

Article

Optimal Standardization in the Law of Property: The *Numerus Clausus* Principle

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I. INTRODUCTION

A central difference between contract and property concerns the freedom to “customize” legally enforceable interests. The law of contract recognizes no inherent limitations on the nature or the duration of the interests that can be the subject of a legally binding contract. Certain types of promises—such as promises to commit a crime—are declared unenforceable as a matter of public policy. But outside these relatively narrow areas of proscription and requirements such as definiteness and (maybe) consideration, there is a potentially infinite range of promises that the law will honor. The parties to a contract are free to be as whimsical or fanciful as they like in describing the promise to be performed, the consideration to be given in return for the promise, and the duration of the agreement.

The law of property is very different in this respect. Generally speaking, the law will enforce as property only those interests that conform to a limited number of standard forms. As it is stated in a leading English case, “incidents of a novel kind” cannot “be devised and attached to property at the fancy or caprice of any owner.”¹ With respect to interests in land, for example, the basic forms are the fee simple, the defeasible fee simple, the life estate, and the lease. When parties wish to transfer property in land, they must specify which legal form they are using—fee simple, lease, and so forth. If they fail to be clear about which legal interest they are conveying, or if they attempt to customize a new type of interest, the courts will generally recast the conveyance as creating one of the recognized forms. Of course, the law freely allows customization of the more physical, tangible dimensions of ownership rights. Property comes in all sorts of shapes and sizes. But with respect to the legal dimensions of property, the law generally insists on strict standardization.

Every common-law lawyer is schooled in the understanding that property rights exist in a fixed number of forms. The principle is acknowledged—at least by implication—in the “catalogue of estates” or “forms of ownership” familiar to anyone who has survived a first-year property course in an American law school.² The principle, however, is by

1. *Keppell v. Bailey*, 39 Eng. Rep. 1042, 1049 (Ch. 1834).

2. Standard reference and instructional materials present the list of property options as being closed. For example, a chapter entitled “Introduction to Permissible Interests in Land” in a leading treatise begins as follows: “This Treatise explores and discusses the general principles of law that apply to ‘permissible interests in land,’ which courts and legislatures have recognized.” 1 RICHARD R. POWELL, *POWELL ON REAL PROPERTY* § 11.01, at 11-2 (Patrick J. Rohan ed., 1999); see also CHARLES DONAHUE, JR. ET AL., *CASES AND MATERIALS ON PROPERTY: AN INTRODUCTION TO THE CONCEPT AND THE INSTITUTION* 457 (3d ed. 1993) (“[T]he common law regarded the system of estates as closed.”); JESSE DUKEMINIER & JAMES E. KRIER, *PROPERTY*

no means limited to estates in land and future interests; it is also reflected in other areas of property law, including landlord-tenant, easements and servitudes, and intellectual property. Nor is the principle confined to common-law countries; to the contrary, it appears to be a universal feature of all modern property systems.³ In the common law, the principle that property rights must conform to certain standardized forms has no name. In the civil law, which recognizes the doctrine explicitly, it is called the *numerus clausus*—the number is closed.⁴ We adopt this term for purposes of our discussion here, which focuses primarily on the common law.

As befits a doctrine that has no name, the principle that property rights must track a limited number of standard forms has received very little examination in Anglo-American legal literature. We have discovered only one full-length English-language article on the *numerus clausus*.⁵ This is again in contrast to the civil law, where the doctrine is widely acknowledged by commentators as being a substantive limitation on the definition of property, as in Germany,⁶ or a limitation on the circumstances

204 (4th ed. 1998) (referring to the “standardization of estates”); LEWIS M. SIMES & ALLAN F. SMITH, *THE LAW OF FUTURE INTERESTS* § 61, at 45-46 (2d ed. 1956) (presenting a short section entitled “A Doctrine of Fixed Types of Estates”).

3. As one leading English comparativist has stated, “In all ‘non-feudal’ systems with which I am familiar (whether earlier, as at Rome, or later), the pattern is (in very general terms) similar: there are less than a dozen sorts of property entitlement.” Bernard Rudden, *Economic Theory v. Property Law: The Numerus Clausus Problem*, in *OXFORD ESSAYS IN JURISPRUDENCE: THIRD SERIES* 239, 241 (John Eekelaar & John Bell eds., 1987). As noted *infra* Section II.B, depending on how one does the classification, American common law recognizes more than a dozen forms of property. Still, as far as we are aware, Rudden’s point about the number of forms being finite and effectively closed in all known non-feudal property systems is accurate.

4. John Henry Merryman, *Policy, Autonomy, and the Numerus Clausus in Italian and American Property Law*, 12 *AM. J. COMP. L.* 224 (1963); Rudden, *supra* note 3, at 240.

5. Rudden, *supra* note 3. Certain applications of the doctrine are addressed in Merryman, *supra* note 4, and, as we note below, the doctrine is considered in passing in a variety of sources.

6. The term *numerus clausus* is used in Germany alongside *Typenzwang* and *Typenfixierung* (both meaning “fixation of types” of property); the principle is considered a substantive limitation on the definition of property implicit in the code. See § 854 BGB (defining property); PHILIPP HECK, *GRUNDRIS DES SACHENRECHTS* §§ 23, 120(6) (1930). According to one treatise, for example, interested parties

cannot be free to endow any right that they please pertaining to a thing with the character of a real right. The principle of freedom of contract, which dominates the law of obligations, has no validity in the law of property. Here the contrary principle holds: The interested parties can only establish such rights as are permitted by the law. The number of real rights is therefore necessarily a closed one.

3 *MOTIVE ZU DEM ENTWURFE EINES BÜRGERLICHEN GESETZBUCHES FÜR DAS DEUTSCHE REICH* 3 (Berlin & Leipzig, Guttentag 1888) (authors’ translation); OTTO PALANDT, *BÜRGERLICHES GESETZBUCH* 1069 (Peter Bassenge et al. eds., 59th ed. 2000); see also, e.g., KARL-HERMANN CAPELLE, *BÜRGERLICHES RECHT: SACHENRECHT* 13 (1963) (“Numerus Clausus, Typenzwang oder Typenfixierung”); KLAUS SCHREIBER, *SACHENRECHT* 28-29 (1993) (“Typenzwang und Typenfixierung”); JAN WILHELM, *SACHENRECHT* 146 (1993) (“Numerus Clausus / Typenzwang”); Jürgen Kohler, *The Law of Rights in Rem*, in *INTRODUCTION TO GERMAN LAW* 227, 230 (Werner F. Ebke & Matthew W. Finkin eds., 1996) (“*numerus clausus* of rights in rem”).

in which property rights can be enforced against third parties, as in Japan⁷ and perhaps France,⁸ or at least an unstated design principle.⁹

Particularly striking is the virtual absence of any treatment of the *numerus clausus* by scholars influenced by the law-and-economics movement. The principle that property forms are fixed and limited in number represents an extremely important qualification to the principle of freedom of contract—a principle widely regarded by law-and-economics scholars as promoting the efficient allocation of resources. A willing buyer and a willing seller can create an infinite variety of enforceable contracts for the exchange of recognized property rights, and can describe these property rights along a multitude of physical dimensions and prices. But common-law courts will not enforce an agreement to create a new type of property right. Remarkably, virtually no effort has been made to theorize

7. The *numerus clausus* principle is well-established in Japanese law, although in contrast to German law, Japanese law regards the principle, which is reflected in Civil Code Article 175, more as a limitation on the circumstances in which property rights can be enforced against third parties. MINPŌ, art. 175; see, e.g., YOSIYUKI NODA, INTRODUCTION TO JAPANESE LAW 198-99 (Anthony H. Angelo ed. & trans., 1976) (noting that Civil Code Article 175 limits property rights to types created by legislation and that registration is not required to create a property right but is required for enforcement of the right against third parties); HIROSHI ODA, JAPANESE LAW 157 (1992) (discussing Article 175 limitations); *id.* at 158-61 (noting that registration is not required to create a property right but is required for enforcement of the right against third parties); see also, e.g., 1 J.E. DE BECKER, THE PRINCIPLES AND PRACTICE OF THE CIVIL CODE OF JAPAN 140-42 (1921) (noting that it is the policy of Article 175 to limit types of property rights); J. MARK RAMSEYER & MINORU NAKAZATO, JAPANESE LAW: AN ECONOMIC APPROACH 25-26 (1999) (noting in passing that Article 175 limits estates in land).

8. The *numerus clausus* is recognized as a principle of French law, and controversy centers on whether it is a substantive limitation implied by Code civil Article 543 or is created through the rather strict formalities required for enforcement of property rights. See generally CHRISTIAN ATIAS, DROIT CIVIL: LES BIENS § 1, ¶ 39, at 44-45 (3d ed. 1993) (reviewing the history of limitations on types of property rights in French law). Compare ÉMILE CHÉNON, LES DÉMEMBREMENTS DE LA PROPRIÉTÉ FONCIÈRE EN FRANCE AVANT ET APRÈS LA RÉVOLUTION § 60, at 180-83 (2d ed. 1923) (arguing for the limiting character of Article 543), and S. GINOSSAR, DROIT RÉEL, PROPRIÉTÉ ET CRÉANCE: ÉLABORATION D'UN SYSTÈME RATIONNEL DES DROITS PATRIMONIAUX 146-51 (1960) (arguing that the *numerus clausus* is implied by Article 543), with 3 MARCEL PLANIOL & GEORGES RIPERT, TRAITÉ PRATIQUE DE DROIT CIVIL FRANÇAIS: MAURICE PICARD, LES BIENS § 3, ¶ 48, at 52-54 (1st ed. 1926) (arguing that the civil law does not formally prohibit creation of new forms of property but renders such creation extremely rare through limits on in rem enforcement, antifragmentation devices, and requirements of publicity).

9. For example, in Roman law the servitude (*servitus*) was defined as a modification of full ownership, and included usufructs (*usus fructus*). Servitudes were subject to limitations and a presumption against creating new types. FRITZ SCHULZ, CLASSICAL ROMAN LAW 336-37, 381-88, 393-94 (1951); FRITZ SCHULZ, PRINCIPLES OF ROMAN LAW 153-55 (1936); ALAN WATSON, THE LAW OF PROPERTY IN THE LATER ROMAN REPUBLIC 180 (1968) (“[E]ven in classical law a right, to be accepted as a servitude, had to fall within a recognized type.”); see also A.M. PRICHARD, LEAGUE’S ROMAN PRIVATE LAW 157-60, 208-09 (3d ed. 1961) (noting limitations on types of property rights and stating that other rights were contractual). The later breakdown of the classical system included a loosening of the limitations on servitudes. ERNST LEVY, WEST ROMAN VULGAR LAW: THE LAW OF PROPERTY 55-59 (1951).

about whether this critical qualification to freedom of contract is justifiable in economic terms.¹⁰

The primary candidate for an economic explanation has been the suggestion that the *numerus clausus* is a device for minimizing the effects of durable property interests on those dealing with assets in the future,¹¹ and in particular the effects of excessive fragmentation of interests, or an “anticommons.”¹² On this view, the *numerus clausus* serves to prevent situations in which too many individuals have a veto right over the use or disposition of a resource. But whatever the merits of this anti-fragmentarian view for other property doctrines, it does not fully explain the *numerus clausus*, which is aimed at limiting *types* of rights, not the number of rightholders. As we show below, limiting fragmentation is at best an incidental effect of the *numerus clausus*, and does not appear to be a sufficiently robust explanation to account for the universal nature of the doctrine and its tenacious hold on postfeudal legal systems.¹³

When one turns to the snippets of commentary on the *numerus clausus* found in more conventional Anglo-American legal literature, one finds that the attitude is often one of hostility. Scholars and judges tend to react to manifestations of the *numerus clausus* as if it were nothing more than outmoded formalism. For example, the idea that property may exist only in prescribed forms is implicitly debunked by quoting Holmes’s aphorism that “it is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV.”¹⁴ Taking this position one step further, Critical Legal Studies (CLS) scholars have portrayed the doctrine of fixed estates as perniciously reinforcing hierarchical social relations. As one CLS-inspired source puts it, the “formalistic, box-like structure” of

10. A partial exception is Rudden, *supra* note 3, which touches upon several possible economic justifications for the doctrine, including the third-party information-cost theory we develop at length in Part III of this Article. *Id.* at 254-56. Rudden ultimately concludes, however, that the rationale for the doctrine remains a mystery. *Id.* at 261.

11. This argument is made in its most general form in Carol M. Rose, *What Government Can Do for Property (and Vice Versa)*, in *THE FUNDAMENTAL INTERRELATIONSHIPS BETWEEN GOVERNMENT AND PROPERTY* 209, 214-15 (Nicholas Mercuro & Warren J. Samuels eds., 1999). This concern about future parties dealing in assets subject to idiosyncratic or fragmented rights also animates the vaguer concerns in traditional doctrine about restraints on alienation and the more recent literature reflecting anti-fragmentarian concerns. See *infra* Section IV.B.

12. Michael A. Heller, *The Boundaries of Private Property*, 108 *YALE L.J.* 1163, 1176-78 (1999).

13. *Infra* Section IV.B.

14. E.g., CURTIS J. BERGER & JOAN C. WILLIAMS, *PROPERTY: LAND OWNERSHIP AND USE* 213-14 (4th ed. 1997) (reproducing a case quoting the aphorism in discussing the doctrine of fixed estates); DONAHUE ET AL., *supra* note 2, at 459 (quoting the aphorism in notes discussing the doctrine). The aphorism originally appeared in Oliver Wendell Holmes, *The Path of the Law*, 10 *HARV. L. REV.* 457, 469 (1897). English commentators evince similar attitudes. E.g., Susan Bright, *Of Estates and Interests: A Tale of Ownership and Property Rights*, in *LAND LAW: THEMES AND PERSPECTIVES* 529, 546 (Susan Bright & John Dewar eds., 1998) (stating that English judges have “bolt[ed] the door” on existing categories of property and “[i]t is about time that the door was opened and new rights admitted on a more principled basis”).

property law, that is, the *numerus clausus*, reflects a “feudal vision of property relationships designed to channel (force?) people into pre-set social relationships.”¹⁵

A related source of antipathy to the *numerus clausus* may be the perception that it is a trap for the unwary. The menu of recognized property forms is relatively complex, and any attempt to venture beyond simple sales of goods and short-term leases into the arcane worlds of future interests, easements and covenants, or intellectual property requires the advice of a lawyer. When unsophisticated or poorly advised actors enter these worlds, they may find that courts force the transaction into one of the established “boxes,” with the result that the actors’ intentions are frustrated. By contrast, actors who are sophisticated or well-advised can almost always manipulate the menu of options so as to realize their objectives.¹⁶ In this sense, the *numerus clausus* discriminates in favor of those who are well-endowed with legal resources and against those who are poorly endowed.¹⁷

A third source of the antagonism toward the *numerus clausus* may be the lessons supposedly learned from the reform movement in landlord-tenant law. This reform effort has often proceeded under the banner of discarding outmoded “property” concepts in favor of the greater flexibility and attention to the parties’ intentions associated with “contract” precepts.¹⁸ By extension, other features of property law that deviate from the norms of free contract may fall under a cloud of suspicion. Here again, standardization of forms is associated with the *ancien régime*, and contractual norms are assumed to be more open, fair, and egalitarian.

15. BERGER & WILLIAMS, *supra* note 14, at 211. The junior editor of this casebook, Joan Williams, has been influenced by CLS theory. *See generally, e.g.*, Joan Williams, *The Rhetoric of Property*, 83 IOWA L. REV. 277 (1998).

Whatever the merits of such critiques of formalism in other contexts, they are ironic when directed against the *numerus clausus*. Historically, the doctrine is closely associated with efforts in post-revolutionary France to eliminate the proliferation of fragmented rights characteristic of feudal regimes. CHÉNON, *supra* note 8, at 91-183; Henry Hansmann & Ugo Mattei, *The Functions of Trust Law: A Comparative Legal and Economic Analysis*, 73 N.Y.U. L. REV. 434, 442 (1998); *see also* John Henry Merryman, *Ownership and Estate*, 48 TUL. L. REV. 916, 938-43 (1974). In other words, the doctrine was originally embraced (at least by the French) because it would *undermine* established hierarchies, not because it would reinforce them.

16. *E.g.*, Lawrence W. Waggoner, *Reformulating the Structure of Estates: A Proposal for Legislative Action*, 85 HARV. L. REV. 729, 732 (1972).

17. *Cf.* Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1699-1700 (1976) (noting the argument that formalism in law tends to favor those with greater access to legal resources).

18. *See, e.g.*, *Javins v. First Nat’l Realty Corp.*, 428 F.2d 1071, 1074-77 (D.C. Cir. 1970); *Hilder v. St. Peter*, 478 A.2d 202, 207-08 (Vt. 1984). The notion that these judicial reforms reflect a contractual model of leases is dubious, since the reforms are often based on the terms of housing codes and other statutes and are typically nonwaivable. Mary Ann Glendon, *The Transformation of American Landlord-Tenant Law*, 23 B.C. L. REV. 503, 504-05 (1982). *See generally* Roger A. Cunningham, *The New Implied and Statutory Warranties of Habitability in Residential Leases: From Contract to Status*, 16 URB. L. ANN. 3 (1979).

These casual criticisms of the *numerus clausus* fail to confront what to us are the essential questions. Before condemning standardization of forms and embracing a regime of contractual freedom with respect to the legal dimensions of property, one must first engage in a series of inquiries: What are the costs and benefits of standardization in defining property rights? To what extent should standardization of rights be supplied by the government rather than relying solely on owners' incentives to conform to the most-widely used forms? If the government plays a role in standardizing rights, what is the appropriate division of labor between courts and legislatures in enforcing standardization and in making the inevitable changes to the menu of standard forms that must occur over time?

In Part II of the Article, we survey the common law of property in an effort to ascertain the extent to which the *numerus clausus* is a recognized feature of that law. We find that, in practice, courts and lawyers routinely abide by the principle, even if they are unaware of its existence. Perhaps because it is so little discussed or recognized, however, modern American courts sometimes waver when faced with a direct challenge to the *numerus clausus*, and flirt with the notion that property forms should be subject to modification by contract.

In Part III, we set forth a positive theory of the *numerus clausus*, and in particular, why property rights, unlike contract rights, are restricted to a limited number of standardized forms. The root of the difference, we suggest, stems from the in rem nature of property rights: When property rights are created, third parties must expend time and resources to determine the attributes of these rights, both to avoid violating them and to acquire them from present holders. The existence of unusual property rights increases the cost of processing information about all property rights. Those creating or transferring idiosyncratic property rights cannot always be expected to take these increases in measurement costs fully into account, making them a true externality. Standardization of property rights reduces these measurement costs.

Although the *numerus clausus* represents a use of law to restrict individual choice, in actual operation it is not inconsistent with private ordering and freedom of contract. Like another network, language, the system of property rights contains features that allow the creation of very complex composite rights out of a limited vocabulary and rules of combination. As in the case of human language, because so much can be done functionally with simple building blocks, the generative power of the system cannot be measured by counting the number of basic building blocks allowed. Accordingly, the amount of frustration caused by standardizing the building blocks is far less than would be the case if a specially tailored basic building block were required for every purpose to which property rights can be put.

Part IV considers and rejects several potential objections to our explanation. These include the claim that measurement costs can be reduced just as effectively by mandating notice of idiosyncratic property forms as by standardization; that parties have adequate incentives to seek to conform to the most-commonly used forms without legal compulsion because of network effects; that standardization can be supplied by private institutions rather than by law; that the *numerus clausus* is a response to a concern with fragmentation rather than a device for lowering information costs; and that the *numerus clausus* has been rendered irrelevant by developments in contract law.

In Part V, we consider how the *numerus clausus* functions as an instrument of institutional choice. If the number of property forms is “closed,” and cannot be expanded either by the parties’ contract or through judicial interpretation, then reforms to the system of property rights generally must occur through legislation rather than through judicial entrepreneurship. We argue that, because of several critical attributes of legislative rulemaking, this feature also functions on balance to reduce the costs to third parties of measuring the legal dimensions of property rights. Thus, the institutional-choice implications of the doctrine reinforce the basic information-cost rationale we identify.

II. THE *NUMERUS CLAUSUS* IN THE COMMON LAW OF PROPERTY

To what extent does the common law of property reflect the *numerus clausus* principle? The question does not admit of an easy answer because of an odd disconnect in the law. On the one hand, courts and commentators behave as if we have a property system characterized by a limited number of forms not subject to contractual or judicial modification. On the other hand, there is no explicit recognition of the *numerus clausus*, which naturally renders the status of the doctrine somewhat insecure. Indeed, we find some evidence of an incipient attitude that courts should simply enforce the intentions of the parties and abandon any insistence that property rights conform to a finite list of recognized forms.

A. *The Numerus Clausus as a Norm of Judicial Self-Governance*

Given basic differences between civil-law systems and common-law systems, it is perhaps not surprising that the *numerus clausus* is expressly recognized in the former but not the latter. Civil-law jurisprudence rests on the premise that the code is the exclusive source of legal obligation.¹⁹ Thus,

19. 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.,

if the code recognizes certain forms of property, but not others, it follows logically that the forms enumerated in the code are the only types of property that the judiciary may enforce.²⁰ The parties may not create a new type of property by contract, nor may the judiciary on its own authority invent new property rights, because this would contradict the code's status as the exclusive source of legal obligation. Thus, the only way to subtract from or add to the list of legally sanctioned property forms is for the legislature to amend the code.

The common law, of course, rejects the assumption that enacted law is the exclusive source of legal obligation. Especially in private law—contracts, torts, and property—common-law courts are regarded as having inherent power to define basic legal principles and obligations. The Blackstonian justification for this judicial authority is that common-law courts enforce principles grounded in immemorial custom.²¹ The modern justification is that common-law courts exercise inherent policymaking authority with respect to private law, subject to legislative revision.²² Whatever the justification, the common law's rejection of the exclusivity postulate of the civil law means that the *numerus clausus* cannot be derived deductively from fundamental postulates about the legal system. In common-law systems, there is no inherent reason why all existing forms of property should derive from an act of the legislature, nor is there any inherent reason why existing forms of property should not be subject to judicial revision and supplementation.

Yet notwithstanding the absence of logical compulsion behind the *numerus clausus* in common-law systems, it is reasonably clear that common-law courts *behave* toward property rights very much like civil-law

1994) (stating 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) (stating that the separation of powers as formulated in civil-law countries precludes the doctrine of *stare decisis* and judge-made law and that in the civil-law tradition “only statutes enacted by the legislative power could be law,” supplemented by administrative regulations and custom); ALAN WATSON, *THE MAKING OF THE CIVIL LAW* 168 (1981) (arguing 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).

20. In civil-law systems, the *numerus clausus* is often said to be an independent substantive doctrine or a principle implicit in the civil code. *Supra* notes 6-9 and accompanying text. In at least one civil-law country, the *numerus clausus* is directly incorporated in the code. Rudden, *supra* note 3, at 243 (discussing the civil code of Argentina).

21. 1 WILLIAM BLACKSTONE, *COMMENTARIES* *69 (“[A judge is] sworn to determine, not according to his own private judgment, but according to the known laws and customs of the land; not delegated to pronounce a new law, but to maintain and expound the old one.”); Albert W. Alschuler, *Rediscovering Blackstone*, 145 U. PA. L. REV. 1, 37, 43 (1996) (noting that the declaratory theory reflects a strong presumption against judicial innovation, and that Blackstone “may have viewed legislatures rather than courts as the principal source of legal innovation”).

22. See, e.g., MELVIN ARON EISENBERG, *THE NATURE OF THE COMMON LAW* 1-7 (1988); RICHARD A. POSNER, *THE PROBLEMS OF JURISPRUDENCE* 9-23 (1990).

courts do: They treat previously-recognized forms of property as a closed list that can be modified only by the legislature. This behavior cannot be attributed to any explicit or implicit command of the legislature. It is best described as a norm of judicial self-governance. Jurisprudentially speaking, the *numerus clausus* functions in the common law much like a canon of interpretation, albeit a canon that applies to common-law decisionmaking rather than statutory or constitutional interpretation,²³ or like a strong default rule in the interpretation of property rights.²⁴

Before reviewing the evidence in support of our contention that common-law courts follow the *numerus clausus* as a norm of self-governance, it is useful to consider an example of the principle in operation. Landlord-tenant law includes a version of the *numerus clausus* principle. Leases are limited to four recognized types: the term of years, the periodic tenancy, the tenancy at will, and the tenancy at sufferance.²⁵ Suppose a landlord and tenant decide to enter into a lease that does not conform to any of the four standard types—a tenancy “for the duration of the war” being the classic example.²⁶ If landlord-tenant law were just like the law of contract, then there would be no reason not to enforce this agreement in accordance with its terms; that is, the tenancy would last until the war ends. But courts typically do not proceed this way. Instead, they seek to determine which of the four recognized types of leases best fits what the parties have created. Since a term of years requires a “definite calendar ending,”²⁷ and wars last for an uncertain length of time, most courts have concluded that a tenancy “for the duration of the war” must be either a periodic tenancy (if the lease provides for payment of rent at periodic intervals) or a tenancy at will.²⁸ The result of the pigeon-holing exercise in

23. On the importance of substantive canons in the interpretation of enacted law, see, for example, WILLIAM N. ESKRIDGE, JR., *DYNAMIC STATUTORY INTERPRETATION* 275-306 (1994); and CASS R. SUNSTEIN, *AFTER THE RIGHTS REVOLUTION: RECONCEIVING THE REGULATORY STATE* 147-57 (1990).

24. Default rules in contract law range in strength according to how explicit one must be to contract around the default. Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 *YALE L.J.* 87, 119-25 (1989).

25. *E.g.*, 2 POWELL, *supra* note 2, §§ 16.03-.06, at 16-55 to 16-103; ROBERT S. SCHOSHINSKI, *AMERICAN LAW OF LANDLORD AND TENANT* §§ 2:1-:26, at 30-83 (1980); 4 THOMPSON ON REAL PROPERTY § 39.02(c), at 492 (David A. Thomas ed., 1994).

26. 1 *AMERICAN LAW OF PROPERTY* § 3.14, at 209-10 (A. James Casner ed., 1952); 2 POWELL, *supra* note 2, § 16.03[4][b], at 16-68 to 16-69.

27. 2 POWELL, *supra* note 2, § 16.03[4][b], at 16-68.

28. *Nat'l Bellas Hess v. Kalis*, 191 F.2d 739 (8th Cir. 1951); *Stanmeyer v. Davis*, 53 N.E.2d 22 (Ill. App. Ct. 1944); *Lace v. Chandler*, 1 All E.R. 305 (K.B. 1944). *But cf.* *Smith's Transfer & Storage Co. v. Hawkins*, 50 A.2d 267, 268 (D.C. 1946) (concluding that a term of years requires only that the lease be certain to end, not that it have a definite calendar ending, and thus that a tenancy until the termination of “the present war” was a term of years). *American Law of Property* asserts that “the tendency has been to uphold such leases in accordance with the intention of the parties.” 1 *AMERICAN LAW OF PROPERTY*, *supra* note 26, § 3.14, at 209-10. But the cases do not bear this out. The minority of courts that have upheld such leases as a term of years have generally done so by changing the definition of a term of years, *e.g.*, *Smith's Transfer*

this example is thus that the parties' intentions are frustrated, because neither a periodic tenancy nor a tenancy at will has the same security of tenure as a tenancy for the duration of the war presumably would have if enforced according to its terms.²⁹

B. *The Common Law's Standardization of Property*

The following is a brief summary of the menu of property forms that exist today in American common law.³⁰ Although we point out in passing which forms are widely used and which ones are rarely encountered, we do not attempt to provide a historical account of the rise and fall of the different forms. The point of the discussion is to show that the number of forms is fixed for most purposes, not to offer a substantive account of how we came to have the particular menu of options that exist today.³¹ We also indicate, in each area, the general attitude of the courts toward claims for the recognition of novel forms of property.

1. *Estates in Land*

The common-law system of estates in land is an area of property law universally recognized to have a "formalistic, box-like structure."³² There

& *Storage Co.*, 50 A.2d 267, not by declaring that the parties are free to modify the available forms of leases by contract.

29. As usual, the clever conveyancer can get around the problem, here most likely by creating a term of years determinable. Thus, for example, one could create a lease "for fifty years unless the war ends sooner." This is not exactly identical to a lease "for the duration of the war," but in most wars it would achieve the same result. 2 POWELL, *supra* note 2, § 16.03[4][b], at 16-68. Commentators have predictably seized on the ability to get around the common-law rule by clever conveyancing as evidence that the *numerus clausus* principle represents a "triumph of form over substance." *Id.*; see also 1 AMERICAN LAW OF PROPERTY, *supra* note 26, § 3.14, at 210. But this is true only if the measurement costs to third parties of ascertaining the meaning of a lease "for fifty years unless the war ends sooner" are the same as the costs of ascertaining the meaning of a lease "for the duration of the war." As to this question, see *infra* text accompanying note 133.

30. For overviews, see, for example, THOMAS F. BERGIN & PAUL G. HASKELL, PREFACE TO ESTATES IN LAND AND FUTURE INTERESTS 19-80 (2d ed. 1984); JOHN E. CRIBBET & CORWIN W. JOHNSON, PRINCIPLES OF THE LAW OF PROPERTY 40-140 (3d ed. 1989); and ROGER A. CUNNINGHAM ET AL., THE LAW OF PROPERTY 26-504 (2d ed. 1993).

31. If such an account were to be developed, it would show that legislation has played a larger role in the creation of the forms of property than most common-law lawyers might suppose. For example, the statute *Quia Emptores*, 1290, 18 Edw. (Eng.), which made free tenements alienable, played a critical role in the development of the fee simple, and the fee tail was created by the statute *De Donis Conditionalibus*, 1285, 13 Edw., ch. 1 (Eng.). Admittedly, however, a number of forms have an uncertain provenance and probably reflect a large measure of customary law. See, e.g., Richard Helmholz & Reinhard Zimmermann, *Views of Trust and Treuhand: An Introduction*, in ITINERA FIDUCIAE: TRUST AND TREUHAND IN HISTORICAL PERSPECTIVE 27, 41-42 (Richard Helmholz & Reinhard Zimmermann eds., 1998) (noting the customary and Roman-law background of trusts).

32. Cf. BERGER & WILLIAMS, *supra* note 14, at 211 (characterizing the common-law approach to landlord and tenant law).

are five general types of present possessory interests: the fee simple absolute, the defeasible fee simple, the fee tail, the life estate, and the lease.³³ Some complications are always acknowledged: Defeasible fees and leases can be further subdivided into subtypes,³⁴ and the fee tail has been abolished in nearly all jurisdictions and is for practical purposes defunct.³⁵ Each of these present possessory interests, except for the fee simple, has one or more corresponding types of future interests: reversions, powers of termination, remainders, and executory interests,³⁶ again with subtypes.³⁷ The exact number of estates in land varies somewhat, depending on how the classifier treats the subtypes. But at bottom there is no disagreement about the identity of the forms or their defining features.³⁸ Moreover, for purposes of everyday legal practice, the only forms that really matter are the fee simple and the lease for a term of years.³⁹ All other estates in land are rarely encountered as legal interests.⁴⁰

In practice, courts enforce the *numerus clausus* principle strictly (although not of course by name) in the context of estates in land. The menu of forms is regarded as complete and not subject to additions.⁴¹ To take one example, testators have occasionally left property to a surviving spouse as a life estate, but with the power to convey or devise a fee simple.⁴² The intention here appears to be to create a kind of hybrid between a life estate and a fee simple—a life estate if the spouse dies intestate but a fee simple if the spouse decides to sell or to make a gift of

33. 1 POWELL, *supra* note 2, § 12.01[2], at 12-5 (enumerating the categories of freehold estates and the subcategories of leases).

34. The defeasible fee is usually subdivided into the fee simple determinable, the fee simple subject to condition subsequent, and the fee simple subject to an executory limitation. CUNNINGHAM ET AL., *supra* note 30, at 35-36; 1 POWELL, *supra* note 2, § 12.01[2], at 12-5 & n.13. Leases are usually subdivided into the term of years, the periodic lease, the tenancy at will, and the tenancy at sufferance. *E.g.*, 2 POWELL, *supra* note 2, §§ 16.03-.06, at 16-55 to 16-103.

35. 2 POWELL, *supra* note 2, ¶ 196, at 14-16 to 14-18. Even before the legislative movement for repeal, the fee tail was not widely used in the United States. Gregory S. Alexander, *Time and Property in the American Republican Legal Culture*, 66 N.Y.U. L. REV. 273, 295 (1991).

36. CUNNINGHAM ET AL., *supra* note 30, at 86.

37. Remainders can be classified as indefeasibly vested, contingent, vested subject to open, and vested subject to complete defeasance. *Id.* at 97. Executory interests can be classified as shifting or springing. *Id.* at 107-12.

38. Powers of appointment are sometimes added to the list of future interests. *E.g.*, 3 POWELL, *supra* note 2, § 20.01[2], at 20-6. But the *Restatement* and most commentators classify powers of appointment as representing a special type of power to complete “the terms of a disposition made by a transferor.” RESTATEMENT (SECOND) OF PROPERTY § 11.1 cmt. f (1986).

39. *Cf.* CUNNINGHAM ET AL., *supra* note 30, at 28 (explaining that the fee simple absolute and the estate for years are the only estates that are commercially salable).

40. Life estates are encountered, but nearly always today as equitable interests conveyed in trust. *Id.*

41. Indeed, the usual complaint is that there are too many recognized types of future interests, and that legislation should be adopted simplifying the existing menu of options. *See, e.g.*, Waggoner, *supra* note 16, at 752-56.

42. RESTATEMENT (SECOND) OF PROPERTY: DONATIVE TRANSFERS § 12.1 cmt. b (1984); 1 AMERICAN LAW OF PROPERTY, *supra* note 26, § 2.15, at 126-27.

the property by will. No court, however, has recognized such a hybrid estate. Courts are divided as to the proper characterization of such an interest: Some construe it to create a life estate,⁴³ others to create a fee simple.⁴⁴ But all courts recognize that the task is to squeeze the interest into one of the established categories, the only question being which standardized box is most consistent with the testator's intentions or is otherwise "best" in terms of policy concerns such as promoting the free alienability of property.⁴⁵

Although the menu of available estates in land is fixed from the perspective of the parties and the courts, this does not mean that property in land is standardized along all dimensions. The law of course permits an immense amount of customization in the physical attributes of rights in land, including the shape and size of the parcel and the types of improvements on the land. And it is possible to cut short present possessory interests or create future interests upon the occurrence of specified conditions (such as a condition that a child reach the age of twenty-one or that a surviving spouse remain unmarried), and these conditions are not themselves limited.⁴⁶ Still, with respect to the most basic legal dimensions, such as duration, powers of alienation, rights of inheritance, and so forth, the system of estates in land presents the picture of highly standardized building blocks not subject to modification by contract or judicial decree.

2. *Concurrent Interests*

The system of estates in land distinguishes forms of property based on their temporal dimension. Cutting across the temporal or "horizontal" dimension is what might be called the "vertical" dimension—the different

43. *E.g.*, *Smith v. Bell*, 31 U.S. (6 Pet.) 68 (1832); *St. Louis Union Trust Co. v. Morton*, 468 S.W.2d 193, 198 (Mo. 1971).

44. *E.g.*, *Sumner v. Borders*, 98 S.W.2d 918, 919-20 (Ky. 1936); *Fox v. Snow*, 76 A.2d 877, 877-78 (N.J. 1950) (per curiam). A third possibility, said to have been suggested by Holmes, is that the gift over in such cases would be classified as a springing executory interest subject to a power of appointment by the original grantee. HART & SACKS, *supra* note 19, at 590-91. This ingenious solution probably more closely tracks the grantor's intentions than does either the fee simple or life estate construction. Note, however, that Holmes also described this solution in terms of recognized interests—executory interests and powers of appointment. He did not suggest that the hybrid interest simply be enforced in accordance with the grantor's intentions.

45. *See, e.g.*, *Bell*, 31 U.S. at 74-79 (construing the interest to be a life estate because this is most consistent with the intentions of the grantor); *Sumner*, 98 S.W.2d at 919 (construing the interest to be a fee simple based on a constructional principle favoring fee simples in cases of doubt).

46. 1 RESTATEMENT (FIRST) OF PROPERTY § 23 cmt. d (1936) (noting a variety of conditions that can be imposed as special limitations on a fee simple or life estate); *id.* § 24 cmt. c (noting a variety of conditions that can be imposed as conditions subsequent on a fee simple or a term of years); *id.* § 25 cmt. f (noting a variety of conditions that can be imposed as triggers of executory interests); 2 *id.* § 157 cmt. r (providing illustrations of conditions that can be imposed as triggers of vested remainders subject to complete defeasance); *id.* § 157 cmt. u (providing illustrations of conditions that can be imposed as triggers of contingent remainders).

forms of concurrent interests in property among multiple parties.⁴⁷ American law recognizes five basic categories of concurrent interests:⁴⁸ tenancy in common; joint tenancy; marital property;⁴⁹ trusts; and condominiums, cooperatives, and time-shares.

The *numerus clausus* principle is also quite strong in the concurrent-interest area. There have been a number of modifications in the forms of concurrent property in the last century. But these changes have almost always been the product of legislative reforms, not judicial rulings, and thus are consistent with a rule of judicial self-governance treating existing forms as closed. Changing conceptions of women's rights have given rise to a number of reforms of marital property interests. For example, common-law rights of dower and curtesy have been abolished in almost all jurisdictions.⁵⁰ Tenancies by the entirety, another form of concurrent property right limited to married couples, have also been abolished in many states.⁵¹ Usually this has been done expressly by statute, although in rare instances, courts have construed legislative silence as requiring abolition.⁵² The tenancy in partnership—another common-law form of concurrent ownership—has also been displaced in all states by the adoption of the Uniform Partnership Act.⁵³

In terms of creation of new concurrent interests, the most dramatic development has been the emergence of condominiums and time-shares. These interests reflect a combination of features of other types of property interests. Individuals hold what amounts to a fee simple in separate units of a complex or in a separate unit for a defined period of time and concurrent interests in common areas along with other association members; relations among concurrent owners are controlled by rules and regulations enforced by a governing body.⁵⁴ In theory, it might be possible to create a

47. As a rule, the forms of property based on duration (e.g., the fee simple or the lease) can be combined with the forms based on multiple ownership (e.g., tenancy in common). *DUKEMINIER & KRIER*, *supra* note 2, at 321 n.1. Thus, one can hold a lease as a tenant in common or a possibility of reverter as community property.

48. 5 *POWELL*, *supra* note 2, § 40.500, at 40-3 (trust); 7 *id.* § 49.01, at 49-2 (nontrust concurrent interests).

49. Marital property has a number of subdivisions, including dower, curtesy, common-law marital property, tenancies by the entirety, and community property. *See* 3 *THOMPSON ON REAL PROPERTY*, *supra* note 25, § 21.01-.02, at 2-157 (curtesy and dower); 4 *id.* § 37.01, at 267-68 (common law and community property); *id.* § 37.06(a), at 290-96 (common-law marital property including tenancy by the entirety).

50. 2 *POWELL*, *supra* note 2, § 213, at 15-121 to 15-127; *see also infra* notes 228-229 and accompanying text.

51. 7 *POWELL*, *supra* note 2, § 620[4], at 52-3 to 52-12.

52. *E.g.*, *Hannon v. S. Pac. R.R.*, 107 P. 335, 339 (Cal. 1909); *In re Richardson's Estate*, 282 N.W. 585, 587 (Wis. 1938).

53. 7 *POWELL*, *supra* note 2, § 608, at 50-62. Under the Uniform Act, "individual partners own the partnership property in theory, but all the incidents of ownership are vested in the partnership." MELVIN A. EISENBERG, *AN INTRODUCTION TO AGENCY AND PARTNERSHIP* 64 (1987).

54. *CRIBBET & JOHNSON*, *supra* note 30, at 126.

condominium by clever combination of preexisting property forms.⁵⁵ But in practice, condominiums did not emerge until the 1960s, when virtually all states adopted statutes expressly authorizing the creation of condominiums.⁵⁶ Thus, the story of the emergence of the condominium is also broadly consistent with the *numerus clausus* in that this new form of property was the product of legislative change, rather than private contract or judicial innovation.

3. *Nonpossessory Interests*

Another general category of property rights in land consists of interests that confer only limited rights of use as opposed to general possession. Here, American law recognizes four basic forms: easements, real covenants, equitable servitudes, and profits.⁵⁷ Easements and equitable servitudes, the most commonly encountered forms, are devices for permitting multiple uses of a single parcel of land or controlling externalities associated with particular land uses.

The *numerus clausus* applies in a somewhat weakened form to nonpossessory property rights. This area has witnessed one major judicial innovation in the last 150 years: the emergence of the equitable servitude. In English common law, negative easements were sharply limited in number, and the burden of covenants respecting land could be enforced against successors only in the landlord-tenant context.⁵⁸ In response to demand for a more flexible instrument that would allow the burden of

55. *Id.* at 126-29. Residential homeowners' associations—the key institutional mechanism that makes the condominium possible—have been created using real covenants and equitable servitudes. The seminal decision is *Neponsit Property Owners' Ass'n v. Emigrant Industrial Savings Bank*, 15 N.E.2d 793 (N.Y. 1938).

56. Curtis J. Berger, *Condominium: Shelter on a Statutory Foundation*, 63 COLUM. L. REV. 987, 1001-03 (1963); Henry Hansmann, *Condominium and Cooperative Housing: Transactional Efficiency, Tax Subsidies, and Tenure Choice*, 20 J. LEGAL STUD. 25, 61-63 (1991). The triggering event for the enactment of these laws appears to have been a section of the National Housing Act of 1961, which makes Federal Housing Administration (FHA) mortgage insurance available for condominiums, provided they have the sanction of state law. Hansmann, *supra*, at 62 n.83. The state statutes were based on an FHA model act, which closely followed a 1958 Puerto Rican statute. *Id.*

57. A variety of subdivisions are possible. Easements have been subdivided into affirmative and negative, 2 AMERICAN LAW OF PROPERTY, *supra* note 26, §§ 8.5, 8.11, 8.12, at 232, 236-37; 4 POWELL, *supra* note 2, § 34.02[2][c], at 34-16 to 34-17; 7 THOMPSON ON REAL PROPERTY, *supra* note 25, § 60.02[e], and into appurtenant and in gross, 2 AMERICAN LAW OF PROPERTY, *supra* note 26, §§ 8.6, 8.9, at 233-36; 4 POWELL, *supra* note 2, § 34.02[2][d], at 34-17 to 34-22; 7 THOMPSON ON REAL PROPERTY, *supra* note 25, § 60.02(f). Real covenants and equitable servitudes can likewise be subdivided into affirmative and negative. 2 AMERICAN LAW OF PROPERTY, *supra* note 26, § 9.35, at 436-37; 9 POWELL, *supra* note 2, § 60.06[1], at 60-95 (affirmative and negative covenants); *id.* § 60.01[2], at 60-5 (affirmative and negative real covenants); *id.* at 60-9 to 60-10 (affirmative and negative equitable servitudes).

58. 2 AMERICAN LAW OF PROPERTY, *supra* note 26, § 9.1, at 335-38; 9 POWELL, *supra* note 2, § 60.04[1], at 60-41.

promises to run in planned residential developments, the English Court of Chancery, in *Tulk v. Moxhay*,⁵⁹ in effect created a new interest—the equitable servitude. This was pure judicial entrepreneurship, as the court was well aware, since it had to limit the holding in *Keppell v. Bailey*,⁶⁰ the leading English case holding that courts lack authority to transform contract rights into new forms of property rights.

Notwithstanding this significant breach of the *numerus clausus*, we still see significant evidence of the operation of the principle in this area. The innovation wrought by the Court of Chancery was quickly limited, as subsequent decisions held that equity would enforce promises as property only if the promise benefits an appurtenant interest in land, only if the party to be bound had notice of the promise, and only if the promise “touches and concerns” the land.⁶¹ These limitations have also been accepted by American courts, notwithstanding persistent criticism from the academic community.⁶²

4. *Interests in Personal Property*

Personal property is restricted to fewer available forms of ownership than real property. A number of standard reference works state that personal property is subject to the same elaborate structure of forms that applies to estates in land (including future interests).⁶³ Yet the case law does not fully support this broad proposition. It is reasonably well established that one can

59. 41 Eng. Rep. 1143 (Ch. 1848).

60. 39 Eng. Rep. 1042 (Ch. 1834).

61. ROBERT MEGARRY & H.W.R. WADE, *THE LAW OF REAL PROPERTY* 772 (5th ed. 1984) (citing decisions restricting enforcement of benefit to appurtenant land owners); *id.* at 779-80 (citing decisions holding that a purchaser without notice is not bound); *id.* at 781 (citing decisions adopting the “touch and concern” requirement). For an account emphasizing the limitations on equitable servitudes in English law, see D.J. Hayton, *Restrictive Covenants as Property Interests*, 87 *LAW Q. REV.* 539 (1971).

62. *E.g.*, Susan F. French, *Toward a Modern Law of Servitudes: Reweaving the Ancient Strands*, 55 *S. CAL. L. REV.* 1261 (1982); Uriel Reichman, *Toward a Unified Concept of Servitudes*, 55 *S. CAL. L. REV.* 1179 (1982).

63. *E.g.*, CUNNINGHAM ET AL., *supra* note 30, at 25. The *Restatement (First) of Property* limits the definition of “estate” to “an interest in land,” but adds that “[i]nterests which are quite analogous” exist in personal property. *RESTATEMENT (FIRST) OF PROPERTY* § 9 cmt. a (1936). According to Blackstone, the “antient common law” prohibited future interests in personal property,

because, being things transitory, and by many accidents subject to be lost, destroyed, or otherwise impaired, and the exigencies of trade requiring also a frequent circulation thereof, it would occasion perpetual suits and quarrels, and put a stop to the freedom of commerce, if such limitations in remainder were *generally* tolerated and allowed.

2 WILLIAM BLACKSTONE, *COMMENTARIES* *398. But Blackstone explained that the courts had eventually relented, permitting bequests of personal goods and chattels for life, with a remainder over to another. *Id.*

create a life estate in personal property.⁶⁴ But there are few if any cases that address the question of whether more exotic interests, such as defeasible fees and executory interests, can be created in personal property. The reality is that virtually anyone who wants to create complicated future interests in personal property, including of course stocks, bonds, and shares in mutual funds—the largest source of wealth in today’s society—does so through a trust.⁶⁵ The trustee holds title to the personal property in fee simple, and the beneficiaries hold life estates and remainders, or sometimes more unusual interests, described using the building blocks of the common-law estates in land. In effect, the trust combines a highly simplified title in the underlying assets with a significant degree of flexibility in designating the beneficial uses of those assets.

In other respects as well, the available forms of personal-property ownership are more limited than with respect to real property. Statutes authorizing the creation of condominiums and time-shares are limited to real property.⁶⁶ And although the case law is rather thin, it also appears that one cannot create servitudes in personal property. This, at least, is the position adopted by the English Court of Chancery in the nineteenth century,⁶⁷ and American precedent is largely, if not quite exclusively, in accord.⁶⁸ In any event, servitudes on personal property are rarely

64. See, e.g., *Gruen v. Gruen*, 496 N.E.2d 869 (N.Y. 1986); RESTATEMENT (FIRST) OF PROPERTY § 153(1) (1936); 4 WILLIAM J. BOWE & DOUGLAS H. PARKER, PAGE ON THE LAW OF WILLS § 37.66 (1961); SIMES & SMITH, *supra* note 2, § 359, at 385-86.

65. ROSCOE POUND, AN INTRODUCTION TO THE PHILOSOPHY OF LAW 236 (1922) (“Wealth, in a commercial age, is made up largely of promises.”); John H. Langbein, *The Contractarian Basis of the Law of Trusts*, 105 YALE L.J. 625, 637-43 (1995) [hereinafter Langbein, *Contractarian Basis*] (discussing how the trust has shifted from a conveyancing device for freehold land to a management device for holding financial assets); John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 YALE L.J. 165, 165, 177-78 (1997) (documenting the importance of commercial trusts, which contain over 90% of the money held in trusts). As far back as can be traced, the trust was always available for personal as well as real property. Richard Helmholz, *Trusts in the English Ecclesiastical Courts 1300-1640*, in *ITINERA FIDUCIAE: TRUST AND TREUHAND IN HISTORICAL PERSPECTIVE*, *supra* note 31, at 153, 160-62.

66. *Infra* note 110.

67. After some initial waffling, the English Court of Chancery held that equitable servitudes could not be imposed on chattels, for example as vertical price restraints or vertical restrictions on the use or resale of goods after the first sale. Zechariah Chafee, Jr., *Equitable Servitudes on Chattels*, 41 HARV. L. REV. 945, 977-80 (1928).

68. In the United States, the question of whether it is possible to create servitudes on chattels has been debated largely in terms of the antitrust laws. But in *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911), the leading antitrust case on vertical price restraints, the U.S. Supreme Court appeared to endorse the same conclusion reached by the English courts as a matter of property law. *Id.* at 404-05 (quoting *John D. Park & Sons Co. v. Hartman*, 153 F. 24, 39 (6th Cir. 1907)). This appears to be the better view today: Equitable servitudes (and presumably other nonpossessory property rights) apply only to real property. *Cf. Zechariah Chafee, Jr., The Music Goes Round and Round: Equitable Servitudes and Chattels*, 69 HARV. L. REV. 1250 (1956) (commenting on *Pratte v. Balatsos*, 113 A.2d 492 (N.H. 1955), a decision departing from the general understanding).

encountered in practice.⁶⁹

5. *Intellectual Property*

Finally, common-law systems recognize a variety of intellectual property interests. The main forms here are patents, copyrights, trademarks, and trade secrets. A number of jurisdictions recognize additional common-law intellectual property interests, such as the right to prevent misappropriation of information and the right of publicity.

The *numerus clausus* is probably at its weakest in the area of intellectual property. To be sure, there is considerable stability in the recognized forms of intellectual property, and federal law in the United States preempts many attempts to create novel forms of intellectual property as a matter of state law.⁷⁰ But there are some notable exceptions in which judicial creativity in fashioning new intellectual-property interests has been sanctioned.

Most prominently, in *International News Service v. Associated Press*,⁷¹ the Supreme Court recognized a right to prevent the misappropriation of information in news dispatches, even if the information is not copyrighted and is not a trade secret.⁷² The Court insisted it was not creating a property right in news, but simply enjoining a form of unfair competition in the form of appropriating news gathered by others.⁷³ But both Justice Brandeis in dissent⁷⁴ and Judge Learned Hand in a later decision in the Second Circuit⁷⁵ saw the decision as a mischievous encroachment on the principle that only Congress may create new forms of intellectual property—in other words, the *numerus clausus*. They were prescient: The doctrine of

69. Chafee, *supra* note 67, at 1013 (discussing the apparent lack of major adverse effects from the lack of recognition of servitudes on chattels); Chafee, *supra* note 68, at 1254-55 (discussing the continued rarity of servitudes on chattels outside of resale price maintenance).

70. *E.g.*, *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 168 (1989) (declaring that a state statute prohibiting the copying of boat hulls is preempted); *Compco Corp. v. Day-Bright Lighting, Inc.*, 376 U.S. 234, 238-39 (1964) (declaring that a state unfair competition law preventing the copying of industrial designs is preempted); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 232-33 (1964) (same); *Wendt v. Host Int'l, Inc.*, 197 F.3d 1284, 1285-87 (9th Cir. 1999) (Kozinski, J., dissenting from denial of rehearing en banc) (stating that the Copyright Act should preempt broad application of a state right of publicity). *But cf.* *Goldstein v. California*, 412 U.S. 546, 560 (1973) (holding that a state statute prohibiting record “piracy” is not preempted by federal copyright law). *See generally* Paul Heald, *Federal Intellectual Property Law and the Economics of Preemption*, 76 IOWA L. REV. 959 (1991) (reviewing cases).

71. 248 U.S. 215 (1918).

72. The decision had been anticipated in earlier cases involving retransmission of “news.” *See, e.g.*, *Nat'l Tel. News Co. v. W. Union Tel. Co.*, 119 F. 294 (7th Cir. 1902).

73. *Int'l News Serv.*, 248 U.S. at 234-37, 240-41.

74. *Id.* at 262-67 (Brandeis, J., dissenting).

75. *Cheney Bros. v. Doris Silk Corp.*, 35 F.2d 279 (2d Cir. 1929).

misappropriation of information has taken on a life of its own and continues to be recognized as a common-law right in many jurisdictions.⁷⁶

Even more strikingly, about half the states in recent years have recognized a “right of publicity,” which protects the images and voices of celebrities from commercial exploitation without their consent.⁷⁷ Slightly more than half of the states recognizing the right have done so at least initially as a matter of judicial lawmaking⁷⁸—which is clearly incompatible with the *numerus clausus* principle. The confusion engendered by the many conflicts among jurisdictions over the scope of the right has given rise to calls, including a proposal by the American Bar Association, for uniform federal legislation ratifying this new form of intellectual property.⁷⁹

C. *Judicial Recognition of the Numerus Clausus*

The *numerus clausus* appears to function as a deeply entrenched assumption of the common-law system of property rights. There are no significant examples of judicial abolition of existing forms of property. Moreover, courts in the modern era for the most part have declined to create new ones. There are a few prominent exceptions to this latter generalization, such as the judicial creation of the equitable servitude and the recognition in some states of the doctrines of misappropriation of information and the right of publicity. But these exceptions have been confined to nonpossessory property rights and intellectual-property rights, and often, as in the case of the right of publicity, there is great pressure for legislative ratification of judicial innovations when they do occur. Still, recognition of the concept by courts and commentators is remarkably underdeveloped. At the level of doctrinal exposition, the *numerus clausus* is almost—but not quite—invisible.

To the extent that there can be said to be a leading case, it is *Johnson v. Whiton*.⁸⁰ Royal Whiton devised certain land “to my granddaughter Sarah A. Whiton and her heirs on her father’s side.”⁸¹ The limitation on descent to

76. *E.g.*, *Bd. of Trade v. Dow Jones & Co.*, 456 N.E.2d 84 (Ill. 1983); *see* Douglas G. Baird, *Common Law Intellectual Property and the Legacy of International News Service v. Associated Press*, 50 U. CHI. L. REV. 411, 422 (1983).

77. *See generally* J. THOMAS MCCARTHY, *THE RIGHTS OF PUBLICITY AND PRIVACY* (1999) (thoroughly examining the contours of the “right of publicity”).

78. The most recent tally indicates that seventeen states have recognized the right of publicity by judicial decision. In five of these states, the right is now recognized by statute. In addition, ten states recognize the right solely as a matter of statute rather than judicial decision. Thus, the right exists in some form in twenty-seven states. *Id.*, § 6.1[B], at 6-6.

79. *See* Symposium, *Rights of Publicity: An In-Depth Analysis of the New Legislative Proposals to Congress*, 16 CARDOZO ARTS & ENT. L.J. 209 (1998) (panel discussion).

80. 34 N.E. 542 (Mass. 1893).

81. *Id.* at 542. The will provided that one-third of Royal’s estate was devised to Sarah, and the land in question was part of the estate.

the father's side of Sarah's family was inconsistent with the Massachusetts law of intestate succession, which permitted property to descend from one line of the family to another. Of course, the issue in the case was not intestate succession, that is, inheritance, but the construction of a will. Nevertheless, the court construed the provision of the will as an attempt to create a "new kind of inheritance," that is, a new type of estate, which the court said could not be done.⁸² Sarah was held to have taken a fee simple absolute, thereby frustrating the evident intentions of Royal Whiton.

Johnson v. Whiton has all the makings of a leading case. The facts are simple. The opinion for the court was authored by Oliver Wendell Holmes, Jr., one of America's most celebrated jurists and an authority on the history of the common law.⁸³ The opinion's reasoning, as is typical of Holmes, is tightly compressed, yet advanced with great self-assurance. It is hard, however, to find signs that *Johnson v. Whiton* has entered into the American legal consciousness (in the manner of, say, *Pierson v. Post*⁸⁴). The decision is not widely cited in later cases. It makes only cameo appearances in the leading treatises, and then is cited for propositions other than the prohibition against judicial creation of new kinds of estates.⁸⁵

Perhaps a better measure of the status of the *numerus clausus* as a legal doctrine is the way in which courts resolve disputes that arise testing the

82. *Id.*

83. Holmes also made reference to the doctrine of fixed estates in *Norcross v. James*, 2 N.E. 946, 949 (Mass. 1885), and alluded to "the rule that new and unusual burdens cannot be imposed on land" in OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 407 (Boston, Little, Brown and Co. 1923) (1881).

84. 3 Cai. R. 175 (N.Y. Sup. Ct. 1805).

85. The leading treatise that is still kept up to date is POWELL ON REAL PROPERTY, *supra* note 2, which contains sixteen volumes. The index does not refer to *Johnson v. Whiton*. See also 6 AMERICAN LAW OF PROPERTY, *supra* note 26, § 26.100, at 544 n.3 (citing *Johnson v. Whiton* in a discussion of restraints on alienation); 2 THOMPSON ON REAL PROPERTY, *supra* note 25, § 18.04, at 487 n.147 (1994) (citing *Johnson v. Whiton* in a discussion of the fee tail); 3 *id.* § 23.03, at 291 n.50 (citing *Johnson v. Whiton* in a discussion of remainders).

The treatment of the decision in first-year property casebooks is especially revealing. Although reproduced as a principal decision in two casebooks (both co-authored by legal historians), BARLOW BURKE ET AL., *FUNDAMENTALS OF PROPERTY LAW* 221-23 (1999); DONAHUE ET AL., *supra* note 2, at 457-58, *Johnson v. Whiton* receives only passing mention in other leading casebooks. See BERGER & WILLIAMS, *supra* note 14, at 211 (noting the doctrine but not *Johnson v. Whiton*); DUKEMINIER & KRIER, *supra* note 2, at 205 (referring to *Johnson v. Whiton*); JOSEPH WILLIAM SINGER, *PROPERTY LAW: RULES, POLICIES, AND PRACTICES* 561 (2d ed. 1997) (same). Most notably, neither the decision, nor the principle for which it stands, is mentioned at all in most instructional materials. *E.g.*, JON W. BRUCE & JAMES W. ELY, JR., *CASES AND MATERIALS ON MODERN PROPERTY LAW* (4th ed. 1999) (containing no references in the index to *Johnson v. Whiton* or the *numerus clausus* idea); RICHARD H. CHUSED, *CASES, MATERIALS AND PROBLEMS IN PROPERTY* (1st ed. 1998) (same); JOHN E. CRIBBET ET AL., *PROPERTY: CASES AND MATERIALS* (7th ed. 1996) (same); JOHN P. DWYER & PETER S. MENELL, *PROPERTY LAW AND POLICY: A COMPARATIVE INSTITUTIONAL PERSPECTIVE* (1998) (same); J. GORDON HYLTON ET AL., *PROPERTY LAW AND THE PUBLIC INTEREST: CASES AND MATERIALS* (1998) (same); SANDRA H. JOHNSON ET AL., *PROPERTY LAW: CASES, MATERIALS, AND PROBLEMS* (2d ed. 1998) (same); SHELDON F. KURTZ & HERBERT HOVENKAMP, *CASES AND MATERIALS ON AMERICAN PROPERTY LAW* (3d ed. 1999) (same).

judicial commitment to the doctrine. Here too, the evidence does not give much reason to believe that American lawyers are aware of the doctrine or its centrality to the system of property rights.

For example, one issue implicating the doctrine that has arisen in several jurisdictions concerns the proper construction of an instrument that purports to grant a lease of property for the life of the tenant. Under the system of estates in land, there is no such thing as a “lease for life.” One can create a life estate. And one can create a lease. But a lease must be either a term of years, a periodic tenancy, a tenancy at will, or a tenancy at sufferance.⁸⁶ Thus, courts confronted with an instrument purporting to create a “lease for life” have typically asked which common-law box best matches the grantor’s intentions: a life estate or a tenancy at will.⁸⁷ Yet there is no evidence in these decisions that the courts are aware that they are applying a foundational precept of property law, or that the assumption that the interest must fit into one of the established forms reflects the same general principle articulated in *Johnson v. Whiton*.⁸⁸

A more recent New York case⁸⁹ confronting the lease-for-life problem suggests that courts in the future may simply defer to the parties’ intention to create a new type of leasehold. The opinion attacked the argument in favor of the tenancy at will—the harsh application of the *numerus clausus*—as being grounded in the “antiquated notion” that a life estate cannot be created without livery of seisin.⁹⁰ This outcome was also condemned as “violat[ing] the terms of the agreement and frustrat[ing] the intent of the parties.”⁹¹

As to whether the court was willing to follow the intent of the parties to the point of recognizing a new type of estate—a lease for life—the decision is ambiguous. Near the end of the opinion, the court characterized the interest as a “life tenancy terminable at the will of the tenant,”⁹² which sounds like a life estate (which can always be disclaimed by the life tenant). Thus, the result that the court ultimately reached may have been to hold that

86. *Supra* note 25 and accompanying text.

87. Compare *Thompson v. Baxter*, 119 N.W. 797 (Minn. 1909) (life estate), with *Nitschke v. Doggett*, 489 S.W.2d 335 (Tex. Civ. App. 1972), *vacated on other grounds*, 498 S.W.2d 339 (Tex. 1973) (tenancy at will).

88. This lack of awareness is also reflected in the best-selling casebook of Jesse Dukeminier and James Krier. In discussing estates in land, the authors note the doctrine of “standardization of estates” and cite to *Johnson v. Whiton*. DUKEMINIER & KRIER, *supra* note 2, at 204-05. But when they turn to landlord-tenant law, and reproduce a case that presents the “lease for life” problem, they make no mention in the notes or the Teacher’s Manual of the relevance of the doctrine of standardization of estates. *Id.* at 424-25 (notes following *Garner v. Gerrish*, 473 N.E.2d 223 (N.Y. 1984)); JESSE DUKEMINIER & JAMES E. KRIER, *TEACHER’S MANUAL: PROPERTY* 188-90 (4th ed. 1998) (summary and commentary on *Garner v. Gerrish*).

89. *Garner*, 473 N.E.2d 223.

90. *Id.* at 224.

91. *Id.*

92. *Id.* at 225.

the instrument created a life estate, which would be consistent with the *numerus clausus*. However, the court also noted that both parties agreed that the instrument created a lease, and it, too, spoke of the interest as a lease.⁹³ This characterization, plus the court's condemnation of "antiquated notion[s]" about established forms of property and its insistence on resolving the issue in terms of the parties' intent, could mean that the court saw no problem with enforcing the instrument in accordance with its terms, as a "lease for life."⁹⁴ Read this way, the decision could foreshadow the emergence of a regime in which property rights are assimilated to contract rights.⁹⁵

D. Summary

In the final analysis, the idea that property interests may be created only in limited numbers of standardized forms has a very odd status in the common law. If one observes what lawyers and judges do, it is clear that the *numerus clausus* exerts a powerful hold on the system of property rights. At the core of the system—the system of estates in land—there has been little deviation from the doctrine of fixed estates. The major departures that do exist, such as the creation of the equitable servitude and the right of publicity, have been relatively few in number and have been concentrated in fringe areas of property rights, such as nonpossessory interests and non-core intellectual property. Moreover, from the perspective of the practicing lawyer, the entire system presents the picture of a fixed menu of options from which deviations will not be permitted. The chances of persuading a court to create a new type of property in any particular case are too remote to be taken seriously. In this respect, property law has always been and continues to be very different from contract law.

93. *Id.* at 224.

94. *Id.* at 224-25.

95. Creeping "contractualization" of property is evident in other areas as well. *See, e.g., Jezo v. Jezo*, 127 N.W.2d 246 (Wis. 1964) (holding that the presumption that joint tenants own equal shares is subject to rebuttal by evidence of contrary intent). The new *Restatement of Property* explicitly adopts a contractualized view of servitudes:

One of the basic principles underlying this Restatement is that the function of the law is to ascertain and give effect to the likely intentions and legitimate expectations of the parties who create servitudes, as it does with respect to other contractual arrangements. . . .

The general principles governing servitude interpretation stated in § 4.1 adopt the model of interpretation used in contract law and displace the older interpretive model used in servitudes law that emphasized the free use of land, sometimes at the expense of frustrating intent.

RESTATEMENT (THIRD) OF PROPERTY: SERVITUDES 494 (2000) (Introductory Note to Chapter 4); *see also id.* §§ 4.1-.13, at 494-640 (setting forth an interpretive rule for servitudes based on the intent of the parties and setting up default rules that can be displaced by evidence of the parties' intent).

If one examines the official doctrine and the reasoning of the few cases that test the validity of the idea, however, the *numerus clausus* appears to have penetrated the consciousness of common-law lawyers only weakly. Perhaps the best characterization of the status of the *numerus clausus* in American common law is that it is simply a fact about the way in which the system of property rights operates. The fact is so patent and obvious, so deeply entrenched, that it is rarely commented upon. But because it is so rarely commented upon, common-law lawyers have little to say in its defense when it is challenged.

III. MEASUREMENT COSTS, FRUSTRATION COSTS, AND THE OPTIMAL STANDARDIZATION OF PROPERTY RIGHTS

What accounts for the widespread adherence to the *numerus clausus*, not only in the common law but in postfeudal legal systems throughout the world? To the extent that an explanation can be found in the American legal literature, it focuses on a concern with undue restraints on alienation.⁹⁶ In *Johnson v. Whiton*, for example, Holmes stated that the conveyance to Sarah “and her heirs on her father’s side” could not be construed as written because this would “put it out of the power of the owners to give a clear title for generations.”⁹⁷ The restraint on alienation presumably would occur because of fragmentation of property rights—the interest would create an open-ended class of potential claimants to the property.⁹⁸ The resulting bargaining difficulties would have created large transaction-cost barriers to any exchange of the property, creating an undue restraint on alienation.⁹⁹

The problem with this argument is that the system of estates in land is sufficiently flexible that one can nearly always find a way to effectuate a complicated conveyance. Thus, if Royal Whiton had conveyed “to Sarah for life, remainder to her heirs on her father’s side,” the conveyance would

96. *E.g.*, DONAHUE ET AL., *supra* note 2, at 449 (discussing the doctrine of fixed estates in a section entitled “Estates in Land and the Policy Against Undue Restraints on Alienation”); DUKEMINIER & KRIER, *supra* note 2, at 204 (“Once the estates system developed, judges decided that standardization of estates furthered alienability by facilitating subsequent transactions in the same resources.”); SINGER, *supra* note 85, at 560-61 (discussing the doctrine in a section entitled “Rules Regulating Restrictions on Use or Ownership To Promote Marketability”).

97. *Johnson v. Whiton*, 34 N.E. 542, 542 (Mass. 1893).

98. The interest created by Royal Whiton was of unclear import. It might have meant that Sarah had a fee simple, but if she died intestate, the property could be inherited only on her father’s side. Alternatively, the interest might have operated something like a fee tail, descending from generation to generation not to the issue of Sarah’s body but to the heirs on her father’s side. Holmes seems to have assumed the latter construction. *See id.* (analogizing the conveyance to a fee tail).

99. If one construes the interest to be a modified fee tail, *see supra* note 98, and assumes the interests of the takers in tail cannot be defeated by a conveyance of the interest by those who presently hold the property, then, as Holmes noted, this would “put it out of the power of the owners to give a clear title for generations.” *Johnson*, 34 N.E. at 542. The transaction costs, in other words, would be enormous.

have accomplished the grantor's apparent objectives, but in a way that did not create a "new kind of inheritance."¹⁰⁰ This alternative conveyance, however, would also have created a large web of potential claimants. The transaction-cost barriers to exchange, and hence the practical restraint on alienation, would still be large.¹⁰¹ This suggests that the *numerus clausus* is not in fact a very effective device for limiting undue restraints on alienation.

The leading English case affirming what we call the *numerus clausus* principle, *Keppell v. Bailey*,¹⁰² suggests a different rationale. *Keppell* involved the conveyance of an iron works, in which the purchasers covenanted on behalf of themselves and their successors and assigns to acquire all limestone required by the works from a particular quarry and to ship the limestone to the works on a particular railroad. The Court of Chancery held that this type of agreement, although enforceable as a contract between the original parties, did not fall within the recognized types of servitudes enforceable against subsequent purchasers as a property right running with the land. There was, however, no suggestion in the case that the covenants worked an undue restraint on alienation;¹⁰³ indeed, the works had recently been conveyed from the original purchasers to another party. Instead, Lord Chancellor Brougham stressed the more systemic consequences of allowing such "fancies," as they have been called,¹⁰⁴ to be enforced as property rights:

There can be no harm to allowing the fullest latitude to men in binding themselves and their representatives, that is, their assets real and personal, to answer in damages for breach of their obligations. This tends to no mischief, and is a reasonable liberty to bestow; but great detriment would arise and much confusion of rights if parties were allowed to invent new modes of holding and enjoying real property, and to impress upon their lands and tenements a peculiar character, which should follow them into all hands, however remote. Every close, every messuage, might thus be held in several fashion; and it would hardly be possible to know

100. *Johnson*, 34 N.E. at 542.

101. If we assume that the conveyance as written created a kind of fee tail in the heirs on Sarah's father's side, *see supra* note 98, then the class of potential claimants would not be known until the last of Sarah's heirs on her father's side died out. This "indefinite failure of issue" construction would create larger transaction costs than the proposed alternative.

102. 39 Eng. Rep. 1042 (Ch. 1834).

103. The opinion found that the covenants were not infirm on perpetuity grounds and did not constitute an impermissible restraint of trade. *Id.* at 1046-47.

104. The Lord Chancellor said that novel forms of property cannot "be devised and attached to property at the fancy or caprice of any owner." *Id.* at 1049. Later English commentators have picked up on this and have referred to idiosyncratic interests not recognized by the law as "fancies." Rudden, *supra* note 3, at 240.

what rights the acquisition of any parcel conferred, or what obligations it imposed.¹⁰⁵

In modern terminology, the Lord Chancellor thought that permitting interests like the covenants in *Keppell* to be established as property rights would create unacceptable information costs to third parties. In this Part, we develop Lord Chancellor Brougham's germ of an insight by presenting a theory of the *numerus clausus* based on optimal standardization of property rights.¹⁰⁶

A. *Measurement-Cost Externalities*

When individuals encounter property rights, they face a measurement problem.¹⁰⁷ In order to avoid violating another's property rights, they must ascertain what those rights are. In order to acquire property rights, they must measure various attributes, ranging from the physical boundaries of a parcel, to use rights, to the attendant liabilities of the owner to others (such as adjacent owners). Whether the objective is to avoid liability or to acquire rights, an individual will measure the property rights until the marginal costs of additional measurement equal the marginal benefits. When seeking to avoid liability, the actor will seek to minimize the sum of the costs of liability for violations of rights and the costs of avoiding those violations through measurement. In the potential transfer situation, the individual will measure as long as the marginal benefit in reduced error costs exceeds the marginal cost of measurement.¹⁰⁸

The need for standardization in property law stems from an externality involving measurement costs: Parties who create new property rights will not take into account the full magnitude of the measurement costs they

105. *Keppell*, 39 Eng. Rep. at 1049.

106. It is uncertain when this hostility toward the creation of new forms of property entered English law. The attitude is present as early as *Chudleigh's Case*, 1 Co. Rep. 113b, 76 Eng. Rep. 261 (K.B. 1589-1595), where the judges of the King's Bench construed the Statute of Uses narrowly so as to make every contingent remainder a legal estate in land (and hence destructible under the Rule of Destructibility of Contingent Remainders). Otherwise, said Chief Judge Popham, "no purchaser would be sure of his purchase without an Act of Parliament." 1 Co. Rep. at 139a, 76 Eng. Rep. at 322.

107. Measurement costs are a reflection of information costs, and the terms can usually be used interchangeably for our purposes. Measurement reduces uncertainty and is the quantification of information; measurement, being observable, makes a model easier to operationalize. Yoram Barzel, *Measurement Cost and the Organization of Markets*, 25 J.L. & ECON. 27, 28 & n.3 (1982). On measurement costs in general, see, for example, *id.*; Roy W. Kenney & Benjamin Klein, *The Economics of Block Booking*, 26 J.L. & ECON. 497 (1983); and Henry E. Smith, *Ambiguous Quality Changes from Taxes and Legal Rules*, 67 U. CHI. L. REV. 647 (2000).

108. For discussions of whether the buyer or the seller will incur measurement costs and devices to minimize them, see, for example, Barzel, *supra* note 107; Victor P. Goldberg, *The Gold Ring Problem*, 47 U. TORONTO L.J. 469 (1997); and Kenney & Klein, *supra* note 107, at 522-27.

impose on strangers to the title. An example illustrates.¹⁰⁹ Suppose one hundred people own watches. *A* is the sole owner of a watch and wants to transfer some or all of the rights to use the watch to *B*. The law of personal property allows the sale of *A*'s entire interest in the watch, or the sale of a life estate in the watch, or the sale of a joint tenancy or tenancy in common in the watch. But suppose *A* wants to create a "time-share" in the watch, which would allow *B* to use the watch on Mondays but only on Mondays (with *A* retaining for now the rights to the watch on all other days). As a matter of contract law, *A* and *B* are perfectly free to enter into such an idiosyncratic agreement. But *A* and *B* are not permitted by the law of personal property to create a *property right* in the use of the watch on Mondays only and to transfer this property right from *A* to *B*.¹¹⁰

Why might the law restrict the freedom of *A* and *B* to create such an unusual property right? Suppose, counterfactually, that such idiosyncratic property rights are permitted. Word spreads that someone has sold a Monday right in a watch, but not which of the one hundred owners did so. If *A* now decides to sell his watch, he will have to explain that it does not include Monday rights, and this will reduce the attractiveness of the watch to potential buyers. Presumably, however, *A* will foresee this when he sells the Monday rights, and is willing to bear the cost of that action in the form of a lower sales price. But consider what will happen now when any of the *other* ninety-nine watch owners try to sell their watches. Given the awareness that someone has created a Monday-only right, anyone else buying a watch must now also investigate whether any particular watch does not include Monday rights. Thus, by allowing even one person to create an idiosyncratic property right, the information processing costs of all persons who have existing or potential interests in this type of property go up. This external cost on other market participants forms the basis of our explanation of the *numerus clausus*.

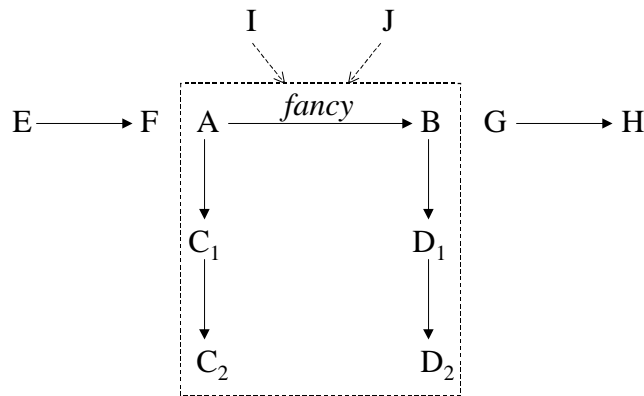
At this point, it is useful to distinguish three classes of individuals who might be affected by the decision to create idiosyncratic property rights, or fancies, as illustrated by Figure 1. First are the *originating parties*, who are the participants to the transaction creating the fancy; this is *A* and *B* in Figure 1. Second are the *potential successors in interest* to the asset that is being subjected to the fancy. This would be anyone who might purchase *A*'s reserved rights (after the transfer to *B*) as well as anyone who succeeds to the interest acquired by *B*. Potential successors in interest are shown as

109. A more complex hypothetical involving time shares in watches can be found in Henry Hansmann & Reinier Kraakman, Unity of Property Rights 5-6 (Nov. 17, 1999) (unpublished manuscript, on file with *The Yale Law Journal*), to which our argument about information costs also applies. See *infra* notes 112-113 and accompanying text.

110. Time shares are a creation of statute, and the various statutes appear to limit time shares to real estate. Ellen R. Peirce & Richard A. Mann, *Time-Share Interests in Real Estate: A Critical Evaluation of the Regulatory Environment*, 59 NOTRE DAME L. REV. 9, 37-42 (1983).

Cs and Ds in Figure 1. Finally, there are the *other market participants*, people who will deal in or with watches other than the one over which A and B have transacted. Other market participants include those selling and acquiring rights in other watches such as E and F and G and H in Figure 1. They also include all who must avoid violating property rights in all watches, rights that are enforced against the world represented by I and J in Figure 1.¹¹¹ In the hypothetical example above, the other market participants are the other ninety-nine watch owners and their successors in title, as well as anyone who potentially might violate a property right in a watch.

FIGURE 1. THE CLASSES OF AFFECTED PARTIES



The difference between other possible explanations of the *numerus clausus* and our information-cost theory can be understood in terms of this three-way classification. Other explanations focus on the effect of novel property rights on the originating parties and potential successors in interests—the As, Bs, Cs, and Ds of the world. One may say that these classes of individuals fall within the “zone of privity” designated by the box with the dotted line in Figure 1. Our explanation, in contrast, focuses on the effect of unusual property rights on other market participants—the Es, Fs, Gs, Hs, Is, and Js of the world—classes of individuals who fall outside the zone of privity. As we argue, explanations based on classes of individuals within the zone of privity have difficulty identifying costs that are not impounded into the price facing those who make the decision whether to create the fancy in the first place. An explanation based on costs incurred by classes of individuals outside the zone of privity does not have this difficulty.

111. Thus, other market participants include those whose actual dealings with watches occur by means other than consensual transactions.

Consider first the originating parties, *A* and *B*. Some commentators have attempted to argue that the creation of novel property rights can be seen as giving rise to external costs further down the road for these originating parties.¹¹² If *A* has sold a Monday interest in the watch to *B*, what happens if *B* turns around and sells the right to *D_i*? *D_i* may be relatively inaccessible or may be unacceptable to *A* for a variety of possible reasons. The sale from *B* to *D_i* of the Monday right may thus lower the value of the retained interest in *A*. Alternatively, after the sale of the Monday interest to *B*, *A* might sell one of the remaining days to *C_j*, and this may damage the value of *B*'s interest. To avoid these sorts of problems, it is argued, the law simply presumes that *A* would ordinarily want to block future sales by *B*, and so for simplicity's sake just disallows the original creation of a property right that could lead to such a transaction altogether.¹¹³

Yet it is problematic to label the impact of the *B*-to-*D_i* sale of the Monday right an externality to *A*. If *A* can foresee the problem that *B* might further transfer ownership of the interest in the watch, then the cost of that future transaction (discounted by its probability) should figure into *A*'s decision to sell the Monday interest to *B* in the first place. The risk of such a future transaction to *D_i* should be capitalized in the form of a lower market value of *A*'s rights.¹¹⁴ Because the costs associated with this contingency will be reflected in the price, there is no externality to *A*.

Thus, focusing only on the potential detriment to the two original parties to the transaction—*A* and *B*—makes it hard to see that there is any legitimate reason for the law to intervene and prohibit the transaction. The decision to create a time-share in the watch may turn out to be an improvident one. But the law generally does not second-guess mundane mistakes like an improvident sale. With some reluctance, the law may stop an owner from burning down her own house.¹¹⁵ But she can presumably destroy a watch she owns. And if she can destroy the watch, there would seem to be no reason why *A* cannot diminish its value by entering into an

112. Hansmann & Kraakman, *supra* note 109, at 5-6.

113. *Id.* at 6. In theory, if *B* tries to sell to *D_i*, *A* might then try to buy out *D_i*'s interest. But once *D_i* has acquired the Monday right, the transfer to *D_i* may be hard for *A* to undo. Alternatively, *A* might contract in advance with *B* that *A* has a right to block such sales. But this would run up against the rule against restraints on alienation.

114. In this hypothetical, the possibility of the sale to *D_i* should lower the market value of the rights *A* retains even if for some reason it did not lower the market value of the rights hived off to *B*.

115. *Eyerman v. Mercantile Trust Co.*, 524 S.W.2d 210 (Mo. Ct. App. 1975) (declining to enforce a will provision directing destruction of a house). Interestingly, John Austin uses the opposite conclusion about this situation to illustrate his conception of ownership. 3 JOHN AUSTIN, LECTURES ON JURISPRUDENCE, 1861-1863, at 6 (1863) ("If I am the absolute owner of my house, I may destroy it if I will. But I must not destroy it in such a manner as would amount to an injury to any of my neighbors.").

improvident sharing agreement that can lead to ownership of the watch being fragmented among multiple and potentially antagonistic parties.

For similar reasons, the costs to potential successors in interest will also be mediated through the price mechanism and so will not require legal intervention. In the literature on fragmentation, it is often pointed out that the creation of novel interests can be difficult for later individuals dealing with the asset, such as C_2 and D_2 , to figure out or to undo. Even interests that do not lead to fragmentation per se can be difficult for those in the distant future to understand and take into account, and this is a reason to adopt some degree of standardization in property rights.¹¹⁶ But these costs are not externalities to such decisions. If a fancy lowers the price that a future purchaser will pay for an interest in the watch over which A and B are transacting, the difficulties facing future D s who might purchase any interest in that watch—or who might lend to the owner of the watch while taking a security interest in the watch—will lead to a lower price than D_1 might pay for an unrestricted watch.¹¹⁷ This lower price will be reflected in a lower market value the instant that the fancy creating such difficulties is created. Because the difficulties to the potential successors in interest (the D s) are reflected in costs facing A (and B) now, there is no externality and no need to intervene.

Again, limited foresight might prevent A or B from making a completely accurate forecast of the costs to those who deal with the asset in the future.¹¹⁸ This does not, however, furnish a basis for taking the decision

116. This argument based on the effects on potential successors in interest has been made most clearly in Rose, *supra* note 11, at 214-15. *See infra* Section IV.B.

117. Baird and Jackson discuss the information costs to potential creditors involved with a particular asset, who would in our classification be counted as potential successors in interest. Douglas Baird & Thomas Jackson, *Information, Uncertainty, and the Transfer of Property*, 13 J. LEGAL STUD. 299, 307-09 (1984). As with the costs to successors in title, the costs to potential successors in interest should be reflected in a lower price to the creating parties, thus presenting no externality. But as with successors in title, systems like recording are likely to be more cost-effective than the *numerus clausus* for the informational problems that remain. *See id.* at 303-07.

118. The intertemporal aspect of property interests also raises the much-discussed question of intergenerational equity. *See, e.g.*, BRUCE ACKERMAN, SOCIAL JUSTICE IN THE LIBERAL STATE 107-38, 168-227 (1980) (discussing justice over time); JOHN RAWLS, A THEORY OF JUSTICE 284-93 (1971) (discussing justice between generations); LEWIS M. SIMES, PUBLIC POLICY AND THE DEAD HAND 32-38 (1955) (discussing dead-hand control); Richard Epstein, *Justice Across the Generations*, 67 TEX. L. REV. 1465 (1989) (discussing the problem of intergenerational equity); Adam J. Hirsch & William K.S. Wang, *A Qualitative Theory of the Dead Hand*, 68 IND. L.J. 1 (1992) (discussing the structure of the problem of intergenerational control); Jeffrey E. Stake, *Darwin, Donations, and the Illusion of Dead Hand Control*, 64 TUL. L. REV. 705 (1990) (same). Even if property law might be used to change the discount rate of present owners of property, we still would want the discount rate to be the same with respect to the different components of the endowment left for future generations. *See* Stephen F. Williams, *Running Out: The Problem of Exhaustible Resources*, 7 J. LEGAL STUD. 165, 186 (1978) (listing components of the legacy to future generations and pointing out that traditional economic analysis concludes that “[f]or any given level of sacrifice that people are willing to make, society should adjust the composition of the endowment so that the marginal values of each component of the endowment are equal”). Whatever one might say about the usefulness of doctrines such as the Rule Against Perpetuities in

out of the hands of the original transactors, unless officials are in a better position to estimate these costs than are the originating parties, who are closest to the transaction and who face the costs most directly.¹¹⁹ Generally speaking, this is not likely.

Further, there are less drastic ways to deal with improvident arrangements that cause excessive costs for parties and potential successors in interest than mandating the standardization of rights through the *numerus clausus* principle.¹²⁰ For example, the law could adopt a default rule against time-shares in personal property with the opportunity to opt out. In such a case, whether *B* could sell some of his interest to *D_i* would be governed by rules of contract interpretation, and property rights would arise (or not) accordingly. No doubt this strictly contractarian approach would be cumbersome. One would have to worry about whether *D_i*, the potential purchaser of *B*'s interest, knew whether *A* had contracted around the default rule prohibiting such interests. Thus, some requirement of notice might be necessary. But from a contractarian point of view, the problems of notice and complexity of property rights can be solved through default rules. The last thing one would expect would be an outright ban on types of property rights.

There is, however, a much more straightforward problem of externalities associated with the creation of idiosyncratic property rights as illustrated in the watch hypothetical. These are the effects on the third class of individuals identified above outside the zone of privity—the other market participants. When *A* creates the Monday right, this can raise the information costs of third parties. If the law allows *A* to create a Monday interest, individuals wishing to buy watches or bailees asked to repair watches will have to consider the possibility that any given watch is a Monday-only watch (or a watch for any other proper subset of days of the week) rather than a full-week watch. While *A* and *B* might be expected to take into account the market-value-lowering effect of undesirable idiosyncratic rights when third parties like *C* or *D* consider purchasing property in this watch, they will not take into account the more general effect on processing costs created by the existence of such rights when *F* is considering a purchase of rights in *E*'s watch, or *I* and *J* are worried about violating property rights.¹²¹

this regard, the *numerus clausus* seems like a very blunt and ineffective instrument for achieving intergenerational equity. Standardizing the basic building blocks of property will probably have little effect on the discount rate or on the amount of an asset left for future generations.

119. For more discussion, see *infra* note 189 and accompanying text.

120. Rose discusses some of these methods of dealing with improvident rights by recording acts or through adjustment *ex post*. Rose, *supra* note 11, at 213-15. For more discussion, see *infra* note 190 and accompanying text.

121. The externality here is an informational one. Other informational externalities that have received increasing attention in economics include the possible effect of speculation in reducing

A and *B* may have subjective reasons for creating property rights based on days of the week. But, the possible existence of such rights will cause information costs for others—such as *E*, *F*, *G*, *H*, *I*, and *J*—to rise. Those considering whether to purchase property rights in watches will have more to investigate: They will have to assure themselves that they are getting all the days of the week that they want. Furthermore, they will have to worry about dimensions of division and elaboration that perhaps no one has yet thought of, making the acquisition of any watch more uncertain as well as riskier.¹²² With an indefinite set of types of rights, these costs will be higher than where parties, especially unsophisticated ones, are restricted to the limited menu the law allows. Furthermore, because property rights are in rem, all those who might violate property rights, accidentally or not, must know what they are supposed to respect.¹²³ An indefinite set of types of rights will raise the cost of preventing violations through investigation of rights.

To return to our hypothetical world of one-hundred watch owners, suppose the value of creating the Monday-only right to *A* is \$10, but the existence of this idiosyncrasy increases processing costs by \$1 for all watch owners. The net benefit to *A* is \$9, but the social cost is \$90. As this example suggests, idiosyncratic property rights create a common-pool problem.¹²⁴ The marginal benefits of the idiosyncrasy are fully internalized

the informativeness of prices, Jeremy C. Stein, *Informational Externalities and Welfare-Reducing Speculation*, 95 J. POL. ECON. 1123 (1987), and the circumstances under which socially costly bait and switch will be attractive to sellers, Edward P. Lazear, *Bait and Switch*, 103 J. POL. ECON. 813 (1995). The informational externality we identify is not a pecuniary externality. A pecuniary externality is one mediated by the price system and cannot lead to inefficiency. For example, if consumers in Chicago love raspberries, this might raise the price for consumers in New York, but the disutility of the New Yorkers is not a technological externality but a pecuniary one. See, e.g., ANDREAS A. PAPANDREOU, EXTERNALITY AND INSTITUTIONS 18-21 (1994); Frank H. Knight, *Some Fallacies in the Interpretation of Social Cost*, 38 Q.J. ECON. 582 (1924). In our example, by contrast, the confusion caused by idiosyncratic rights is not fully reflected in price but is rather the effect of using an open-access resource like a congested road. *Infra* notes 124-125 and accompanying text.

122. According to Knight's well-known distinction, risk is randomness that is quantifiable in terms of a probability distribution, and uncertainty is randomness that is not. FRANK H. KNIGHT, RISK, UNCERTAINTY AND PROFIT (1921). Insurance may be used to shift the risk of not receiving a property interest with the anticipated market value. But in a world in which owners are free to create previously unknown customized property rights, third parties would presumably face not just risk but uncertainty. The uncertainty of such a regime might not be insurable.

123. In Hohfeld's terms, in rem rights are multital rather than paucital. WESLEY NEWCOMB HOHFELD, *Fundamental Legal Conceptions as Applied in Judicial Reasoning II*, in FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING AND OTHER LEGAL ESSAYS 65, 71-86 (Walter Wheeler Cook ed., 1923).

124. The problems of a common-pool resource were first studied by Jens Warming, *Om "Grundrente" af Fiskegrunde*, 49 NATIONALØKONOMISK TIDSSKRIFT 495 (1911), translated in Peder Andersen, "On Rent of Fishing Grounds": A Translation of Jens Warming's 1911 Article, with an Introduction, 15 HIST. POL. ECON. 391 (1983); Jens Warming, *Aalegaardsretten*, 69 NATIONALØKONOMISK TIDSSKRIFT 151 (1931). The analysis was independently discovered by H. Scott Gordon, *The Economic Theory of a Common-Property Resource: The Fishery*, 62 J. POL. ECON. 124 (1954), and extended by Steven N.S. Cheung, *The Structure of a Contract and the*

to the owner of the property right, but the owner bears only a fraction of the general measurement costs thereby created. Overall, the creation of external costs associated with this common-pool problem is likely to proceed beyond the optimal level.¹²⁵ The problem cannot be resolved by side payments from the remaining ninety-nine to A, because the transaction costs are virtually certain to be prohibitive. Consequently, since an individual's interest in creating the nonstandard right—the extra benefit from using it rather than the next best alternative—is less than the additional measurement costs imposed on the other market participants, there is a rationale for the law to prohibit the creation of this kind of idiosyncratic right.

One way to control the external costs of measurement to third parties is through compulsory standardization of property rights.¹²⁶ Standardization reduces the costs of measuring the attributes of such rights.¹²⁷ Limiting the number of basic property forms allows a market participant or a potential violator to limit his or her inquiry to whether the interest does or does not have the features of the forms on the menu. Fancies not on the closed list need not be considered because they will not be enforced. When it comes to the basic legal dimensions of property, limiting the number of forms thus makes the determination of their nature less costly. The “good” in question here might be considered to be the prevention of error in ascertaining the attributes of property rights. Standardization means less measurement is required to achieve a given amount of error prevention. Alternatively, one

Theory of a Non-Exclusive Resource, 13 J.L. & ECON. 49, 66-67 (1970). A wider audience for the analysis was gained by Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

125. The problem here in fact may be worse than that of the prototypical common pool in which one of n participants bears only $1/n$ of the costs of his or her actions. The choice of the degree of idiosyncrasy in any given transaction may not be a continuous one. This can mean that in the system of property rights, some rightholders and transactors will not be concerned with small differences in idiosyncrasy and marketability at the margin.

126. We consider the failure of other methods of controlling the costs of measuring basic property rights in Section IV.A *infra*.

127. This effect of standardization—however the standard is achieved—is familiar from many areas, including manufacturing, see Charles P. Kindleberger, *Standards as Public, Collective and Private Goods*, 36 KYKLOS 377, 378, 384 (1983) (stating that standardization in manufacturing has the twin benefits of facilitating economies of scale and of reducing transaction costs by, inter alia, reducing the need for monitoring); health care information, see William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1741-42 (1999) (stating that standardization carries with it many benefits, including the reduction of “data collection and processing costs”); and securities design, see FRANKLIN ALLEN & DOUGLAS GALE, FINANCIAL INNOVATION AND RISK SHARING 123, 311-12, 333 (1994) (interpreting results of studies as reflecting a discount for unfamiliar securities). See also Alan Schwartz & Louis L. Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests*, 69 VA. L. REV. 1387, 1401-29 (1983) (showing that, just as with price diversity where consumers prefer one price, the variety of contract terms can affect consumer search costs).

can say that standardization increases the productivity of any given level of measurement efforts.¹²⁸

One would expect standardization to have the most value in connection with the dimensions of property rights that are least visible, and hence the most difficult for ordinary observers to measure. The tangible attributes of property, such as its size, shape, color, or texture, are typically readily observable and hence can be relatively easily measured by third parties. In the watch example, the watch can be a Timex or a Rolex and can be any size or color, and so forth. These physical attributes, and of course the price, are relatively easy for third parties to process using their senses, and thus there is less to be gained from standardizing them.¹²⁹ The legal dimensions of property are less visible and less easy to comprehend, especially when they deviate from the most familiar forms such as the undivided fee simple.¹³⁰ Thus, one would expect the effort to lower third-party information costs through standardization to focus on the legal dimension of ownership.¹³¹

128. Of course, standardization of ownership forms is not the only device used by the law to reduce information costs to third parties about property rights. See Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 88 (1985) (noting that the standards for determining possession are based on “a specific vocabulary within a structure of symbols approved and understood by a commercial people”).

129. For a discussion of how the configuration of boundaries can serve to make attributes harder to process and thereby deter strategic behavior, see Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131, 147-48, 161-64 (2000).

130. Conditions that cut short a possessory interest or trigger the creation of a future interest, see *supra* notes 36-37 and accompanying text, are one instance in which the law permits significant variation in an attribute of property rights that is not visible. These conditions, however, are nearly always expressed in “lay language,” describing an attribute such as age (“when she reaches twenty-one”), marital status (“so long as he does not remarry”), or uses (“provided it is used for school purposes”). It may be that such conditions are more understandable to nonlegally trained market participants than are the legal dimensions of the different building blocks of property themselves (e.g., fee simple, contingent remainder, easement). In any event, these sorts of conditions are today almost always found in trusts, where they serve as guides to the trustee in distributing the fruits of the trust among different beneficiaries. Other market participants deal only with the underlying trust assets, which are held by the trustee in fee simple. The widespread use of trusts, in other words, has made possible the continued use of nonstandardized conditions, without at the same time imposing large measurement costs on other market participants.

131. It might be thought that courts and other officials (such as tax authorities) would be among the third parties whose information costs need lowering. This is a consideration, but the question remains why standardization in property law is different from the defaults used in contract law. As for taxing authorities, the *numerus clausus* might ease processing, but, to a great extent, tax-specific concepts of ownership may need to be devised anyway. See Noël B. Cunningham & Deborah H. Schenk, *Taxation Without Realization: A “Revolutionary” Approach to Ownership*, 47 TAX L. REV. 725, 727 (1992) (noting the absence of a comprehensive definition of ownership under the tax code, arguing that the search for a single taxable owner is misguided, and proposing to determine ownership based on financial interest just as Section 1286 of the Internal Revenue Code treats a bond and its coupons as separate pieces of property).

B. *Frustration Costs and the Language of Property Rights*

If the only concern were in reducing third-party measurement costs, then there should be only one mandatory package of property rights, presumably a simple usufruct or an undivided fee simple. But standardization imposes its own costs. Mandatory rules sometimes prevent the parties from achieving a legitimate goal cost-effectively. Enforcing standardization can therefore frustrate the parties' intentions.

Although the *numerus clausus* sometimes frustrates parties' objectives, often those objectives can be realized by a more complex combination of the standardized building blocks of property.¹³² For example, sophisticated parties with good legal advice can create the equivalent of a lease "for the duration of the war" by entering into a long-term lease determinable if the war ends.¹³³ The fact that the *numerus clausus* is in this sense "avoidable" does not mean that it is trivial: Even if the standardization effected by the *numerus clausus* principle does not absolutely bar the parties from realizing their ends, this standardization comes at a price.¹³⁴ The effect is roughly that of price discrimination: Parties willing to pay a great deal for an objective can achieve it by incurring higher planning and implementation costs.¹³⁵ Furthermore, the design and implementation costs imposed by the *numerus clausus* function as a sort of "pollution tax" that should deter parties from insisting on overusing hard-to-process property forms, thereby placing higher processing burdens on market participants and especially courts.

The ability of the system of property rights to limit the degree of frustration that comes from standardization can be grasped by comparing that system to another metaphorical network: language.¹³⁶ The inventory of property rights can be analogized to the lexicon of a language, and the rules for combining property rights are like a language's grammar. In the case of both property law and language, there is a potentially infinite range of things one can do with the limited vocabulary and rules available.

132. *Supra* note 100 and accompanying text.

133. *Supra* note 29.

134. In the context of corporate law, Bernard Black argues that rules that appear to be mandatory can be trivial for four reasons, one of them being the rule's avoidability. Bernard S. Black, *Is Corporate Law Trivial?: A Political and Economic Analysis*, 84 NW. U. L. REV. 542, 544 (1990). However, the greater the transaction costs of contracting around a rule, the more it will fall toward the mandatory end of the spectrum from weak defaults to strong defaults to mandatory rules. *See supra* note 24.

135. Furthermore, as Black notes, one should expect triviality in areas of law in which most parties are sophisticated. Black, *supra* note 134, at 546. We argue that the *numerus clausus* causes property law to vary in avoidability (one of Black's senses of triviality) according to the sophistication of the parties. Furthermore, corporate law is an area in which the participants are typically concerned with liquidity, and where liquidity is a primary concern, there is an incentive to conform even to nonmandatory standards. *Infra* notes 167-169 and accompanying text.

136. *Cf.* ROBERT G. NATELSON, MODERN LAW OF DEEDS TO REAL PROPERTY § 2.1, at 12-13 (1992) (analogizing estates in land to systems of measurement and the alphabet).

In both language and property, standardizing the building blocks will cause some frustration of purposes, but the analogy to language suggests why this may be tolerable. If there were only one form of tailor-made property right for each objective people might have, then limiting such rights would have a severe effect on the objectives people could pursue with the law's aid. But if building blocks can be combined in many ways to serve objectives that cannot be served with the building blocks themselves, then the degree of frustration depends on how well and how easily the building blocks can be combined to serve those objectives. That is, it is important to know the generative power of the system of property rights.

In this respect, the set of outputs of the property system is potentially infinite for reasons analogous to those that capture the infinity of sentences of a language. The set of property rights bundles is potentially infinite because, like some of the rules of language, some rules for forming property rights are *recursive*: These rules can feed into themselves.¹³⁷ For example, a fee simple can be physically divided and divided yet again, or a lessee can create a sublease and the sublessee a (sub)sublease, etc. Also leading to an infinity of outputs are rules that permit multiple owners;¹³⁸ for example, a fee simple can be divided into tenancies in common with any number of concurrent owners or a single lease can be executed with multiple lessees.¹³⁹ And the rules permitting physical and temporal division can be combined with the rules permitting multiple ownership. Thus, again as with language, relatively simple systems can potentially have great generative capacity or expressive power.¹⁴⁰ If so, then the limitations on the

137. The output of a recursive rule contains a constituent of the same category as the input to the rule. Among the linguistic phenomena that call for a model including a recursive rule is the complement clause beginning with "that": "Pat said/believed that Chris is sick," "Leslie said/believed that Pat said/believed that Chris is sick," etc. A sentence can consist of "that" plus another sentence (which can in turn consist of "that" plus another sentence, etc.). See, e.g., IVAN A. SAG & THOMAS WASOW, SYNTACTIC THEORY: A FORMAL INTRODUCTION 36, 259 (1999).

138. An analogous linguistic example would be the "and on" phenomenon. "Some sentences go on and on" is a sentence in English, as is "Some sentences go on and on and on," as is "Some sentences go on and on and on and on." For a good discussion of this source of infinity in syntax, see *id.* at 27-29. This is not the same as recursion, as reflected in the flat structure of the "and on" phenomenon; recursion, in contrast, creates a "nested" tree structure. The property analogy would be to contrast the simple horizontal division of an interest into subinterests with the successive divisions of subinterests creating more than one level.

139. As argued in Section IV.B *infra*, the law does not intervene in any strong anti-fragmentarian way here, but this is not relevant to the present point, which concerns the "expressive power" of the property system.

140. In syntax, generative capacity or power is measured by the set of outputs that a given type of system can produce. E.g., JOHN E. HOPCROFT & JEFFREY D. ULLMAN, INTRODUCTION TO AUTOMATA THEORY, LANGUAGES, AND COMPUTATION 217-32 (1979); BARBARA H. PARTEE ET AL., MATHEMATICAL METHODS IN LINGUISTICS 451-53, 561-63 (1990). See generally THE FORMAL COMPLEXITY OF NATURAL LANGUAGE (Walter J. Savitch et al. eds., 1987). Expressive power refers to the range of meanings that can be expressed in a given language (however clumsily). Claims that certain languages cannot express particular notions have turned out to be false. For a famous example, see EKKEHART MALOTKI, HOPI TIME: A LINGUISTIC ANALYSIS OF THE TEMPORAL CONCEPTS IN THE HOPI LANGUAGE (1983), which refutes claims by Benjamin

vocabulary of property rights may not lead to as much frustration of parties' objectives as one might first think.

Quite complex structures—of property rights or sentences—can be constructed from a limited number of standard building blocks. Importantly, these complexes are easier to process for the very reason that they are built with the standard building blocks. In language, sentences that obey grammatical constraints are likely to be easier to parse than are ungrammatical sentences,¹⁴¹ something that Chomsky pointed out at the dawn of his research program on generative grammar.¹⁴² Similarly, in property, a complex of property rights built from a small number of standard building blocks is likely to be easier for third parties to process than functionally equivalent complex property rights for which third parties must figure out the nature of the building blocks.¹⁴³

As is generally true of analogies, likening the system of property rights to human language only gets us so far. The two networks resemble each other on the frustration cost side of the ledger: The generative power of each leads to great flexibility. Much can be done with a limited vocabulary. On the measurement cost side of the inquiry, however, the system of property looks like language only in certain specialized contexts. Everyday language is a flexible standard: It is permissible and often beneficial to coin new words, and this does not usually lead to a degree of confusion costs

Whorf that the Hopi language lacks any means of expressing time. Cf. GEOFFREY K. PULLUM, *THE GREAT ESKIMO VOCABULARY HOAX: AND OTHER IRREVERENT ESSAYS ON THE STUDY OF LANGUAGE* 159-71 (1991) (debunking claims regarding a large number of Eskimo words for snow).

141. Linguists continue to debate about what factors other than nongrammaticality tend to impede or promote processing. CARSON T. SCHÜTZE, *THE EMPIRICAL BASE OF LINGUISTICS: GRAMMATICALITY JUDGMENTS AND LINGUISTIC METHODOLOGY* 31-32, 160-64 (1996).

142. Interestingly, Chomsky's famous example demonstrating that syntactic or grammatical well-formedness is distinct from semantic intelligibility—"Colorless green ideas sleep furiously"—was introduced in a discussion that also pointed out some correlation between grammaticality (syntactic well-formedness) and ease of processing. The famous example is easier to remember and to produce with natural intonation than are permutations like "Furiously sleep ideas green colorless." NOAM CHOMSKY, *SYNTACTIC STRUCTURES* 15-16 (1957).

143. Thus, it is not necessarily correct that creating a tenancy for the duration of the war in a way that satisfies the *numerus clausus*—a term of years determinable—conveys no more information to third parties than would enforcing a tenancy "for the duration of the war" directly as a matter of the intentions of the parties. To a sophisticated lawyer reviewing the instruments, a lease for a term of, say, ten years, determinable on the end of the war, has a more certain meaning than does a lease "for the duration of the war." The former clearly lasts for a full ten years if the war lasts that long, and it clearly terminates earlier if the war ends before the ten years are up. The latter has no established meaning. Some courts have construed such an interest to be a term of years, some a periodic lease, and some a tenancy at will. *Supra* note 28. Nor is the problem solved by dropping the *numerus clausus* and saying that all leases will be enforced in accordance with the intentions of the parties. There still may be great uncertainties about when the war ends. Does it end when an armistice is declared, or when demobilization occurs, or when a peace treaty is signed? These conundrums affect both alternatives, but in the case of the term of years determinable, we at least know that the lease continues until the debate over when the war ends is resolved. If we enforce a lease for the duration of the war according to its terms, the status of the tenant while the parties debate the meaning of "the end of the war" is more uncertain.

that requires standardization by a central authority.¹⁴⁴ The grammar of a language is more standardized, but again this generally occurs spontaneously. Standardizing property and language may not create massive frustration costs because of each system's generative power, but the source of the standardization is different in the two networks. We return to the question of the source of standards in Section IV.C.

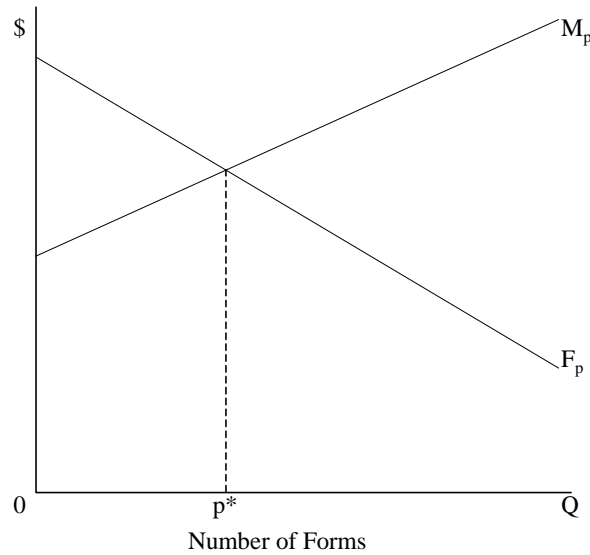
C. *Optimal Standardization and the Numerus Clausus*

We are now in a position to see how the *numerus clausus* functions to promote the optimal standardization of property rights. From a social point of view, the objective should be to minimize the sum of measurement (and error) costs, frustration costs, and administrative costs. In other words, what we want is not maximal standardization—or no standardization—but optimal standardization. Fortunately, standardization comes in degrees. There is a spectrum of possible approaches to property rights, ranging from total freedom of customization on the one hand to complete regimentation on the other. Neither of these endpoints on the spectrum is likely to minimize social costs. Extreme standardization would frustrate many of the purposes to which property rights are put. On the other hand, total freedom to customize rights would create large third-party measurement and error costs and high administrative costs. Attention should focus on the middle range of the spectrum. Starting from a position of complete regimentation, permitting additional forms of property rights should reduce frustration costs by more than it increases measurement and error costs to third parties and administrative costs. Conversely, if one starts from a position of complete customization of rights, increasing the degree of standardization should lower measurement and error costs and administrative costs by more than the attendant frustration costs will rise.

Consider a simple model of the choice of the number of property forms, illustrated in Figure 2. Along the x -axis is the variable p , the number of forms of property, and along the y -axis is the measure of marginal changes to societal wealth.

144. *Infra* notes 171-173 and accompanying text.

FIGURE 2. OPTIMAL NUMBER OF PROPERTY FORMS



M_p = marginal cost of measuring (delineating and processing) property rights

F_p = marginal benefit in reducing frustration of parties' objectives

The number of forms of property is subject to a tradeoff between measurement and error costs on the one hand and frustration costs on the other. As the number of property forms (p) increases, error costs and measurement costs also increase.¹⁴⁵ Moreover, in this model we assume that the simplest and most widely applicable property rights will be adopted first; thus the fee simple is represented in the smallest set of property forms (to the left on the x -axis in Figure 2). Marginal error and measurement costs therefore increase with the number of forms. The curve labeled M_p represents the marginal costs of setting up and processing property rights. As p increases, the marginal costs of measurement increase (M_p is positive and increasing as p increases), reflecting the increased costs of measurement and error associated with more—and more specialized and complicated—property forms.¹⁴⁶ The number of forms may range from 0 to

145. The choice bears some resemblance to the choice of the number of commons. See Barry C. Field, *The Evolution of Property Rights*, 42 *KYKLOS* 319, 321-22, 328-29 (1989).

146. For the more complicated property forms, marginal processing costs are higher because of complexity. To the extent that these property forms are less widely applicable than ones “earlier” on the x -axis, there are fewer instances of the property form over which to spread any fixed costs in setting up and learning to process the property form.

Q , which is defined as the number of property forms that would emerge in a regime of total customization. The other curve, labeled F_p , is a marginal benefit curve; it represents the marginal savings in frustration costs from changes in p . As p increases, the marginal frustration costs saved decrease (F_p is positive and decreasing as p increases), because as we move from the fee simple to more specialized forms, the addition of each form saves less in frustration costs. Thus, movements toward more forms of property yield (increasingly smaller) benefits in terms of reduced frustration costs from efforts to achieve goals that the menu of property forms does not directly allow.

The *numerus clausus* principle can be seen from this perspective as a device that moves the system of property rights in the direction of the optimal level of standardization, that is, p^* .¹⁴⁷ By creating a strong presumption against judicial recognition of new forms of property rights, the *numerus clausus* imposes a brake on efforts by parties to proliferate new forms of property rights. On the other hand, by grandfathering in existing forms of property, and permitting legislative creation of new forms, the *numerus clausus* permits some positive level of diversification in the recognized forms of property. We do not argue that any particular number of property forms is in fact optimal. Nor do we argue that the forms currently recognized by the common law are ideal and beyond improvement. We do submit, however, that the *numerus clausus* strikes a rough balance between the extremes of complete regimentation and complete freedom of customization, and thus leads to a system of property rights that is closer to being optimal than that which would be produced by either of the extreme positions.

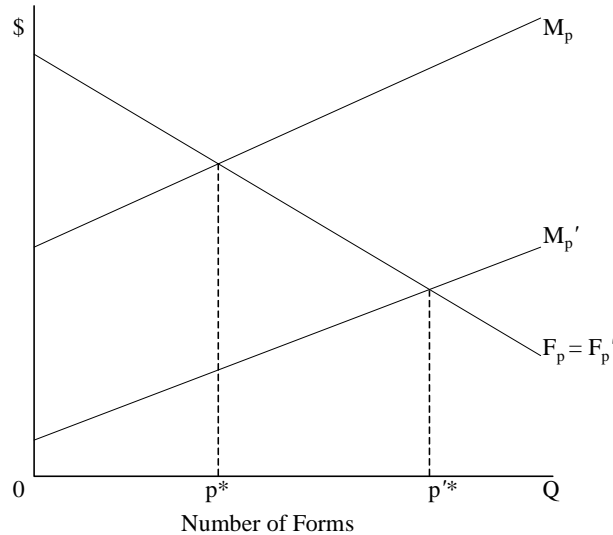
D. Information Costs and the Dynamics of Property

Finally, our explanation of the *numerus clausus* generates some general predictions about the way in which property regimes will change over time: As the costs of standardization to the parties and the government shift, we expect the optimal degree of standardization to rise or fall. Consider the rise of registers of interests in real property, that is, recording acts. This device lowers the costs of notice; it is an alternative method of lowering information costs.¹⁴⁸

147. Rudden acknowledges the possible role of standardization in reducing information costs, but he does not draw out its implications. He concludes that there is no economic justification for the *numerus clausus*, and in particular, he thinks that the possibility of contracting for idiosyncratic rights makes standardization through the *numerus clausus* irrelevant. Rudden, *supra* note 3, at 253-54. That is, he appears to assume the correctness of the irrelevance objection, which we criticize in Section IV.C *infra*.

148. In nineteenth-century England, those arguing for reform in the law of property saw limitation of the types of property interests and compulsory registration of titles as alternative

FIGURE 3. CHANGE IN OPTIMAL NUMBER OF PROPERTY FORMS



M_p = marginal costs of measuring property rights without registration

M_p' = marginal costs of measuring property rights with registration

$F_p = F_p'$ = marginal benefit in reducing frustration of parties' objectives

The effects of adopting a system of registration are illustrated graphically in Figure 3 above. The effect of cheaper information is to shift the marginal costs of property forms in terms of processing inward; M_p shifts downward to a position more like that of M_p' in Figure 3, and thus the optimal number of property forms increases, from p^* to p'^* . As the

methods to simplify conveyancing that might be used together. *See, e.g.*, SECOND REPORT MADE TO HIS MAJESTY BY THE COMMISSIONERS APPOINTED TO INQUIRE INTO THE LAW OF ENGLAND RESPECTING REAL PROPERTY 4-21 (n.p. 1830) (describing the insecurity of title and costs of investigating, noting the need for a uniform system, and advocating a general registry for real property); THIRD REPORT MADE TO HIS MAJESTY BY THE COMMISSIONERS APPOINTED TO INQUIRE INTO THE LAW OF ENGLAND RESPECTING REAL PROPERTY 4-20 (n.p. 1832) (noting the inconvenience and costs of nonuniform and complex systems of estates across England); W.S. HOLDSWORTH, AN HISTORICAL INTRODUCTION TO THE LAND LAW 315-18 (1927) (discussing the necessary emergence of legislation to fill obvious gaps); JOHN STUART MILL, PRINCIPLES OF POLITICAL ECONOMY 884 (J.M. Robson ed., Univ. of Toronto Press 1965) (1848) (criticizing the law of real property for its uncertainty, complexity, lack of registry, consequent expensive formalities, and costly legal proceedings); FREDERICK POLLOCK, THE LAND LAWS 171-74 (London, MacMillan 1896) (describing the cost and trouble of investigating title in nineteenth-century England, noting that registering and simplifying property law were main solutions advocated, and describing reforms); *see also* C.E. Thornhill, *How To Simplify Our Titles*, 5 L.Q. REV. 11 (1889) (documenting the argument in England between those who wished to reduce costs of investigating title by simplification of estates and those who advocated notice through a land register, and taking the former position).

marginal costs of defining property forms shift inward, the optimal point of standardization shifts to less standardization. Similarly, in the case of security interests, the provision of notice through filing allowed the loosening of the earlier quite strict limits on the types of security interests permitted.¹⁴⁹

Likewise, the more recent move toward increased use of contract principles in areas like electronic commerce fits in well with the information-cost theory of the *numerus clausus*. Notice is arguably easier to furnish (if not to process) when, for example, rights to digital content are being transferred, and notice of restrictions and other features of rights transferred are technologically not difficult to provide.¹⁵⁰ Also fitting this pattern are recent criticisms of negotiability as being superseded by technology.¹⁵¹ Negotiability imposes very strict formality requirements precisely in order to reduce the need to measure the reliability of an instrument. But when technology furnishes alternative means of promoting reliance (including lowering the need to measure risk), there is less need for the standardization provided for by the requirements of negotiability. In general, to the extent that technological change allows cheaper notice of relevant interests, the need for standardization by the law will be somewhat diminished. Just as the rise of land registers allowed some loosening of the *numerus clausus*, so too technology that lowers information costs can be expected to weaken the *numerus clausus* further.

IV. POTENTIAL OBJECTIONS

We anticipate a variety of objections to our optimal standardization theory of the *numerus clausus*, which we collect under three headings. The first we call “libertarian” objections, because they share the common theme that government-mandated standardization is not necessary in order to reduce third-party measurement costs. The second we call the “antifragmentation” objection, because it posits that the *numerus clausus* is designed not to reduce third-party information costs but rather to restrict the fragmentation of ownership. The third we call the “irrelevance” objection; basically, it posits that virtually anything one can do with property can also

149. E.g., Robert Charles Clark, *Abstract Rights Versus Paper Rights Under Article 9 of the Uniform Commercial Code*, 84 YALE L.J. 445, 476-78 (1975); Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. (forthcoming Dec. 2000) (manuscript at 18, on file with *The Yale Law Journal*).

150. E.g., Robert P. Merges, *The End of Friction? Property Rights and Contract in the “Newtonian” World of On-Line Commerce*, 12 BERKELEY TECH. L.J. 115, 120-29 (1997).

151. E.g., Ronald J. Mann, *Searching for Negotiability in Payment and Credit Systems*, 44 UCLA L. REV. 951 (1997); *Symposium on Negotiability in an Electronic Environment*, 31 IDAHO L. REV. 679 (1995); Jane Kaufman Winn, *Couriers Without Luggage: Negotiable Instruments and Digital Signatures*, 49 S.C. L. REV. 739, 742 (1998).

be done by contract, thus rendering the standardizing features of the *numerus clausus* otiose. We argue that none of these various arguments is ultimately persuasive.

A. *Libertarian Objections*

The argument that government-mandated standardization of property forms, that is, the *numerus clausus*, is not necessary comes in three forms. The first posits that the government need not standardize because third-party informational needs can be supplied just as effectively by requiring notice of idiosyncratic property forms. The second, which draws upon the burgeoning literature on network effects, argues that government-mandated standardization is unnecessary because standardization would occur without government guidance. The third is that standardization can be supplied by private organizations and associations rather than the government. We address in turn each of these variations on the libertarian theme.

1. *Notice Cures All*

An emphasis on freedom of contract is characteristic of a critique of certain manifestations of the *numerus clausus* offered by libertarians. Not surprisingly, libertarians see the standardization of property rights as standing in the way of parties' exercise of contractual freedom. The libertarian argument has been made most forcefully by Richard Epstein in his call to abolish the existing restrictions on servitudes.¹⁵² In his view, legal intervention is needed only to provide notice by recordation of privately created interests. As long as such interests are recorded, they may take any form the parties choose.

For Epstein, the function of recordation is to identify to prospective purchasers the individual with whom one has to deal in order to acquire title.¹⁵³ Because land is permanent and immobile, recording can give notice to prospective purchasers not just of the physical dimensions of land but also of the legal dimensions, such as complex forms of servitudes and future interests.¹⁵⁴ While prospective purchasers must search for such information, the search is channeled into the records and the result is more

152. Richard A. Epstein, *Notice and Freedom of Contract in the Law of Servitudes*, 55 S. CAL. L. REV. 1353 (1982) [hereinafter Epstein, *Servitudes*]; see also Alfred F. Conard, *Easement Novelties*, 30 CAL. L. REV. 125, 131-33 (1942) (arguing that the enforcement of easements should not be objectionable on grounds of novelty as long as there is notice). Epstein has also advanced a version of the argument in urging abolition of restrictions on the creation of future interests, such as the Rule Against Perpetuities. Richard A. Epstein, *Past and Future: The Temporal Dimension in the Law of Property*, 64 WASH. U. L.Q. 667, 705-07 (1986).

153. Epstein, *Servitudes*, *supra* note 152, at 1355.

154. *Id.*

certain than was true under the common-law rules that the recording system displaced. Moreover, Epstein recognizes the crucial point that the costs of creating novel property rights will be capitalized into the present market value of the property.¹⁵⁵ If *A* creates undesirable restrictions or interests that will be difficult to remove, then the market value of *A*'s property drops today by the discounted amount that future buyers would spend to remove these items or would demand to be paid to live with them. Thus, the costs to future purchasers of the right are internalized to the right's creator.

Aside from requiring notice, Epstein argues, the only role of courts, just as in contract law, is to interpret the parties' intent and to supply default terms when evidence of intent is lacking.¹⁵⁶ The whole point of property law, he argues, is to establish a sphere in which individuals' choices are respected (and facilitated through enforcement) rather than overruled by collective preferences.¹⁵⁷ As long as actors do not infringe upon the rights of third parties, there is no principled basis for disrespecting choices in servitude law any more than in property or contract law more generally.

What this critique overlooks is that the adoption of idiosyncratic property rights has an impact not only on the originating parties and potential successors in interest, but also on other market participants. Idiosyncratic rights create a common-pool problem, which *does* impose external costs on third parties. Making the running of a fancy depend solely on the original parties' intent and on notice—even recorded notice—to subsequent parties acquiring property assumes that notice is the most cost-effective method to minimize third-party information costs. But notice of idiosyncratic property rights is costly to process, and, although land registers furnish notice at far lower cost than would a doctrine of constructive notice, even they can require lengthy and error-prone searches.¹⁵⁸

A comparison with the costs of processing contracts highlights the processing problem. Even the terms of a bilateral contract are not costless to process. This is one reason why parties may leave clauses in a contract simple: A simple clause requires less inspection for hidden traps (or investments by the writer of the clauses in precommitting not to write in

155. *Id.* at 1360.

156. *Id.* at 1357.

157. *Id.* at 1358.

158. The nineteenth-century English commentators cited *supra* note 148 were aware of this point. That processing costs can be higher or lower depending on how notice is presented emerges also from the few studies on the relative costs of recording versus Torrens systems. See Joseph T. Janczyk, *An Economic Analysis of the Land Title Systems for Transferring Real Property*, 6 J. LEGAL STUD. 213 (1977); see also Joseph T. Janczyk, *Land Title Systems, Scale of Operations, and Operating and Conversion Costs*, 8 J. LEGAL STUD. 569 (1979); cf. Baird & Jackson, *supra* note 117, at 308 & n.25 (noting that filing comes closer to conclusively establishing title under the Torrens system than under other systems).

traps).¹⁵⁹ These processing costs are all the higher in the more impersonal context of land registers, and especially where transactors do not deal with all the market participants. The very existence of idiosyncratic, hard-to-process property rights makes information about property rights in general harder to process. Third parties incur heavier measurement costs in processing “notice” when the universe of property rights includes idiosyncratic servitudes or other “fancies” than when these are prohibited. Moreover, these costs are true externalities of any given transaction. The costs to third parties who do not deal even indirectly with the creator of the unusual servitude are not capitalized into the price of the creator’s property, and hence the creator cannot be expected to take these costs into account.¹⁶⁰ In particular, the higher measurement costs for parties considering other parcels are not reflected in a lower price for the parcel of the creator of such rights.

Of course, if parties had complete freedom to customize property rights, they would undoubtedly find it advantageous to conform somewhat to market-generated coordination points. Nevertheless, because not all costs of nonstandard rights would be internalized to them, we would expect to find some individuals exercising their freedom in a way that would lead to a suboptimal level of standardization.¹⁶¹

2. *Standardization and Network Effects*

A second possible reason why mandatory standardization may be unnecessary is that standardization will occur spontaneously. The argument might draw upon the growing literature on “network effects” or “network externalities.” Although somewhat difficult to define, network effects arise when a consumer’s value of a good depends on the number of other users; the interdependence of consumer valuations leads to a network that is literal (as in the case of the telephone system) or metaphorical (as in the case of language).¹⁶² Consumers benefit from the larger network made possible by the participation of others or, equivalently, suffer a cost from others’

159. Eric Rasmusen, A Model of Negotiation, Not Bargaining 1-2, 8-21 (May 1, 1998) (unpublished manuscript, on file with *The Yale Law Journal*).

160. This of course includes parties who are not prospective purchasers but who may incur losses due to a violation of the terms of the servitude.

161. In contexts in which marketability is a primary concern for transactors, we would expect the desire to conform to standards to be at its greatest. *Infra* note 167 and accompanying text.

162. Furthermore, the decision whether to consume a good may have a positive or negative network effect: It is positive if the choice to consume increases the value of that type of good to other consumers (for example, by the ability to communicate or interact at low cost), and it is negative if it reduces the value to others (for example, through overcrowding). *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).

nonparticipation.¹⁶³ To the extent that this effect is not mediated through the market, it is an externality to a consumer deciding whether to participate in the network.¹⁶⁴ Network theory has been applied to issues arguably analogous to the *numerus clausus*, such as the choice of contract terms, particularly choice of business form,¹⁶⁵ although it is unclear whether such effects are important.¹⁶⁶

The conventional approach to network externalities focuses on the learning and network benefits of using forms that others have used and will be using. Particularly where transactors are trying to enhance the marketability of the property they create, there will be a strong desire to conform to emerging standards.¹⁶⁷ Thus, it may be argued, there is no need for the government to impose limits on the available menu of property forms; those packaging property would select standardized forms anyway, because of the benefits of participating in a network. Government

163. Where there are network effects, the increasing returns to scale stem from demand-side factors—consumers derive more value from a larger network—rather than from the familiar increasing returns that stem from decreases in average costs of production (on the supply side) over a stated period of time. STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS, & MICROSOFT: COMPETITION AND ANTITRUST IN HIGH TECHNOLOGY 90-104 (1999).

164. Terminology varies greatly by author. Liebowitz and Margolis argue for distinguishing “network effects” from “network externalities” on the basis of whether suboptimal conditions result: Network effects obtain in markets in which there are increasing returns to scale, and network externalities exist only where increasing returns lead to suboptimality. S.J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, J. ECON. PERSP., Spring 1994, at 133, 135. For a discussion of the difficulties with defining externality in terms of a cost not mediated by the price mechanism, see PAPANDEOU, *supra* note 121, at 49-54. The question relevant to the design of legal institutions is whether the cost that might be termed an externality is remediable by legal rules or not, according to one’s chosen criteria for justifying legal intervention.

165. *E.g.*, Marcel Kahan & Michael Klausner, *Path Dependence in Corporate Contracting: Increasing Returns, Herd Behavior and Cognitive Biases*, 74 WASH. U. L.Q. 347 (1996); Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (or “The Economics of Boilerplate”)*, 83 VA. L. REV. 713 (1997); Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757 (1995).

166. For skepticism on this score, see, for example, Clayton P. Gillette, *Harmony and Stasis in Trade Usages for International Sales*, 39 VA. J. INT’L L. 707, 721-40 (1999); Clayton P. Gillette, *Lock-In Effects in Law and Norms*, 78 B.U. L. REV. 813, 814-15, 822-43 (1998), which argues that adjudication and legislation may be less susceptible to lock-in effects than are informal norms; Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 562-86 (1998); and Larry E. Ribstein & Bruce H. Kobayashi, *The Fable of the B.A.’s: Network Externalities and the Choice of Business Form* (May 4, 1999) (unpublished manuscript, on file with *The Yale Law Journal*). Indeed, the notion of network externality runs the danger of losing its usefulness through overbreadth and controversy over some of the canonical examples. *See, e.g.*, S.J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J.L. & ECON. 1 (1990); Liebowitz & Margolis, *supra* note 164, at 135-44.

167. *E.g.*, ALLEN & GALE, *supra* note 127, at 309-14 (discussing the benefits to a firm of offering standard forms of securities); Hansmann & Mattei, *supra* note 15, at 468-69; Claire A. Hill, *Securitization: A Low-Cost Sweetener for Lemons*, 74 WASH. U. L.Q. 1061, 1090-94 (1996) (demonstrating how some firms benefit by reducing information costs associated with the firm through securitization); *see also, e.g.*, Henry T. Greely, *Contracts as Commodities: The Influence of Secondary Purchasers on the Form of Contracts*, 42 VAND. L. REV. 133, 134 (1989) (discussing the benefits of retaining standard contract forms).

intervention to assure standardization of forms at best is redundant, and at worst interferes with the evolution of the optimal number and type of forms.

This argument misses the point about the nature of the problem that the *numerus clausus* is designed to overcome. Government-imposed standardization here is not designed to assure that large numbers of owners participate in a network and, hence, provide external benefits for other participants. Rather, standardization is imposed to control a negative externality created by the prospect that a few persons will deviate from popular forms. Thus, the *numerus clausus* is aimed at what might be called a special kind of network confusion effect based on problems of processing information, rather than on the size of the network of participants.

One can have a powerful network effect pushing nearly all participants toward standard forms and still suffer from a network confusion effect that raises the information-processing costs to all the participants in the network. The one out of one hundred who adopts a nonstandard form for property rights can increase the costs of processing the rights of ninety-nine others. It is not just that the ninety-nine do not benefit from one more addition to their “network” of standardized property rights. Rather, it is that the ninety-nine are worse off because of the possibility of the one-hundredth idiosyncratic right than they would be if that right could not be created at all. This is not a matter of increasing the value of rights with more users, but of preventing confusion to users who already exist.

We readily concede that property owners for whom marketability is critical at the margin will standardize without government intervention. Where actors are very interested in liquidity, economists predict a high (if not excessive) degree of standardization.¹⁶⁸ It is this sort of situation on which recent commentators have focused their attention and which fits most comfortably within the conventional view of networks. Thus, a public corporation designing securities to be traded on the market will respond to the network benefits of standardization and will opt for standards without being forced to do so. In such cases, the *numerus clausus*, to the extent it plays a role, serves to identify coordination points and to start a convention.¹⁶⁹

168. For example, securities' prices will be discounted to reflect the cost of acquiring additional information if the security includes uncertain features. *See, e.g.*, ALLEN & GALE, *supra* note 127, at 123, 311-13 (discussing and citing literature). For a skeptical treatment of arguments that network effects lead to an inefficient lock-in to standards, see *supra* note 166.

169. Thus, in corporate law, there seems to be a role for government standardization to provide forms, just as the government prescribes which side of the road to drive on. But once the coordination point attains salience through government fiat, almost everyone is happy to abide by the regularity. *See, e.g.*, DAVID K. LEWIS, *CONVENTION: A PHILOSOPHICAL STUDY* 78-79 (1969) (defining “convention”); H. Peyton Young, *The Economics of Convention*, *J. ECON. PERSP.*, Spring 1996, at 105, 105-06 (same). This role in establishing coordination points is consistent with what Black terms triviality in corporate law. Black, *supra* note 134, at 544 (discussing

In other circumstances, however, there is an implicit recognition that the private benefits of doing the conventional thing do not always control individual decisionmaking. For example, there will be situations involving families and small enterprises in which idiosyncrasies in property rights may be valued more than the fraction of common-pool increase in information costs. For a given owner, the desire to accomplish a certain goal (for example, keeping property within a close-knit group) can outweigh concerns for future marketability. It is in these sorts of circumstances that the *numerus clausus* does play a role.

The distinction we have drawn between ordinary network externalities and network confusion effects carries over into other networks besides property rights. Consider weights, measures, and money. A company that begins using kilograms as a unit of measurement may lose the advantage of network effects in the U.S. market, where most participants adopt English units of measurement. But a company that begins using a nonstandard weight called a “pound,” but actually equal to 1.2 pounds, will produce far more measurement costs for third parties; adoption of the purely idiosyncratic unit of measurement will generate confusion. Money works similarly, and it is noteworthy that defacing currency is sometimes a crime while destroying it altogether is not.¹⁷⁰ Defacing currency causes measurement costs to rise, but destroying it does not.

The analogy to language, discussed above in Section III.B, also sheds some light on the question of when standardization needs to be provided centrally. Because of standard network effects, government intervention is not required to give language a high degree of standardization: People want to make themselves understood.¹⁷¹ Relatedly, language in most everyday contexts is treated as a flexible (as opposed to a fixed) standard: Newly coined words can be freely tolerated in order to express new meanings.¹⁷² In this respect, the *numerus clausus* is closer to a fixed standard like weights and measures, where individual innovation is too costly to tolerate. Even in

market-mimicking rules). In the *numerus clausus*, we argue, there is a greater need to police the standard.

170. This is the case in England and Wales. Bernard Rudden, *Things as Things and Things as Wealth*, in PROPERTY PROBLEMS: FROM GENES TO PENSION FUNDS 146, 155 n.14 (J.W. Harris ed., 1997). Similarly, it is illegal to deface currency in the United States. 18 U.S.C. § 333 (1994) (“Whoever mutilates, cuts, defaces, disfigures, or perforates, or unites or cements together or does any other thing to any bank bill, draft, note, or other evidence of debt . . . with intent to render such bank bill, draft, note or other evidence of debt unfit to be reissued, shall be fined under this title or imprisoned not more than six months, or both.”)

171. The well-known efforts of the French government to standardize the French language are aimed less at ensuring mutual comprehension than at serving other political goals.

172. LIEBOWITZ & MARGOLIS, *supra* note 163, at 87-89; *see also* Lawrence Lessig, *The Limits in Open Code: Regulatory Standards and the Future of the Net*, 14 BERKELEY TECH. L.J. 759 (1999) (distinguishing “coordinating” and “regulating” standards and noting that the former can be imposed top-down or emerge bottom-up, but the latter usually are imposed top-down).

the case of language, however, there are certain contexts in which governments do intervene to eliminate potential costs that could arise if one or more participants did not participate in a common language. Thus, the law mandates one standard language or use of a shared language in certain contexts where impediments to communication can be especially costly, as in airplane cockpits or aboard oil tankers.¹⁷³ These are circumstances in which use of an idiosyncratic language by a single participant can cause significant confusion in communication, with the costs of miscommunication being potentially very high.

3. *Privately Supplied Standardization*

A third objection to government standardization is that the problem of third-party measurement costs can be handled by private entities. The provision of standards may seem like a public good, but this does not mean that it must be supplied by the government. If private parties can appropriate the benefit of the standards, they can be supplied privately. For example, brand names or warranties might be used to vouch for the legal dimensions of property rights, or private certification systems might arise to assure parties that property rights conform to certain standards.¹⁷⁴

173. For a discussion of this issue in airline safety and an argument that ambiguity still leads to disaster, see STEVEN CUSHING, *FATAL WORDS: COMMUNICATION CLASHES AND AIRCRAFT CRASHES* 1-48, 89-110 (1994). On oil tankers, see 33 U.S.C. § 1228(a)(7) (1994), which states, “No vessel . . . shall operate in the navigable waters of the United States . . . , if such vessel . . . while underway, does not have at least one licensed deck officer on the navigation bridge who is capable of clearly understanding English.”; and compare *United States v. Locke*, 120 S. Ct. 1135, 1138 (2000), which holds that a state statute imposing an English-language proficiency requirement on an entire tanker crew was preempted by the more limited federal statute.

174. On standard-setting organizations in general, see Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 CAL. L. REV. 261, 303-04 (1985). On the much-discussed role of standard-setting organizations in electronic commerce, see, for example, Mark A. Lemley, *Standardizing Government Standard-Setting Policy for Electronic Commerce*, 14 BERKELEY TECH. L.J. 745, 752-53 (1999), which discusses the role of standard-setting organizations on e-commerce in the presence of members’ intellectual property rights in standards; Jane Kaufman Winn, *Clash of the Titans: Regulating the Competition Between Established and Emerging Electronic Payment Systems*, 14 BERKELEY TECH. L.J. 675, 707 (1999), which enumerates standards-setting organizations in the Internet commerce area; and Internet Eng’g Task Force, *Overview of the IETF*, at <http://www.ietf.org/overview.html> (last visited Feb. 24, 2000). Standard-setting organizations have traditionally been regarded with suspicion in antitrust law, where the adoption of a standard violates Section 1 of the Sherman Antitrust Act if a court finds it to have been adopted to disadvantage a competitor. See, e.g., *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 500 (1988); *Am. Soc’y of Mech. Eng’rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 571-72 (1982); see also *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656 (1961) (leaving open the possible illegality of a standard-setting organization’s refusal to grant a seal of approval to a plaintiff’s apparently safe and efficient burner).

In many contexts, particularly where purchasers are concerned with liquidity, we do see private standards emerge.¹⁷⁵ But there are theoretical and empirical reasons to doubt that private ordering will do better than legal constraints in standardizing the basic building blocks of property rights.¹⁷⁶ First, outside of contexts such as the design of securities in which liquidity is paramount, the benefits from standardizing the building blocks of property are likely to be small for any given owner and very diffuse. Second, a system of private provision of standardization in property would probably require heavy legal intervention to make it feasible.¹⁷⁷ Someone would need to protect the value of the marks attached to property and police infringement, leading to a regime like trademark law. Third, for many types of property, the association of a mark with the property would probably not be worth the cost: Consider that, other than real estate and automobiles, few items of property can be registered today.¹⁷⁸ Thus, the hypothetical regime would have none of the features—high concentrated value of assets, a close-knit group, and a convenient method of marking—that have made private provision of marks feasible.¹⁷⁹ Fourth, identifying to which private system a right belongs would entail processing costs of its own.

The question would be whether private provision of standardization would lead to enough benefits in terms of flexibility to be worth the cost of

175. See *supra* note 167 and accompanying text.

176. See R.H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 10 (1988) (“When the physical facilities [of markets] are scattered and owned by a vast number of people with very different interests, as is the case with retailing and wholesaling, the establishment and administration of a private legal system would be very difficult. Those operating in these markets have to depend, therefore, on the legal system of the State.” (footnote omitted)).

177. Take the example of lighthouses, the classic public good. Though they have been provided by private entities as well as by the government, see R.H. Coase, *The Lighthouse in Economics*, 17 *J.L. & ECON.* 357 (1974), all known examples of private lighthouses have involved at a minimum government enforcement of monopoly charters and fixing of rates, as well as government enforcement of property and contract rights. See David E. Van Zandt, *The Lessons of the Lighthouse: “Government” or “Private” Provision of Goods*, 22 *J. LEGAL STUD.* 47, 56 (1993).

178. Baird & Jackson, *supra* note 117, at 303-04 (noting that “[f]iling systems are not . . . equally suited to all kinds of property,” and that filing systems are better than possessory systems when the property is not transferred often, when it is valuable, when shared ownership is important, when physical use is key, or when the right is abstract and unembodied; immobility and permanence are also conducive to filing).

179. Cf. ROBERT C. ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* 177-82 (1991) (documenting deviations between the law on the books and informal norms enforced by neighbors in close-knit communities); Terry L. Anderson & P.J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 *J.L. & ECON.* 163, 173 (1975) (suggesting that the branding of livestock was initially introduced informally and was only later recognized by legislation). In one well-studied example, mining camps in the Gold Rush, it appears that private provision of property rights was feasible but left so much to be desired that government aid was eventually sought. GARY D. LIBECAP, *CONTRACTING FOR PROPERTY RIGHTS* 37-47 (1989) (documenting how the insecurity of privately provided property rights among early Nevada miners led miners to seek the involvement of government in securing rights); JOHN R. UMBECK, *A THEORY OF PROPERTY RIGHTS WITH APPLICATION TO THE CALIFORNIA GOLD RUSH* 36, 85, 91-94, 99-103, 119, 126-27 (1981).

the remaining confusion and the legal intervention needed to support it.¹⁸⁰ If, as we argue, the frustration costs from a fairly severe degree of standardization through the *numerus clausus* are not that large,¹⁸¹ there is little reason to think that private standards will be more cost-effective than those supplied by the government. Moreover, if one set of basic building blocks will do for most purposes, government provision of such a system is likely to be characterized by significant economies of scale and scope.¹⁸² Setting up the system of property rights involves proportionately large fixed costs compared to the marginal administrative cost of extending the rights' application to more individuals, making jurisdiction-wide application attractive. The state as the enforcer of property rights also probably enjoys an advantage in delineating the basic forms of property rights: From the point of view of the supplier, enforcing and defining basic forms of property rights are likely to be complementary activities.

Finally, indirect empirical evidence points to the superiority of the *numerus clausus* as a standardization device. Throughout history and across numerous legal systems, the provision of standards for the basic building blocks of the property system has been largely a government affair. The fact that the *numerus clausus* is so widespread and enduring, is so pervasive within each system, and is otherwise quite puzzling from a contractarian point of view, suggests that it has inherent advantages for solving the standardization problem that are not easily replicated by private ordering.

B. *The Antifragmentation Objection*

It has become common to regard property law as serving a function of policing against excessive fragmentation.¹⁸³ This view has recently been

180. In terms of Figures 2 and 3, the number of forms (p) probably correlates with how likely private provision of forms will be. Because they provide the largest marginal benefit at the lowest marginal cost, simple rights with wide application will be chosen first (to the left in the figures) and then more complex, less-widely used forms (toward the right in the figures). With the simplest and most-widely used forms, the innovation and flexibility of private provision is less likely to provide a large (or any) advantage over government supply of forms.

181. See *supra* Section III.B, in which we discuss the features of the property system and of natural language that allow the achievement of complexity with simple forms.

182. Cf. Alan Schwartz, *Proposals for Products Liability Reform: A Theoretical Synthesis*, 97 YALE L.J. 353, 389 (1988) (mentioning economies of scale that give administrative agencies an advantage over courts and juries in devising good safety regulations).

183. E.g., RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 559-60 (5th ed. 1998) (stating that a rule forbidding restraints on alienation "reduces transaction costs, because restraints on alienation, like rights of first refusal, create in effect divided ownership, thereby increasing the number of parties whose agreement must be obtained before property can be transferred"); see, e.g., Heller, *supra* note 12; Clifford G. Holderness, *A Legal Foundation for Exchange*, 14 J. LEGAL STUD. 321 (1985); Frank I. Michelman, *Ethics, Economics, and the Law of Property*, in NOMOS XXIV: ETHICS, ECONOMICS, AND THE LAW 3, 15 (1982); Reichman, *supra* note 62, at 1233; Rudden, *supra* note 3, at 259; Stake, *supra* note 118, at 718-20; Stewart E. Sterk, *Freedom*

elaborated by Michael Heller, who has coined the term “anticommons” to describe the potential problem.¹⁸⁴ The basic point is that if ownership of resources becomes excessively fragmented, it will become difficult or impossible to reach the unanimous consent among all stakeholders necessary to put the property to productive uses. We have already noted that Holmes, in *Johnson v. Whiton*, appeared to view the *numerus clausus* as a doctrine designed to prevent undue restraints on alienation—a theory that implicitly rests on concern about fragmentation.¹⁸⁵ Heller has also recently cited the *numerus clausus* as an example of a property principle that works to minimize fragmentation, thus making the antifrAGMENTATION argument explicit.¹⁸⁶

Viewed as an antifrAGMENTATION regime, however, the *numerus clausus* has a very curious quality; namely, it prohibits some kinds of fragmentation but is highly tolerant of others. Parties are allowed even in the area of personal property to fragment their interests: With respect to a watch, one can have an unlimited number of co-owners with present possessory interests (whether or not exercised).¹⁸⁷ Thus, when it comes to division of the watch among co-owners, the law does not prevent an anticommons but rather leaves it up to parties to choose the degree of fragmentation they wish, and to bear the costs of any mistakes they might make. Even more fragmentation is allowed in real property. Indeed, from an antifrAGMENTATION or anticommons point of view, the size of parcels or the number of co-owners generate the most pressing problems, and yet the law does not directly limit this type of fragmentation. Instead, it places a limit on the number of *types* of interests rather than on the number of interest holders.

Not only does the *numerus clausus* tolerate much fragmentation, the principle’s operation does not necessarily lead to less fragmentation. For example, the law construes a “lease for life” to be either a life estate or a tenancy at will.¹⁸⁸ But neither outcome reduces the number of holders. Many applications of the *numerus clausus* do not result in fewer rightholders, making the doctrine difficult to view as an antifrAGMENTATION device.

from *Freedom of Contract: The Enduring Value of Servitude Restrictions*, 70 IOWA L. REV. 615, 619-20, 624-34 (1985).

184. Heller, *supra* note 12; Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).

185. See *supra* text accompanying notes 96-99.

186. Heller, *supra* note 12, at 1176-78.

187. *Supra* Subsection II.B.4 (noting that concurrent interests in personal property are permitted).

188. *Supra* notes 87-92 and accompanying text. As previously noted, the invocation of the *numerus clausus* in *Johnson v. Whiton* did not necessarily reduce fragmentation, because Royal Whiton could have chosen a permissible form for the conveyance that would have produced a significant number of dispersed interest holders. *Supra* notes 100-101 and accompanying text.

Moreover, the problem of fragmentation is addressed much more directly through other legal doctrines besides the *numerus clausus*. Even if a public remedy for “excessive” fragmentation of property rights (caused by, say, individuals’ limited foresight) were not worse than the disease,¹⁸⁹ the action for partition, adverse possession, the Rule Against Perpetuities, recording acts, doctrines of changed conditions, the government’s power of eminent domain, and the like appear to be much more direct and cost-effective methods of preventing excess fragmentation of property rights.¹⁹⁰ Compared to these devices, the *numerus clausus* does relatively little to limit excessive fragmentation.

Simply pointing out that a rule has the effect of limiting fragmentation to some degree is not enough to provide a persuasive explanation for its existence. A doctrine that aims at standardizing property rights rules out many kinds of rights, and some of these are characterized by fragmentation, in the sense of divided ownership. But the anticommons or anti-fragmentarian view cannot explain why the law leaves the fragmentation decision to parties in many cases, uses mild devices to limit interests in others, and imposes strong standardization in yet other cases.

Our focus on the information costs incurred by other market participants is distinct from the concern with excessive fragmentation of property rights, and, we believe, provides a better explanation for the persistence of standardization of property forms. Viewing the *numerus clausus* as a standardization device allows us to explain why it mandates a limited number of legal forms, which are harder to process than physical

189. Cognitive biases lead to errors that are sometimes said to be inconsistent with rationality; controversy has centered on whether the cognitive biases claimed in behavioral decision theory (BDT) really do violate probability theory and whether the heuristics that lead to cognitive biases are explanatory. Compare Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 48 (Daniel Kahneman et al. eds., 1982) (overweighting of recent data in making judgments and forecasts), Lee Ross & Craig A. Anderson, *Shortcomings in the Attribution Process: On the Origins and Maintenance of Erroneous Social Assessments*, in JUDGMENT UNDER UNCERTAINTY, *supra*, at 129 (optimism bias), and Daniel Kahneman & Amos Tversky, *On the Reality of Cognitive Illusions: A Reply to Gigerenzer’s Critique*, 103 PSYCHOL. REV. 582 (1996) (arguing that conditions leading to cognitive error are being identified), with Jonathan L. Cohen, *Can Human Irrationality Be Experimentally Demonstrated?*, 4 BEHAV. & BRAIN SCI. 317, 317 (1981) (disputing that BDT experiments establish that subjects commit fallacies), Gerd Gigerenzer, *How To Make Cognitive Illusions Disappear: Beyond “Heuristics and Biases,”* 2 EUR. REV. SOC. PSYCHOL. 83, 86-101 (1991) (arguing that phenomena attributed to cognitive bias in BDT do not actually violate probability theory), and Gerd Gigerenzer, *On Narrow Norms and Vague Heuristics: A Reply to Kahneman and Tversky*, 103 PSYCHOL. REV. 592, 592-95 (1996) (arguing that some heuristics have little explanatory power). But to be inefficient in a sense relevant to policy, there must be an ex ante or ex post method that improves outcomes more than it incurs costs (including the costs of officials’ own cognitive biases). See LIEBOWITZ & MARGOLIS, *supra* note 163, at 49-56 (describing different degrees of path dependence and arguing that a lack of cost-effective avoidance mechanisms will make an inefficiency illusory).

190. We leave it open which of these doctrines is better at dealing with improvidence or excessively fragmented rights. Our only point is that these doctrines would address such problems more directly and at less cost than would the *numerus clausus* principle.

attributes, and so are more in need of standardization.¹⁹¹ A concern with *types* of interests is just what we expect if we view the *numerus clausus* as addressed to information costs: Proliferation of types of property rights leads to third-party information costs and suboptimal standardization.

C. *The Irrelevance Objection*

A final potential objection to our theory is that although the *numerus clausus* is a feature of traditional forms of property such as estates in land, it is for practical purposes irrelevant in the modern world, given the emergence of new forms of organizational ownership based on contract.¹⁹² Contract, the objection would run, has in effect superseded property. Contract rights are now generally freely assignable, giving such rights the kind of transferability traditionally associated with property. Moreover, most resources today are controlled by legal entities organized around a nexus of contracts, such as trusts, partnerships, and corporations. Using contracts, contract assignments, and these organizational forms, individuals can hold resources in any form they wish, rendering the traditional boxes of property a quaint anachronism.

We do not dispute the importance of assignable contracts and of organizational forms of ownership, and we readily concede that these developments have greatly enhanced the flexibility with which resources can be deployed.¹⁹³ But as we see it, these developments do not supersede the standardization associated with basic property forms, nor do they render the *numerus clausus* irrelevant. Rather, modern organizational forms build up from and are dependent on the foundation established by the *numerus clausus*.

First, consider assignable contracts. Contract rights today can generally be assigned, subject to limitations that protect the original parties.¹⁹⁴ And in many transactional settings, complex assignment clauses might be an acceptable substitute for property rights. With respect to servitudes, for example, if a real estate developer wants to assure that all houses in a subdivision are painted beige, one can imagine doing this either with real covenants incorporated into the deeds (the property solution), or by executing contracts with the original purchasers that mandate that the contract be assigned to all subsequent purchasers (and that all assignments contain mandatory assignment clauses, in infinite regress). But property

191. *Supra* note 130 and accompanying text.

192. Rudden, *supra* note 3, at 253-54, appears to subscribe to this objection. *Supra* note 147.

193. See *supra* notes 134-135, 161, 167-169, and accompanying text.

194. *E.g.*, RESTATEMENT (SECOND) OF CONTRACTS §§ 317-18, 324, 331, 334, 340-42 (1981); 4 ARTHUR LINTON CORBIN, CORBIN ON CONTRACTS § 874-91 (1951 & Supp. 1999); E. ALLAN FARNSWORTH, CONTRACTS §§ 11.4-.5 (3d ed. 1999).

rights are in rem—they serve not only to bind successors in interest but the whole world. One can perhaps use contracts to bind successors in interest to paint a house beige, but it is not practical to use contracts to bind the whole world not to commit trespasses or nuisances on the property.¹⁹⁵ In rem rights provide protection against in personam harms, but it is not practical to create an in rem right by bundling together myriad in personam rights that have been individually negotiated with every potential wrongdoer.¹⁹⁶ Thus, in many contexts transaction costs will prevent contracts from serving as an effective substitute for property rights.

Moreover, contract assignment builds on the most basic standardized unit of ownership established by property law. By and large, only one type of assignment is permitted: The assignee steps into the shoes of the assignor.¹⁹⁷ In effect, only “full ownership” of the right can be assigned if the assignment is to be treated as resulting in an enforceable interest in the assignee.¹⁹⁸ Complex estates in contract rights—such as future interests—do not seem to exist. As between the parties themselves, little is frustrated by limiting assignments to a fee simple-like estate; by contrast, standardizing the contract rights themselves might lower information costs a little but would entail high frustration costs. The parties can usually serve their objectives by tailoring the contract itself, or entering into a new contract. But for others processing both the original contract rights and the higher-order rights (rights over rights, etc.), it is helpful to know that only the terms of the agreement need to be processed and that another layer of such complexity can be safely ignored. Thus, contract rights themselves can be tailored just as a house can be custom-built, but the way of owning it is highly simplified to reduce information costs to third parties.

195. Cf. Thomas W. Merrill, *Trespass, Nuisance and the Costs of Determining Property Rights*, 14 J. LEGAL STUD. 13 (1985) (predicting that “mechanical” entitlement determination costs will be used to provide clear signals to potential trespassers about the existence of property rights).

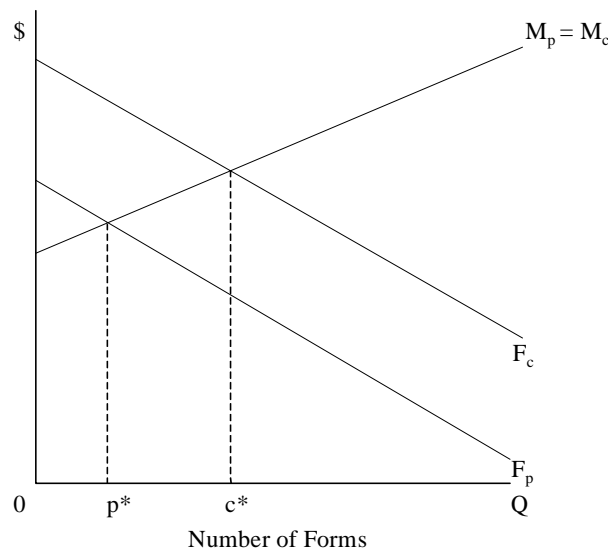
196. For a related philosophical discussion emphasizing the differential knowledge required of those who are bound by in rem as opposed to in personam rights, see J.E. PENNER, *THE IDEA OF PROPERTY IN LAW* 23-31 (1997).

197. See, e.g., RESTATEMENT (SECOND) OF CONTRACTS § 340 (1981); 4 CORBIN, *supra* note 194, § 891; FARNSWORTH, *supra* note 194, § 11.3.

198. The common law originally did not allow assignment of contractual rights without the consent of both of the original parties, but equity adopted the modern approach of giving effect to present assignments as proprietary interests and contingent assignments as contractual rights. See sources cited *supra* note 197; see also Law of Property Act, 1925, 15 & 16 Geo. 5, ch. 20, § 136 (Eng.) (requiring a whole chose in action or debt in order for assignment to be absolute); *Walter & Sullivan Ltd. v. J. Murphy & Sons Ltd.* [1955] 2 Q.B. 584 (Eng. C.A.) (distinguishing between absolute assignments and assignments by way of charge only); J.G. STARKE, *ASSIGNMENTS OF CHOSSES IN ACTION IN AUSTRALIA* 6-7, 10-50 (1972) (discussing common-law, equitable, and statutory approaches); Thomas W. Albrecht & Sarah J. Smith, *Corporate Loan Securitization: Selected Legal and Regulatory Issues*, 8 DUKE J. COMP. & INT’L L. 411, 433 & nn.90-93 (1998) (summarizing the pertinent English common-law and statutory history). Indeed, in contingent assignments, an assignment can lead to contractual rights over proprietary rights in a contractual right.

That contract law falls on the less-standardized end of the spectrum can be captured in the simple model we used above. Recall that, when we modeled the number of property forms as a tradeoff between definition costs and savings in frustration costs, we noted that property systems start with the simplest and most-widely used forms and add more complex and specialized forms as the number of allowed forms increases. Now consider contractual forms. Here too we can arrange the forms along a spectrum from most to least-widely used, but here, limiting the forms is likely to lead to greater marginal frustration costs than in the case of property forms.¹⁹⁹ This can be illustrated as in Figure 4. (We assume for expositional simplicity that the marginal costs of measuring property rights, M_p , equals the marginal costs of measuring contract rights, M_c ; this assumption is unlikely to change the analysis because, if anything, M_c is likely to be lower.)

FIGURE 4. OPTIMAL NUMBER OF FORMS



M_p = marginal cost of measuring property rights

M_c = marginal cost of measuring contract rights

F_p = marginal benefit of property forms in reducing frustration of objectives

F_c = marginal benefit of contract forms in reducing frustration of objectives

199. Our claim is that a hypothetical *numerus clausus*-like limited set of ways of contracting (making enforceable agreements) would be unlikely to function like the building blocks of property in being easy to combine and so accomplish a wide range of objectives. That is, standardizing the dimensions along which contracts can vary would have an effect like standardizing the dimensions of property—such as physical dimensions and legal conditions—that are currently not standardized. See *supra* note 46.

Because the addition of allowable contract forms saves more in frustration costs than does the addition of more property forms, the F_c curve lies above the F_p curve, with the result that the optimal number of allowed contract forms is greater than the optimal number of property forms. That is, contract should be (and is) less standardized than is property law.

Organizational forms like trusts are also dependent on the building blocks of the common law. Legal title to trust property is typically held in fee simple, while the equitable interests of the beneficiaries are described in terms of the common-law estates in land.²⁰⁰ This permits resources to be managed for the benefit of one or more beneficiaries with far lower third-party information costs than would otherwise be the case. The corpus of the trust can be bought and sold, invested and reinvested, leased and mortgaged, in the sound discretion of the trustee as if the property were an undivided fee simple. The complexities of dividing the fruits of these efforts among different generations and classes need not trouble the third parties who deal with the trustee in the management of the trust corpus. Dividing the fruits is a concern only of the settlor, the trustee, and the beneficiaries. And to the extent that courts, creditors, and others must measure the different beneficial interests, the fact that they are described in the vocabulary of common-law estates in land reduces the information costs associated with this exercise.

We also suspect, although the point takes us beyond the scope of this Article, that a close look at various contractual and contract-based solutions to the control of resources would reveal that contract law takes on a more standardized, that is, more *numerus clausus*-like quality, the more third parties enter into the picture. Consider the problem of the faithless bailee who transfers property to a third-party purchaser for value. The Uniform Commercial Code (U.C.C.) adopts a standardized rule in this situation, allowing those who purchase entrusted goods in the ordinary course of business to obtain good title if they lack knowledge of the bailor's superior claim of title.²⁰¹ Analogous points can be made about security interests. Security interests are created by contract, but they bind third parties without notice only if strict filing or recording requirements are met.²⁰² And a similar story can be told about organizational forms of ownership, like trusts. As between the grantor, the trustee, and the beneficiaries, all rights

200. PAUL G. HASKELL, PREFACE TO THE LAW OF TRUSTS 2-3 (1975).

201. U.C.C. § 2-403(1) to (2) (1998). The general problem is considered in Richard A. Epstein, *Inducement of Breach of Contract as a Problem of Ostensible Ownership*, 16 J. LEGAL STUD. 1, 10-15 (1987); and Saul Levmore, *Variety and Uniformity in the Treatment of the Good-Faith Purchaser*, 16 J. LEGAL STUD. 43, 59-60 (1987).

202. U.C.C. § 9-307 (1997).

and duties could be replicated by contract.²⁰³ But as Henry Hansmann and Ugo Mattei have pointed out, trust law performs a unique function, which cannot be replicated by contract, in reorganizing the “rights and responsibilities between the three principal parties and third parties, such as creditors, with whom the principals deal.”²⁰⁴ The fact that the trust draws upon the building blocks of common-law property also serves to lower the costs to strangers of avoiding violations of the rights involved.²⁰⁵

That contractual institutions turn to standardized terms when third parties enter the picture suggests that the story of optimal standardization we outlined in Part III operates not only where traditional property rights are involved, but also with respect to institutions grounded in contract. Thus, even in a hypothetical world in which property rights had been rendered irrelevant by contract rights, the resulting contract-based regime would contain features that mirror, at least to a significant degree, the optimal standardization that the *numerus clausus* promotes with respect to property.

V. THE *NUMERUS CLAUSUS* AND INSTITUTIONAL CHOICE

The *numerus clausus* also has important implications for the division of authority between courts and legislatures with respect to changes in the structure of property rights. By limiting courts to enforcing the status quo in terms of recognized property interests, the *numerus clausus* makes the courts an inhospitable forum for modifying existing forms of property or creating new ones. Consequently, parties who wish to secure changes in the pattern of available property rights must look elsewhere—most prominently, to the legislature. In this part, we argue that the institutional-choice dimension of the *numerus clausus* is closely related to the basic functional explanation for standardization of property rights set forth in Part III: For a variety of reasons, legislated changes in property forms produce information to third parties at less cost than judicially mandated changes. Standing alone, this consideration does not establish that legislated rule change is superior to judicial rule change. But it helps explain why the *numerus clausus*—understood in this context to mean a significant degree

203. See Langbein, *Contractarian Basis*, *supra* note 65, at 650 (discussing the default nature of trust law in which “[t]he rules of trust law apply only when the trust instrument does not supply contrary terms” (citing RESTATEMENT (SECOND) OF TRUSTS § 164(a) (1959))).

204. Hansmann & Mattei, *supra* note 15, at 472.

205. The standardization in each of the examples in this paragraph reduces the costs of notice to third parties about the identity and the assets of the party with whom the third party is dealing. This is different from the standardization of property forms required by the *numerus clausus*. Our point is that the underlying information-cost economics driving each type of standardization is similar.

of judicial conservatism regarding innovation in the system of property rights—is a universal feature of modern legal systems.

A. *The Numerus Clausus and the Source of Legal Change*

The strength of judicial adherence to the *numerus clausus* helps determine which institution in society will effect changes in the structure of property rights. The *numerus clausus* requires courts to respect the status quo with respect to the menu of available property rights. Thus, the stronger the judicial fidelity to the *numerus clausus*, the greater the necessity of turning to other sources to secure modifications in property rights. In theory, one option is to turn to private ordering. For reasons previously recited, however, this option is unlikely to be useful in most contexts. If private institutions cannot certify the standardization of basic property interests,²⁰⁶ it is unlikely that they can be used to eliminate existing forms or introduce new ones. The only plausible alternative to the courts as agents of legal reform in this context is the legislature.

The institutional-choice function of the *numerus clausus* can be seen most starkly in the civil-law countries, where the principle is expressly recognized to be a central tenet of the code and is enforced quite strictly.²⁰⁷ One consequence has been that some of the forms of property that common-law lawyers take for granted do not exist, at least in general form, in the civil law. The most dramatic example is the trust.²⁰⁸ Trusts have been viewed by civil-law courts as a novel type of property outside the list of forms recognized by the code. Consequently, trusts are not permitted as such. The result, not surprisingly, is that the civilians have been forced to rely on a variety of substitutes for the trust, most of them specifically authorized by legislation.²⁰⁹

In England, where the *numerus clausus* is not recognized by name but where the courts exhibit a general conservatism analogous to that which characterizes civil-law courts,²¹⁰ the “unwritten” rule of the *numerus clausus* has had a similar effect. Notwithstanding *Tulk v. Moxhay*,²¹¹ English courts have generally declined to create new property forms. The result, predictably, has been that nearly all changes in the forms of property

206. *Supra* Subsection IV.A.3.

207. *Supra* notes 6-9 and accompanying text.

208. See Hansmann & Mattei, *supra* note 15, at 440-45; Vera Bolgár, Comment, *Why No Trusts in the Civil Law?*, 2 AM. J. COMP. L. 204 (1953).

209. Hansmann & Mattei, *supra* note 15, at 442-44; Pierre Lepaule, *Civil Law Substitutes for Trusts*, 36 YALE L.J. 1126 (1927).

210. P.S. ATIYAH & ROBERT S. SUMMERS, FORM AND SUBSTANCE IN ANGLO-AMERICAN LAW: A COMPARATIVE STUDY OF LEGAL REASONING, LEGAL THEORY, AND LEGAL INSTITUTIONS 88-93, 118-27, 134-41, 411-15 (1987); RICHARD A. POSNER, LAW AND LEGAL THEORY IN ENGLAND AND AMERICA 20-37 (1996).

211. 41 Eng. Rep. 1143 (Ch. 1848); see also *supra* note 59 and accompanying text.

interests have been achieved through parliamentary action. As Holdsworth observed: “[T]he Legislature has had a larger share in shaping the land law than it has had in shaping any other branch of private law.”²¹² For example, there is no judicially crafted action for misappropriation of information or judicially developed right of publicity in U.K. law.²¹³

Although the U.S. courts are far more adventuresome than either civil-law courts or English courts, the *de facto* recognition of the *numerus clausus* has also had a significant impact in channeling reform of property rights to legislatures in this country. A number of examples are canvassed in Part II. The abolition of the fee tail, dower and curtesy, the tenancy by the entirety, and the tenancy in partnership have been accomplished in this country by legislation, not by courts. And the creation of new interests such as condominiums and time-shares has also been accomplished through legislative action rather than judicial rulings. The fact that it is possible to cite counterexamples in the U.S. context, such as the development of the action for misappropriation of information and the right of publicity, simply attests to the reality that the *numerus clausus* is a weaker doctrine in U.S. courts, both in terms of express judicial recognition and in terms of judicial behavior. Because the doctrine is weaker, predictably it acts more weakly as an institutional choice mechanism in the United States than in other countries where the doctrine is stronger.

B. *The Consequences of Making Legislatures the Agents of Change*

Traditional law-and-economics scholars may regard the institutional-choice dimension of the *numerus clausus* as unfortunate. One of the tenets of early law-and-economics literature was that common-law rules are more likely to be efficient than are legislated rules.²¹⁴ A central reason for this assumption is that legislatures were regarded as being dominated by interest groups with narrow distributional objectives, whereas common-law courts were regarded as being immune from this type of distortion.²¹⁵ Scholars who continue to share these assumptions may regard as pernicious a doctrine that freezes further development of property forms by courts and

212. HOLDSWORTH, *supra* note 148, at 325.

213. JON HOLYOAK & PAUL TORREMAN, INTELLECTUAL PROPERTY LAW 339-72, 381-411 (1995) (describing common-law doctrines recognized by English courts as supplementing statutory intellectual property rights, not mentioning either misappropriation of information or the right of publicity).

214. For citation to the relevant authorities and critical discussion, see DONALD A. WITTMAN, THE MYTH OF DEMOCRATIC FAILURE: WHY POLITICAL INSTITUTIONS ARE EFFICIENT 116 (1995); Frank B. Cross, *The Judiciary and Public Choice*, 50 HASTINGS L.J. 355, 358-60 (1999); and Eric A. Posner, *Law, Economics, and Inefficient Norms*, 144 U. PA. L. REV. 1697 (1996).

215. Einer R. Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 YALE L.J. 31 (1991).

allocates all legal change to the legislature. The *numerus clausus* from this perspective would appear to consign questions about the design of the property-rights system to the institution least likely to be motivated by concerns with economic efficiency.

Yet if we put aside for the moment concerns about the possible distortions of the legislative process associated with interest-group activity, there are a number of features of legislative decisionmaking that make it relatively more attractive than common-law decisionmaking as a basis for modifying or creating categories of property rights.²¹⁶ These features can be summarized under the headings of clarity, universality, comprehensiveness, stability, prospectivity, and implicit compensation.²¹⁷ Significantly, each of these features also bears on the explanation for the *numerus clausus* we develop in Part III—that it is designed to reduce the costs to third parties of identifying the legal dimensions of property rights. Because of these features of legislated change, it is possible that the advantages of the *numerus clausus* as a rule of institutional choice may offset or even outweigh the detriments traditionally associated with legislative decisionmaking.

1. *Clarity*

Legislated rule changes are more apt to be identified as such by the community than are common-law rule changes. This is largely a function of the form in which new rules appear. Legislated rules are set forth in a canonical text which is easy to identify and usually terse. Common-law rules, by contrast, often evolve incrementally through a series of decisions over time. Moreover, they must be teased out of court opinions, which often contain numerous qualifications, alternative holdings, dicta, concurring and dissenting opinions, and so forth.²¹⁸ Thus, informational intermediaries, such as lawyers, realtors, lenders, title insurers, and trade associations, are apt to grasp and disseminate information about a rule change more quickly and confidently when the change comes about through legislation.

216. For a different view of the relative merits of judicial and legislative modifications of property forms, see Anthony Scott, *Property Rights and Property Wrongs*, 16 CAN. J. ECON. 555 (1983). Scott notes the standardized nature of property rights in the course of discussing the relative merits of litigation and legislation as vehicles for the evolution of property rights. He reaches no firm conclusions about which institution is to be preferred, although he identifies a number of variables that are relevant in making the comparison. *Id.*

217. Cf. NEIL K. KOMESAR, *IMPERFECT ALTERNATIVES: CHOOSING INSTITUTIONS IN LAW, ECONOMICS, AND PUBLIC POLICY* (1994) (presenting a theory of comparative institutional choice centered on bias and expertise).

218. 3 JOHN AUSTIN, *LECTURES ON JURISPRUDENCE* 50, 52-53, 649 (London, John Murray 2d ed. 1863); cf. David L. Shapiro, *The Choice of Rulemaking or Adjudication in the Development of Administrative Policy*, 78 HARV. L. REV. 921, 941 (1965) (noting that when rules have developed through adjudication, “even experienced practitioners may be hard put to state the rule accurately”).

This feature of legislated rule change has, of course, a direct bearing on the function of providing information to other market participants about the dimensions of property rights. To the extent that legislated rules are more visible than decisional rules, they will come to the attention of other market participants more quickly and at lower cost than will decisional rules. Thus, the institutional-choice dimension of the *numerus clausus* reinforces the basic function of the principle: to reduce information costs to other market participants.

2. *Universality*

Legislated rules are almost by definition universal in their application throughout the jurisdiction. A change wrought by the legislature therefore has an unambiguous domain. A new rule legislated by the Congress applies throughout the United States; a new rule adopted by a state legislature applies throughout the state. Judge-made rules, in contrast, often have an ambiguous domain. Decisions by intermediate courts of appeal are binding in only one district in a given political jurisdiction, and may or may not be followed by courts in other districts. In addition, decisional rules may be limited by their terms to certain categories of parties or certain factual situations, with clarification of the scope of the rule left to be resolved by future decisions. Thus, the implementation of a new rule by judicial decision is likely to occur in a piecemeal fashion.

The lack of universality associated with common-law rules also increases the costs to other market participants of ascertaining the rule and comprehending the meaning of the rule for their circumstances. This is particularly true in the case of entities that do business in different jurisdictions or in different locations within jurisdictions. Presumably, this is a main reason why intellectual property rights in the United States are typically governed by federal rather than state law:²¹⁹ Intellectual property rights are distributed in many different states, making a uniform federal rule easier to comprehend and enforce. This feature of legislated rules dovetails with the basic purpose of the *numerus clausus*.

3. *Comprehensiveness*

Any creation of a new form of property raises a number of questions: What is the range of interests encompassed by the form? Is there a time limit on rights that come within the terms of the form? Who is eligible to hold one of the interests covered by the form? What is the remedy for violation of a right protected by the form? When does the change in the

219. See *supra* note 70.

form take effect? Similarly, any abolition of a form of property raises multiple questions: When does the abolition take effect? Are existing holders to be grandfathered in or given other types of transitional relief? What, if anything, will be used in replacement of the deleted form? Courts are at a great disadvantage in addressing these multiple issues comprehensively.²²⁰ Courts are limited to deciding specific issues presented by adverse parties in the discrete cases that come before them. It might take years or even decades to flesh out all the dimensions of a particular modification or creation of a form of property through common-law adjudication. In contrast, legislatures can and do typically address all these issues comprehensively in a single piece of legislation.

The greater comprehensiveness of legislated rules is also relevant to the information costs associated with rules and rule change. It is cheaper to gather the needed information about all the dimensions of a rule if it is assembled in a single place and at a single time than if it is scattered over multiple authorities that date from different points in time.

4. *Stability*

Legislative adoption of property forms and legislated changes in property forms are also more likely to be stable than are common-law rules. The principle reason for this is that “legislative production [is] an extremely expensive form of production.”²²¹ It is almost certainly more expensive in the typical case to procure a legislated change in rules than it is to finance litigation designed to achieve a modification in legal rules.²²² If the legislature is the only forum for procuring changes in rules, the very expense of securing such changes tightly rations the amount of reform. Fewer reforms translates into greater stability in the dimensions of property rights.

A second reason why legislated rules are likely to be more stable relates again to the fact that judicial rules typically emerge piecemeal over time. The composition of the judiciary is likely to change from one decision to the next, especially if the court operates through panels of judges who are a subset of the full court and are selected at random. Thus, the policy views of the judges may shift between the first decision indicating that a rule change is appropriate to subsequent decisions filling out the details. The

220. This was essentially Justice Brandeis’s argument for allowing legislatures to develop new forms of intellectual property rights. *Int’l News Serv. v. Assoc. Press*, 248 U.S. 215, 263 (1918) (Brandeis, J., dissenting).

221. Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 267 (1974).

222. Thomas W. Merrill, *Does Public Choice Theory Justify Judicial Activism After All?*, 21 HARV. J.L. & PUB. POL’Y 219, 227 (1997).

result may be that the rule ends up looking different than observers may have anticipated at first.

It is easy to see how the stability of property reforms also relates to the theme of reducing information costs to other market participants. A rule that has been around a long time and is relatively unchanging is more likely to be understood because actors and the informational intermediaries who advise them are more apt to have encountered the rule in the past and to have made some previous investment in comprehending the rule.

5. *Prospectivity*

Another advantage of legislated changes in property forms—one that in this case is less directly relevant to information costs—is that legislated changes nearly always operate prospectively.²²³ Legislative abolition of an existing form or creation of a new one applies only going forward. Hence legislated changes can be tailored so as to minimize the disruptive effect to established reliance interests. Judicial changes in rules, by contrast, apply retroactively to the parties in the case and to all others who have interests implicated by the rule not reduced to a final judgment.²²⁴ This is likely to be highly disruptive to existing stakeholders. For example, if the legislature abolishes dower rights, it can do so only with respect to future widows, or only with respect to parties who have not yet married. A judicial abolition would presumably affect widows currently relying on life income from dower estates.²²⁵

The greater prospectivity of legislated changes in property rights is relevant primarily to the level of “demoralization costs” associated with legal change.²²⁶ But it is not entirely irrelevant to our story about information costs. If legal change can occur in a way that imposes high

223. See generally DANIEL E. TROY, *RETROACTIVE LEGISLATION* (1998) (discussing traditional objections to legislative retroactivity and the presumption in favor of prospective operation of statutes); Jill E. Fisch, *Retroactivity and Legal Change: An Equilibrium Approach*, 110 HARV. L. REV. 1056, 1063-66 (1997) (discussing judicial hostility to retroactive legislation).

224. *James B. Beam Distilling Co. v. Georgia*, 513 U.S. 106 (1995); *Harper v. Va. Dep't of Taxation*, 509 U.S. 86 (1993).

225. Abolition of dower and curtesy by the legislature did in fact give rise to constitutional challenges, with mixed results. Compare *Randall v. Kreiger*, 90 U.S. (23 Wall.) 137, 148 (1874) (upholding the prospective abolition of the dower rights of a married woman on the ground that it was a “mere expectancy or possibility” during the husband’s life), with *Class v. Strack*, 96 A. 405 (N.J. Ch. 1915) (holding that a legislature was not free to abolish the dower rights of a married woman whose husband was still living).

226. See Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of “Just Compensation” Law*, 80 HARV. L. REV. 1165, 1214 (1967) (defining demoralization costs as the losses that flow to losers and their sympathizers from the realization that no compensation will be offered for deliberate government action that reduces the value of property). See generally William A. Fischel & Perry Shapiro, *Takings, Insurance, and Michelman: Comments on Economic Interpretations of “Just Compensation” Law*, 17 J. LEGAL STUD. 269 (1988) (evaluating the meaning and significance of demoralization costs).

demoralization costs on those who hold established forms of property, then other market participants may want to expend resources not only identifying the existing dimensions of property rights, but also the possibilities for future changes in those dimensions. In this fashion, a legal regime with a higher incidence of retroactive changes in property forms—and hence a higher incidence of demoralization costs—also is a regime that imposes higher information-gathering costs on other market participants.

6. *Implicit Compensation*

Finally, legislated change in property forms has the advantage that the legislature can devise various means for affording implicit compensation to those adversely affected by the change.²²⁷ Courts are at a much greater disadvantage in this regard, since courts will often not have the losers before them and in any event are endowed with a limited set of options in devising remedies. A classic illustration of the ability of legislatures to afford implicit compensation is provided by the abolition of dower and curtesy rights. Dower was a widow's right to a life estate in one-third of the real property held by her husband, curtesy the widower's right to a life estate in all real property held by his wife.²²⁸ Typically, when these rights were eliminated, the legislature simultaneously adopted a forced spousal share statute, which generally afforded the surviving spouse of either gender the right to take in fee simple their share of the deceased spouse's estate.²²⁹ Thus, the forced spousal share statutes left prospective widows and widowers better off than they were with dower and curtesy rights. If courts were to abolish dower and curtesy rights, they would be at a much greater disadvantage in devising a remedy analogous to the forced spousal share statutes to provide implicit compensation for the legal change.

The greater capacity of legislatures to provide implicit compensation, like the ability of legislatures to make legal change prospective, is relevant primarily to the demoralization costs associated with legal change. The ability to provide compensation allows the legislature further to minimize demoralization costs that come from change in a way that courts cannot. Again, however, insofar as legislatures are in a better position to reduce

227. Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 582-92 (1986) (discussing a variety of legislative compensation mechanisms, including phase-ins and grandfathering). On the concept of implied compensation, see RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 195-215 (1985), which discusses "implicit in-kind compensation" as a defense to an otherwise valid takings claim.

228. See *supra* note 50 and accompanying text.

229. June Carbone & Margaret F. Brinig, *Rethinking Marriage: Feminist Ideology, Economic Change, and Divorce Reform*, 65 TUL. L. REV. 953, 970 (1991); see also LAWRENCE M. FRIEDMAN, *A HISTORY OF AMERICAN LAW* 375-76 (1973); MARYLYNN SALMON, *WOMEN AND THE LAW OF PROPERTY IN EARLY AMERICA* 141-84 (1986).

demoralization costs, they are also in a position indirectly to reduce the need for other market participants to invest resources in acquiring information about the likelihood of future change in the menu of property rights.

C. Legislated Rule Changes: The Final Balance

Even if we are correct that legislatures enjoy some inherent advantages over courts in changing property rights in ways that lower the information costs to other market participants, it is necessary to weigh these advantages against the disadvantages of legislative rulemaking. These include the costs of legislative inertia,²³⁰ especially in the face of problems that have low visibility and highly dispersed costs and benefits. They also include the dangers emphasized in the literature on public choice, such as interest group domination, cycling among independent options, path dependency, and the like.²³¹ The balance of merits and demerits between common-law courts and legislatures obviously entails a complex judgment as to which no definite answer can be offered. We would, however, offer several observations that suggest that the demerits of the legislative process emphasized by supporters of common-law courts may not loom as large in the context of reforming property regimes as elsewhere.

First, the demerit of legislative inertia is in many respects just the flip side of the merit of stability inherent in limiting change to legislative action. Stability and change represent well-known tradeoffs in any legal system, and a system that scores high on stability is likely for that very reason to be slow to change. Thus, it comes as no surprise that property-law scholars frequently complain about legislative inattention to needed reforms, such as simplifying the system of future interests or streamlining the requirements for establishing covenants or servitudes running with the land.²³² Overall, however, the legislative record is not that bad. Forms of ownership that seriously interfere with the free circulation of property or otherwise outlive their usefulness, such as the fee tail, dower and curtesy, and the tenancy in partnership, have been abolished in nearly all states.²³³ And where a significant demand for a new form of property has emerged, as with the condominium and the time-share, legislation establishing these forms has

230. Cf. GUIDO CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES 1-7 (1991) (discussing the general problems of legislative inertia).

231. Cf. KOMESAR, *supra* note 217, at 138-42 (emphasizing the need to compare the superior expertise of legislatures against the greater risk of bias in decisionmaking). See generally DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION (1991) (providing an overview of public choice theory); DENNIS C. MUELLER, PUBLIC CHOICE II (1989) (same).

232. See, e.g., French, *supra* note 62; Waggoner, *supra* note 16.

233. See *supra* notes 35, 50-53 and accompanying text.

often spread very rapidly.²³⁴ The legislative record is far from perfect. But the areas of inertia may be more the product of a lack of consensus about the proper path reform should take than of any inherent inability of legislatures to respond to demands for changes in property systems.

Second, the creation of new forms of property may offer fewer inducements to interest-group rent-seeking than is the case in other areas, such as the revision of tax codes or the expenditure of public monies. Adding a new type of property to the existing options changes the opportunities for the creation of private wealth, but often does not in and of itself create or distribute wealth. For example, if the legislature enacts a law that makes it possible to build and sell condominiums, this does not mean that any condominiums will actually get built and sold. Condominiums will be built and sold only if private capital is diverted to these purposes, and that capital typically will not be supplied by the legislature. Adding to the corpus of property forms is thus an unlikely strategy for any group eager to engage in redistribution of wealth. It is likely to appeal only to those groups who are prepared to invest significant resources in productive activities and who seek legislative change in order to maximize the return they are likely to receive on that investment. In other words, a desire to add to the menu of property rights is likely to be motivated by a desire to expand the size of the pie, rather than to cut the slices in different ways.

Third, abolishing or modifying existing forms of property as a means of redistributing wealth is sharply constrained by constitutional protections of property rights. Suppose, for example, that a majority coalition in a state legislature wants to abolish long-term leases of single-family residential housing in order to provide more opportunities for fee simple ownership of single-family homes.²³⁵ It is clear that any attempt to do this without compensating the owners of the reversions under the long-term leases would be unconstitutional. If compensation must be paid, this constrains attempts to use the legislature for such objectives. If the source of the compensation is to come from the beneficiaries of the transfer, then such attempts are constrained even further.²³⁶ In effect, the compensation requirement substantially neutralizes any distributional gains from the abolition of particular forms of property. Abolition is thus likely to be

234. See *supra* notes 54-56 and accompanying text.

235. Cf. *Haw. Hous. Auth. v. Midkiff*, 467 U.S. 229 (1984) (involving a constitutional challenge to a statute permitting the state to condemn a landlord's reversion under a long-term residential lease and sell it to the lessee).

236. This appears to be the practice in many instances where the power of eminent domain is delegated to permit A-to-B type transfers. See, e.g., *id.* at 234 (reporting that under a state statute condemning a landlord's reversion and transferring it to the lessee, "funds to satisfy the condemnation awards have been supplied entirely by lessees"); see also Thomas W. Merrill, *The Economics of Public Use*, 72 *CORNELL L. REV.* 61, 85-88 (1986) (discussing the secondary rent-seeking that can come about from A-to-B transfers made possible by condemnation of property).

pursued only in cases where the social gains from the abolition exceed the losses to the incumbent owners.

Finally, to the extent that distributional forces continue to play a role in efforts to create new forms of property, it is not clear that these forces will operate with more virulence in legislative than in judicial forums. Consider, for example, the efforts in the United States over the last twenty-five years to gain recognition for a right of publicity. The moving force behind these efforts has been celebrities and their agents, the Elvis Presley Estate, headquartered in Memphis, Tennessee, being a notable example.²³⁷ These entities have fought for the exclusive right to license the image of the celebrity on coffee mugs and T-shirts, in television commercials, and so forth. It is interesting to note that the courts of Tennessee have been among those judicially recognizing such a right.²³⁸ One can readily portray the process by which the Tennessee courts have reached this result as one in which compact and well-organized private interests (Nashville recording artists and the Presley Estate) have prevailed upon the local judiciary to sanction a diversion of wealth from consumers in other states to actors located in Tennessee. Whether the Tennessee legislature, not to mention the U.S. Congress, would be as willing to recognize a property right in these circumstances is open to question.²³⁹

In sum, the comparison of legislatures and courts as sources of legal innovation must be sensitive to context. Even if legislatures come out ahead in terms of generating rules with lower information costs to regulated parties, there is always the possibility that legislatures will be susceptible to interest-group capture or other imperfections. With respect to changes in property rights, however, there are reasons to believe that these sorts of legislative failures are less pronounced than may be the case in other contexts. This gives us further confidence in saying that the *numerus clausus* operates as a rule of institutional choice to further the basic information cost-lowering objectives we have identified.

VI. CONCLUSION

Virtually all postfeudal legal systems draw an important and pervasive distinction between contract rights and property rights: Contract rights are freely customizable, but property rights are restricted to a closed list of

237. See Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 125, 136-37 (1993) (noting that the “right of publicity redistributes wealth upwards”).

238. MCCARTHY, *supra* note 77, § 6.12[A], at 6-84.10 (summarizing the “mass of complicated lawsuits” over whether Elvis Presley’s right of publicity survived his death).

239. The Tennessee legislature adopted a more limited statutory right of publicity in 1984, but it is unclear whether this applies to personalities who died before the act was passed (Presley allegedly died in 1977). See *id.* § 6.12[B], at 6-84.12.

standardized forms. In civil-law countries, the *numerus clausus* defines a fixed universe of property rights, and the principle is rigorously enforced. In common-law countries, the principle has no name and has not been widely analyzed or appreciated. Nevertheless, the principle exists as part of the “furniture” of the common law, even in the United States, where the courts are most accustomed to tinkering with established legal doctrines.

We have argued that the *numerus clausus* makes sense from an economic perspective. By permitting a significant number of different forms of property but forbidding courts to recognize new ones, the *numerus clausus* strikes a balance between the proliferation of property forms, on the one hand, and excessive rigidity on the other. Proliferation is a problem because third parties must ascertain the legal dimensions of property rights in order to avoid violating the rights of others and to assess whether to acquire the rights of others. Permitting free customization of new forms of property would impose significant external costs on third parties in the form of higher measurement costs. On the other hand, insisting on a “one size fits all” system of property rights would frustrate those legitimate objectives that can be achieved only by using different property rights that fall short of full ownership. Optimal standardization is the solution, and the *numerus clausus* moves the legal system closer to the optimum, although we do not claim it generates a perfect mix of forms.

By insisting that courts respect the status quo in terms of the menu of property rights, the *numerus clausus* also channels legal change in property rights to the legislature. This institutional-choice dimension, we have argued, reinforces the information-cost minimization features of the doctrine, because legislated changes communicate information about the legal dimensions of property more effectively than judicially mandated changes.

The understanding that property rights by their very nature require a significant degree of standardization has a host of potentially valuable applications in assessing particular issues regarding property. These include proposals to expand the list of available intellectual property rights,²⁴⁰ proposals to use digital technology in conjunction with notice to substitute for standardization,²⁴¹ and proposals suggesting that all landlord-tenant issues be resolved in accordance with contract law precepts.²⁴² It also sheds important light on traditional disputes about the appropriate domain of freedom of contract, as well as on more contemporary debates about the

240. See *supra* text accompanying notes 71-79 (discussing judicial recognition of intellectual property rights under the misappropriation of information and right of publicity doctrines).

241. See *supra* text accompanying notes 148-151 (discussing the predicted relaxation of the *numerus clausus* as cheaper forms of notice develop).

242. See Glendon, *supra* note 18 (noting that the reform movement in landlord-tenant law has argued that leases should be construed as contracts).

significance of network effects²⁴³ and concern with fragmentation or an “anticommons” in assessing the development of the law.²⁴⁴ Similarly, our contention that standardization is advanced by forcing legal change to occur through legislation has important implications for fledgling efforts to devise criteria for comparative institutional analysis of courts and legislatures.²⁴⁵ Drawing out these implications must await another day. But we hope we have said enough to suggest that the *numerus clausus* is relevant to more than the driest and dustiest aspect of property—the system of estates in land. It is key to understanding one of the law’s most important and dynamic institutions.

243. See *supra* Subsection IV.A.2 (contrasting network externalities and network confusion effects).

244. See *supra* Section IV.B (criticizing antifragmentation as an explanation for the *numerus clausus*).

245. See KOMESAR, *supra* note 217; Thomas W. Merrill, *Institutional Choice and Political Faith*, 22 L. & SOC. INQUIRY 959 (1997) (reviewing KOMESAR, *supra* note 217) (applauding Komesar’s call for comparative institutional analysis but noting that the techniques for such an analysis exist in a very primitive state).