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Complexity in Property

by Meredith M. Render

Working Paper

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Complexity in Property

Meredith M. Render^{*}

Abstract:

This article illuminates the largely misunderstood relationship between complexity and the regulation of property interests. Specifically, the article presents the “complexity thesis” - a novel explanatory account of the principle of numerus clausus. The principle of numerus clausus is an ancient common law rule which prohibits the customization of property interests. The complexity thesis holds that the primary function of numerus clausus is to prevent the proliferation of highly idiosyncratic property interests. In so doing, numerus clausus provides a bulkhead against the overwhelming complexity that would ensue if customized property interests were permitted.

For the last fifteen years, numerus clausus has been the subject of a spirited colloquy in which property theorists of all methodological stripes have sought to unravel some of the mysteries that surround the principle. This article carefully engages several prominent explanatory accounts of numerus clausus, and demonstrates that while these competing accounts supply a number of important insights about the principle, the complexity thesis does a better job of accounting for all of the salient features of the principle without sacrificing coherence or consilience.

Finally, the complexity thesis is especially instructive today, as the 2007 collapse of the housing market can largely be traced to a set of basic misapprehensions about the destructive power of complexity in the context of highly alienable interests. The complexity thesis demonstrates that standardization serves an essential epistemic function. Standardization makes it possible for us to better apprehend risk, and thereby avoid catastrophic miscalculations such as those that led to the housing collapse.

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Introduction

Complexity begets danger.¹ Or perhaps it is more accurate to say that existing dangers are more readily hidden within complex situations. In

¹ Although the term “complexity” can refer to several distinct connotations and conceptions, it is used here to denote “computational complexity” – a phenomenon that is measured by the volume of information that must be processed to draw a given conclusion. See Sanjeev Arora, Boaz Barak, Markus Brunnermeier & Rong Ge, *Computational Complexity and Information Asymmetry in Financial Products* (Princeton Working Paper,

complex situations, the important facts - the very facts that we need to know to avoid catastrophe - may be quite effectively hidden in plain sight. The essential information is *there*, it is available, but there is simply too much information for us to process. An example of this phenomenon frequently arises in the context of litigation. Complexity's obscuring power is often strategically exploited in the course of discovery.² Litigants send dozens of boxes of documents in response to a single RFD³ forcing opponents to waste time and money searching for the needle of relevant information amid a haystack of obscuring (but otherwise perfectly benign) documents.⁴ Complexity provides excellent camouflage and its destructive capacity is frequently underestimated.

Complexity's dark side – its destructive capacity - is often underestimated, in part, because we are accustomed (or, perhaps, acculturated) to regarding complexity with varying shades of awe and admiration. Complexity has the propensity to exponentially expand opportunities and possibilities, which is intuitively appealing. Moreover, complex systems, such as the human body, are capable of astounding feats.⁵ Because much of what we experience (and, even, what we *are*) is intractably entangled with the phenomenon of complexity, we often fail to appreciate complexity's darker attributes such as its capacity to inundate and overwhelm us.

One of the principle means by which we attempt to grapple with the complexity of lived human experience is to adopt systems of rules – including legal rules.⁶ Laws (insofar as they succeed in regulating human

Oct. 19, 2009), available at <http://www.cs.princeton.edu/~rongge/derivative.pdf>. (applying the concept of computational complexity in the context of derivatives); *see also*, Melanie Mitchell, COMPLEXITY: A GUIDED TOUR 94-111 (2009).

² Cf. Linda S. Mullenix, *Discovery in Disarray: The Pervasive Myth of Pervasive Discovery Abuse and the Consequences for Unfounded Rulemaking*, 46 STAN. L. REV. 1393, 1401 (describing a “common discovery abuse in which corporate defendants... inundate requesting plaintiffs with thousands of documents.”)

³ An RFD is a request for documents proffered in accordance with Rule 26 of the Federal Rules of Civil Procedure. FED. R. CIV. P. 26.

⁴ Mullenix, *supra* note 1, at 1401 (observing that document inundation “impos[es] extra cost, harassment, and delay on requesting plaintiffs.”).

⁵ Cf. Mitchell, *supra* note 1, at 5-9 (describing the feats accomplished within the complex systems of the human brain and immune system.).

⁶ Ronald J. Allen, *Rationality and the Taming of Complexity*, 62 ALA. L. REV. 1047, 1048 (2011). (“The central, largely unnoticed, challenge of the legal system is to domesticate complexity.”).

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behavior) provide pockets of potential respite from the relentless challenges presented by the complexity of human existence.⁷ Indeed, as Ronald Allen has stated it, “the struggle with complexity may be one of the most general explanatory features of the legal system.”⁸ From this perspective, the need to domesticate complexity may be a progenitor of “law” itself.⁹

This Article posits that property law, in particular, is *uniquely* well-suited to the task of taming complexity. Moreover, the means by which property law battles complexity is the deceptively simple principle of *numerus clausus*.

Numerus clausus does only one thing, but it does it extraordinarily well: it prevents the customization of property interests.¹⁰ In the absence of this simple common law rule, the normative commitments that comprise our rights and duties with respect to the tangible objects in the world would rapidly grow so complex as to overwhelm our capacity to understand them, let alone enforce them. Thus, *numerus clausus* is more than just an ancient and peculiar feature¹¹ of our property system - it is also a *necessary* and *constitutive* feature of any normative conception of property rights.

Indeed, it is widely acknowledged that the principle of *numerus clausus* is a cross-cultural, universal feature of property law.¹² It is a feature of property

⁷ *Id.* at 1054 (describing “law” and “fact” as “bubbling cauldrons of interacting variables too numerous to articulate let alone compute.”).

⁸ *Id.* at 1048.

⁹ *Id.* at 1060 (“A large part of debate over rules and their limits is often implicitly about the complexity of the relevant domain.”). For an excellent article discussing the implications of complexity in the context of legal rules, see Eric Kades, *The Laws of Complexity and the Complexity of Laws: The Implications of Computational Complexity Theory for the Law*, 49 RUTGERS L. REV. 403 (1997).

¹⁰ Thomas W. Merrill and Henry E. Smith, *Optimal Standardization in the Law of Property: the Numerus Clausus Principle*, 110 YALE L. J. 1, 3 (2000) (“A central difference between contract and property concerns the freedom to ‘customize’ legally enforceable interests.”).

¹¹ Avihay Dorfman, *Property and Collective Undertaking: The Principle of Numerus clausus*, 61 U. TORONTO L. J. 467, 467 (2011) (“What can explain this peculiar limitation?”).

¹² Nestor M. Davidson, *Standardization and Pluralism in Property Law*, 61 VAND. L. REV. 1597, 1600 (2008) (“Versions of the *numerus clausus* are found in Roman law and recur throughout the history of feudal and post-feudal English common law. Likewise, some

law “that transcends context.”¹³ It appears to be a feature of every known post-feudal system of property.¹⁴ As Nestor Davidson has observed there must be a reason “why property interests almost always coalesce around forms defined by the state.”¹⁵

The principle’s universality represents the first of two mysteries that surround *numerus clausus*: why do all property systems employ the same tool of structural restraint, when those systems are otherwise often committed to diverse and conflicting sets of institutional and distributional principles?¹⁶

A second mystery also surrounds *numerus clausus*. This mystery concerns the principle’s *unique* persistence in property law.¹⁷ As many scholars have observed, virtually any function that *numerus clausus* could be said to serve in the context of property interests (e.g. lowering transaction costs by simplifying interests;¹⁸ or mediating competing pluralist values¹⁹), could equally be served in the context of the creation of other legally enforceable interests.²⁰ Why then does *numerus clausus* only arise as a principle in property doctrine?

form of a standard list appears in disparate modern civil law and common law systems throughout the world.”).

¹³ *Id.*

¹⁴ Bernard Rudden, *Economic Theory v. Property Law: The Numerus clausus Problem*, in OXFORD ESSAYS IN JURISPRUDENCE 239, 241 (John Eekelaar & John Bell eds., 1987).

¹⁵ Davidson, *supra* note 12, at 1600.

¹⁶ *Id.* at 1600 (observing that the universality of the principle belays “any account of the phenomenon grounded in specific patterns of social relations or normative coherence.”).

¹⁷ See, e.g., Henry Hansmann and Reinier Kraakman, *Property, Contract, and Verification: The Numerus clausus Problem and the Divisibility of Rights*, 31 J. LEGAL STUD. 373, 380 (2002) (faulting an explanatory account of the principle for failing “to explain why property law is more restrictive than contract law.”).

¹⁸ See, e.g., Merrill and Smith, *supra* note 10 (advancing the theory that *numerus clausus* functions to reduce transaction costs).

¹⁹ See, e.g., Davidson, *supra* note 12 (advancing the theory that *numerus clausus* functions to mediate pluralistic values).

²⁰ Hansmann and Kraakman, *supra* note 17 (suggesting that a successful explanation for *numerus clausus* must account for its unique presence in property law).

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Unraveling these twin mysteries has proven to be something of a challenge.²¹ For the past fifteen years, the principle of *numerus clausus* has been the focus of a rich colloquy in which scholars of various methodological stripes have sought to address these and other questions.²² This study has resulted in both illumination and in obfuscation. On the one hand, explanations of the principle now abound, many of which shed light on important aspects of *numerus clausus*.²³ On the other hand, our amassed explanations have failed to account for the most pointed and vexing aspects of the phenomenon: the universality and unique application of a rule that appears to hinder efficiency,²⁴ thwart autonomy,²⁵ and is, by conventional accounts, the embodiment of a well-known intellectual error.²⁶

²¹ See Davidson, *supra* note 12, at 1618 (describing the persistence of *numerus clausus* in property doctrine as a “puzzle” and observing, “standardization has long proven challenging to predominant accounts of property.”).

²² See, e.g., Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1176-1178 (1999) (arguing that *numerus clausus* functions to prevent the fragmentation of property interests); Merrill and Smith, *supra* note 9, at 8 (arguing that *numerus clausus* “stems from the *in rem* nature of property rights,” and serves to reduce information costs in property transactions); Hansmann and Kraakman, *supra* note 16, at 373, 382, 416-17 (arguing that standardization in property serves to “aid verification of the ownership of rights offered for conveyance.”); Hanoach Dagan, *The Craft of Property*, 91 CAL. L. REV. 1517 (2003) (“The *numerus clausus* principle, in other words, sustains the institutions of property as intermediary social constructs through which law interacts with--reflects and shapes--our social values.”); Daphna Lewinsohn-Zamir, *The Objectivity of Well-Being and the Objectives of Property Law*, 78 N.Y.U. L. REV. 1669, 1730-39 (2003) (advancing the theory that various conceptions of objective well-being serve as a justification for the *numerus clausus* principle); Davidson, *supra* note 11 (arguing that the principle is a means by which property doctrine accommodates competing pluralist values); Joseph W. Singer, *Democratic Estates: Property Law in a Free and Democratic Society*, 94 CORNELL L. REV. 1009 (arguing that structural features of proper law, like *numerus clausus*, are justified or unjustified in light of the degree to which those features support democratic values); Dorfman, *supra* note 10 (arguing that the principle of *numerus clausus* represents a moral commitment to democratic self-government).

²³ Cf. *id.*

²⁴ Davidson, *supra* note 12, at 1599 (observing that *numerus clausus* appears to “restrict the autonomy and efficiency gains conventionally associated with private property.”).

²⁵ *Id.*

²⁶ Merrill and Smith, *supra* note 10, at 6 (stating that “[s]cholars and judges tend to react to manifestations of the *numerus clausus* as if it were nothing more than outmoded formalism.”).

This Article addresses these mysteries by providing a novel explanatory account of *numerus clausus*, described here as “the complexity thesis.” It is important to be clear that the thesis presented here is offered as an explanation – but not a *justification* – of the principle. Towards that end, the thesis strives to account for the three most salient aspects of the principle: (1) the principle’s prohibition of novel forms; (2) the principle’s universality; and (3) the principle’s unique application in property doctrine.

The complexity thesis accounts for these features by positing that the primary function of *numerus clausus* is to eliminate highly idiosyncratic property interests. The benefit of eliminating idiosyncratic interests is, at base, epistemic. Standardization serves to constrain the overall *volume* of information that we must process to understand and enforce property interests. In this way, *numerus clausus* makes it possible for us to understand our property interests.

Thus, the complexity thesis supplies an answer to the twin mysteries of the principle’s universality and uniqueness. *Numerus clausus* arises as an element of every property system in the world because the complexity of the task at hand (i.e. organizing our normative interactions with tangible objects in the world) necessitates it. Although most human endeavors require us to grapple with complexity, there are particular ontological features of tangible objects in the world (and our interactions with those objects) that render our property practices *uniquely* vulnerable to complexity’s capacity to overwhelm. The thesis likewise accounts for the principle’s prohibition of novel forms: customized property interests are disallowed by *numerus clausus* as a means of controlling the volume of information that constitute our property interests.

In this way, the complexity thesis provides clarity on questions that previous theses have left unresolved. In this way, the complexity thesis brings consilience and coherence to an aspect of property law that has long fascinated (and frustrated) theorists of all stripes.

These ideas are presented in the following format. First, Part I provides an overview of the relationship between standardization, complexity, and property. Next, Part II considers prominent alternative explanatory accounts of *numerus clausus*, and highlights the major critiques that have challenged these accounts. Part III then details the complexity thesis, explaining the principle of *numerus clausus* in light of its epistemic function and the ontological features of property that necessitate it. Finally, Part IV offers a conclusion.

I. Complexity in Property

Before embarking on the project of detailing the epistemic function of *numerus clausus* and ontological features of property that necessitate the principle, it may prove helpful to first tarry for a moment on the topic of complexity itself.

“Complexity” is a contested concept.²⁷ There are many ways to define complexity (e.g., complexity as size; complexity as entropy; computational complexity; complexity as hierarchy).²⁸ However, the term is used here to roughly denote “computational complexity.”²⁹ Computational complexity refers to the amount of information that one must process in order to reach a conclusion or resolve an uncertainty.³⁰ In the context in which the term is applied here, complexity refers to the amount of information that one must process to draw conclusions about the substantive content of our duties and obligations with respect to tangible objects in the world.

The central thesis of this piece holds that *numerus clausus* prevents our property interests from evolving into such complex entities that they present a situation of “intractable computational complexity.”³¹

A. The Dark Side of Complexity

When complexity interacts with our property practices, it is a double-edged sword. To a great extent, complexity is the author of our capacity to conceptualize normative commitments vis-à-vis tangible objects in the world. Similarly, domesticated complexity serves as the architect of any system of property that is sophisticated enough to encourage the efficient

²⁷ Mitchell, *supra* note 1, at 94.

²⁸ *Id.* at 94-111.

²⁹ *Cf.* Arora, *et al.*, *supra* note 1, at 2 (applying the concept of computational complexity in the context of complex financial instruments).

³⁰ *Id.* See also, Kades, *supra* note 9 (discussing computational complexity in the context of applying fixed legal rules to a large number of factual variables). Kades succinctly explains the role of computational complexity theory in this context: “CCT takes the rules as fixed, and analyzes the difficulty of applying them as the size of the case to which they must be applied increases.” *Id.* 421.

³¹ See Arora, *supra* note 1, at 2 (describing as “intractable” the computational complexity presented by certain types of financial derivatives).

use of scarce resources. Yet complexity in the context of our property practices exhibits decidedly menacing propensities as well. A dramatic and instructive example of those propensities can be found amid the rubble of the 2007 housing market collapse and the ensuing financial crisis.³²

Although many factors contributed to the financial crisis,³³ most commentators agree that the proliferation of “opaque” securities, such as synthetic collateralized debt obligations (CDOs), played a substantial role.³⁴ A CDO is a type of complex derivative whose value is dependent upon the performance of a set of underlying assets, such as a portfolio of mortgages.³⁵ At base, a CDO is a contract.³⁶ It is a type of credit default swap, in which the buyer pays a premium to the seller and, in exchange, the seller promises to pay the buyer a large lump sum in the event of a default

³² Saule T. Omarova, *License to Deal: Mandatory Approval of Complex Financial Products*, 90 WASH. U. L. REV. 63 (2012) (“One of the fundamental causes of that crisis, however, was the unprecedented level of complexity of financial products and markets.”); Arora, *et al.*, *supra* note 1 at 2-3 (contending that the computational complexity that resulted from the structure of complex derivatives was a significant precipitating factor in the 2007-2009 financial crisis).

³³ Adam J. Levitin and Susan M. Wachter, *Explaining the Housing Bubble*, 100 GEO. L.J. 1177, 1181 (2012) (observing there to be “little consensus” as to the causes of the collapse, but largely attributing the housing market collapse to the “failure of markets to price risk correctly due to the complexity, opacity, and heterogeneity of the unregulated private-label mortgage-backed securities.”); Arora, *supra* note 1, at 2; *see* Steven L. Schwarcz, *Understanding the Subprime Financial Crisis*, 60 S.C. L. REV. 549, 550 (2009) (observing that “[t]he financial crisis resulted from a cascade of failures, initially triggered by the historically unanticipated depth of the fall in housing prices” among other “failures”).

³⁴ *See, e.g.*, R. Christopher Whalen, *The Subprime Crisis - Cause, Effect and Consequences*, 17 SPG J. AFFORDABLE HOUSING & COMMUNITY DEV. L. 219 (2008) at 221 (citing “active encouragement by the SEC and federal bank regulators of the rapid growth of over-the-counter (OTC) derivatives and securities by all types of financial institutions, leading to a breakdown in safety and soundness at banks and securities dealers” as a precipitating cause of the crisis).

³⁵ Lynn Stout, *Uncertainty, Dangerous Optimism, And Speculation: An Inquiry Into Some Limits Of Democratic Governance*, 97 CORNELL L. REV. 1177 at 1185 (“Derivatives are literally bets--contractual agreements between two parties that one will pay the other an amount of money determined by whether or not some future event occurs.”).

³⁶ *Id.* at 1178.

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in the underlying asset.³⁷ In entering the contract, the seller is betting that the underlying asset will not default, and the buyer is betting that it will.³⁸

In the years leading up to the financial crisis, there was a robust over-the-counter market in CDOs in which the underlying portfolio of assets included subprime mortgages.³⁹ Assessing the value and risk of these securities required information about the likelihood of default in the underlying assets.⁴⁰ However, the likelihood of default in any given mortgage is dependent upon a very large number of variables. When many different mortgages are packaged together in a portfolio, an accurate individual assessment of the risk of default is prohibited by the *sheer number* of relevant variables. The time and expense it would take to cull through each individual loan and analyze the relevant variables is so high as to prohibit the credit default swap altogether.⁴¹

Indeed, economists Sanjeev Arora, Boaz Barak, Markus Brunnermeiere, and Rong Ge, have argued persuasively that the proliferation of CDOs presented a problem of *intractable computational complexity*, even to banking powerhouses like Goldman Sachs that were possessed of substantial computational capacity.⁴² There were simply too many variables for even the most highly powered computers to compute within a pragmatically reasonable amount of time.⁴³ This intractable computational complexity led to informational asymmetries that made it impossible for CDO investors to accurately assess their risk, a circumstance that ultimately led to the

³⁷ *Id.* at 1185.

³⁸ *Id.* at 1185 (“[D]erivatives are fundamentally wagers, they offer a unique opportunity for pessimists to try to make profits betting on falling prices.”).

³⁹ Whalen, *supra* note 34, at 221.

⁴⁰ Levitin and Wachter, *supra* note 33, at 1182 (stating that “serious informational asymmetries between financial intermediaries and investors” caused investors to underestimate risk across the class of products.).

⁴¹ Chunlin Leonhard, *The Subprime Mortgage Crisis And Economic Checks And Balances*, 31 NO. 6 BANKING & FIN. SERVICES POL’Y REP. 15, 16 (2012) (“[S]ecurities were structured in such a complex manner that a proper risk evaluation was ‘difficult, if not impossible’.”).

⁴² Arora, et al. *supra* note 1, at 2-3.

⁴³ *Id.* at 2.

financial crisis.⁴⁴ Although investors has adequate *access* to information about risk, they could not make profitable use of that information because there was simply too much of it.⁴⁵

What was the origin of all this complexity? There are two reasons that CDOs are such complex entities.⁴⁶ The first has to do with the set of multilayer contingencies that is inherent in a credit default swap.⁴⁷ For example, the credit-worthiness of the mortgagor is one variable, but credit-worthiness itself consists of many variables such as credit history, employment information, debt-to-equity ratio and even more elusive information regarding the mortgagor's health, family status, and temperament.⁴⁸

However, a second, and more significant set of variables are introduced into the trading of CDOs due to their *structural flexibility*.⁴⁹ CDOs are not standardized. The terms of a CDO can be customized to fit the specific risk-management needs of the seller and buyer.⁵⁰ In other words, the parties to the transaction can write their own novel terms.⁵¹ This flexibility adds a significant layer of complexity to the trading of these derivatives.⁵²

As a consequence of this structural flexibility, CDO transactions are not comparable to one another. This means that a CDO's material terms are not *intuitively* accessible. One cannot know what is important to know about a CDO, in the way that one can immediately know what is important to know about, say, a car. Generally speaking, we are acquainted with not only the limited menu of variables that are relevant to a car's value, but we are also acquainted with the limited menu of powers and duties that attend car

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ Omarova, *supra* note 32, at 69.

⁴⁷ Stout, *supra* note 35, at 1185.

⁴⁸ Omarova, *supra* note 32, at 69.

⁴⁹ Levitin and Wachter, *supra* note 33, at 1183-1184 (“The structure of these products made them very difficult to gauge, and hence price, their risk accurately.”).

⁵⁰ Omarova, *supra* note 32, at 70.

⁵¹ *Id.* at 71.

⁵² Leonhard, *supra* note 41 at 16.

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ownership. We know both what a car *is* and what it is to *own* one. This intuitive understanding is absent in the context of complex derivatives because important features of a derivative contract are not *generalizable* in the same way that important features of a car tend to be generalizable.

A third source of CDO complexity issues from the structure of the markets in which they are traded.⁵³ As Saule Omarova has described it, “[c]omplex structured transactions effectively separate and repackage ownership, payment, and other rights associated with the reference assets. ... As a result of this complexity, opacity, interconnectedness, and fragmentation, individual financial institutions lack the ability to measure and analyze... the true level of their own risk exposure.”⁵⁴

Because of their perceived volatility, derivatives such as CDOs have long enjoyed a rapsallion reputation within the public imagination.⁵⁵ Indeed, a monograph on the subject is titled “Derivatives: the Wild Beast of Finance.”⁵⁶ Although there is a certain degree of theatrics to such a title, there is, too, a degree of aptness. There is something that might be described as “feral” about complex derivatives, where “feral” connotes a menacing unpredictability and its attendant dangers. The most important source of “feral-ness” derives from the fact that it is so difficult to process relevant information due to the sheer volume of relevant information. In other words, it is complexity that renders these products feral.⁵⁷

Yet, perhaps the most interesting thing about derivatives – at least from the perspective of the thesis advanced here - is that CDOs are not “property.”⁵⁸

⁵³ Omarova, *supra* note 32, at 69-71.

⁵⁴ *Id.* at 71.

⁵⁵ Robert J. Aalberts and Percy S. Poon, *Derivatives and the Modern Prudent Investor Rule: Too Risky or Too Necessary?* 57 OHIO ST. L. J. 525 (2006) at 532-533 (“Derivatives are quite possibly the most controversial of all investments. Indeed there are several examples of derivatives devastating investors...[which] has contributed to ...a kind of ‘derivaphobia.’”).

⁵⁶ Alfred Steinherr, *DERIVATIVES: THE WILD BEAST OF FINANCE: A PATH TO EFFECTIVE GLOBALIZATION?* (Wiley, 2000).

⁵⁷ Omarova, *supra* note 32, at 70-71 (“Complex financial instruments are difficult to understand and value, because their risks are not easily measured and controlled. This is attributable to the potential complexity of the specific reference assets and the structure of the transactions.”).

⁵⁸ Levitin and Wachter, *supra* note 33, at 1183-1184.

Despite the fact that a CDO is a valuable entity that is fully alienable and often traded in mass, a CDO is characterized as a contract interest rather than a property interest.⁵⁹ You may be a party to a CDO, but you cannot be the owner of a CDO.⁶⁰ Moreover, it is this classification as a “contract” that makes *possible* both the extraordinary flexibility and extraordinary complexity of CDOs. CDOs are capable of becoming exceedingly complex because they are not subject to the principle of *numerus clausus*.

B. Standardization in Property

To illustrate this point, imagine for a moment that we lived in a world in which customization and its ensuing complexity extended not only to the purchase of sophisticated financial securities, but also to the purchase of more straightforward and commonplace entities, like a car. Imagine that each time a car was purchased the seller and the buyer created their own novel terms of ownership. In such a world, “ownership” might include a byzantine set of powers and duties each of which could be contingent upon other underlying events.

For example, imagine that I “bought” a car from a seller who wanted to both profit from the car yet also continue to use the car part of the time. Imagine that the seller offered to “sell” me the car to use at all times except on the third Sunday of every month that the New England Patriots scored a touchdown. On those dates, the seller may or may not elect to use the car herself. In the event she elects not to use the car on those dates, I, as buyer, would owe seller a fee equivalent to the fair market value of the use seller forewent. Further, to hedge her bet that the New England Patriots would score sufficient touchdowns such that she would have adequate access to the car, imagine that seller requires that I agree to allow her plenary use of the car for one half hour a week during the off-season of every year in which the Patriots failed to make it to the playoffs. Finally, imagine that seller is concerned that my future use of the car could impinge upon her future use of the car – for example, if I used the car excessively, failed to maintain it, or used it dangerous situations -- and so our “ownership” arrangement excludes each of those uses, as well as uses that involve any religious activities (as seller is an ethically committed atheist).⁶¹

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ A reader may here sensibly object that this hypothetical arrangement is allowed by the principle of *numerus clausus* in the form of a “timeshare.” The term “timeshare” may refer to one of several legal arrangements, including a lease, a use right, and a “partial

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Now imagine that *all* cars were subject to such customized ownership agreements. Not only would it be difficult for me to keep track of the parameters of my powers and obligations as an “owner” of the car, it would be difficult to discern the value of my car as compared to other cars. My ownership powers and obligations would be difficult to compare to the ownership arrangements that accompanied other cars. What is important to know about one car would no longer be generalizable to other cars. I would not know what I should pay for my car because I would lack vital information about the comparable value of other cars. There would simply be too many relevant variables to analyze.

Finally, imagine that my seller is one of seven previous “owners” of the car in question, and that each time the car was sold, it was sold subject to a complexly customized “ownership arrangement.” Each link in the car’s chain of title would potentially represent the introduction of numerous variables relevant to both the value of my car and the scope of my interest in it (e.g. power to use and transfer it). Under such a system I would have to anticipate that at any moment a past “owner” could turn up at my doorstep and demand to use the car pursuant to an ownership arrangement that long predates my connection to the car. Even if such prior arrangements were disclosed to me in good faith, it is plausible – even likely – that (as with customizable derivatives) the sheer number of potential variables would leave me perennially uncertain as to scope of my powers and obligations with respect to the object in question.

Thus, in the customizable-property world that we have imagined, a ferality begins to emerge as the constraining structures of our property practices break down. Familiar objects – like a car - suddenly take on a menacing aspect. We become reluctant to invest in these objects. We may even be disinclined to use our objects for fear of violating the rights of another. Within this imagined world, the uncertainty and confusion that follows from customizable property rights grows exponentially with the

ownership” interest. Whether this hypothetical falls within the ambit of what counts as a “timeshare” interest in property is fairly debatable (e.g. timeshare arrangements are generally standardized, not highly idiosyncratic as the in the hypothetical). More importantly, the questions itself falls within a potentially broader critique of this project which is skeptical of the claim that *numerus clausus* succeeds in substantively prohibiting customized property interests. While this skepticism is briefly address *infra* at Part II A, a full consideration of this concern must regrettably be reserved for a future project.

passage of time until it threatens to overwhelm all of our settled expectations with respect to objects in the material world.⁶²

In the grim, spectral light of this imagined world the value of *limitation* and of *constraint* is revealed. Our world is distinguished from this imagined world by a solitary feature: the principle of *numerus clausus*. Thus, one way to think about the normative force of the principle of *numerus clausus* is that it “cages” what would otherwise be the chaotic experience of interacting with objects in the material world. It is in this not entirely theatrical sense, that *numerus clausus* tames the wild beast of complexity.

II. The Mysterious Numerus Clausus

As heroes go, the principle of *numerus clausus* is an unlikely one. As a superficial matter, there is, of course, the problem of its name: ideas denoted in Latin rarely excite the romantic imagination. There is also the fact that during our passing acquaintanceship with *numerus clausus* in our first-year property class,⁶³ most of us likely found the principle to be idiosyncratic, inhibiting, and anachronistic -- hardly qualities we associate with heroism. A final condemnation lies with its perceived lack of utility: the principle seems neither to embody an intrinsic good, nor to serve a clear purpose.⁶⁴ Given these failings, it seems more sensible to wonder why the principle persists at all, rather than to champion it.⁶⁵

Yet despite its conspicuous short-comings, the principle of *numerus clausus* may be the most underappreciated of all the tools that populate our legal arsenal. But before detailing the unsung role that *numerus clausus* plays in taming our interactions with the tangible world, it is appropriate that we should first attend to the principle’s less laudatory dimensions. It is, after

⁶² See generally, Arora, et al., *supra* note 1, at 2 (describing computational complexity “infeasible” if “the resources needed to solve it grow exponentially in the length of the input.”).

⁶³ Merrill and Smith, *supra* note 9, at 3 (“The principle is... familiar to anyone who has survived a first-year property course in an American law school.”).

⁶⁴ Cf. Dorfman, *supra* note 10, at 476-480 (arguing that *numerus clausus* fails to limit the set of property forms and likewise fails to perform other suggested functions).

⁶⁵ Davidson, *supra* note 11, at 1598 (querying why the principle persists).

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all, conventional to bury Cesar before praising him, and burying numerus clausus is not difficult as there is much to fault about the principle.⁶⁶

As readers may recall, the phrase numerus clausus literally means “the number is closed.”⁶⁷ As applied in American property law, the principle means that cognizable property interests must conform to one of the existing forms of ownership.⁶⁸ No novel forms are allowed.⁶⁹ An owner can only convey a property interest in one of the recognizable forms, which include the fee simple, fee simple defeasible, life estate, and leasehold.⁷⁰ In the event that an owner attempts to convey a novel interest, courts will convert the novel interest into a recognized interest.⁷¹ Off-menu ordering is simply not permitted.

Thus, numerus clausus fundamentally inhibits private ordering in property transfers.⁷² While contract law allows for “an infinite range of promises the law will honor,”⁷³ property law will enforce only a handful of ownership arrangements.⁷⁴ Contract law’s openness to innovation and individual preferences is an attribute that is conventionally understood to promote efficiency in the allocation of valuable resources.⁷⁵ In contrast, the principle

⁶⁶ Merrill and Smith, *supra* note 9, at 5 (concluding that the legal academy has often assumed an “attitude of . . . hostility” toward the principle, noting the literature is punctuated with “antipathy,” “antagonism,” and “causal criticisms” of the principle.).

⁶⁷ Davidson, *supra* note 11, at 1598 (The name numerus clausus originates “from the civil law concept that the ‘number is closed.’”).

⁶⁸ *Id.* (“[P]roperty law recognizes only a limited and standard list of mandatory forms.”).

⁶⁹ Merrill and Smith, *supra* note 9, at 3 (“‘[I]ncidents of a novel kind’ cannot ‘be devised and attached to property at the fancy or caprice of any owner.’”).

⁷⁰ *Id.* at 3 (“With respect to interests in land . . . the basic forms are the fee simple, the defeasible fee simple, the life estate, and the lease.”). This is not intended to be an exhaustive list, and reasonable minds can and do disagree about what does and does not “count” as a property form. Also, property use interests are likewise generally limited to existing forms, such as an easement or servitude.

⁷¹ *Id.* at 3 (“If [parties] attempt to customize a new type of interest, the courts will generally recast the conveyance as creating one of the recognized forms.”).

⁷² Davidson, *supra* note 11, at 1598.

⁷³ Merrill and Smith, *supra* note 9, at 3.

⁷⁴ Davidson, *supra* note 11, at 1589.

⁷⁵ *Id.* at 1619.

of *numerus clausus* seems to foreclose innovation in the allocation of tangible resources while ensuring that property law remains relatively insensitive to individual preferences.⁷⁶

Moreover, in addition to seeming to hinder efficiency, the principle suffers from a second and third intellectual blemish: the principle can fairly be characterized as formalist and its formalism is thought to favor existing and/or entrenched distributions of property interests.⁷⁷ To many, the principle of *numerus clausus* is to modern property law what the principle of “freedom of contract” was to labor law during the *Lochner* Era: a judicially-imposed and outmoded obstacle to modernity and progressive ends. Thus, by many lights, *numerus clausus* is a doddering legal atavism: a feudal throwback to our embarrassingly inefficient and inegalitarian past.⁷⁸

How then is it possible that it continues to persist in modern property doctrine?⁷⁹ As Nestor Davidson has aptly put the question, “what can explain a persistent feature of the law that seems, at first glance, so clearly to restrict the autonomy and efficiency gains conventionally associated with private property?”⁸⁰ More surprising still, as noted previously, this doddering legal atavism appears to be a *universal* feature of all property systems.⁸¹ As Davidson has observed “this transcendence suggests that there must be some overriding structural reason” why all property systems employ standardization with respect to property forms.⁸²

⁷⁶ Cf. Levitin and Wachter, *supra* note 32, at 1257 (describing, in the context of a proposal to standardize mortgage-backed securities, the degree to which standardization limits individual choices).

⁷⁷ Merrill and Smith, *supra* note 9, at 6-7 (observing that scholars and judges seem to react to the principle as if it were formalist).

⁷⁸ Davidson, *supra* note 11, at 1619 – 1622 (describing the concern that *numerus clausus* causes inefficiencies); see e.g., Singer, *supra* note 21, at 1024 (describing the estate system as “disturbing to modern sensibilities.”).

⁷⁹ See e.g., Dorfman, *supra* note 2 at 468 (describing as the persistence of the principle as a “mystery”); Davidson, *supra* note 2, at 1598.

⁸⁰ Davidson, *supra* note 11, at 1598-1599.

⁸¹ *Id.* at 1600. (“Versions of the *numerus clausus* are found in Roman law and recur throughout the history of feudal and post-feudal English common law. Likewise, some form of a standard list appears in disparate modern civil law and common law systems throughout the world.”).

⁸² *Id.* at 1600.

The quest to identify an “overriding structural reason” for the principle has generated a number of explanatory accounts of *numerus clausus*.⁸³ Because an explanatory theory purports to *explain* (rather than justify) the presence of the principle in property doctrine, to succeed these theories must account for each of the three most salient features of *numerus clausus*: (1) its universality; (2) its prohibition of novel forms; and (3) its unique application in property law. The degree to which competing accounts of the principle have succeeded along this metric is explored below.

A. A Brief Intellectual History of *Numerus clausus*

Although the principle of *numerus clausus* has been a part of our system of property at least since the emergence of post-feudal property rights, it received little scholarly attention until relatively recently.⁸⁴ However, property theorists have recently more than made up for this historical neglect of the principle.⁸⁵ Over the course of the last decade, a lively colloquy has arisen around the principle. This discussion has produced helpful insights about the function of *numerus clausus*. A consideration of those ideas follows.

⁸³ *Cf. supra* note 21.

⁸⁴ Davidson, *supra* note 12, at 1600.

⁸⁵ *Cf. supra* note 22.

(1) Merrill and Smith and the Information-Cost Thesis

In recent years, a wealth of analysis has been focused on the principle of *numerus clausus*.⁸⁶ This recent spate of interest in the principle was largely inaugurated in 2000 by the publication of Thomas Merrill and Henry Smith's now-canonical article, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*.⁸⁷ In this piece, and others that followed,⁸⁸ Merrill and Smith argued that by preventing the customization of property rights, *numerus clausus* serves to distinguish property rights from other legal interests (i.e. interests created by contract).⁸⁹

Merrill and Smith also provided an influential explanatory account of the principle.⁹⁰ Standardization in the form of *numerus clausus*, they explained, functions to reduce what they described as “measurement costs.”⁹¹ Measurement costs are incurred when a prospective owner seeks to understand the nature and scope of rights she can acquire in a desired object, as when a prospective buyer seeks to buy a house.⁹² The prospective buyer 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).”⁹³ Similar measurement must be taken when a non-owner encounters owned property (e.g. an undeveloped parcel of real property) and wishes to avoid violating the property rights of the owner.⁹⁴ *Numerus clausus* reduces these information costs to third parties

⁸⁶ See *supra* note 22.

⁸⁷ Merrill and Smith, *supra* note 10.

⁸⁸ Thomas W. Merrill and Henry E. Smith, *What Happened to Property in Law and Economics*, 111 YALE L.J. 357, 359 (2001) (arguing that “property is required to come in standardized packages that the layperson can understand at low cost.”) (hereinafter, *What Happened*); Thomas W. Merrill and Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773 (2001) (hereinafter, *Property/Contract*).

⁸⁹ Merrill and Smith, *Property/Contract*, *supra* note 85 at 774-775.

⁹⁰ Merrill and Smith, *supra* note 10.

⁹¹ *Id.* at 24-35.

⁹² *Id.* at 24.

⁹³ *Id.* at 28.

⁹⁴ *Id.* at 24.

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by reducing the amount of information that third parties must process in order to avoid violating property rights.⁹⁵

Thus, Merrill and Smith argue that standardization succeeds in making some material information about ownership more accessible (or accessible at a lower cost than it otherwise would be).⁹⁶ They provide the example of A would who like to sell his watch to B to use on Mondays only.⁹⁷ Merrill and Smith conclude that such an arrangement may prove beneficial to A and B, but that the possibility of a Monday-only form of ownership would impose costs on third parties.⁹⁸ If such novel arrangements were possible, then anyone who wished to buy a watch would have to investigate the possibility that the watch they intend to purchase is likewise burdened by the idiosyncratic restriction.⁹⁹ Thus, by taking the possibility of a Monday-only ownership interest in a watch off the table, standardization eliminates the need to investigate this contingency.¹⁰⁰ Information about the scope of the ownership interest available in a watch is therefore accessible at a lower cost.¹⁰¹

It is important to note that Merrill and Smith concede that *numerus clausus* does not reduce information costs to a bare minimum.¹⁰² *Numerus clausus* is tolerant of a certain degree of customization in the form of contingent variables.¹⁰³ The principle admits a set of forms that permit an owner to create property rights that are subject to contingent conditions such as restrictive covenants and defeasible estates.¹⁰⁴ The contingent conditions

⁹⁵ Merrill and Smith, *What Happened*, *supra* note 85, at 387 (“If the legal system allowed in rem rights to exist in a large variety of forms, then dutyholders would have to acquire and process more information whenever they encountered something that is protected by an in rem right.”).

⁹⁶ Merrill and Smith, *supra* note 10, at 30.

⁹⁷ *Id.* at 26-30.

⁹⁸ *Id.* at 30.

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 31.

¹⁰¹ *Id.*

¹⁰² Merrill and Smith, *supra* note 9, at 32 - 33.

¹⁰³ *Id.* at 33.

¹⁰⁴ *Id.* at 26.

can be quite unpredictable (or even “weird” as Joseph Singer has described them).¹⁰⁵ However, Merrill and Smith argue that some degree of flexibility in the creation of property interests is desirable.¹⁰⁶ For Merrill and Smith, the function of *numerus clausus* is not to eliminate information costs to the fullest extent possible, but rather “to promote optimal standardization of property rights.”¹⁰⁷ “Optimal standardization” in this scenario permits X number of forms where “X” represents the point at which the utility of having the forms outweighs the costs imposed by the forms.¹⁰⁸

(2) Critiques of the Information-Cost Thesis

Responses to Merrill and Smith’s “information cost thesis” of *numerus clausus* were rapidly forthcoming.¹⁰⁹ These responses offered a range of insights and critiques directed at Merrill and Smith’s thesis. Two of the more significant critiques are considered in detail below.

a. Hansmann and Kraakman and the Uniqueness Critique

An important consideration of the information-cost thesis was undertaken by Henry Hansmann and Reinier Kraakman who agreed with Merrill and Smith that “third-party information costs are central to the regulation of property.”¹¹⁰ However, Hansmann and Kraakman, pose a key question in light of Merrill and Smith’s analysis: if the standardization of interests reduced information costs to an optimal level in property, why does standardization not serve the same function in the creation of contract interests?¹¹¹ In other words, Hansmann and Kraakman object to Merrill and

¹⁰⁵ Singer, *supra* note 22, at 1026 (“There is no rule against transferring property to another person ‘until Barack Obama wins the presidency,’ for example.”).

¹⁰⁶ Merrill and Smith, *supra* note 10, at 38-41.

¹⁰⁷ *Id.* at 38.

¹⁰⁸ *Id.*

¹⁰⁹ See, e.g., Hansmann and Kraakman, *supra* note 17; Dagan, *supra* note 22.

¹¹⁰ Hansmann and Kraakman, *supra* note 17, at 374.

¹¹¹ *Id.* at 380 (arguing that the information-cost thesis “fails to explain why property law is more restrictive than contract law. If there is an optimal finite number of standard forms for property rights, why is not the same true for contract rights?”).

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Smith's explanatory account of *numerus clausus* on the grounds that it fails to account for *numerus clausus*' *unique* utility in property.¹¹²

Hansmann and Kraakman resolve the issue of uniqueness by noting that burdens imposed in the creation of property interests “run with the asset.”¹¹³ By this they mean that “a property right in an asset, unlike a contract right, can be enforced against subsequent transferees of other rights in the asset.”¹¹⁴ This feature of property law, they argued, is the key distinguishing characteristic between property interests and contract interests.¹¹⁵

For Hansmann and Kraakman, the fact that property law permits rights to be enforced against successors in interest who were not parties to the original conveyance explains why *numerus clausus* is uniquely useful in the context of property transfers.¹¹⁶ By their lights, standardization is a mechanism by which property law ensures that adequate notice is provided to subsequent transferees.¹¹⁷ Contract requires no such mechanism because contract rights are generally only enforceable against parties to the contract.¹¹⁸ The contract itself provides the necessary notice and verification of rights.¹¹⁹ However, in the property context, notice must be standardized to avoid successors in interest incurring prohibitively high information costs in their quest to verify their interests.¹²⁰

In other words, Hansmann and Kraakman agree with Merrill and Smith that standardization in property reduces information costs, but they reject the idea that the limitation on forms reduces costs to third parties by limiting

¹¹² *Id.* at 380.

¹¹³ *Id.* at 378-379.

¹¹⁴ *Id.* at 374.

¹¹⁵ *Id.* (concluding that this is the way in which “[p]roperty rights differ from contract rights.”).

¹¹⁶ *Id.* at 375.

¹¹⁷ *Id.* at 384.

¹¹⁸ *Id.* at 383 (“The parties' mutual assent to the contract... is the method by which the parties signal to each other that they share a common understanding of their rights.”).

¹¹⁹ *Id.*

¹²⁰ *Id.* at 383.

the amount of information that third parties need to process to avoid transgressing on the property rights of others (or to ascertain their own rights).¹²¹ Instead, Hansmann and Kraakman argue that the limitation on categories of ownership is “inextricably intertwined” to the unique need in property to verify interests that were created (or withheld) by remote transferors.¹²² Numerus clausus fashions categories of ownership, but these categories are merely a vehicle for the imposition of verification rules.¹²³

b. Problems with the Verification Solution

Hansmann and Kraakman’s uniqueness critique of Merrill and Smith’s information costs thesis of numerus clausus is well taken.¹²⁴ However, their resolution of the uniqueness question ultimately proves unsatisfactory as well. In attempting to resolve this mystery, Hansmann and Kraakman slightly mischaracterize the relationship between the asset (e.g. the physical parcel of land that is Blackacre) and a condition placed on the estate that conveys interest in Blackacre (e.g. a defeasible fee). In the context of a property interest, the *estate* (rather than the asset) is the appropriate contract analogue. The estate creates enforceable interests just as a contract creates enforceable interests. Conditions (which we might profitably, if slightly erroneously, think of here as promises to do things or not do things) may qualify the interests created by the estate, just as conditions may qualify the interests created by a contract. However, when the estate ends, so does the imposition of the condition.¹²⁵ The condition does not follow the asset into the next estate.

To illustrate this point, consider that Blackacre’s owner (grantor) may convey Blackacre “to A for so long as the property is used for farming.” The requirement that Blackacre must be used for farming “runs with the asset” (or “runs with the land” as we conventionally describe this attribute

¹²¹ *Id.* at 374.

¹²² *Id.* at 384.

¹²³ *Id.* at 399 (“[P]roperty rights that fall outside the standard categories are simply governed by highly unaccommodating verification rules that place a heavy burden on the holder of the right to provide notice to third parties.”).

¹²⁴ *Id.* at 380.

¹²⁵ It should be noted that conditions or restrictions that are placed on estates can also end *before* a given estate ends. *See, e.g., Preseault v. U.S.*, 100 F.3d 1525 (1996) (finding an easement held in fee simple terminated upon abandonment of the use interest).

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in property parlance).¹²⁶ If A transfers the property to subsequent owner B, B will likewise be obliged to meet the condition or forfeit Blackacre. However, once the condition ceases to be met (i.e. the owner of Blackacre ceases to use it for farming), the estate ends and the *condition ends with it*. In this example, grantor (or her successor in interest) will then take Blackacre in fee simple absolute. Grantor need not use Blackacre for farming. The condition survived only as long as the estate that created the condition survived. Conditions that attend property interests burden the “asset” for the *duration of the estate*.

Now perhaps in using the term “asset” Hansmann and Kraaman refer to the *estate* rather than the physical parcel of land that is Blackacre. This is a reasonable construal, after all, the legal right to use and enjoy Blackacre is itself an entity of value separate and apart from the inherent value of Blackacre (for example, as shelter to a squatter). However, in that case, Hansmann and Kraaman have identified a phenomenon that is not at all unique to property. An estate is created when an interest-holder transfers her interest to another party. This exchange of interests is the property-interest analogue to a contract, and so it should not be at all surprising that conditions or restrictions that were imposed on the estate during the creation of the estate, will follow the estate. Such conditions are entirely creatures of the estate.

In this light, we can see that the phenomenon of “following the asset” is not unique to property law. Contract interests, too, are burdened by conditions that last for the duration of the contract.¹²⁷ For example, Professor Y may enter into a 5 year contract to teach at Blackacre University. That contract may contain a clause prohibiting Professor Y from moonlighting at other universities. Upon the termination of the contract, the clause that prohibits Professor Y from working at other schools is likewise terminated. Professor Y is not bound by that limitation beyond the duration of the contract. Restrictions on interests created by contract “run with the contract” just as Restrictions on interests created by property “run with the estate.”

It should be noted that there is another set of conditions imposed on property interests that seem to provide a better fit with Hansmann and

¹²⁶ Cf. Alfred L. Brophy, *Contemplating When Equitable Servitudes Run with the Land*, 46 ST. LOUIS U. L.J. 691 (2002).

¹²⁷ In the context of contract, “conditions” are typically regarded as simply contract terms.

Kraakman’s “running with the asset” description.¹²⁸ Although conditions that limit defeasible estates have a clear duration element (i.e. the estate ends when the condition ceases to be met) servitudes (i.e. easements and covenants) do not seem to have an inherent durational quality.¹²⁹ An easement or covenant can burden the servient estate indefinitely – there is no triggering event that will end both the estate and restrictive condition.¹³⁰

However, the conception of “estate” as analogue to “contract” provides the best framework in this context as well. When a servitude arises, interests that were originally created by the estate in Blackacre are asymmetrically split between two owners. Sometimes this split arises voluntarily (as when the owner of Blackacre sells an easement across Blackacre to the owner of Whiteacre).¹³¹ Other times it arises by operation of law (as when the owner of Whiteacre acquires a prescriptive easement over Whiteacre).¹³² In either instance, the creation of the servitude inaugurates two (or more, in the case of multiple dominant tenements) *new* estates. These new estates (read: contracts) *supersede* the previous estates. Where Blackacre was previously held as a fee simple absolute unburdened by an easement, it is now a fee simple absolute burdened by an easement. Similarly, while owner’s interest in Blackacre has been diminished under the new “contract,” Whiteacre’s owner’s interest in Whiteacre has expanded. Owners who take subsequent to the creation of these new estates are merely assignees of the original estate holders.

Therefore, servitudes, like defeasible conditions, follow the estate, not the asset. Moreover, a servitude (like a defeasible condition) can be terminated.¹³³ The servitude is not irrevocably tied to the physical parcel that is Blackacre. If the benefited parcel and burdened parcel come into the same hands, a servitude will be extinguished.¹³⁴ Similarly, the owners of the

¹²⁸ Hansmann and Kraakman, *supra* note 17, at 374 (“a property right ‘runs with the asset.’”).

¹²⁹ Jesse Dukeminier James E. Krier, Gregory S. Alexander, Michael H. Schill, PROPERTY 892 (2010) (“In general, the duration of covenants is a matter of the intention of the parties. For [most]servitudes...the duration is indeterminate.”).

¹³⁰ Unless the parties so intend. *Id.*

¹³¹ *See generally, id.* at 765-768.

¹³² *Id.* at 794 (describing the creation of easements by prescription).

¹³³ *Id.* at 882 (describing the termination of covenants).

¹³⁴ *Id.*

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benefited and burdened parcels may agree to terminate the servitude, or the owner of the benefited parcel may abandon her rights.¹³⁵ In any of these circumstances, the servitude ceases to “follow” Blackacre.

Thus, the fact that conditions on property interests “run with the asset” is not a meaningful means of distinguishing property interests from contract interests. Restrictions on property interests can burden subsequent owners who were not party to the original conveyance, but when this happens subsequent owners simply become assignees of the original grantee. Subsequent owners accept their property interest subject to the restrictions assumed by the original grantee until the duration of the estate is ended. Once the estate itself is extinguished, the conditions are likewise extinguished.

Moreover, the fact that property interests are assignable in this manner does little to distinguish property interests from contract interests.¹³⁶ It is often said that in granting Blackacre, owner can only convey an interest equal to or less than she has.¹³⁷ An owner’s capacity to convey rights in Blackacre is controlled by her estate, just as the holder of a contract interest’s capacity to convey interests under the contract is limited by the interest she holds under the contract.¹³⁸ For example, if Professor Y in the above example assigns her interests under her contract to Professor Z, she cannot give Professor Z the right to teach at Blackacre University while moonlighting at another school. Professor Y cannot convey greater rights than she holds. Similarly, if a property owner holds a fee simple determinable (as in the example in which Blackacre must be used for farming), she can convey the estate that she has (i.e. a fee simple determinable) or a lesser estate (e.g. a life estate determinable).¹³⁹ She cannot convey a fee simple absolute.¹⁴⁰

¹³⁵ *Id.*

¹³⁶ *See generally*, 29 Williston on Contracts § 74:27 (4th ed.) (“Contract duties are generally delegable, unless prohibited by statute, public policy or the terms of the contract.”)

¹³⁷ *See* Knud E. Hermansen and Donald R. Richards, *Maine Roads and Easements*, 48 ME. L. REV. 197, 277 (1996) (“[A] subsequent owner can convey no better title than he obtained from his grantor.”).

¹³⁸ *Id.*

¹³⁹ *See* Hermansen and Richards, *supra* note 128 at 277.

¹⁴⁰ *Id.*

Now one might sensibly offer the following objection at this stage of the analysis: contract assignees are in privity of contract with a party to the original transaction.¹⁴¹ We need not assign verification rules to “categories” of contract rights because the contract itself provides notice to assignees.¹⁴² In contrast, property grantees are often many generations removed from the transaction with created the original estate.¹⁴³ Therefore, the objection would hold, notifying remote grantees of their rights poses a unique problem in property, and that unique problem could potentially explain the phenomenon of standardization in property.¹⁴⁴

In fact, Hansman and Kraakman point to the fact that contracts require mutual assent to support the inference that the contract itself serves to ensure that parties have adequate notice of their rights.¹⁴⁵ They observe, “parties’ mutual assent to the contract, testified to by signatures or other conventional means, is the method by which the parties signal to each other that they share a common understanding of their rights— namely, the understanding expressed in the contract.”¹⁴⁶

However, upon deeper examination, the privity-of-contract distinction seems overdrawn. Although the idea that the “mutuality of assent” solves notice problems that are endemic in the context of property transfers is intuitively appealing, we should not be misled by the turn of phrase. The requirement of mutual assent assures that parties agree as to the material terms of the contract.¹⁴⁷ But the requirement does not assure that parties to the contract understand limitations on their rights that result from one party’s obligations under a *different* contract (or other legal obligation).

¹⁴¹ See Hansmann and Kraakman, *supra* note 17, at 383 (“The problem of verification is more difficult in the case of property rights for the reason that two or more holders of property rights in a given asset may not be in privity of contract.”).

¹⁴² *Id.*

¹⁴³ See, e.g., *Rockafellor v. Gray*, 191 N.W. 107 (Iowa, 1922)(grantees removed by several transactions from the conveyance which created the originally restricted estate).

¹⁴⁴ Hansmann and Kraakman, *supra* note 16, at 383.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.* at 383.

¹⁴⁷ See generally, Restatement (Second) of Contracts § 19 (1981)(describing mutually of assent).

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An example may be helpful in illuminating this point: assume that A and B enter into an employment contract. A agrees to work for one year as a software engineer at B Enterprises. B agrees to compensate A with X amount of salary and benefits. A and B assent to the material terms, and sign the contract. If Hansmann and Kraakman's account is correct, then A and B have received adequate notice of their interests under the contract. Now let us assume that prior to entering into the contract with B, A signed a noncompete agreement with her previous employer, C. Under the terms of the noncompete agreement, A is precluded from working for B. Consequently, B's rights with respect to the A-B contract are limited by an obligation that A assumed prior to executing the A-B contract. A and B's mutual assent does nothing to provide B with notice of the terms of the A-C contract, yet the A-C contract potentially limits B's interests under the A-B contract.

The A, B, C example illustrates the specific notice problem in property transfers. The thorniest part of the problem of providing notice to remote grantees results not from a lack of understanding of what the remote grantor purports to convey to the remote grantee, but rather it results from the fact that remote grantor's power to convey what she purports to convey may be limited by a *different* and *previous* conveyance. Thus, even if remote grantor and remote grantee share the same understanding of the interests to be conveyed (e.g., they both think grantee is receiving a fee simple absolute in Blackacre), they may both be wrong about remote grantor's *ability* to grant what she purports to grant (e.g., remote grantor only holds a fee simple determinable in Blackacre and therefore lacks the power to convey a fee simple absolute).

Thus, appeal to the criterion of "mutual assent" to ensure that parties to a contract have adequate notice of their rights misses the point of the risk that a remote grantee assumes. The remote grantee is subject to the risk that transferor *lacks the power* to transfer what she purports to transfer. More importantly, the risk that remote grantees assume is not distinct from the risk that parties to a contract assume. Any time that parties seek to transfer interests, there is a risk that one party lacks the power to transfer the interest she purports to transfer. Thus, it is not clear that parties in privity of contract are insulated from the notice difficulties that Hansmann and Kraakman point to as especially plaguing transfers of property interests.

There are, nonetheless, two additional reasons we might believe that a party in privity of contract receives better notice of the rights transferred to her under a contract than a property interest grantee whose rights are subject to restrictions assigned from a remote grantor. The first has to do with specificity. We may believe that contracts do a better job of specifying the

interests they create than property conveyances. Yet, a contract may or may not do a good job of specifying the interests that are created.¹⁴⁸ Enforceable rights may emerge from contracts where the perimeters of obligation are far from clear.¹⁴⁹ At the same time, property interests are not transferred by magical innuendo. Every grantee of a property interest takes that interest pursuant to some assertion purporting to describe the interest conveyed.¹⁵⁰ When the asset conveyed is an interest in real property, the description of the interest transferred is in writing.¹⁵¹ There may be no mutuality of obligation or assent in the transfer of property interests, but neither of these requirements ensures that interests created by the contract will be identified with particular specificity.¹⁵² In short, there is little reason to believe that, as a class, contract rights are delineated with greater specificity than rights created by conveyances of property.

A second reason we may believe that parties in privity of contract have better notice of their rights concerns the potential omission of relevant information in conveyances of real property.¹⁵³ When O transfers Blackacre to A, she may do so by means of a deed that omits relevant information about A's rights. O may omit information in the deed about liens, servitudes, or defeasible conditions which burden O's estate in Blackacre. O may omit this information to induce A to purchase Blackacre, or because O herself is ignorant of these limitations on O's estate. Here, we are concerned less with the specificity and more with the accuracy of the rights described by the conveyance. O may purport in the transaction to transfer a fee simple absolute in Blackacre unburdened by liens or servitudes, when in fact O lacks the power to transfer an unfettered fee simple.¹⁵⁴

¹⁴⁸ Cf., George G. Triantis, *The Efficiency of Vague Contract Terms: A Response to the Schwartz-Scott Theory of U.C.C. Article 2*, 62 La. L. Rev. 1065, 1066 (2002)(observing that "vague" contract terms are "ubiquitous.").

¹⁴⁹ See generally, *id.*

¹⁵⁰ Dukeminier, *et al.*, *supra* note 115 at 541.

¹⁵¹ *Id.*

¹⁵² See Triantis, *supra* note 140 at 1066.

¹⁵³ See, e.g., *Willard v. First Church of Christ, Scientist*, 498 P.2d 987 (Cal. 1972). (deed omitted information regarding an easement).

¹⁵⁴ See, e.g., *Brown v. Lober*, 389 N.E. 1188 (Ill. 1979). (grantor purported to convey 100 percent of mineral rights, but owned only two third of the mineral rights).

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However, this, too, is a risk that is not unique to property transfers. It is true that every property transferee takes the risk that transferor lacks the power to transfer the interest she is purporting to transfer. Yet, every recipient of a contract interest also takes the risk that transferor lacks power to transfer the interest she purports to transfer. Contract and property both generally account for this risk by permitting some form of compensation where a transferee is damaged by the omission. Of course ensuring adequate notice avoids the more costly route of compensation after injury, but it is not clear why the property transferee – *in particular*– requires an elaborately constructed scheme (i.e. *numerus clausus*) to ensure she has adequate notice, while the contract transferee does not.

Finally, the most significant reason why Hansmann and Kraakman’s notice-based account fails to adequately address the uniqueness question has to do with the tenuous link between *numerus clausus* and notice. Hansmann and Kraakman contend that *numerus clausus* facilitates verification of property interests by allowing the law to impose specifically-tailored notice requirements on different “categories” of ownership.¹⁵⁵ On this view, *numerus clausus* serves as an organizational platform for disseminating rules about notice.¹⁵⁶ However, it is not clear why a platform for disseminating rules about notice should be organized around forms of *ownership*. In some cases, *numerus clausus* (and the rules of property generally) do a terrible job of ensuring that a restriction on interest will not be imposed on transferee who lacks notice.¹⁵⁷ This is especially so for durational restrictions on the estates, which is perhaps the most significant limit that can be placed on a property interest.¹⁵⁸ If O purports to transfer a fee simple absolute in Blackacre to A, but O holds only a life estate in Blackacre, A will only receive a life estate in Blackacre.¹⁵⁹

¹⁵⁵ Hansmann and Kraakman, *supra* note 17 at 375.

¹⁵⁶ *Id.*

¹⁵⁷ Consider, for example, the rule that allows a joint tenant to unilaterally and without notice destroy her cotenant’s right of survivorship. *See, e.g., Riddle v. Harmon*, 162 Cal. Rptr. 530 (1980).

¹⁵⁸ *See, e.g., Harper v. Paradise*, 210 S.E.2d 710 (Ga. 1974) (grantor purported to convey a fee simple via execution of a mortgage, but only held a life estate).

¹⁵⁹ *See, e.g., id.*

Similarly, there are other platforms that could better achieve the result of disseminating tailored rules about notice while avoiding the imposition on autonomy and innovation that is presented by *numerus clausus*' limitation on forms of ownership.¹⁶⁰ In fact, property law primarily provides for verification via notice rules that are wholly extrinsic to *numerus clausus*, such as recording acts and systems of registry for chattel.¹⁶¹

Moreover, in the real property context, the simplest and cheapest way of ensuring verification of interests to remote transferees is to require recordation as a *criterion* of title transfer. In such a scenario, title would not transfer unless or until the interest was recorded. If property law were primarily concerned with verification, as Hansmann and Kraakman opine, then incorporating notice as an aspect of ownership would seem a much less costly way of achieving that end.

So Hansmann and Kraakman's critique of the information-cost thesis of *numerus clausus* raised an important challenge to the information-cost thesis of *numerus clausus*: why does *numerus clausus* appear to have unique utility in the context of property interests?¹⁶² Yet while Hansmann and Kraakman offer an interesting alternative account of the principle, that account ultimately falls short of resolving the uniqueness mystery.

c. Skepticism about Information-Cost Reduction

Hansmann and Kraakman also raised a second important challenge to the information-cost thesis of *numerus clausus*.¹⁶³ They expressed skepticism about Merrill and Smith's causal claim that *numerus clausus* succeeds in reducing information costs to third parties.¹⁶⁴ For Hansmann and Kraakman, *numerus clausus* fails in reducing "measurement costs," at least

¹⁶⁰ See, e.g., Bruce W. Burton, *In Search Of John Constable's The White Horse: A Case Study in Tortured Provenance and Proposal for a Torrens-Like System of Title Registration for Artwork*, 59 Fla. L. Rev. 531 (2007).

¹⁶¹ See generally, Dukeminier, *et al.*, *supra* note 120 at 646-651 (describing the recording acts).

¹⁶² Hansmann and Kraakman, *supra* note 17, at 380.

¹⁶³ *Id.* at 399 (expressing skepticism that *numerus clausus* reduces information costs).

¹⁶⁴ *Id.* at 401 ("The 'information-processing costs' and 'measurement costs' facing someone who is contemplating the purchase of real estate that might be subject to an easement, for example, are not increased by the fact that the law also allows for property rights in other types of assets.").

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in the manner contemplated by Merrill and Smith, because the principle fails to regulate the *content* of property interests.¹⁶⁵ Hansmann and Kraakman contend:

Property law tends to regulate the available categories of property rights. It generally leaves the specific content of those rights to be individually specified by the parties who create them, thus allowing substantial room for all the uncertainty and measurement problems that Merrill and Smith see property law as mitigating.¹⁶⁶

Similar skepticism has been advanced by others.¹⁶⁷ Joseph Singer, for example, contends that *numerus clausus* cannot be credited with “simplifying” our property practices or making our property arrangements “clear and understandable” insofar as it fails to eliminate peculiar and unpredictable property arrangements.¹⁶⁸ Singer notes “even though the law limits us to the fee simple, the defeasible fee, the life estate, the lease, and mortgage-financing arrangements of various kinds, property law places few limits on the kinds of conditions and covenants that can be imposed on land ownership.”¹⁶⁹ He observes that the principle of *numerus clausus* does not prevent land from being burdened with any number of “weird” conditions that defy “ordinary expectations.”¹⁷⁰ Singer notes, for example, that “the widespread use of homeowners associations means that buyers of land must search the voluminous covenants, conditions, and restrictions contained in the recorded declaration, as well as the governing rules of the association, to find out what their rights will be if they buy the property.”¹⁷¹

¹⁶⁵ *Id.* at 374.

¹⁶⁶ *Id.* at 382.

¹⁶⁷ *See, e.g.*, Dorfman, *supra* note 11 at 475 (arguing that the information cost thesis is flawed because it “confuse[s] form restriction with form reduction.”).

¹⁶⁸ Singer, *supra* note 22, at 1025, 1061. (making the claim that the system of estates does not “result in anything close to simplification or standardization of the package of rights that go along with ownership.”)

¹⁶⁹ *Id.* at 1025.

¹⁷⁰ *Id.* at 1022.

¹⁷¹ *Id.* at 1025.

Moreover, skeptics of the information-cost thesis offer a second and related criticism.¹⁷² Not only does *numerus clausus* regulate the *wrong* aspects of ownership (in focusing on form rather than content) but *numerus clausus* may not, according to some these critics, meaningfully regulate *any* aspect of ownership.¹⁷³ The root of this concern lies in the (false) conventional wisdom that parties to a property interest transaction can “contract around” the forms of property to achieve virtually any substantive end they desire. As Avihay Dorfman has stated, “it is roundly acknowledged that private persons can ‘almost always’ achieve whatever it is that they initially aim to achieve through manipulating the existing forms of property rights, without being forced to tailor a novel form.”¹⁷⁴ If parties can create whatever substantive property arrangements they prefer while operating within the confines of *numerus clausus*, it stands to reason that *numerus clausus* is not doing any work to simplify those arrangements.

Thus, skeptics of Merrill and Smith’s claim that *numerus clausus* reduces information costs to third parties raise two related challenges to the claim. First, they worry that that because *numerus clausus* regulates form rather than content (and it therefore allows any number of peculiar and unpredictable property arrangements), the principle does not reduce the cost of obtaining information about property rights.¹⁷⁵ Also, critics worry that *numerus clausus* may not actually impose a substantive restriction on the kinds of property interests that will be enforced, because parties to a transaction can generally contract around the forms to achieve any desired end.¹⁷⁶ The merits of each of these concerns is explored in detail below.

¹⁷² Dorfman, *supra* note 11, at 478 (offering the criticism that *numerus clausus* fails to regulate property interests).

¹⁷³ *Id.* (“What is the point of form restriction...if it does not target the substance of the transactions?”).

¹⁷⁴ *Id.* at 478.

¹⁷⁵ Hansmann and Kraakman, *supra* note 17 at 374.

¹⁷⁶ Dorfman, *supra* note 11, at 478.

d) Rethinking Cost-Reduction Skepticism

Skepticism about cost-reduction has proved to be one of the most oft-repeated and enduring criticisms of Merrill and Smith's thesis. Consequently, it warrants careful and detailed consideration. As noted above, the criticism is centered upon two related, but distinct ideas: first, that *numerus clausus* regulates the wrong aspect of ownership; and second, that *numerus clausus* fails to meaningfully regulate ownership at all. Each of these ideas is treated independently below.

i) Content versus Form

To evaluate the merit of the concern that *numerus clausus* fails to reduce information costs, let us begin first with the idea that it is the content, rather than the form of property interests that “complicate” property rights and/or increase information costs.¹⁷⁷ In support of this supposition, critics have observed that both the scope of incidents and the scope of interest can vary greatly within a particular form.¹⁷⁸ The incidents and interest that attends a fee simple absolute that is encumbered with an easement, a mortgage, and two restrictive covenants is quite different from the incidents and interest that attends a fee simple absolute that is unfettered by encumbrances. As a result, if O grants Blackacre to A in fee simple absolute, A will require much more information than merely the form of ownership to ascertain the scope of her in the property. Further, “form-only” regulation clouds the informational waters for third parties strangers to the conveyance as well. The fact that such encumbrances are tolerated by *numerus clausus* means that a third party must consider the possibility that an asset that she is considering buying may be so burdened.¹⁷⁹

Conflated within the foregoing analyses are two distinct concerns. The first concern has to do with *intersectionality*: the content of ownership rights are complicated by the fact that forms of ownership often intersect with one another. One owner's easement constitutes a diminution of an adjacent owner's interest. A fee simple may be complicated by the existence of a restrictive covenant. A second problem results from the fact that a degree of *contingency* is inherent within certain forms of ownership- notably

¹⁷⁷ See Singer, *supra* note 22, at 1025.

¹⁷⁸ *Id.*

¹⁷⁹ This is the “watch-on-Mondays” problem that Merrill and Smith claim *numerus clausus* avoids.

defeasible estates, servitudes and mortgages. Each of these forms permits grantor to impose certain “customized” restrictions on property. It is useful to consider these concerns individually.

1) Intersectionality

At the heart of the intersectionality concern is the worry that *numerus clausus*' limitation on property forms fails to promote uniformity of interests within the forms. Thus, two owners, O and X, may hold the *same form* of property interest – say, for example, a fee simple absolute -- yet O and X's estates may differ greatly from one another in terms of interest and incidents. This lack of uniformity means that property forms are not immediately or intuitively comparable with one another, which poses a problem from the perspective of information-cost reduction. Simply knowing the form of the estate that O and X hold does not effectively communicate the extent to which restrictions encumber the properties. O and X will incur “measurement costs” to adduce their interests in the property, and *numerus clausus* does not affect these costs.

To a limited degree, this concern is well-taken. There are, generally speaking, four categories of restriction that can complicate ownership arrangements within a particular. They are (1) pecuniary restrictions (*e.g.*, liens and mortgages); (2) quantitative interest restrictions (*e.g.* concurrent interests); (3) durational use restrictions (*e.g.*, defeasible conditions); and (4) non-durational use restrictions (*e.g.*, easements and covenants). Each of these categories of restriction can be applied to an estate of any duration – *e.g.*, a fee simple, a life estate, or leasehold. Moreover, multiple restrictions from multiple categories can burden a single estate. This can seem to produce substantive inconsistencies within the strictures of a given durational form. Where a given durational form intersections with multiple restrictions – or as Singer has described it, “voluminous covenants, conditions, and restrictions”-- the result can appear to be a set of highly individualized and idiosyncratic estates within a single form.¹⁸⁰

However, this concern about consistency within forms plays upon a basic misapprehension about the category of “property form.” Although it is frequently recited (and was indeed recited here *supra*, Section I) that the forms of property generally consist of the fee simple, the life estate, the leasehold, the mortgage, servitudes, etc., this list is actually quite incomplete insofar as it excludes the phenomenon of intersectionality among forms. When we account for intersectionality, the “list” of recognized forms grows substantially. In this light, we understand a fee

¹⁸⁰ Singer, *supra* note 22, at 1025.

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simple absolute that is burdened by an encumbrance to be a *distinct form of ownership* from the unfettered fee simple. In this taxonomy, we would understand the intersection of two or more forms to create a separate, stand-alone form. So for example, we would acknowledge not only the (1) fee simple, (2) the mortgage, and (3) the easement as forms of ownership, but we would also consider (4) the fee simple subject to an easement to be a form, as well as (5) the fee simple subject to an easement and a mortgage, and so forth.

Within this understanding, *numerus clausus* succeeds in promoting uniformity and comparability within forms. It is, of course, not perfect uniformity or comparability – one estate that subject to an easement may involve a use restriction in the form of a right-of-way, while another may involve a restriction on boating – but the particular type of form restriction imposed by *numerus clausus* permits us to categorize these distinctions into ever more specific forms of ownership. We could understand a fee simple subject to a right of way to be a one kind of form of ownership, while a fee simple subject to a boating restriction is another, distinct, form, and so forth.

Further, this “micro-categorization” is completely consistent with the structure of our system of property forms. Intersected property forms are comprised, simply, of independent and discrete property forms. A fee simple absolute that is burdened by a right of way encompasses two long-recognized forms of ownership: the fee simple (held, for example, by a servient tenement owner) and the right of way (held by a dominant tenement holder). Yet only by examining the intersection of these two interests can we fully appreciate the imprint that a right of way visits upon a fee simple estate. It is only at the intersection of these two forms that critical features of the burdened estate can be discovered.

Moreover, while an intersectionality-sensitive understanding of property forms may seem to emphasize technical distinctions and details, these distinctions are quite significant in that they illuminate the work that *numerus clausus* is doing in the context of *ordering* information about the interests and incidents of ownership. *Numerus clausus* provides a cartography and taxonomy for tracing the interaction and consequences of adjacent rights. In so doing, the principle provides us a uniform language with which to describe the interaction of variables and thereby to anticipate future legal obligations. The principle then maps those interactions and consequences onto particular estates. As a result, a list of forms that accounts for intersectionality offer a fairly comprehensive account of the topology of interests that accompany a given estate.

Similarly, and significantly, although the list of property forms is substantially longer when we take intersectionality into account, the list is ultimately manageable. Importantly, the list is not infinite, as it would be in the absence of *numerus clausus*. This is because *numerus clausus* not only identifies discrete interests -- the principle also *delineates* and *constitutes* those interests. In requiring that interests comport with recognized forms, the principle necessarily delineates the boundaries of those forms.

This means that the form of, say, an equitable servitude, is delineated by particular criteria that distinguish whether a given restriction falls within the extension of the legal concept of “equitable servitude.” For example, assume I sell you my house, but in the deed I purport to require you to hold a monthly requiem service at the grave of my pet poodle, Noodle, who is buried in the front yard. Such an arrangement may constitute a contract between you and I, but to constitute a property interest (in me) or property encumbrance (on your estate) it must meet the criteria of “equitable servitude.”¹⁸¹ If the restriction fails to meet the criteria, it will not be binding on successors in interest and is not properly understood as an encumbrance on your estate. In that circumstance, the agreement is nothing more than a personal obligation that you undertook, having nothing to do with your rights (or the rights of others) in the tangible object that we also exchanged.

Here, it becomes clear that *numerus clausus*’ form restriction also serves an important *content restriction* function. In the Noodle requiem example, the agreement would indeed fail to meet one of the criteria of an equitable servitude: it fails to “touch and concern” the land (i.e. your tangible property).¹⁸² Consequently the agreement is excluded from the category of “equitable servitude.” Although you and I may both wish the agreement to be binding on successors in interest, *numerus clausus* forecloses that possibility.

Numerus clausus then exercises considerable criterial-control over forms of ownership. In this way, *numerus clausus* works to weed out some of the “weirdest” of weird conditions that vagaries of human whimsy might other impose on land use and ownership (a point we shall return to shortly).¹⁸³

¹⁸¹ This interest could also be classified as a negative easement, but the classification of the interest is not central to the point.

¹⁸² See generally, Dukeminier, *et al.*, *supra* note 120 at 866-869 (describing the touch and concern requirement).

¹⁸³ See Singer, *supra* note 22, at 1025.

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By eliminating these and a potentially infinite host of other such possibilities, *numerus clausus* keeps the list of possible ownership interests to an admittedly large, but yet not *overwhelmingly* large set.

Thus, rather than obscuring or even proliferating hidden restrictions, *numerus clausus*, properly understood, serves as a compass for discovering what would *otherwise* be hidden restriction and obligations that are inherent in the practice of people living together in a world of finite material resources. Interests that would otherwise be obscured by the complexity brought about by the interaction of an infinite number of variables (in the form of idiosyncratic interests, obligations, and criteria for each) are instead brought into a shaper and more manageable relief by virtue of the disciplining effect of the principle.

2) Contingency

Skeptics of the information-cost thesis also voice considerable concern over the fact that *numerus clausus* allows for a substantial degree of contingency in the creation of property interests.¹⁸⁴ *Numerus clausus* tolerates the imposition of conditions on ownership, and even permits those conditions to be weird and unpredictable (as in Singer’s example of “to A if Obama wins the presidency”).¹⁸⁵ We could, the argument goes, adopt a system of complete standardization of conditions – or content - as well as forms (e.g. conditions like “until A marries” and “for farming use only” are allowed, all other are disallowed). Simpler still, we could eliminate the enforcement of all conditions. In failing to do either of these, critics posit that *numerus clausus* leaves unregulated the source of the most significant “measurement costs” that arise in the context of ascertaining property rights.¹⁸⁶

To illustrate this point, consider the four categories of ownership restriction introduced above: (1) pecuniary restrictions (i.e. liens and mortgages); (2) quantitative interest restrictions (i.e. concurrent interests); (3) durational use restrictions (i.e. defeasible conditions); and (4) non-durational use restrictions (i.e. easements and covenants). The material terms of these restrictions are not standardized, even within a given category. For example, the material terms of one mortgage may vary substantially from the material terms of another. Similarly, the material terms of a defeasible varies greatly from one estate to another. O may grant Blackacre to A for so long as

¹⁸⁴ See Hansmann and Kraakman, *supra* note 17, at 382.

¹⁸⁵ Singer, *supra* note 22, at 1026.

¹⁸⁶ Hansmann and Kraakman, *supra* note 17, at 382.

Blackacre is used for farming. On the other hand, O may grant Whiteacre to B for so long as B remains married. Simply knowing that A or B holds a fee simple determinable tells us nothing of the substantive restriction that is placed on their respective estates.

In fact, critics of the information-cost thesis correctly observe that *numerus clausus* does not resolve the fundamental uncertainties that surround each of these categories of restriction. Thus, estates burdened with restrictions encompass an intractable degree of contingency that is unaffected by the form restriction that is imposed by *numerus clausus*. Hence, critics conclude, because *numerus clausus* fails to resolve these uncertainties, it likewise fails to meaningfully reduce information costs (at least in the manner contemplated by Merrill and Smith).¹⁸⁷

The heart of this criticism is the fact that *numerus clausus* fails to generate a particular kind of knowledge: it fails to answer a subset of questions about the content of restrictions that are placed on ownership. Moreover, proponents of this position are largely correct that *numerus clausus* fails to generate this category of knowledge. Now, to be clear, *numerus clausus* does generate some important knowledge in this context insofar as the principle cabins the potential content of restrictions by exercising its criterial-control over the forms, as is illustrated by the elimination of the Noodle-requiem requirement, described above. As a result, we know that enforceable restrictions will adopt certain characteristics and/or meet certain criteria.

Nonetheless, this criticism is accurate insofar as it highlights an epistemic function that *numerus clausus* fails to perform. *Numerus clausus* does not tell us what conditions must be met for certain property rights to vest or divest. But this failure is not as devastating to the information cost reduction thesis as its critics seem to imagine. Merrill and Smith's point that *numerus clausus* aims at "optimal" rather than complete standardization is well taken here. Although complete standardization of property interests (e.g. allowing only a fee simple absolute transfer and nothing else) would generate the greatest degree of certainty of title, but that certainty would be secured at a significant cost in terms of flexibility and autonomy in ownership.

More significantly, although *numerus clausus* fails to answer specific questions about vesting and divesting conditions, it does serve a much more essential epistemic function in terms of eliminating a potentially infinite

¹⁸⁷ See, e.g., Singer, *supra* note 22, at 1026.

host of possible ownership arrangements and thereby maintaining a manageable taxonomy of ownership options. The import of this epistemic function is explored in greater detail in Part III (A) below.

ii) The “Contract Around” Argument

A second argument offered in support cost-reduction skepticism holds that *numerus clausus* fails to *meaningfully* regulate *any aspect* of ownership.¹⁸⁸ This argument is predicated on the proposition, advanced by many, that parties to a property transaction can “almost always” contract around the form restrictions of *numerus clausus* and still achieve any substantive goal.¹⁸⁹ Dorfman states this belief in its most emphatic form, opining that *numerus clausus* may not be a principle of form reduction at all.¹⁹⁰ He understands the forms to be entirely fungible and concludes, “[f]orm restriction,’ then, stands for the proposition that private parties can design their transactions however they see fit to the extent that they invoke existing forms of property rights.”¹⁹¹

Yet, despite the fact that versions of this concern are frequently echoed in the literature, the concern seems overstated. It is true that parties to a transaction are sometimes stymied in their substantive goals because they selected the wrong form, where a different form would have both met their goals and complied with *numerus clausus*. Examples of this phenomenon abound in both the common law and the literature. One simple example involves grantor purporting to convey a fee simple while withholding the power to transfer – an interest that is excluded by *numerus clausus*. Insofar as the grantor wishes to withhold the right to transfer because she wants to ensure the property descends to the grantee’s heirs, the same substantive goal could be achieved by employing different forms (i.e. a life estate followed by a remainder in the heirs).

However, we cannot draw from this (and similar) examples the conclusion that Dorfman and others would have us draw. It is not the case that parties to a property transaction can achieve *any* substantive goal. Recall again the example of the car that I want to purchase from the New England Patriots fan. In that hypothetical, grantor was willing to “sell” me the car, but

¹⁸⁸ See, Dorfman, *supra* note 11, at 478.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.* at 475.

¹⁹¹ *Id.* at 482.

subject to a set of byzantine restrictions that included surrendering the car to her on certain occasions which were to be determined by the future success of her favorite football team. Such a transaction is prohibited by *numerus clausus* and there is no degree of shifting or cobbling together of forms that would permit the substantive goals of grantor to be realized. The transaction is simply excluded.

What this perhaps seemingly unlikely hypothetical illustrates is that the overwhelming majority of the time grantor and grantee's substantive goals align fairly well with the substantive commitments of property law. Whether parties' substantive goals generally align well with what the law allows because we have sufficiently internalized the norms that underlie our property system, or, alternatively, because the forms of property do an especially good job of capturing the realities of our broader social practices (as Dagan would have it),¹⁹² most of the time when parties try to create property interests, they try to create interests that are substantively permitted. Consequently, there is generally a form of ownership that accommodates the typical substantive goals. It is only the highly *idiosyncratic* substantive goal that is left unfulfilled by the principle of *numerus clausus*.

Indeed, barring the highly idiosyncratic property interest is *numerus clausus*' primary regulatory role. It is important to be clear, however, that this does not mean that most interests are allowed and only a handful of fringe interests are excluded. On the contrary: while the most *commonly-sought* interests are allowed, many, *many*, more interests are excluded than are allowed.

In fact, a potentially infinite number of interests are excluded by *numerus clausus*. If we recall the earlier discussion of complex derivatives, it becomes clear that if parties to a property transaction were permitted to create specifically-tailored interests, there would be a potentially infinite array of enforceable property interests. Although it would likely still be the case that *most* property transfers would assume familiar forms (i.e. fee simples, life estates), a subset of property interests would be contingently tailored in a manner that mirrors derivative contracts.

Moreover, the existence of even a subset of individually-tailored property interests would threaten to bring an overwhelming degree of complexity to our property system. Part III discusses why this is so, and how *numerus clausus* prevents it.

¹⁹² See Dagan, *supra* note 22, at 1565 (arguing that property forms cohere around social meaning).

In sum, critics of the information-cost thesis raise important challenges to the thesis. The most significant of these are the uniqueness challenge and skepticism about cost reduction. As explained above, the uniqueness challenge is well taken and an adequate explanation of the principle of numerus clausus must address this challenge. On the other hand, skepticism about cost-reduction to some degree simply misses the point of the epistemic function of numerus clausus. Each of these points is ultimately resolved in light of the complexity thesis advanced here. However, before turning to the heart of that project, it is useful to first consider the strengths and weaknesses of a few other theses that have been offered as alternatives to the information-cost thesis.

(3) Alternatives to the Information-Cost Thesis

Following Merrill and Smith's initial contribution, Hansmann and Kraakman offered the first alternative account of the function of numerus clausus, as is summarized above.¹⁹³ Rather than reducing information costs for third parties, Hansmann and Kraakman claim that property law as a whole (including the numerus clausus principle) operates to regulate the type of notice that creators of unusual property interests must provide to remote transferees.¹⁹⁴

Other alternative accounts quickly followed.¹⁹⁵ Most of these accounts involved substantially less engagement with Merrill and Smith's central idea than the Hansmann and Kraakman account.¹⁹⁶ Instead, most subsequent accounts posited theses of numerus clausus that adopted, as a point of embarkation, the uniqueness and causal skepticism critiques offered by Hansmann and Kraakman.¹⁹⁷ Two of these are considered in detail below.¹⁹⁸

¹⁹³ Hansmann and Kraakman, *supra* note 17.

¹⁹⁴ *Id.*

¹⁹⁵ See e.g., Dagan, *supra* note 21 at 1567 (offering his 2003 account of numerus clausus as a facilitator of "human interactions.").

¹⁹⁶ See, e.g., *id.*

¹⁹⁷ See, e.g., Dagan, *supra* note 21, at 1566 (briefly summarizing the Merrill/Smith-Hansmann/Kraakman exchange and concluding that "Hansmann and Kraakman are closer

a. Dagan's Default-Framework Thesis

In 2003, in the wake of the Merrill/Smith- Hansmann/Kraakman conversation, Hanoch Dagan offered a fascinating and insightful explanatory account of the function of *numerus clausus*.¹⁹⁹ In this account, Dagan proposes that *numerus clausus* functions to create a set of default frameworks for “human interaction.”²⁰⁰ Dagan’s account understands property forms as “intermediary social constructs through which law interacts with – reflects and shapes – our social values.”²⁰¹ Limiting the forms of ownership “consolidates expectations and express[es] ideal forms of relationship.”²⁰² The virtue of creating default “social constructs” appears to be that it maintains the “normative integrity of the institution of property.”²⁰³

to the truth in focusing on verification and notice as major manifestations of property law's concern for third parties' interests.”).

¹⁹⁸ It should be noted that Avihay Dorfman has also offered an alternative explanatory account of the principle, in which he contends that the principle embodies a commitment to democratic self-government. Dorfman, *supra* note 22. However, Dorfman’s democratic-self-governance thesis fails, as a threshold matter, to account for the principle’s universality. It is certainly not the case that all of the post-feudal systems of property that have employed a rule of *numerus clausus* have done so pursuant to a preceding commitment to democratic self-government. Many (if not most) of those systems of government have failed to manifest or constitute such a commitment in public law, so it seem unlikely such a commitment implicitly underlies the structure of those countries’ property systems. While it may be the case that application of the *numerus clausus* is consistent a principle of democratic self-government, a commitment to democratic self-government cannot *explain* the universal presence of *numerus clausus* in property systems.

¹⁹⁹ Dagan, *supra* note 22. Dagan later elaborated on this account in Hanoch Dagan, PROPERTY: VALUES AND INSTITUTIONS 33-35 (2011) (“In property as institutions the *numerus clausus* principle...is understood as a means for facilitating stable, and thus necessarily a limited number of, categories of human interaction.”) (hereinafter, “PROPERTY”).

²⁰⁰ Dagan, *supra* note 21, at 1567.

²⁰¹ *Id.* at 1566.

²⁰² *Id.* at 1567 (“Limiting the number of property forms and standardizing their content facilitates the roles of property in consolidating expectations and expressing ideal forms of relationship.”).

²⁰³ Dagan, PROPERTY, *supra* note 180 at 33.

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In staking out a new explanatory account of *numerus clausus*, Dagan's ambition is to "take seriously" the content of the property forms that *numerus clausus* admits.²⁰⁴ Dagan proposed thinking about property forms as a series of default suggestions for navigating within certain property-exchange-relevant relationships.²⁰⁵ The main thrust of Dagan's claim concerns the practical implication of this type of thinking.²⁰⁶ The consequence of this account, Dagan holds, is that when faced with the task of regulating the forms or identifying the interests created by an ambiguous conveyance judges must "reason from the social purpose of the form."²⁰⁷

However, as an *explanation* of *numerus clausus*, Dagan's account suffers from a set of challenges. First, Dagan's thesis is vulnerable to the same uniqueness critique as the information-cost thesis. If it is the case that default forms of interest serve to facilitate social good in the context of property, why do the same principle not apply in the context of contract?

In both contexts, parties come together to create and transfer interests in a manner that is backed by the force of law. In both cases, material aspects of our social practices are reflected in the most common forms these transfers assume. For example, the property form of a life estate reflects the common concern that a loved one should be cared for until her death. Similarly, common types of contracts (i.e. the personal service contract, the employment contract) reflect material aspects of the employment relationship and the personal service relationship. Yet, while there are some restrictions imposed on the parties' capacity to customize some contracts (e.g. labor laws) there is no *uniform* restriction on the form that interests created under *any* contract can assume. If default frameworks facilitate idealized forms of relationships in property, why do we not impose default frameworks in the contract context as well? In other words, why should we single out property law as a vehicle for facilitating these normative ends, but exclude contract from the same category?

Moreover, Dagan's thesis fails to account for perhaps the most salient feature of *numerus clausus*: the prohibition of novel forms. Assuming that Dagan is correct that there is utility in creating a set of default forms which

²⁰⁴ Dagan, *supra* note 22, at 1563.

²⁰⁵ Dagan, PROPERTY, *supra* note 180, at 33.

²⁰⁶ Dagan, *supra* note 22, at 1566- 1567.

²⁰⁷ *Id.* at 1567.

serve to facilitate ideal relationships, it is not clear why there should be a *limited* set of such “defaults.”²⁰⁸ It is true that some “defaults” will be more frequently used than others, but why should uncommon forms of ownership be *prohibited* simply because they are in less demand?

Dagan notes that parties to a property transaction may be able to “contract around” the restriction on form – a capacity which Dagan’s treatment of *numerus clausus* would greatly expand – but such an observation begs the question of the utility of requiring the workaround in the first place.²⁰⁹ It seems that the full utility (and function) of Dagan’s account of *numerus clausus* could be realized by providing a wholly volitional set of suggested forms – a kind of playbook of model conveyances (e.g. a set of model rules). In this scenario, parties to the conveyance could choose to select a model form from the playbook, or, alternatively, to strike out on their own and customize the interests created by the conveyance. In either case, Dagan’s account of the utility and function of *numerus clausus* would be equally served.

Thus, Dagan’s principle contribution to the conversation surrounding *numerus clausus* is the significant insight that common forms of property often reflect material aspects of our social practices and the existence of these forms can facilitate idealized forms of certain relationships.²¹⁰ However, as an explanatory account of *numerus clausus*, Dagan’s account fails to resolve the uniqueness question and likewise fails to account for the most functionally salient feature of *numerus clausus*: the prohibition of novel forms of ownership.

b. Davidson’s Mediation-of-Competing-Norms Thesis

In 2008 Nestor Davidson offered a well-reasoned and well-received alternative explanatory account of the principle of *numerus clausus*.²¹¹ Davidson argued that:

²⁰⁸ Hansmann and Kraakman raise a similar point in the context of critiquing the information-cost thesis. They observe, “so long as there are clear definitions and labels for the forms most needed, the ability of parties to transact in those forms will not be compromised by the availability of additional forms. Nobody need ever use those additional forms, after all, or even utter their names.” Hansmann and Kraakman, *supra* note 17, at 380.

²⁰⁹ Davidson, *supra* note 12, at 1568.

²¹⁰ Dagan, *PROPERTY*, *supra* note 180 at 33-34.

²¹¹ Davidson, *supra* note 12.

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[L]egal systems standardize property law because regulating the variety of allowable forms provides platforms onto which property law's competing social and political goals can be engrafted onto private ordering.²¹²

Davidson's account sought to reconcile aspects of what he perceived to be the two dominant accounts of the principle: (1) the Merrill/Smith-Hansmann/Kraakman law and economics account, which emphasized structural elements of the principle (i.e. the prohibition on novel forms); and the (2) property-forms-as-categories-of-meaning position which emphasized the content of property forms as principally advanced by Dagan.²¹³ Rather than embracing either of these, Davidson espoused a pluralist account of *numerus clausus*, concluding that the principle's primary function is to serve as a platform for mediating competing values such as autonomy, efficiency, democratic values, and distributive justice.²¹⁴

Davidson's principle insight is that the formal rigidity of the forms of property provides a stable structural platform for negotiating and contesting these competing values, while the principle's tolerance for flexibility within the content the forms accommodates inherent tensions in these values as they are applied in the context of property rights.²¹⁵ He contends, "standardization facilitates the regulation of particular problems in property in a more targeted manner than regulating on a system-wide basis (as with, for example, unconscionability in contract regulation)."²¹⁶ Moreover, he notes, that "resolving conflicts over a myriad of competing priorities in property law has played out largely within the confines of the forms."²¹⁷

As with Dagan's account, Davidson's account contributes a significant descriptive richness to our understanding of property forms. Davidson's insight that the forms can serve as an arena of contestation within the larger

²¹² *Id.* at 1601.

²¹³ *Id.* at 1599.

²¹⁴ *Id.* at 1600-1601.

²¹⁵ *Id.* at 1653

²¹⁶ *Id.* at 1653.

²¹⁷ *Id.* at 1654.

project of regulating property is well taken.²¹⁸ However, as an *explanatory* theory of *numerus clausus*, Davidson's account faces some challenges.

The first difficulty with Davidson's account as an explanation of the persistence of *numerus clausus* in property doctrine has to do with nexus between property forms the negotiation of the competing values that Davidson identifies. Although it is true that when courts alter rules regarding the perimeters of a particular form -- holding, for example, that a Right of Entry is fully alienable -- competing values are reprioritized.²¹⁹ A rule which says that a Right of Entry is inalienable *inter vivos* may be understood to be an inefficient rule (i.e. greater alienability of land increases the efficient use of that resource). When a court changes that rule (i.e. allowing alienability), the value of efficiency is renegotiated and given a higher priority.

Yet this phenomenon is equally at work any time a property rule (or any rule of law) is renegotiated. When, for example, in the context of adverse possession, a court rules that an owner must have actual knowledge of a small encroachment (thereby changing the previous rule and making it more difficult to gain adverse possession of a small piece of land), the values of efficiency, equity, and distributive justice which are implicated by the rule are reordered. Thus contesting, expressing, and prioritizing competing values takes place *outside* the context of property forms as meaningfully as it does within the context of property forms.

Further, Davidson points to general regulatory rules (such as the prohibition against unconscionability in contracts) as a contrast to property law's preference to resolve conflicts via the forms.²²⁰ However, property law employs these same broad regulatory rules. The common law rule against perpetuities (and its various statutory analogues), antidiscrimination rules, rules prohibiting trespassing, rules of intestate succession, rules that deny enforcement to conditions on use or ownership that violate public policy, morality, or rationality²²¹ -- all of these reflect a broad regulatory model that is entirely independent of the forms.

²¹⁸ *Id.* at 1653 (“[A form] provides a relatively stable point of focus around which changes in meaning and content can be negotiated.”).

²¹⁹ *See, e.g.,* Dukeminier, *et al.*, *supra* note 120, at 232.

²²⁰ Davidson, *supra* note 12, at 1653.

²²¹ For example, the rule against the enforcement of racially restrictive covenants as fashioned in *Shelley v. Kraemer*, 334 U.S. 1 (1948).

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More significantly, it is within these broad regulatory contexts that the most serious and contentious battles among competing values are played out. For example, in the context of the important and (at one time) exceedingly prevalent problem of racial discrimination in housing, the arenas of contestation turned out to be constitutional challenges to restrictive covenants,²²² the judicial reinterpretation of Reconstruction Era legislation (i.e. Section 1982),²²³ and the adoption of new federal statutory law (i.e. the FHA).²²⁴ The forms neither played a role in that negotiation, nor were they a primary (or even secondary) locus of the conflict.

Similarly, virtually all of our most important and deeply contested property-related issues (i.e. riparian rights, the extent of copyright protections, the content of patent protections, the perimeters of the “public use” doctrine in takings, the right to cultural property, and so forth) are negotiated and renegotiated on platforms that have nothing to do with property forms.

Thus, while as a descriptive matter, the forms may sometimes (like all legal rules) serve as the locus of contests among competing values, they do not serve as the sole or even primary locus of such contests in property law. Like other doctrinal areas, property law appears to primarily rely upon broad regulatory rules for renegotiating contested values. It follows that the forms’ capacity to serve as arenas for such conflicts is unlikely to explain their existence in property law.

Moreover, Davidson’s account encounters a second challenge insofar as this account, too, is unable to explain either the principle’s unique presence in property doctrine. Assuming – as may well be the case - that property forms facilitate the negotiation of pluralistic values, it is not clear why the standardization of interests would not yield similarly positive results in other doctrinal areas. Why do we only apply *numerus clausus* in property law?²²⁵

²²² *Id.*

²²³ In 1968, the Civil Rights Act of 1866, 42 U.S.C.A. § 1982 (1866), was reinterpreted by the Supreme Court to bar all racial discrimination in the sale and rental of property. *Jones v. Alfred H. Mayer Co.*, 392 U.S. 409 (1968).

²²⁴ Fair Housing Act, 42 U.S.C.A §§ 3601-3619, 3631 (1968).

²²⁵ See Hansmann and Kraakman, *supra* note 17, at 380.

Finally, as with Dagan's thesis, Davidson's thesis does not explain the prohibition on novel forms. Assuming that the forms aid in negotiating pluralistic values, it is not clear how the principle's prohibition of novel forms of ownership advances this function. It seems to follow that various forms of ownership could continue to serve as platforms for negotiating competing values in the absence of the prohibition of new forms. The concomitant enforcement of novel or unusual forms of ownership would not seem to undermine the availability of common or core forms of ownership for use as arenas of contestation.

B. Lessons from the Fray: Compatibility, Uniqueness, and Universality

Having considered several prominent explanatory theses of *numerus clausus*, it may prove useful at this point to collect and reflect upon some points of synthesis. A few broad points are revealed by engagement with the information-cost thesis and its various rejoinders. First, although each of the theses considered above offers a novel explanatory account of *numerus clausus*, as a descriptive matter these accounts are not mutually exclusive. Importantly, most of the descriptive insights are entirely compatible with the complexity thesis advanced here.

Second, the complexity thesis advanced herein does a better job of accounting for the salient features of *numerus clausus*, which are: (1) the prohibition of novel forms; (2) the principle's universality; (3) its unique application in property law) than the preceding explanatory accounts. Each of these ideas is considered in turn below.

1. Compatibility

Although each of the explanatory accounts of *numerus clausus* considered above paints a slightly different descriptive picture of the principle, these descriptive accounts are not mutually exclusive. Merrill and Smith's account understands the principle to reduce certain kinds of information costs.²²⁶ Hansmann and Kraakman believe that *numerus clausus* functions to facilitate the verification of property interests.²²⁷ Dagan understands *numerus clausus* to provide convenient default frameworks for expressing and contesting social meaning within the context of ownership.²²⁸ Finally,

²²⁶ Merrill and Smith, *supra* note 10, at 8.

²²⁷ Hansmann and Kraakman, *supra* note 17, at 374.

²²⁸ Dagan, *supra* note 22, at 1520.

Davidson thinks that the primary function of the principle is to mediate competing public norms in the context of ownership.²²⁹

While each of these theses is insufficient as an explanation of the principle (as is discussed above), these theses could, nonetheless, all be *descriptively* true. It could be the case that *numerus clausus* reduces some information costs, facilitates verification, constitutes forms that reflect social realities, and mediates conflicting norms.

Each of these descriptive pictures of *numerus clausus* is also largely consistent with the complexity thesis. While the battle against complexity best explains the salient features of *numerus clausus* – the principle’s prohibition of novel forms, its universality and its uniqueness -- the principle could *also* (if secondarily) succeed in serving many (or, indeed, all) of the functions ascribed it by other theorists.

2. Explanation of Salient Features

As is detailed above, other explanatory accounts of *numerus clausus* fail to adequately account for all of the salient features of the principle. Nonetheless, engagement with these theses illuminates some important aspects of the questions that surround the principle’s three salient features (i.e. universality, prohibition of novel forms, and uniqueness). Insofar as the adequacy of an explanatory thesis can be measured by its capacity to account for these features of the principle, a consideration of these questions may prove helpful in shedding light on important aspects of the complexity thesis.

a. Universality and Form-Prohibition

Functional explanatory accounts of *numerus clausus* abound largely because of the persistent and vexing question concerning the “overriding structural reason” for the principle’s universal presence in post-feudal property systems.²³⁰

Yet it is important to be clear that when we refer to *numerus clausus* in this context we are referring specifically and inevitably to the principle’s *prohibition of novel forms*. It is this feature that is universal. Our particular

²²⁹ Davidson, *supra* note 12, at 1650.

²³⁰ *Id.* at 1600.

forms, our particular interpretation of the criterial limits on those forms – these nuances are, of course, not universal. Thus, explanations that fail to account for the principle’s prohibition on forms necessarily likewise fail to account for its universality. When we are engaged with questions of the principle’s universality we are directly interrogating why all property systems (both historically and cross-culturally) prohibit novel forms.

The complexity thesis provides the most comprehensive (and parsimonious) response to this question, positing that form-prohibition is necessitated by the complexity that is inherent in our interactions with objects in the material world (as is described in greater detail *infra* Part III). In this way, the complexity thesis provides the only *necessary* and *ontological* connection between the application of the principle and the ownership of tangible objects. The complexity thesis thereby provides a better explanation for the principle’s universality.

b. Uniqueness

As the preceding discussion demonstrates, accounting for *numerus clausus*’ unique application in property doctrine is not a simple matter. Contract law provides a natural analogue, but many scholars have had difficulty distinguishing property interests from contract interests in a manner that makes use of *numerus clausus*.

One of the thorniest problems with distinguishing contract law in this context is the fact that there does not seem to be a structural feature of either contract or property law that *uniquely* insulates a party from the risk that her interests are limited by a restriction or condition that she does not know about and that is external to immediate transaction. In both the contract and property context, this scenario may arise when a party to the contract (or conveyance) has a lesser interest than she purports to convey. A property party’s risk seems to be commensurate with the contract party’s risk in this regard. If *numerus clausus* mitigates this risk in the context of property, we would expect to see a rule of standardization likewise applied to contract interests.

Similarly both a party to a contract and a party to a conveyance seem to enjoy reasonably commensurate *access* to information about their respective rights. If anything, the property assignee is in a better position than the contract party to access information relevant to the scope of her interest. Property law provides systematic means of discovering information regarding the scope of the interest that the transferring party

purports to be transferring (e.g. recording acts, chattel registries).²³¹ Property also creates incentives to make use of the recording system to investigate the scope of one's rights (e.g. rules often tie the priority of interests to recording).²³² In contrast, there is generally no recording or registry system in place to assist a party to a contract in determining whether her rights under the contract may be limited by prior independent obligations assumed by the other party. Therefore, a party's capacity to access relevant information about her interests cannot serve as a metric for distinguishing contract interests from property interests.

However, the complexity thesis offers an account of *numerus clausus*' unique application in property doctrine that does not depend upon distinguishing contract interests from property interests in terms of either risk or access to information. Instead, the complexity thesis posits that contract interests are distinguished from property interests in terms of the *sheer volume* of information that attends each. Because of certain ontological features that attend owning tangible (i.e. the duration of estates, the fact that material objects transcend their estates; and the fact that property interests are highly alienable), property interests have a unique propensity to accumulate – over long periods of time – voluminous limiting contingencies and conditions. *Numerus clausus* functions to control the proliferation of these variables and thereby provides a service that is necessitated by the problems that are *uniquely endemic* to the context of property ownership.

The remainder of this Article is committed to explicating these facets of the complexity thesis. A consideration of the epistemic function of the *numerus clausus* and the ontological features of property ownership that necessitate the principle follows.

III. *Numerus clausus* as Antihero

Although the principle was initially described in this Article as a hero, *numerus clausus* is most accurately described as an antihero. It embodies well known flaws and it presents a number of nettling puzzles to those who seek to explain it. Yet *numerus clausus* also succeeds in protecting us from

²³¹ See generally, Dukeminier, *et al.*, *supra* note 120 at 646-651 (describing the recording acts).

²³² *Id.* at 648.

the potentially catastrophic effect of unbridled complexity. A consideration of the principle's role in staving off catastrophe follows.

A. The Epistemology of Numerus Clausus

There has been much talk in the literature about the relationship between numerus clausus and the generation of knowledge about property interests. Most of the attention directed at this issue has assumed the form of criticism directed at the information-cost thesis.²³³ Therefore, until now the primary framework for thinking about the relationship between numerus clausus and knowledge-generation has centered the degree to which the principle either makes information about property rights more *accessible* (thereby reducing information costs),²³⁴ or, alternatively, categorically eliminates certain kinds of *uncertainty* with respect to property rights (thereby reducing information costs).²³⁵

However, the thesis advanced here holds that each of these framings misconstrues the primary function of numerus clausus. The primary function of numerus clausus *is* epistemic in nature – but its function is not to make information more accessible or categorically eliminating certain kinds of uncertainty. Instead, the primary epistemic function of numerus clausus is to render our property interests comprehensible by controlling the complexity that is inherent in our normative interactions with tangible objects in the world.

The principle achieves this goal by controlling the proliferation of variables.²³⁶ In this way, numerus clausus protects us from complexity's capacity to overwhelm us with relevant information. Additionally, the criterial control that numerus clausus exercises over the forms of ownership provides a guide to distinguishing information that is material about property interests from immaterial information. Through this mechanism, numerus clausus protects us from complexity's destructive obscuring capacity.

²³³ See, e.g., Hansmann and Kraakman, *supra* note 17, at 374.

²³⁴ See, e.g., *id.* (arguing that numerus clausus does not reduce measurement costs).

²³⁵ See, e.g., Singer, *supra* note 22, at 1025 (arguing that numerus clausus tolerates a great deal of uncertainty with respect to property interests).

²³⁶ While Merrill and Smith have suggested that this is the epistemological function of numerus clausus, the thesis offered here illuminates the specific mechanics and content of that claim.

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Numerus clausus exercises criterial control over the content of conditions placed on property – a regulatory feature that is often underestimated – but it still permits a fairly robust degree of contingency with respect to those conditions. Our consideration of epistemic-based criticism of numerus clausus has revealed that the principle does seem to succeed in substantially reducing information costs to third parties (and to remote grantees) in much the way that Merrill and Smith originally predicted.²³⁷ By exercising its criterial control over forms and by disallowing highly idiosyncratic property interests, numerus clausus succeeds in eliminating an infinite number of (otherwise) possible ownership arrangements. The absence of these arrangements means that third parties (and remote grantees) do not need to investigate these possibilities.

At first blush, this thesis may seem strikingly similar to Merrill and Smith’s information cost reduction thesis. After all, reducing the overall volume of information is a form of information cost reduction, and so the thesis presented here might seem fairly characterized as a refinement of Merrill and Smith’s broader claims. Yet the complexity thesis departs from the information cost thesis in that it makes no claims at all about efficiency. The thesis advanced here allows room for skepticism that numerus clausus leads to an “optimal” number of forms (or, alternatively, to optimal forms), or that it otherwise meaningfully reduces information costs beyond the function of controlling a worst-case scenario of variable proliferation.

In this sense, the thesis presented here is sympathetic to the concern that the principle of numerus clausus is in some ways poorly suited to the broader task of reducing information costs associated with property interests. The thesis leaves room for the criticisms that principle does a poor job of facilitating low-cost access to information (i.e. notice), that it does a poor job of eliminating contingencies, and that forcing parties to use recognized forms often seems to create at least as many information costs as it solves.

Instead, the complexity thesis posits that whatever information-cost function that numerus clausus serves is a derivative of its primary function which is to avoid a worst-case scenario: that is a property system that is completely overwhelmed by relevant information. In this light, complexity presents a problem that is distinct from (even if fairly categorized as a subset of) more broadly generalizable efficiency concerns. Controlling complexity is a very specific and very circumspect function. At the same time, it is a function that is best realized with an especially blunt tool -- i.e. a tool that is insensitive to efficiency and/or other distributive concerns. So,

²³⁷ Merrill and Smith, *supra* note 10, at 8.

although numerus clausus seems to be a poor fit for reducing information costs generally, if we were to design a rule that sought *only* to control the complexity that is inherent in our normative interactions with material objects in the world numerus clausus would be a fairly good, numerus clausus would be a very good fit.

The principle controls complexity in two ways. First, it controls the overall proliferation of variables in the context of ownership by categorically disallowing a potentially infinite set of ownership interests. In a world in which property rights are infinitely customizable, the sheer number of variables that would be relevant to ascertaining our property rights would be so overwhelming as to defeat our capacity to process them. Second, numerus clausus exercises criterial control over categories of ownership which serves a guide to distinguishing material information from immaterial information. Each of these functions is considered in turn below.

a. Variable Constraint

Numerus clausus' primary function is to control the proliferation of variables. We have already uncovered, within the preceding discussion, the principle mechanisms by which it achieves this end. First numerus clausus' prohibition on novel forms succeeds in eliminating highly idiosyncratic forms of ownership. Additionally numerus clausus' criterial control over the forms of ownership succeeds in grounding (within criterial limits) the kinds of conditions that can be placed on ownership. With these two tools, numerus clausus protects us from the overwhelming complexity that would otherwise render our property interests incomprehensible.

Although the principle fails to answer conveyance-specific questions about restrictions (and thereby resolve those specific contingencies), the principle does succeed in eliminating (by rendering immaterial) *whole classes* of contingencies. The utility of this function is perhaps best illustrated by a metaphor in which a potentially idiosyncratic condition on ownership is a "needle" in haystack of variables that relate to ownership. Numerus clausus neither categorically eliminates the needle, nor does it specifically identify the location of the needle. Instead, numerus clausus goes a long way towards eliminating the haystack.

To illustrate these ideas, it is helpful to return to my hypothetical "purchase" of a car from the New England Patriot fan. In the hypothetical, the New England Patriot fan wants to "sell" her car to me but the seller imposes several conditions upon my ownership. Among these conditions is the seller's right to use the car on the third Sunday of every month that the Patriots scored a touchdown. The hypothetical may seem fanciful, but this perception may owe more to our (acculturated or deeply ingrained,

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depending on your perspective) expectations regarding ownership, than it does about the example itself. Whether our centuries-old property rules have constituted our concept of “ownership,” or, alternatively, our rules simply reflect that concept, our concept of “ownership” excludes these types of byzantine arrangements.

Yet we could easily imagine otherwise. We could regard our normative commitments vis-à-vis tangible objects in the world to be comprised of nothing more than a successive string of personal commitments – that is, of *contracts*. Instead of conveying the right of possession, we could exchange promises to surrender property to one another under specified conditions. Under such a system, it would make sense to highly customize those promises so as to maximize the use of objects.

Additionally, if we were to rid ourselves of the very concept of “ownership” and all of the normative commitments and status-based social connotations that attend the concept, we would be left with a very different way of interacting with objects in the world. Rather than buying a car, I might enter into a “time share” contract so that my expenses with respect to my use of the car are more carefully calibrated to my actual use of the vehicle. Similarly, I may lease rather than buy furniture (or my clothes) on a weekly or even daily basis so as to avoid the nuisance and expense of maintaining those objects (i.e. cleaning or laundry). It may well be the case that my commitments vis-à-vis objects in the world would become much shorter-term – a flexibility that would allow me to quickly adapt to changing circumstances – while synthetic objects in the world would themselves become much more disposable.

Moreover, it seems likely that given plenary power to construct the right to use a given object, a purveyor of the right might be inclined to introduce significant contingencies into these short-term, flexible contracts. I might, for example, wish to sell the right to use my car, but only if my new carpool works out. Had I unfettered power to customize, I could transfer the right to use my car until such a time as I change my mind. In the present used automobile market, I would likely have trouble finding a buyer with such a lingering uncertainty burdening title to the car. But if *all* cars were subject to similar sets of personal commitments (and if I priced my offering appropriately) I would likely find a taker.

It is not hard to see how within such a system, there would be significant incentives to enter into highly idiosyncratic agreements about objects in the world. It is equally apparent that discerning who, at any given moment, has the right to use a particular object – and more importantly, the scope of the right to use -- would be greatly complicated by the nearly infinite array of

possible answers to the question. In such a situation we would begin to see some of the difficulties that arise in the context of complex derivatives arise in the context of *every* tangible object that we use or wish to use. Even assuming that perfect notice of these contractual obligations were possible (as is largely the case with derivatives), the amount of information that one would have to *process* in order to understand the scope of obligations concerning objects would be overwhelming. The problem would not be one of *access* to relevant information. Instead the problem would be the sheer *volume* relevant information that must be brought to bear on questions of value and risk in the context of tangible objects.

Thus, the imagined scenario would differ from our present property system in many ways, two of which are particularly important. First, there would be a potentially infinite number of *types* of property arrangements. Every promise could be novel thereby constituting its own category of property arrangement. In other words, every token would likewise be a type. This fact alone imports an intolerable number of variables into a decision to use an object. We would not be able to meaningfully generalize about car ownership, as each ownership arrangement would be distinct from all others. We would not be able to easily and intuitively identify (i.e. without a lot of time spent analyzing a huge amount of variables) the salient features of car ownerships. In fact, there would be no generally salient features – the materiality of a particular feature of “car ownership” would turn on the specific obligations that attend the use of a specific car.

Second, there would be no criteria for the enforcement of a given type of ownership arrangement. There may, of course, be broad criteria for the enforcement of *all* promises, as we already have in the context of contract enforcement (i.e. there must be mutual assent; unconscionable conditions are not enforced). But there would not be criteria to help us delineate distinct categories – or forms – of property arrangements. As a result, no arrangements would be excluded (aside from those promises that violated the broad proscriptions such as unconscionability), at which point our analysis circles back to the first point: we are left with a potentially infinite number of forms of “ownership.”

Finally, in addition to its role as a novel-form eliminator, *numerus clausus* serves as a guide to distinguishing relevant information from irrelevant information. A consideration the mechanics of this epistemic function follows.

b. The Known Unknown

Herein we turn attention to those “weird” conditions and “voluminous...restrictions” that Singer quite has described as complicating our property arrangements.²³⁸ Singer’s point is that numerus clausus does little to simplify our property arrangements insofar as it tolerates these unpredictable and burdensome restrictions.²³⁹ To some extent, the criticism is accurate: numerus clausus does tolerate such restrictions, and such restrictions do increase uncertainty with respect to property rights. However, numerus clausus works to tame complexity in this context as well by providing a guide for distinguishing relevant information from irrelevant information in the context of idiosyncratic restrictions.

An illustration may provide helpful. Let us return for a final time to the hypothetical of the New England Patriots fan’s car. As discussed previously, the arrangement is not permitted by numerus clausus. However, let us assume that the Patriots fan altered in the agreement in light of numerus clausus to create a fee simple determinable, granting the car to me “until the New England Patriots score a touchdown.” In this scenario, I am saddled with considerable uncertainty with respect to the duration of my use of the car. I likewise have no control over the condition that might trigger the end of my estate. However, because of numerus clausus’ criterial control over the category of “fee simple determinable” I know that information about the future scoring of the Patriots is material, even if I do not have access to that information. I also know the *degree* to which it is material. The fee simple determinable is actually quite inflexible, at least when compared to the plenary flexibility that is possible with a customized property arrangement. The triggering condition (i.e. scoring of a touchdown) operates as a toggle: it either happens or does not, and if it does happen my estate ends.

Now compare this situation with the original “ownership” arrangement that seller sought to transact. Under that arrangement, if the Patriots scored a touchdown, the seller reserved the right to use the car, or, alternatively, to opt to demand a fee from me. In this scenario, not only is the Patriots’ future scoring ability material, but the seller’s future state of mind with respect to the use of the car is likewise material. Moreover, these variables interact with one another. The seller’s state of mind is only relevant *if* the Patriots score a touchdown. Further, if this ownership arrangement is only one of several arrangements that affect my interest in the car I might not be

²³⁸ Singer, *supra* note 22, at 1025.

²³⁹ *Id.*

aware that the Patriots' scoring ability is material, simply because I am overwhelmed with relevant information.

Here enters some of the more subtle antiheroism of *numerus clausus*. The principle renders immaterial considerations of the seller's state of mind. It transforms the contingent condition into a toggle such that I know the consequences of the condition, even though I do not know whether it will come to pass. In this way, the principle eliminates the materiality of whole categories of information and highlights the materiality of other categories. It transforms information that I do not know is material (or do not know the degree to which it is material) into information that I know to be material (even though I do not have access to the information).

Moreover, we might broaden our consideration of this phenomenon across multiple classes of information that is relevant to owning a car. Some information that is relevant to owning a car is discernible from the object itself (e.g. the car's mileage), and as such, it may be immediately available when I encounter a particular car that I would like to buy. *Numerus clausus* does not affect my ability to access or process this information. Similarly, there is some information that may not be immediately accessible, but that I know is material by virtue of the nature of the object itself (i.e. the accident history of the car). *Numerus clausus* does not affect my ability to access or process this information.

However, when we reach the class of information that is inaccessible because it involves a contingency, *numerus clausus* eliminates a potentially obfuscating class of information. We could describe this class of information as the "unknown unknown" – that is, information that is inaccessible (because it depends upon a contingency) and that I do not know is material (or the degree to which it is material), either because I am overwhelmed with relevant information about my interests in the car, or because the consequence of the contingency itself is contingent. The application of *numerus clausus* transforms "unknown unknown" information into "known unknown" information.

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In the absence of *numerus clausus* there exists a class of information that is material to our evaluation of the risk of the transaction and to the value of the object, but because we are overwhelmed with relevant information (or because the contingent variables in our customized agreement interact with one another) we are unaware that the information is material (or the degree to which it is material). *Numerus clausus* moves this class of “unknown unknown” information into the “known unknown” category.

In sum, the primary epistemic function of *numerus clausus* is to control the overall volume of variables that are relevant to the value of objects and the risks of ownership. The principle affects this end by exercising its criterial control over the forms of ownership to eliminate the highly idiosyncratic ownership arrangement, and to eliminate the category of “unknown unknown” information.

However, the complexity thesis must still contend with a final challenge. An explanatory account of *numerus clausus* must be able to account for the principle’s *unique* application in property law. That project is undertaken below.

B. The Ontological Phenomenon of Complexity in Property

Assuming, provisionally, that we allow that *numerus clausus* functions to tame complexity in the context of our normative interactions with objects in the world (and we likewise assume that this function is important), we still must account for the fact that *numerus clausus* is a *unique* feature of property law. When we create a legally enforceable interest -- whether that interest is characterized as a property interest or contract interest – it seems likely that a commensurate degree of complexity follow. Why then do we not standardize contract interests?

There are two answers to this question: a short answer and a longer answer. The short answer is: property is uniquely complex. The longer answer is: when we stand in normative relation to objects in the world, there are certain ontological features of our interaction with those objects (and our interactions with one another, *vis-à-vis* those objects) that produce mind-boggling complexity. These features include: (1) the duration of estates; (2) the transcendence of material objects; (3) the highly alienable nature of property rights. A consideration of these features follows.

1) Duration of Estates

To begin this analysis, it is helpful recall our previous consideration of “uniqueness” as a challenge to other explanatory theses.²⁴⁰ In the course of that discussion it became clear that there was no structural feature of property law that provided an impediment (or, especially, a *unique* impediment) to accessing information about property interests. In other words, insofar as it is not uniquely difficult for people to learn about their property rights, adequate *notice* is not the problem. Similarly the risk undertaken by a property grantee that her interest is circumscribed by a prior commitment on grantor’s part is roughly commensurate with the same risk that is undertaken by a party to contract.

Yet despite the lack of a unique structural distinction between contract and property law, there are notable differences between our property *practices* and our contract practices that are bound up in the ontological features of tangible objects. Among these is the fact that estates often have an indefinite termination date, while contracts generally do not.

Similarly, interests in a particular estate are frequently assigned dozens of times as Blackacre changes hands over the course of sometimes hundreds of years – a situation that results in multiple “remote” grantors and grantees who are significantly removed in time and, presumably, knowledge from the creation of the original estate. In contrast, the assignment of interests under a contract often (although not always) involves an original party to contract. Although multiple, generation-spanning assignments are theoretically possible in contract law, they do not seem to be the norm.²⁴¹

The fact that estates can (and very often do) last a very long time, and the fact that rights created by a given estate may be assigned multiple times across multiple generations conspire to make it more likely that the grantee will have *more* relevant information to process than she would have were rights under the estate not assignable, or, alternatively, were the duration of the estate to be shorter. In other words, the quality that distinguishes the two situations is the potential *complexity* of the interests at hand.

²⁴⁰ See, e.g., Hansmann and Kraakman, *supra* note 17, at 380.

²⁴¹ See generally, Karen Eggleston, Eric A. Posner, and Richard Zeckhauser, *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 Nw. U. L. Rev. 91 (2000) (describing why real world contracts as less “complex” than certain theoretical models would anticipate).

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Now it is important to pause here and seriously consider what is meant by “more” and by “complexity” in this context. Certainly there can be (and frequently are) very “complex” contracts.²⁴² Often, in the context of contracts, a voluminous amount of information is required to determine the scope of the interests that are created by the contract.²⁴³ But it is much less often the case that a contract will bind multiple-generations of parties, each of whom can unilaterally add their own contract terms to the terms negotiated by the originating parties.

This is the case, however, with estates. Estates either have a set durational end point (e.g. a term of years), a defeasible durational end point (e.g. a fee simple determinable), or no end point at all (e.g. fee simple absolute).²⁴⁴ A grantee who takes a fee simple absolute that is unfettered by collateral obligations (i.e. servitudes), can, when she transfers her interests, transfer an entirely new estate. She can grant another fee simple absolute, or she can create a lesser estate.

On the other hand, a grantee who takes an estate subject to preexisting restrictions (either durational or qualitative) is bound by those conditions. Grantees who take after her are assignees of the original obligations created in the conveyance. Yet the grantee can add her own restrictions to those that are already in place upon the estate. So for example, a grantee who takes a fee simple determinable, can, during her tenure as owner, impose an easement upon the estate that she holds. The next grantee then will take an estate burdened both by a defeasible condition and by an easement. While the imposition of additional restrictions does not necessarily cloud the issue of notice (as discussed previously), it does complicate the contours of the interest owner enjoys in the estate. Over time, ownership conditions can become imposing and the amount of information required to ascertain the contours of the estate voluminous.

It is important to note, too, that each successive owner (or “assignee” to continue the contract analogy) that takes Blackacre does so in unique circumstances and with unique purposes. Over the long durational arc of an estate, the physical characteristics of the land in question (as well as surrounding land) may change. Each successive owner may have her own idiosyncratic plans for using and enjoying the estate. Successive owners

²⁴² See *id.* at 92.

²⁴³ *Id.*

²⁴⁴ See generally, Dukeminier, *et al.*, *supra* note 120, at 191 – 202.

need not be united in purpose or in plans. Only the object itself (here, Blackacre) connects them to one another.

In other words, a significant distinction between property and contract has to do with what is referred to in property as the “chain of title,” but what we can consider here more loosely to be the “chain of estate.” Here the concern is not just that inaccuracies as to the nature of interests conveyed may accumulate or that each subsequent owner is able to add a unique layer of variables to the existing cohort of restrictions. The concern is that, over time, the volume of information required to understand property rights significantly increases.

This situation would be greatly aggravated if each successive owner were permitted to impose restrictions that were not subject to the critical control exercised by *numerus clausus*. If owners were permitted to add highly idiosyncratic and circumstantially-driven contingencies to land (and object) ownership, the degree of complexity that attends ownership would increase exponentially. Interests in Blackacre may be straightforward upon the creation of an estate, and many generations later be reduced to a tangled thicket of interacting variables

Another way of thinking about this distinction is to conceptualize all the relevant information about an estate in Blackacre as a small block of ice. Core information about the estate – e.g., information about the physical parcel of land - is both relatively stable and transparent. At the dawn of a new estate, this core of information is poised at the top of a timeline with no end in sight. As the estate moves through time, it travels through the hands of a string of successful owners whose possession and use has the potential to cause information relevant to the estate to “snow ball.” As the cluster of information grows, access to any one piece of information becomes obscured by the sheer volume of relevant information.

Now contrast this picture with its contract analogue. Contract interests may be quite complex at their inception, but they are much less likely to grow exponentially over the duration of the contract term. It is also not likely that the duration of a contract term will span multiple human lifetimes as is quite frequently the case in property.

Now, we may well pause here to wonder whether the durational length of estates can be properly characterized as an *ontological* feature of interacting with tangible objects in the world. After all it seems that we could simply impose durational limits upon estates. We could, for example, limit the

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duration of an estate to the lifespan of the owner, thereby converting all property interests into life (or lesser) estates.²⁴⁵

However, the fact that estates frequently have open-ended durational limits is bound up in ontological facts about objects in the world. Property interests are inherently in tension with other adjacent interests, largely (but not exclusively) because land is, literally, contiguous. Because land is contiguous, property interests are typically reciprocal and interact with one another (i.e. *your* right of way is a restriction on *my* estate). For example, suppose that A subdivides a parcel into two lots: X and Y. Suppose too, that Y is completely landlocked. A grants Y to B and also grants an easement across X. When should the easement end? If the easement ends when B dies, then the owners who succeed B in Whiteacre will perennially be beholden to the successive owners of Blackacre. As a consequence of the property's adjacency, Whiteacre owners will forever be required to negotiate (and renegotiate) with Blackacre's owners for access to an egress.²⁴⁶ No "permanent" or enduring egress can be obtained, despite the fact that the condition that necessitates the egress is permanent and enduring.²⁴⁷ How would such a system fairly contend with the inherent durational advantage that would issue from ownership by a non-natural person (i.e. a corporation)?

Also, because land (and other tangible objects) often endure for longer than a single lifespan (a point we shall return to below), property interests are also inherently successive in nature. Assuming we impose a lifetime durational limit on estates (such that the interest evaporates at the death of the owner, as when a joint tenant predecease her cotenants),²⁴⁸ who is empowered to determine who the successive owner will be?

²⁴⁵ Durational limits for certain property interests have been suggested in limited contexts. Cf. Carol M. Rose, *Servitudes, Security, and Assent: Some Comments on Professors French and Reichman*, 55 S. Cal. L. Rev. 1403 (1982) (proposing durational limits for certain servitudes).

²⁴⁶ Although this is not a disagreeable proposition to all commentators. See, Rose, *supra* note 251, at 414 (suggesting that hold out problems could be solved by "limiting servitudes to a fixed duration which is understood by the parties at the outset and renegotiated periodically.").

²⁴⁷ *But see, id.* at 413 (contemplating the periodic renegotiation of some servitudes).

²⁴⁸ Cf. Dukeminier, *et al.*, *supra* note 120, at 323 (discussing the right of survivorship in the context of a joint tenancy).

These factors, which are endemic to our interactions with tangible objects in the world, conspire to present a difficult circumstance for imposing blanket durational limits on property. Blanket durational rules would be difficult to constitute in way that promotes either the just distribution or the best use of valuable resources given the contiguous nature of real property and the reciprocal and adjacent nature of property rights.

Finally, tangible objects in the world – particularly land - tends to transcend the lifespan of an individual owner. The significant of this fact in the context of complexity is considered below.

2) The Transcendence of the Material

A second reason why property transactions are uniquely vulnerable to complexity has to do with the fact that objects in the material world enjoy a physical existence that is independent of their legal significance. Unlike the entities that are the subject of human interaction in other areas of legal regulation like “wrongs” in tort or “promises” in contract, objects in the material world transcend the legally significant moment of “operational facts” – indeed they transcend their legal narrative altogether.

Consider a well-built house: the Hendricks House in Wilmington, Delaware, for example.²⁴⁹ The Hendricks House was built in 1690 by Johan Hendricksson as wedding present for his younger brother, Anders.²⁵⁰ Originally, it was merely a gift from one brother to another. The legally significant act of conveying the house was bounded by the relevant legal criteria for perfecting a gift. The act of conveying was also bounded in time (once the gift was perfected the act of giving became irrevocable).²⁵¹ But the *fact* of house – the fact that it existed as a tangible object occupying space in the world - stands outside of these legal constructs. Once constructed, the house would continue to stand whether a gift was perfected (it was) or not. Similarly, the house existed, whether Johan gave the house to Anders (as he did) or whether he changed his mind mid-construction and gave the house instead to his youngest brother Matthias.²⁵² Once created,

²⁴⁹ Ronald A. Henderickson, *The Henderickson House: Oldest Stone House in America?* originally published in *Swedish Colonial News*, Volume 1, Number 19 (Spring 1999), available at <http://www.colonialswedes.org/Forefathers/Hendrick.html>.

²⁵⁰ *Id.*

²⁵¹ *See generally*, Dukeminier, *et al.*, *supra* note 120 at 164-166 (gifts are irrevocable).

²⁵² *See* Henderickson, *supra* note 255.

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the house became an entity that transcended both the acts that constituted the perfection of a gift, and the parties to the gift.

Indeed, the house literally transcended the parties, outlasting not only Johan and Anders but every person involved in the building of the house – stone masons, carpenters, and so forth. The Hendricks House then proceeded to outlast Anders’ children and grandchildren and great-grandchildren, and everyone who ever knew Anders’ children or grandchildren or great-grandchildren.

The Hendricks House endured not only the legally significant moment of “giving” between the brothers, but it endured the very system of government that gave significance to those acts.²⁵³ The Hendricks House endured through a political revolution and inception of two subsequent forms of government.²⁵⁴ The house was nearly one hundred years old before the system of government that presently regulates its legal significance was finally put into place.²⁵⁵ The Hendricks House still stands today, some 323 years after it was created, and over the course of the last three centuries it has been the subject of numerous ownership arrangements.²⁵⁶ It was created in the context of a conveyance between Johan and Anders, but the *existence* – the material reality - of the house could hardly be said to be confined by that context.

This remarkable transcendence is a unique feature of material entities. What non-material subject of legal regulation has the capacity to transcend not only the parties immediately affected by the regulation, but, potentially, the legal regime itself? The regulation of property is uniquely complex, in part, because each of our objects has the potential to become serially involved in a long sequence of ownership arrangements. For each object, the sequence of ownership arrangements can span vast amounts of time (which can itself introduce a host of variables relating to changing circumstances) and involve a very large number of otherwise unconnected people.

Perhaps nowhere is this transcendence more plainly evident than in the regulation of real property. Every inch of *terra firma* on the planet is matter

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ *Id.*

of significance. There is perhaps no subject of legal regulation that is more closely connect to basic human survival than the regulation of physical space. Yet, each acre of land transcends the context of any given ownership arrangement. A parcel of land is neither constituted by, nor is it coterminous with, an estate. Although the two are frequently conflated, objects of property and the estates that are attached to them are two entirely different entities.

To consider this, imagine if, instead of a house, the Hendricks brothers had been parties to a contract. The contract would have been extinguished when it was executed, repudiated, or the contract term ended. If the brothers had been connected by a tort, the wrong would have been completed once the act or omission constituting the wrong was completed. In both instances, the brothers would have likely outlived the object of regulation.

In other words, a promise and a wrong both *happen*, but a house *is*. The Hendrickson House exists separate and apart from the acts that gave rise to an estate (*i.e.* the act that manifested Johan’s intent to give; the act that manifested Anders’ acceptance of the gift; the delivery of the deed).²⁵⁷ In contrast, while a “promise” and a “wrong” are each constituted by particular acts (*e.g.*, the act of striking another person constitutes a “wrong”), once those acts transpire, the “promise” and/or the “wrong” cease to exist outside the context of their on-going legal significance (*i.e.* a contract or a cause of action). Their moment, in other words, is fleeting, and does not lend itself to successive participants. A house, however, remains a house before the creation of the estate, during the estate, and after the termination of the estate. The house endures because it is not primarily or solely constituted by the acts that gave rise to the estate.

This endurance means that the house will likely meet with successive owners, and even successive estates. Over time, the likelihood that restrictions will proliferate increases. In other words, the arc of the house’s lifespan is long and it bends towards complexity.

In addition to the duration of estates and the transcendence of the material, there is a final attribute of property that likewise renders it vulnerable to complexity: the highly alienable nature of property interests. This quality is considered below.

²⁵⁷ See generally, Dukeminier, et al., *supra* note 120 at 164-166 (discussing the elements of a gift).

3) The Highly Alienable Nature of Property Interests

The highly alienable nature of property interests provides a final point of distinction between property interests and contract interests. Although contract interests are often assignable, they are assigned with much less frequency than property interests. In property, assignments are the norm given that the duration of estates tend to span multiple generations.

With respect to the alienability of property interests, we might meet with the objection (as we did in the context of discussing the duration of estates) that this is an attribute of property ownership that is synthetic rather than ontological. We could, the objection might hold, render property interests less alienable if we constructed our property rules differently.

However, the alienability of property interests is also bound up in ontological facts about our interactions with tangible objects in the world. Because property interests are poorly suited to blanket durational rules, material objects tend to transcend, and owners (at least human owners) are mortal, ownership of real property is an exercise in finitude. These three attributes conspire to ensure the necessity of property alienability. It follows that a property interest is likely to acquire a series of unconnected successful owners, and this likelihood renders property interests more vulnerable to the destructive capacity of complexity.

IV. Conclusion

In sum, while excellent insights can be culled from the rich exploration of *numerus clausus* that precedes this project, the complexity thesis offers a more coherent explanation of all of the salient features of *numerus clausus*. The complexity thesis accounts for the principle's universal presence in property systems by demonstrating that the enterprise of normatively interacting with tangible objects in the world is inherently and uniquely complex.

In the absence of *numerus clausus*' prohibition of novel forms, the duties and obligation that we create with respect to our property interests would rapidly grow so complex as to overwhelm our capacity to understand and enforce our property interests. In exercising criterial control over the forms of ownership, *numerus clausus* "tames" the wild beast of complexity and thereby makes it possible for us to stand in normative relation to objects in the world.