed. 2010) (in Chinese).

ple absolute or ownership. As elaborated above, a property right is any right regarding a resource that is embedded with an in rem right to exclude “all others” and runs with assets, while fee simple absolute/ownership is an accumulation of all types of broadly-defined use rights that contain all the necessary features of a property right—or, to put it differently under the common law mindset, fee simple absolute or ownership can be carved into all types of use rights. In addition, there should be no exception in the definition of property rights. Those rights that do not contain all the core elements of property rights are at best quasi-property rights, to which we turn in the next section.

B. Theoretical Difficulties with “Propertized Contract”

One interesting difference between civil and common law is that while the civil law treats both contracts and torts under the common heading of obligation (in German, *Schuld*) and strictly separates obligation from property,¹⁴⁷ property, contracts, and torts are three different legal areas in the common law.¹⁴⁸ The German conceptual framework that strictly separates property and obligation (especially contract), however, has to face the existence of relations falling in between property and obligation, such as contracts with third-party effects, which are codified but fit uneasily into the strict dichotomy. The focus in the German framework on the dominion of things rather than relations, we argue, makes it difficult to accurately conceptualize and categorize these intermediate relations.

Take the lease as an example of contracts with third-party effects. The lease is a property relation in the common law world¹⁴⁹ but is a contractual relation in the civil law world. Recognizing the hardship imposed on lessees if they have no right against a new property owner

147 While Germany, France, the Netherlands, Japan, and Taiwan more or less separate obligation (contract and torts) and property, China may be an exception. China stipulated its General Principles of the Civil Law in 1986, Contract Law in 1999, Employment Contract Law in 2007, Property Law in 2007, and Tort Law in 2009. It is still unclear if and when China incorporates these separate codes, whether tort law and contract law will be placed under the heading of obligation law.

148 Another interesting difference is that in civil law countries, private law scholars usually master all three areas (property, contract, and torts)—though, because of the strict separation between obligation and property, it is even more common for a private law scholar to be an expert in contract and torts at the same time. By contrast, in common law countries, at least in the U.S., it is unusual for a law professor to teach (not to mention to be an expert in) all three areas.

149 Note, however, that in the U.S., leasehold is also partially “contractized.” See, e.g., JESSE DUKEMINIER ET AL., PROPERTY 431–39 (7th ed. 2010); Merrill & Smith, *supra* note 29, at 811–20; Thomas J. Miceli et al., *The Property-Contract Boundary: An Economic Analysis of Leases*, 3 AM. L. ECON. REV. 165, 166–67 (2001).

who acquires the property from the lessors, most, if not all, civil codes adopt a rule that is called “a sale does not break a lease.”¹⁵⁰ If certain conditions (usually regarding notice) are met, the new owners have no choice but to step in the shoes of the original lessors—that is, the lease runs with the asset. German lawyers call this *Verdinglichung obligatorischer Rechte*, literally translated as “reification of contractual rights,”¹⁵¹ which is neither a typical property nor a typical contract.¹⁵² We will instead use the term “propertized contract” or “propertized contractual rights/relations,” to make their intermediate nature obvious. Probably to keep the strict separation as intact as possible, German scholars have argued that conceptually this is the only type of intermediate relation between contract and property.¹⁵³

Also, in Germany¹⁵⁴ and Taiwan,¹⁵⁵ tenants in common can in a covenant allocate how each co-tenant uses and manages a specific part

150 For France, see AKKERMANS, *supra* note 68, at 160–61. For Germany, see *id.* at 35, 240–43. For the Netherlands, see BW art. 7:226 (Neth.). For Japan, see ODA, *supra* note 127, at 164. For Taiwan, see LAWS & REGULATIONS DATABASE OF THE REPUBLIC OF CHINA art. 425 (May 26, 2010), available at <http://law.moj.gov.tw/Eng/LawClass/LawContent.aspx?PCODE=B0000001>.

151 See van Erp, *supra* note 88, at 118. The German law of obligations embraces (roughly) contracts, torts, and unjust enrichment, but it is contract here that is in issue.

152 For propertized contracts in Japanese law, see ODA, *supra* note 127, at 164.

153 See, e.g., Claus-Wilhelm Canaris, *Die Verdinglichung Obligatorischer Rechte*, in FEST-SCHRIFT FÜR WERNER FLUME 377–78 (Horst Heinrich Jakobs ed., 1978); accord IV CHUNG-JAU WU, CIVIL LAW AND JURISPRUDENCE 23 (2010) (in Chinese). Wu is a German-trained Taiwan scholar.

154 “Where the co-owners of a plot of land have arranged the management and use or excluded permanently or for a period of time the right to require the co-ownership to be dissolved, or have laid down a notice period, the provision agreed on has effect against the successor in interest of a co-owner only if it is registered in the Land Register as an encumbrance of the share.” BGB, Aug. 18, 1896, BGBL. I 1600, § 1010(1) (Ger.), available at http://www.gesetze-im-internet.de/englisch_bgb/englisch_bgb.html#BGBengl_000P1010.

155 LAWS & REGULATIONS DATABASE OF THE REPUBLIC OF CHINA art. 826-1 (May 26, 2010), <http://law.moj.gov.tw/Eng/LawClass/LawContent.aspx?PCODE=B0000001> (“(1) The covenant of the use, management, partition or partition inhibition or the decision made between the co-owners of the real property according to the first paragraph of Article 821, is bound to the share transferee or the person who acquires the right in rem after its recordation. The same rule shall apply to the management which a court has ruled that has been recorded. (2) The agreement and decision upon the thing held in indivision or the order made by the court between co-owners of personal property shall also bind the share transferee and the person who acquires the right in rem, but only when such person knows or should have known of such case while transferring or acquiring. (3) When the share of the thing held in indivision is transferred, the transferee is jointly and severally liable for the charges arising from the use, management, or other matters related to the thing held in indivision.”).

of the co-owned real property.¹⁵⁶ If the covenant is registered in the real estate registry, subsequent transferees of any co-tenant's share will be bound by the covenant. That is, the covenant runs with assets. Property scholars in Germany and Taiwan generally consider this kind of covenant to be a type of "propertized contract."¹⁵⁷

Nevertheless, if property rights are understood according to our framework above, intermediate relations will not pose theoretical or conceptual problems and we can understand property rights and quasi-property rights more accurately. In Part II we pointed out the *sine qua non* of property relations and several distinctions between property relations and contractual relations. We argue that if a relation in question meets one or two but not all three essential features (in rem, right to exclude, and running with assets) of a property relation, it is a quasi-property relation. Seen from this angle, the "propertized contract" conventionally understood by civil lawyers actually contains a variety of relations that are propertized to different extents. In the lease example above, the rights run only when a lessor transfers her title but not when a lessee transfers what the common law would call her "leasehold."¹⁵⁸ In addition, the lessee is not equipped with an in rem right to exclude because of the lease contract itself (lessees, however, can in their capacity as possessors usually exclude trespassers). Thus, the "a sale does not break a lease" doctrine only minimally propertizes the lease contract. As for the covenant to use a co-owned resource, a co-tenant already has an in rem right to exclude other co-tenants and all others from unauthorized use or transfer; in addition, a co-tenant can transfer some or all of her share to any third party, making the latter a holder of a property interest. Thus, tenancy in common is a full-blown property relation. The covenant between co-tenants that runs to transferees is, therefore, an added layer to the property relation between co-tenants.

Merrill and Smith have pointed out that in the property-contract interface, there are two types of intermediate relations: "quasi-multiple" (relations with indefinite, nonnumerous parties) and "com-

156 For introduction and discussions of such covenants, see Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 *YALE L.J.* 549, 618–20 (2001); Yun-chien Chang, *Tenancy in "Anticommons"? A Theoretical and Empirical Analysis of Co-ownership*, *J. Legal Analysis*, (forthcoming 2012), available at <http://jla.oxfordjournals.org/content/early/2012/08/08/jla.las011.full.pdf+html>.

157 See, e.g., BAUR & STÜRNER, *supra* note 131, at 32 § 3 Rn. 47; Yun-chien Chang, *An Economic Analysis of the Article 826-1 of the Taiwan Civil Code: The Distinction Between Property Rights and Quasi-Property Rights*, 40 *NAT'L TAIWAN U. L.J.* 1255 (2011) (reviewing the literature in Taiwan) (in Chinese).

158 See van Erp, *supra* note 76, at 1053.

pound-paucital” (relations with definite, numerous parties).¹⁵⁹ Our analysis here not only shows that civil lawyers only have in mind quasi-multital relations (as a propertized contract generally binds indefinite, nonnumerous parties), ignoring the possibilities of compound-paucital relations, but also implies that quasi-multital relations can further be categorized. The civil-law lease is one type of quasi-multital relation. Covenants for co-owned personal property are another case in point. The Taiwan Civil Code stipulates that co-owners of personal property can also covenant to arrange usage. Nevertheless, because a registry for most types of personal property does not exist in Taiwan, the law stipulates that only bad-faith transferees of the shares are bound by the covenants. Here, whether the covenant runs with assets depends on whether a third party knows enough about what she buys! Since the covenant does not always run, but bad-faith third parties are still bound by the covenant, the covenant constitutes another type of quasi-multital/quasi-property relation (different from the lease type).¹⁶⁰

C. *Transaction Cost Explanations*

Why have civil law countries adopted and stuck to the three features of its style of delineation—the unitary concept of property rights, strict separation between property and obligation, and the definition of property rights as relations between persons and things? As we have demonstrated above, these concepts cannot adequately explain lesser property rights like mortgages or pledges and inhibit civil laws from adequately characterizing intermediate relations between contract and property that are prevalent nowadays. We present an explanation based on path-dependence, even though the path is very long, and sometimes winding.

As is well known, current civil law systems, especially in their law of property,¹⁶¹ are still deeply influenced by the Roman law that was stipulated about two millennia ago and was self-consciously revived at various later times.¹⁶² In both France and Germany, Roman law

159 See Merrill & Smith, *supra* note 29, at 786.

160 The Taiwan Supreme Court, in another context, has ruled that a contract could bind bad-faith parties and those who should have (but do not have) knowledge about the contract. This relation is yet another type of quasi-multital/quasi-property relation.

161 See Sjef van Erp, *A Comparative Analysis of Mortgage Law: Searching for Principles, in LAND LAW IN COMPARATIVE PERSPECTIVE* 69, 71 (María Elena Sánchez Jordán & Antonio Gambaro eds., 2002).

162 We do not argue that civil law countries have adopted the whole package of Roman property law. For discussions of how industrialization in Germany in the nine-

served as a background focal point.¹⁶³ Roman concepts have persisted in many ways on the European Continent for two thousand years. The Roman jurists thought that property (in rem) referred to “a relationship between a person and a thing,”¹⁶⁴ and they regarded only corporeal things (*res corporales*) as the object of property rights.¹⁶⁵ As a result, they “felt no need to make a clear distinction between ownership and its object.”¹⁶⁶ Nevertheless, in many respects, Roman property law is strikingly different from modern civil property law: Roman law adopts an extremely rigid unitary concept of property rights. Indeed, under classical Roman law, a property owner was “not allowed to transfer anything less than the entire bundle of rights, privileges, and powers that he had in the property,”¹⁶⁷ with very few exceptions.¹⁶⁸ In addition, “there is no Roman definition of ownership . . . [T]he commentators adapted the definition of usufruct by adding to the rights of use and enjoyment” the right of disposal.¹⁶⁹ Furthermore, security interests such as pledge (*pignus*) and mortgage (*hypotheca*) are discussed under the heading of obligation,¹⁷⁰ not property.¹⁷¹ The idea of “possession” is used restrictively, applied only to owners, because “[t]he Roman probably understood by ‘possession’ not simply the holding of a thing but rather the holding of a thing in the manner of an owner;”¹⁷² that is, a usufructuary is not in possession of the land he uses.¹⁷³

The three features first developed by the Romans and inherited by the civil law countries actually make sense—for the Romans. Since full ownership is the predominant form of property rights, a unitary

teenth century moved the German nuisance law away from Roman law influence, see Claus Ott & Hans-Bernd Schäfer, *The Dichotomy Between Property Rules and Liability Rules: Experiences From German Law*, 1 ERASMUS L. REV. 41, 46–50 (2008).

163 So much so that Savigny could defend a version of Roman law as a sort of German people’s law against contemporaneous efforts at codification. See FRIEDRICH CARL VON SAVIGNY, *VOM BERUF UNSERER ZEIT FÜR GESETZGEBUNG UND RECHTSWISSENSCHAFT* (Heidelberg: Muhr und Zimmer 1814).

164 BARRY NICHOLAS, *AN INTRODUCTION TO ROMAN LAW* 100 (1962).

165 *Id.* at 106–07.

166 *Id.* at 107.

167 Francesco Parisi, *Entropy in Property*, 50 AM. J. COMP. L. 595, 603 (2002).

168 *Id.* at 603–04.

169 NICHOLAS, *supra* note 164, at 154.

170 Note that in countries like Portugal, mortgage and pledge are still stipulated in obligation. The French Civil Code stipulates mortgage and pledge separately from contracts and property.

171 One modern commentator has considered it “both of contract and of property.” NICHOLAS, *supra* note 164, at 150.

172 *Id.* at 111.

173 *Id.* at 110–11.

concept is probably the clearest, if not the only, way to capture the idea of full ownership as the major form of property right. In addition, without some forms of security rights that do not entitle their interest holders to possess or literally use the thing, conceiving property rights as relations between persons and things¹⁷⁴ is perhaps conceptually easier to understand than the property concept we advance in this Article. Given the Roman's narrow concept of property rights, intermediate relations are largely inconceivable, thus justifying a strict separation between property and obligation.¹⁷⁵

With the fall of the Roman Empire came the feudal property system and various local customary laws. But Roman law and its property concept were not dead. Roman law continued to be studied by jurists in various places, including in what is now France and Germany, and was sometimes even drawn on to adjudicate cases.¹⁷⁶ Indeed, medieval jurists struggled to reconcile feudalism with the Roman law concept of unitary ownership.¹⁷⁷ Still, how was Roman law formally internalized into those modern civil codes? In the case of France, when the Revolution overthrew the old political regime and the accompanying feudal property system,¹⁷⁸ the commission established by Napoleon to submit a draft of a new civil code based its ideas of ownership and property law mainly on Roman law.¹⁷⁹ Why revive Roman law? As Francisco Parisi indicated, “[d]uring the 18th century, it had become fashionable to point to the feudal tradition as the root of inefficient property fragmentation and to rebel against the feudal heritage by proclaiming a new paradigm of absolute and unified property.”¹⁸⁰ The “new” paradigm is actually quite old and was the undercurrent of the property regime through the medieval and pre-

174 For such conception of property in Roman law, see, for example, Aynès, *supra* note 82, at 147.

175 For the Roman conception of strict separation, see AKKERMANS, *supra* note 68, at 172–74 (referencing the writings and observations of Friedrich Karl von Savigny).

176 See, e.g., *id.* at 84 (“[I]t became a custom of French lawyers to invoke the *Corpus Iuris Civilis*. In this respect, Roman law was customary law in the south of France.” (footnote omitted)).

177 Joshua Getzler, *Plural Ownership, Funds, and the Aggregation of Wills*, 10 THEORETICAL INQUIRIES L. 241, 251 (2009).

178 See Parisi, *supra* note 167, at 602; AKKERMANS, *supra* note 68, at 85; Ugo Mattei, *Property Rights in Civil Law*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 157, 158–59 (Peter Newman ed., 1998).

179 See AKKERMANS, *supra* note 68, at 86. Indeed, the subject matter of Napoleonic Code was nearly identical with that of the first three books (persons, things, and actions) of the Institutes of Justinian. See MERRYMAN & PEREZ-PERDOMO, *supra* note 118, at 10; STEINER, *supra* note 69, at 379.

180 Parisi, *supra* note 167, at 602.

Revolutionary era, especially in southern France.¹⁸¹ As for the codification itself, the codifiers, and Portalis in particular, attempted to enshrine a version of natural law derived from Pothier in the eighteenth century and Domat, Grotius, and Pufendorf in the seventeenth, who in turn drew on the Spanish jurists of the sixteenth century.¹⁸² Because these notions were set forth very abstractly—in terms of delineating property on the basis of things—it was easy for the code to receive a more individualistic interpretation in the nineteenth century.¹⁸³ What is striking is how the Roman vocabulary and style, based on things and dominion, could remain a thin but constant element through very different legal regimes over a long period of time. Thus, modeling a new civil code after the Roman one saved information costs for French jurists¹⁸⁴ and obviated the institutional costs of switching to a new set of property doctrines that are not necessarily better than Roman law.

In the case of Germany, the Roman law was formally “received”¹⁸⁵ as binding law long before Germany was unified in 1871.¹⁸⁶ Therefore, it should come as no surprise that many German scholars in the nineteenth century considered a unitary concept of ownership as “the only possible type of ownership.”¹⁸⁷ The Roman idea of strict separation between property and obligation was also whole-heartedly accepted by German jurists (*Trennungsprinzip* in German) and is even considered the foundation of German property law.¹⁸⁸ Thus, similarly, codifying the Roman law principle reduced information costs and institution costs.¹⁸⁹

With French property law and German property law as its modern incarnation, the Roman property law concept took flight—even to

181 See, e.g., VAN CAENEGEM, *supra* note 121, at 2, 6, 17.

182 James Gordley, *Myths of the French Civil Code*, 42 AM. J. COMP. L. 459, 461–62 (1994).

183 *Id.* at 466–68.

184 Inheriting Roman law may even reduce information costs for ordinary people who may have been governed by Roman law as customary law, as was the case in southern France.

185 Germany, the Netherlands, and many other European countries “received” Roman law. See, e.g., Kleijn et al., *supra* note 86, at 109; VAN CAENEGEM, *supra* note 121, at 2–3.

186 MERRYMAN & PEREZ-PERDOMO, *supra* note 118, at 10.

187 AKKERMANS, *supra* note 68, at 174.

188 See *id.* at 173.

189 For the influence of Roman Law on Germany’s *BGB*, see, for example, VAN CAENEGEM, *supra* note 121, at 156–57; JAMES Q. WHITMAN, *THE LEGACY OF ROMAN LAW IN THE GERMAN ROMANTIC ERA*, at x–xi (1990).

Asia. First Japan, then Taiwan¹⁹⁰ and other countries, and finally China modeled its property law after Germany's *BGB* and basically maintained the three features identified above—the unitary concept of property, the strict separation of property and obligation, and the definition of property as a relation between a person and a thing.

Given the high switching costs and the fact that civil property law works just fine most of the time, it is not surprising that civil law countries stick to their “styles” of delineating legal interests. Nevertheless, it is hard to understand, other than preserving the traditional way of thinking, why modern jurists in civil law countries do not manage to change their concept of property rights. Changing the conceptual framework requires no political costs, for the three features discussed above are mainly scholarly constructions, and thus not a word in the civil code needs to be changed. Roman jurists developed the conceptual framework of property without taking into account mortgage, pledge, superficies (the right to construct and use a major fixture like a building on others' land), and *emphyteusis* (like a permanent leasehold).¹⁹¹ That framework, as argued above, is ill-suited for the modern world. Perhaps, the costs of paradigm-shifting in academia are also too great, and, other than legal scholars, who support the old paradigm, no one else is seriously affected by those three features; thus, there is again no constituency for reform.

Putting the pieces together, our transaction cost theory accounts for the broad structural similarities and the subtler stylistic differences between common and civil law property.

The functional outlines of the two property systems are very similar, probably for familiar reasons of purpose and possibly evolutionary pressures to serve those purposes.¹⁹² In particular, overwhelming

190 Taiwan's civil code was actually enacted in 1930 when the Republican government reigned in China. This code was supposed to apply in China, and indeed did so for about two decades. Apparently, China has no Roman law tradition. But this civil code and all of the previous drafts (the first one announced in 1910, the last year of the Qing Dynasty) were influenced by German Civil Code and Japan Civil Code. Why didn't China emulate the common law? Archival work suggests that civil law was preferred by the Qing Dynasty because civil law is more centralized and thus conformed to the tastes of the ruling “Mandarins.” See Feng Deng, *Why Did China Choose the Civil Law? An Economic Analysis*, 2 PEKING U. L.J. 165 (2009) (in Chinese).

191 Barry Nicholas observes that superficies and *emphyteusis* “were admitted to the private law too late for any theoretical account The lawyers of the late Empire were content to leave them simply as institutions *sui generis*.” NICHOLAS, *supra* note 164, at 157.

192 Even as big a proponent of the use of an idealized Roman law to attain theoretical purity as von Savigny conceded that “merely theoretic considerations must give way to the actual wants of daily life” FRIEDRICH CARL VON SAVIGNY, VON SAVIGNY'S

transaction cost advantages favor the basic exclusion-governance architecture. Sometimes these basic features common to many property systems are conveniently labeled and classified using the terminology or categories of Roman law.¹⁹³

Within these broad outlines, systems vary in their method or “style” of delineating property rights, as we have been discussing. For exogenous political reasons—feudalism and gradualism in the common law, and Roman origins and anti-feudal Roman-based reform in the civil law—large fixed costs were incurred at specific times in the past.¹⁹⁴ The ability to incur these costs to effect change only happens rarely, and, when it does, it does not occur as part of judicial lawmaking. Especially in property, legislatures have taken the primary role in major changes in the property system, particularly ones that have in rem effects, even in common law countries.¹⁹⁵ This is consistent with legislatures and sovereigns (e.g., William the Conqueror) rather than courts being the major innovators—they are the only ones that can effectively incur the large fixed costs. Post-Conquest, high switching costs and network effects have caused lock-in.

Moreover, the Roman-inspired style of property delineation served as a coordination device over long stretches of time in the civil-

TREATISE ON POSSESSION; OR THE JUS POSSESSIONIS OF THE CIVIL LAW 404 (Erskine Perry trans., 6th ed. 2002) (1848). For one famous version of the functional view, see Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV., no. 2, May 1967 at 347. On evolution, see, for example, Armen A. Alchian, *Uncertainty, Evolution, and Economic Theory*, 58 J. POL. ECON. 211 (1950) (drawing a parallel between the biologist and the economist in assessing decision-making while accounting for uncertainty in the environment). See also Todd J. Zywicki, *The Rise and Fall of Efficiency in the Common Law: A Supply-Side Analysis*, 97 NW. U. L. REV. 1551 (2003) (examining the changes in the efficiency of common law legal rules using supply-side, institutional conditions relating to competition).

193 On the influence of Roman law in the common law treatise tradition, including famously Blackstone, see Alan Watson, *The Structure of Blackstone's Commentaries*, 97 YALE L.J. 795 (1988). On the *ius commune* in England, see R. H. HELMHOLZ, *THE IUS COMMUNE IN ENGLAND: FOUR STUDIES* (2001). For the *ius commune* in Continental Europe, see RENÉ DAVID & JOHN E. C. BRIERLEY, *MAJOR LEGAL SYSTEMS IN THE WORLD TODAY* 45–46 (3d ed. 1985).

194 See, e.g., PETER STEIN, *ROMAN LAW IN EUROPEAN HISTORY* 119 (1999) (“The German Romanists were not interested in tracing the way in which Roman law had been adapted to serve the needs of contemporary society [T]hey wanted to reveal the inherent theoretical structure that was implicit in the [Roman] texts.”); R. C. VAN CAENEGEM, *JUDGES, LEGISLATORS AND PROFESSORS: CHAPTERS IN EUROPEAN LEGAL HISTORY* 82, 113–26 (1987); Richard A. Posner, *Savigny, Holmes, and the Law and Economics of Possession*, 86 VA. L. REV. 535, 536–40 (2000); James Q. Whitman, *The Moral Menace of Roman Law and the Making of Commerce: Some Dutch Evidence*, 105 YALE L.J. 1841, 1843 (1996).

195 Merrill & Smith, *supra* note 14, at 58–68.

ian world. Legal communication about property is served by convergence on a single style, and Roman law was focal for the reasons discussed earlier. Similarly, in the common law world, the estates and future interests provided a familiar (to lawyers) language of delineation with network effects, long after the demise of feudalism itself.

These conditions created styles of delineation that exhibited path dependence. Style is very real from an internalist perspective, and captures the (somewhat exaggerated) differences between systems as perceived by their respective practitioners. More easily measurable is a subset of style features: the number of property forms. Common law systems typically have a larger set of property rights and are somewhat more open-ended—they have a less strict *numerus clausus*.¹⁹⁶

With respect to the style of delineation, the two systems only allowed tinkering around the edges. In part, this is a consequence of the *numerus clausus*, and in part it is the result of the institutional incapacity of courts to make major changes. In the case of the estate system, it has been very difficult to generate interest in reforming the system and reducing the number and complexity of legal estates. Rarely does anyone find it worthwhile to incur the large fixed costs of changing the style of delineation. Where it has happened, as in England in 1925, it has occurred as part of broader land law reform legislation. In civil law countries the status quo is reinforced by the norm built into the system that the Code is the exclusive source of legal obligation.¹⁹⁷

What is the significance of these developments? We believe that the style of delineation, based on dominion in the civil law and on estates in the common law, is worthy of explanation in the first place. The more exaggerated instances of legal styles are also, we argue, symptoms, in each case, of a lack of attention to the difference between use interests and the lumpy legal interests to which they cor-

196 *Id.* at 8–11, 20–24; Chang, *supra* note 83.

197 HENRY M. HART, JR. & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 749 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994) (1958) (observing that civil law codes are based on “a self-contained body of statutory provisions which are to be taken as the exclusive source of law, and to which all judicial decisions must be referred”); JOHN HENRY MERRYMAN, *THE CIVIL LAW TRADITION: AN INTRODUCTION TO THE LEGAL SYSTEMS OF WESTERN EUROPE AND LATIN AMERICA* 22–23 (2d ed. 1985) (observing that separation of powers as formulated in civil law countries precludes the doctrine of *stare decisis* and judge-made law, and that in civil law tradition “only statutes enacted by the legislative power could be law,” as supplemented by administrative regulations and custom); ALAN WATSON, *THE MAKING OF THE CIVIL LAW* 168 (1981) (observing that statutes, including foremost the code, along with governmental and ministerial decrees, are the only independent source of law, with a possible subordinate source of law in custom).

respond. Importantly, style of delineation is part of a mode of communication with network effects that contributes to the overall “legal culture.” And in certain areas, the style of delineation may have a substantive impact, as with the treatment of leases, mortgages, and the like in civil law, and German law in particular. To this we might add the needless complexity of the common law estate system, where it persists, and the attractiveness of the trust that allows the legal estates not to be of much practical use.

CONCLUSION

Both the common and civil law must distinguish interests in use from the often indirect legal structure—legal interests and the devices that protect them—in order to avoid the massive transaction costs of a “complete” property system. To borrow a term from corporate law,¹⁹⁸ this is the (or at least *an*) “essential role” of property law. And the two systems respond to a variety of real world problems with similar broad structures. Nevertheless, the path dependence of the delineation process in the two systems—feudalism and (revived) Roman law, respectively—make the starting point and the details of delineation—what we are calling its style—quite different. The lack of constituency for change and the generativity and flexibility of the systems reduce the pressure to change at this level, reinforcing the path dependence.

The result is the characteristic anomalies at the doctrinal and theoretical level in the two traditions. The idea of property as relations between persons regarding resources springs naturally from the feudal property system, but the idea is not just useful in feudalism or the common law estate system. We have demonstrated that property as structured relations better explains the well-recognized lesser property interests, especially security interests, and the ever more prevalent propertized contracts in civil law systems. On the other hand, the estate system as abetted by Legal Realism deemphasizes things to the point of obscuring the role delineation costs play in the shape of property law. Further, the common law has overlooked the fact that not all property relations are the same. There are four prototypical property relations. Obscuring this typology has caused confusion in the literature on the essence of a property right. We argue that in *rem* status, the right to exclude, and running with assets all count as a *sine qua non* of a property right. In other words, a property right is not a bundle of rights, but a right with these three features that relates to the use of some defined thing.

198 Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387, 393–94 (2000).

Legal styles of delineation have a remarkable persistence. Some form of path dependence lies at the root of this persistence. Legal delineation is a matter in part of communication, which is subject to network effects from the need to coordinate. Other generators of path dependence, such as large fixed costs, learning effects, and adaptive expectations, likely also play a role. Also, to the extent that style is compatible with functional change to meet new needs, switching styles will generally not be cost-effective. Moreover, because of the special needs of in rem coordination and communication, we predict that the style of property delineation will be more resistant to change than is true of contract law, and that within property law the most in rem aspects will likewise be the most stable stylistically over time. So-called mixed systems and the peripheral mixed aspects of conventionally denominated common law and civil law systems are consistent with these predictions.

Harmonization of contract law and tort law has been under way on the continental (Europe, most prominently) and even the global level.¹⁹⁹ Property law, by contrast, is often lacking in comparative law scholarship, owing to the ostensible gulf between common and civil law property law.²⁰⁰ By proposing a transaction cost theory that explains where the differences between civil and common law properties come from and their significance, and by advancing a more sophisticated concept of property that can better depict both the common and civil law property rights, we hope to provide a platform for global comparative property law.

199 See, e.g., van Erp, *supra* note 135, at 234–35.

200 In an important book, *TOWARDS A EUROPEAN CIVIL CODE*, there are thirteen chapters (about 200 pages) on contract law and five chapters (about 100 pages) on tort law, but just four chapters (about seventy pages) on property law. See EWOUT HONDIUS ET. AL., *TOWARDS A EUROPEAN CIVIL CODE* (Arthur Hartkamp et al. eds., 4th ed. 2011). In another book, *ENGLISH, FRENCH, & GERMAN COMPARATIVE LAW*, there are chapters on constitutional law, contract law, tort law, etc., but no chapter on property law! See RAYMOND YOUNGS, *ENGLISH, FRENCH, & GERMAN COMPARATIVE LAW* (2d ed. 2007). Note, however, that the European Bank for Reconstruction and Development has proposed a model law on non-possessory security over movable properties. This model law “[is] compatible with civil law concepts and, at the same time, [draws] on common law systems.” John Simpson & Joachim Menze, *Ten Years of Secured Transactions Reform*, EBRD’S OFFICE OF THE GEN. COUNSEL SECURED TRANSACTIONS PROJECT 21 (2000), available at <http://www.ebrd.com/downloads/legal/secured/lit002b.pdf>.

