The Tragedy of the Anticommons: Property in the Transition from Marx to Markets

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ARTICLES
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THE TRAGEDY OF THE ANTICOMMONS:
PROPERTY IN THE TRANSITION
FROM MARX TO MARKETS

Michael A. Heller*

Why are many storefronts in Moscow empty, while street kiosks in front are full of goods? In this Article, Professor Heller develops a theory of anticommons property to help explain the puzzle of empty storefronts and full kiosks. Anticommons property can be understood as the mirror image of commons property. By definition, in a commons, multiple owners are each endowed with the privilege to use a given resource, and no one has the right to exclude another. When too many owners hold such privileges of use, the resource is prone to overuse — a tragedy of the commons. Depleted fisheries and overgrazed fields are canonical examples of this familiar tragedy. In an anticommons, according to this Article, multiple owners are each endowed with the right to exclude others from a scarce resource, and no one has an effective privilege of use. When too many owners hold such rights of exclusion, the resource is prone to underuse — a tragedy of the anticommons. Empty Moscow storefronts are a canonical example of the tragedy of underuse. Anticommons property may appear whenever governments define new property rights in both post-socialist and developed market economies. Once an anticommons emerges, collecting rights into usable private property bundles can be brutal and slow. The difficulties of overcoming a tragedy of the anticommons suggest that policymakers should pay more attention to the content of property bundles, rather than focusing just on the clarity of rights.

I. INTRODUCTION

Socialist rule stifled markets and often left store shelves bare. One promise of the transition “from Marx to markets”¹ was that new entrepreneurs would acquire the stores, create businesses, and fill the shelves.² However, after several years of reform, storefronts often re-

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¹ Bob Ellickson and I developed and co-taught “From Marx to Markets” as a seminar at Yale Law School in 1991. I teach an eponymous seminar at Michigan. Variations on the term have been widely used in describing transition. See, e.g., Economists (Should) Rule, OK, ECONOMIST, Aug. 14, 1993, at 19, 19 (“[T]he law of the market is replacing that of Marx or the military.”).

² Paralleling the conventional usage, this Article uses the terms “transition” and “transition regimes” to refer to the 28 post-socialist societies that have adopted some market-oriented reforms, but which one cannot yet describe as fully formed market economies. See FROM PLAN TO MARKET: WORLD DEVELOPMENT REPORT, 1996, at ix [hereinafter WORLD DEVELOPMENT
mained empty, while flimsy metal kiosks, stocked full of goods, mush-
roomed up on Moscow streets. Why did new merchants not come in
from the cold?

Property theorists offer partial explanations for this puzzle of empty
stores and full kiosks, citing the ambiguity of new rights, local govern-
ment corruption, and the lack of a legal infrastructure. This Article
argues that, even if the initial endowment of property rights were
clearly defined, corruption held in check, and the rule of law respected,
storefronts would remain empty because of the way governments are
creating property rights. Transition regimes have often failed to endow
any individual with a bundle of rights that represents full ownership of
storefronts or other scarce resources. Instead, those regimes have rati-
fied the expectations of powerful socialist-era stakeholders by making
them rights-holders in the new economy. Rights were made alienable in
the hope that new owners would trade them to more productive
users. In a typical Moscow storefront, one owner may be endowed ini-
tially with the right to sell, another to receive sale revenue, and still others to
lease, receive lease revenue, occupy, and determine use. Each owner
can block the others from using the space as a storefront. No one can
set up shop without collecting the consent of all of the other owners.

Empty Moscow storefronts are a stark example of anticommons
property, a type of property regime that may result when initial en-
dowments are created as disaggregated rights rather than as coherent
bundles of rights in scarce resources. More generally, one can under-
stand anticommons property as the mirror image of commons property.
In a commons, by definition, multiple owners are each endowed with

3 See generally ROMAN FRYDMAN & ANDRZEJ RAPACZYNSKI, PRIVATIZATION IN EASTERN
EUROPE: IS THE STATE WITHERING AWAY? 170 (1994) (commenting on the essential role of the
state and the legal system in a private property regime); Cheryl W. Gray, Rebecca J. Hanson & Mi-
chael Heller, Hungarian Legal Reform for the Private Sector, 26 GEO. WASH. J. INT'L L. & ECON.
293, 303–05 (1992) (noting the slow transition from state to private property ownership in the Hun-
garian legal system); Andrei Shleifer, Establishing Property Rights, in PROCEEDINGS OF THE
WORLD BANK ANNUAL CONFERENCE ON DEVELOPMENT ECONOMICS 93, 95, 104 (1994) (dis-
cussing problems in establishing secure property rights in transition regimes).

4 This Article draws on the familiar image of property as a "bundle of rights," in which each
right represents the relation between two actors over the use and control of a scarce resource. See
Thomas C. Grey, The Disintegration of Property, 22 NOMOS 69, 69 (1980) (recognizing the modern
view of property as a "bundle of rights").

5 The viability of the idea of a "standard" bundle of rights and the equally controversial idea of
"normal" use of property is discussed below in note 228. This Article uses such terms descriptively
by reference to analogous market legal systems.

6 See infra section II.B (discussing Moscow storefront case study).

7 Frank Michelman appears to have coined the term "anticommons." See infra Part III (dis-
cussing the fleeting appearance in property theory literature of the anticommons and developing a
more useful definition).

8 See infra pp. 651, 656, 672 (distinguishing a legal anticommons in storefronts from a spatial
anticommons in communal apartments).
the privilege to use a given resource, and no one has the right to exclude another. When too many owners have such privileges of use, the resource is prone to overuse — a *tragedy of the commons*. Canonical examples include depleted fisheries, overgrazed fields, and polluted air.

In an anticommons, by my definition, multiple owners are each endowed with the right to exclude others from a scarce resource, and no one has an effective privilege of use. When there are too many owners holding rights of exclusion, the resource is prone to underuse — a *tragedy of the anticommons*. Legal and economic scholars have mostly overlooked this tragedy, but it can appear whenever governments create new property rights. This Article proposes empty Moscow storefronts as a canonical example of the tragedy of underuse.

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9 A commons is "a scheme of universally distributed, all-encompassing privilege[,] . . . a type of regime that is opposite to [private property]." Frank I. Michelman, *Ethics, Economics and the Law of Property*, in 24 NOMOS 3, 9 (1982). This vocabulary of privileges of use and rights of exclusion tracks Hohfeld's terms for describing legal relations, which are now commonly used in property theory. See Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning and Other Legal Essays* 96–97 (Walter Wheeler Cook ed., 1923). In this context, "'rights' mean[] that others are legally required to leave the object alone save as the owner may permit, and . . . 'privileges' mean[] that the owner is legally free to do with the object as he or she wills." Michelman, supra, at 5.

10 The literature on the tragedy of the commons is vast. See, e.g., Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244–45 (1968) (introducing the term); Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* 182–84 (1990) (discussing applications of the tragedy of the commons and showing sustainable informal management of commons resources).

11 The initial endowment of competing rights discussed here differs from the voluntary fragmentation of bundles in private property regimes. Market legal systems allow owners to break up property bundles, but also have rules that usually operate both to create clear decisionmakers over objects and to limit extreme fragmentation of rights. See infra pp. 665, 671–72 (discussing allowable fragmentation in private property regimes).

In conversation with the author, Carol Rose notes that common law countries such as the United States have developed elaborate mechanisms that accommodate desires for changing uses and that prevent anticommons property from emerging. For example, modern condominium law often uses majority voting to prevent individuals from blocking change. Also, joint owners can always partition commonly held property. See John E. Cribbet & Corwin W. Johnson, *Principles of the Law of Property* 114 (3d ed. 1989). Many states require recording covenants periodically to keep them in force, a rule that helps extinguish low-value rights. See id. at 392. But cf. Hodel v. Irving, 481 U.S. 704, 718 (1987) (holding escheat of low-value devise and descent interests in allocated Native American lands to be an unconstitutional taking); infra section IV.D (discussing Hodel).

12 How do players behave in a game in which each holds rights to veto, rather than the more familiar models in which each player has a privilege of use? It is beyond the scope of this Article to develop a formal economic model that distinguishes anticommons behavior from closely related collective action problems and evaluates strategies to overcome anticommons tragedy.

13 Andrei Shleifer has described the issue:

The literature on poorly defined property rights has focused on the common pool problem. . . . It explores how a society moves from a situation in which a forest is common property, to one of reasonably well-defined communal property rights, to one in which the government enforces property rights. . . . But in Eastern Europe assets are already too valuable to remain common property, and well-defined control structures govern the use of these assets. These control structures give politicians enormous control rights over all assets, including private assets that are politi-
THE TRAGEDY OF THE ANTICOMMONS

The main goal of this Article is to introduce the anticommons as a useful new tool for property theory; a subsidiary goal is to show how awareness of anticommons tragedy may help inform legal policymaking. Part II presents an empirical study of the creation and resolution of anticommons property across a range of property in transition. The Russian government did not intentionally create anticommons property. For the most part, new rights track the ways that people want to use resources. But not always. Governments can create too many property rights and too many decisionmakers who can block use. The empirical material in this Part shows how, once an anticommons emerges, collecting rights into usable private property bundles can be brutal and slow.

Part III defines anticommons property more precisely and situates the term in a property theory framework. This Part shows how commons and anticommons property can operate symmetrically. Neither would be tragic in a theoretical world of costless transactions, because people could trade their initial endowments until resources were put to their highest-valued uses. In practice, close-knit communities may develop informal norms and institutions to manage resources and avoid tragedy. Often, however, efficient bargains fail because transaction costs are controlled through regulation. [These politicians] use their control rights to produce inefficient outcomes that serve their personal goals.

In a transition economy the problem of establishing property rights largely comes down to shrinking the range of political control. Shleifer, supra note 3, at 98–100 (citations omitted); see also Andrzej Rapaczynski, The Roles of the State and the Market in Establishing Property Rights, 10 J. ECON. PERSP. 87, 98 (1995) ("The absence of a workable system of legal entitlements has clearly played a retarding role in the growth of small businesses in Russia. Many new Russian businesses operate out of kiosks and other temporary structures, while existing real estate is woefully underutilized.").

In the storefront example, the government lacks the resources to buy back and re-bundle poorly designed rights and is unwilling to undermine the credibility of market reforms by taking rights without payment. Frank Michelman has elaborated on this dilemma through his oft-cited distinction between "settlement" and "demoralization" costs. See Frank I. Michelman, Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law, 80 HARV. L. REV. 1165, 1214–18 (1967).

In some cases, informal norms emerge to routinize bundling of rights, and rights-bundling entrepreneurs buy or bully their way into control. In other cases, however, holdouts by anticommons owners, high transaction costs, and cognitive biases block bundling. See infra p. 674.

Coase's model overlooks cognitive biases, such as wealth and framing effects, that would prevent a single efficient outcome even in the case of no transaction costs. See Richard Craswell, Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships, 43 STAN. L. REV. 361, 385–91 (1991).

Carol Rose, Elinor Ostrom, and others have shown how people sometimes develop informal norms and institutions to manage commons property efficiently. See, e.g., Ostrom, supra note 10, at 182–84; Carol Rose, The Comedy of the Commons: Custom, Commerce, and Inherently Public Property, 53 U. CHI. L. REV. 711 (1986). In addition, locking multiple users together may reinforce communitarian values and help people learn to work together. See id. at 774–77. These insights on the potential for informal coordination and the non-utilitarian value of overlapping ownership apply with similar force on the anticommons end of the property spectrum. Whether anticommons
costs, strategic behaviors, and cognitive biases defeat informal negotiations, and communities of owners are not close-knit.\textsuperscript{18} When markets fail to rearrange initial endowments, resources can become stuck in low-value uses at either end of the property rights spectrum. Whether this misallocation takes the form of overuse in a commons or underuse in an anticommons, the economic waste of scarce resources results. Privatizing a commons and bundling an anticommons can solve the tragedies of misuse by better aligning individual incentives with social welfare.\textsuperscript{19}

Part IV briefly applies the anticommons idea to puzzles beyond Russian real property transition. Governments may create anticommons property in developed market economies, as well as in transition countries. In the United States, vivid examples appear at the frontiers of Native American law and intellectual property protection.\textsuperscript{20} Whether anticommons tragedy emerges in a developed or transition economy, and whether it lasts for a short or long period, societies can avoid its social costs by creating more coherent initial endowments. The difficulties of overcoming a tragedy of the anticommons suggest that property theorists and policymakers should pay more attention to the content of property bundles,\textsuperscript{21} rather than focusing just on the clarity of rights.\textsuperscript{22}
II. THE GRADIENT OF PROPERTY IN TRANSITION

This Part introduces the Moscow storefront as a paradigm of an anticommons. Section II.A sets the legal stage and proposes an explanation for the link between bundling of rights and economic performance. Section II.B details transition in Moscow storefronts. Finally, Section II.C contrasts the dynamics of anticommons property in related empirical settings.

A. Defining the Gradient of Property

1. Key Elements of Socialist Law. — Socialist legal systems organized property in a fundamentally different way from private property systems. For example, socialist law did not have the legal concept of "real estate." One could not point to a sharply defined piece of real estate and say that it belonged to a particular entity. Instead, the state owned all land — the "hard core of state property" — indivisibly with no right of alienation. For administrative convenience, the government allocated complex use rights to state organizations. Structures such as buildings had a somewhat different legal regime: state organizations could transfer structures among themselves but could not alienate them to private individuals. Conflicts among users of state property were resolved through a dispute-settlement mechanism that accorded primacy to state socialist expediency, rather than to abstract legal prin-


See Gray, Hanson & Heller, supra note 3, at 303–05. Many solid works detail the Soviet legal system and socialist law of property. See, e.g., George M. Armstrong, Jr., The Soviet Law of Property 6 (1983); W.E. Butler, Soviet Law 169–76 (1983); F.J.M. Feldbrugge, Russian Law: The End of the Soviet System and the Role of Law 229–46 (1993). This section touches on only those elements of the socialist legal system that set up the anticommons argument and leaves for another day a more nuanced explanation of why socialist systems divided property as they did.


See Butler, supra note 23, at 247.

See Butler, supra note 23, at 253.

See Feldbrugge, supra note 23, at 243–44.

See Butler, supra note 23, at 170.
Socialist governments did not maintain the ordinary mechanisms that market legal systems use to distinguish one plot of land from another. Because no land markets existed, no need arose for maintaining market legal tools such as land registries.

The absence of real estate as a legal category suggests three elements that distinguished socialist property laws from market legal systems and set the stage for the emergence of an anticommons:

(a) **Hierarchy of Property.** — Whereas market legal systems tend to dichotomize among types of property (for example, real and personal, or tangible and intangible) and to focus on the scope of individual rights, socialist law categorized property according to the identity of the owner. Socialist law erected a hierarchy based on the level of protection afforded property held by different owners. At the top was state socialist property, which received the most protection. Next came cooperative property, which received similar but somewhat less protection. Personal property received still less protection.

The residual
category of private property was abolished altogether in the Soviet Union; the rest of the socialist world gave it the least protection from taxation, regulation, and confiscation.36

(b) Objects of Socialist Property. — Within the category of socialist property, which included the objects of greatest economic value in socialist society, the state defined the boundaries of objects in ways that are unfamiliar in market legal systems. Because all productive assets were in principle "unitary" and belonged to "the people as a whole," socialist law did not delineate the ordinary physical and legal boundaries of private property.37 Concretely, there was often no record of the line dividing land between two buildings.38 In the early years of the transition from socialism, private owners and public officials often could not answer the question, "Who controls the land on which we stand?"

(c) Ownership of Socialist Property. — Instead of assigning an owner to each object, socialist law created a complex hierarchy of divided and coordinated rights in the objects it defined.39 These ownership and control rights varied among socialist countries, but one can loosely compare them to Western forms of trust ownership.40 The law integrated ownership of physical assets within overlapping state structures, often linking upward from a state enterprise, to a group of similar enterprises, to the local and then central offices of a ministry responsible for that branch of industry.41 Central-planning mechanisms coordinated uses; state arbitration courts, formally, and the Communist Party, informally, resolved conflicts.42

Thus, the most valuable assets in socialist countries began the transition to markets with indistinct boundaries and overlapping ownership. To create private property that owners could trade in markets,
transition reformers first had to break down the socialist regime. Across the socialist world, the task of eliminating socialist property law generally involved addressing the three elements discussed above. Transition regimes eliminated the hierarchy of property, made property legally divisible and alienable, and put private ownership on an equal footing with state ownership. Transition reformers also began to redefine owners and objects in terms analogous to those of market economies. Following these initial steps to dismantle socialist legal regimes, subsequent reforms began to develop new market legal systems in the hope of generating well-functioning private-property relations.

2. The Gradient of Property: Protection and Performance. — When property is organized along the hierarchy of socialist legal protection, a

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43 The literature on transition from socialism is extensive. For a useful, annotated bibliography on the speed and sequencing of reforms, see WORLD DEVELOPMENT REPORT, cited above in note 2, at 149. As one article noted:

"The mechanisms of the command economy were dismantled everywhere with surprising speed," said Peter Havlik, [deputy director of the Vienna Institute for Comparative Economic Studies.] On the other hand, the formation of new institutions has turned out to be much more difficult, slower and more painful than most analysts had expected at the outset of reforms in 1990.


44 In many transition countries, a major part of transition has been the restitution of property expropriated from pre-Communist owners. See WORLD DEVELOPMENT REPORT, supra note 2, at 59. Rights acquired under such programs could contribute to anticommons phenomena. Russia has not opened the restitution issue, perhaps because there is no living memory of pre-1917 ownership.

45 See GRAY, supra note 31, at 4; WORLD DEVELOPMENT REPORT, supra note 2, at 88-89. China and Vietnam are exceptions in that they still formally assert the primacy of state property, although they now broadly allow long-term leases of property by private individuals. See id. at 89.


Other countries went through a similar process. For example, in Hungary, Law 14 of 1991 “abolished all forms of socialist ownership, abrogated privileges of state and cooperative ownership as against private ownership, reviewed the range of exclusive state property and inalienable assets, and empowered the state to cede certain property” to private owners. Gray, Hanson & Heller, supra note 3, at 305. Act 1 of 1987 on Land, as amended through 1991, then helped create a private real estate market, in part by defining land and structures as objects of private ownership, and in part by eliminating conflicting categories of socialist law such as the “operational administration” form of land-holding. Id. at 306 (internal quotation marks omitted).

47 The process that socialist systems used to create private property generally followed three broad steps: decentralization, in which the federal government assigned newly alienable objects to state enterprises and to local, regional, and federal government agencies; privatization, in which state enterprises and agencies were instructed to transfer most of their property into private control; and regulation, in which governments began to create the complex regulatory framework typically used in market economies both to protect public welfare and to mediate disputes among private property owners. See, e.g., id. at 307-08, 310-11.
striking and previously unreported trend emerges.\textsuperscript{48} This section will argue that, within a given regime, the more protection property received under socialist law, the less successful its performance has been in a new market economy.\textsuperscript{49} It is difficult for existing transition literature to explain this inverse correlation between protection and performance.\textsuperscript{50} For example, the level of administrative corruption, judicial incapacity, and clarity of rights is reasonably consistent across types of real estate within any given national real property market. Yet residential real estate, which received relatively less protection under socialist law, appears to be performing better than commercial real estate, which received relatively more protection.\textsuperscript{51}

The working hypothesis in this section is that private property emerges less successfully in resources that begin transition with the most divided ownership. In such resources, poorly performing anticommons property is most likely to appear and persist.\textsuperscript{52} In contrast, private property emerges more successfully in resources that begin transition with a single owner holding a near-standard bundle of market legal rights.\textsuperscript{53} In such resources, the transition from a socialist to a market economy occurs more smoothly (Figure 1).\textsuperscript{54}

\textsuperscript{48} This Article abstracts from the significant variations across the 28 transition countries in the pace and scope of reforms, the length of time under communism, and the underlying cultural, historical, and legal background.

\textsuperscript{49} The measure of "performance" is difficult to quantify given the available data. A comparison of Russian assets with similar assets in developed market economies, however, provides a useful proxy for the concept of performance. Simple efficiency-related measures of performance in the real estate context could be the trend in vacancy rates, the ratio of rental value or sales prices to incomes, and the aggregate value of sectoral resources compared to that of market economies at a similar level of economic development. Exploration of distribution-related measures of performance is also possible. This Article considers performance more in terms of the size of the pie, rather than who gets which slice. In other words, it focuses on efficiency, as opposed to distribution. See generally \textit{WORLD BANK, HOUSING: ENABLING MARKETS TO WORK} 71-112 (1993) (using quantitative indicators to compare housing sector performance across countries).

\textsuperscript{50} See, e.g., sources cited supra note 3.

\textsuperscript{51} Compare Raymond J. Struyk, \textit{The Long Road to the Market}, in \textit{ECONOMIC RESTRUCTURING OF THE FORMER SOVIET BLOC} 60 (Raymond J. Struyk ed., 1996) ("Can households with reasonable purchasing power readily buy housing in the market? ... 'Yes' ... True, the whole transaction may not be as efficient as in the West, but the system is working ... The clearest evidence we have for our assertion of a positive answer comes from the Russian Federation."). with \textit{WORLD DEVELOPMENT REPORT}, supra note 2, at 60 ("Reformers [have had] meager success in privatizing commercial real estate: no transition economy has yet embarked on a systematic program.").

\textsuperscript{52} Although private property may perform quite badly in market economies, most resources arguably perform better as private property than as anticommons property. See infra Part III.B.

\textsuperscript{53} Personal property with the lowest socialist legal protection, such as cars, has been most rapidly and successfully transformed into private property. Most cars owned by individuals were converted directly to private property; after this change, it was no longer an economic crime to use a car for income-producing purposes. Overnight, it became much easier to hail a taxi in Moscow because virtually any car would pull over to give one a ride anywhere for a few dollars.

\textsuperscript{54} As a caveat, this gradient is an illustration of anticommons dynamics, rather than a comprehensive catalog of socialist property. The transition economies' experience with large state enterprises, small enterprises, collective farms, intellectual property, and other types of property could
To hold reasonably constant a number of alternative explanatory variables, this Article focuses the analysis on four Russian real estate examples. These examples comprise a more significant portion of national wealth than observers often realize. For example, in market economies, the value of commercial real estate often exceeds the value of the industrial plant and equipment. Housing is an even larger share, accounting for about one-third of reproducible national wealth in market economies.

Each point along the gradient of property in transition suggests lessons about the nature of anticommons property and possible routes to rebundling anticommons property as private property. Property that began transition at the top of the gradient, such as Moscow storefronts, represents an anticommons in its starkest form. Section II.B explores Moscow storefronts. The following section will then briefly contrast three additional points along the gradient: street kiosks, individual
apartments, and communal apartments (komunalkas). Together, these examples provide a sense of the major routes into and out of an anticommons.

B. Case Study of Empty Stores in Moscow

1. Empty Stores as Anticommons Index. — Stores in socialist regimes were notoriously bare because of an economic policy that disfavored production of consumer goods. Although the transition to markets took root in the early 1990s and storefronts were privatized, many storefronts in Moscow unfortunately remain empty. The streets in front of these empty stores, however, new entrepreneurs set up thousands of metal kiosks, which they rapidly filled with goods. The kiosk became a defining icon of transition for casual observers and savvy politicians alike. The presence of kiosks can be seen as a visual

60 Redefining property rights is a prolonged process and not easily confined to a single "start" date. In Russia, for example, relevant property rights reforms began during the Gorbachev era in the mid-1980s with glasnost and perestroika and accelerated during the early 1990s. See generally 1 INTERNATIONAL MONETARY FUND, WORLD BANK, ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT & EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT, A STUDY OF THE SOVIET ECONOMY 7–18 (1991) (providing a detailed appraisal of the Soviet economy before its dissolution). In Russia, the creation of anticommons property can be dated perhaps to the 1990 Law on Private Property, cited above in note 46, and the Law on Local Self-Government in the RSFSR (July 6, 1991), which decentralized state socialist property ownership to local and republic governments and agencies.

By contrast, transitions in the political or economic arenas may be charted more easily. One such political transition is the collapse of the Berlin Wall in 1989. See Peter Marcuse, Missing Marx: A Personal and Political Journal of a Year in East Germany, 1989–1990, at 81 (1991). On the economic side, start dates for transition can be similarly traced to dramatic events such as freeing prices or ending wage controls. See generally Peter Murrell, The Transition According to Cambridge, Mass., 33 J. Econ. Lit. 164 (1995) (reviewing literature on the economic aspects of transition).

61 See Rapaczynski, supra note 13, at 98. Hard data on store vacancies by city or region are not available for the period under discussion in this Article. The common understanding of widespread vacancies is thus largely impressionistic, rather than the result of survey data. See, e.g., id. Note that well-functioning market economies normally have a certain level of vacancies, but vacancies in Russia appear to have exceeded that level.

62 See Ellen Barry, Kiosk Crackdown Yields Sidewalk Space, Bitterness, Moscow Times, Feb. 14, 1995, available in LEXIS, News library, Arcnews file ("In 1990, new laws made it possible to sell goods with your bare hands anywhere except the Kremlin walls . . . . At first there were only 60 or 70 kiosks, . . . but then the number rose sharply" to the 16,000 [metal kiosks] that lined Moscow's streets in 1993, [Moscow Mayor] Luzhkov said.").

63 See Fred Kaplan, Dirty Capitalism, Boston Globe, June 25, 1993, at 61 ("The kiosk has become a double-edged symbol of Russia's transition from socialism to capitalism — a quick way to break into free enterprise and bring merchandise to the market, yet also a shoddy hut of tawdry goods and corruption."); Sergei Khrushchev, Stands of Dirty Capitalism, Asia, Inc., Mar. 1994, at 86, available in LEXIS, News Library, Arcnews File (describing kiosks as "symbolic of the chaos in the Russian economy"); Kathy Lally, Kiosks Provide Muscovites a Ticket VP, Baltimore Sun, Dec. 13, 1992, at 3A ("Russians look at the kiosks, which sell everything from liquor and fur coats to shampoo and underwear, and see either certain economic ruin or guaranteed salvation."); Adam Tanner, City to Cut Kiosks, Urges Move to Stores, Moscow Times, July 17, 1994, at 32 (noting that kiosks "have come to symbolize the early stage of capitalism in Moscow").
and analytic indicator for measuring a transition country's progress from anticommons to private property. In Poland, for example, anticommons property in commercial real estate lasted less than a year: kiosks appeared briefly, but viable private property rights in commercial storefronts soon emerged. By contrast, in Russia, kiosks remain an important presence on the streets. Why have Moscow merchants not completed the move from kiosks into stores? The answer lies partly in the legal regime surrounding commercial real estate. One newspaper article reports: "All this buying and selling takes place on the street because the title to most stores is unclear or because stores are occupied by moribund state enterprises. The sidewalks were free and empty, so the

64 See Anne Barnard, Luzhkov Steps Up War on Kiosks, MOSCOW TIMES, May 5, 1994, available in LEXIS, News library, Arcnws file (quoting Moscow Mayor Luzhkov to say that kiosks "have fulfilled their purpose . . . Now it is time for trade to go back into the stores.")

65 See id. ("[K]iosks sprouted in Warsaw for about a year as the free market gained a foothold, and then 'naturally disappeared' without pressure from city authorities as merchants moved into shops."); Grzegorz Wojtowicz, World Bank Assignment: Poles' Retail Privatization Outstrips Region's, WARSAW VOICE, Apr. 2, 1995, available in LEXIS, News library, Arcnws file. However, even in Poland, problems of anticommons bundling have not been entirely overcome in theory. Rapaczynski notes: [T]he western rim countries in transition — such as Hungary, Poland and the Czech Republic — have by and large created a legal basis for private ownership of land of all kinds. Although this fact has certainly contributed to the fast growth of the new private sector, the rights actually acquired by most users of commercial premises have been significantly less complete and more insecure than those made possible by the legal system.

66 However, some evidence suggests that kiosk numbers may now be decreasing. See infra pp. 645-47 (discussing conflicting evidence on the Moscow kiosk population).

67 In addition to the legal regime, a range of practical business reasons suggest why merchants could prefer to start with kiosks rather than stores. First, merchants report that they can accumulate the capital to stock a small kiosk more readily than the relatively large interiors of typical Russian stores. See Tanner, supra note 63 ("Tvetkov, like many businessmen, still finds the prospect of opening a store overly daunting . . . Among the obstacles he cited was the high cost of inventory. His kiosk stocks about 1.5 million to 2 million rubles worth of goods, far below what a store would require."). This concern might not be determinative if commercial space were divisible among merchants and leases secure and marketable. Second, merchants may be better able to respond to market demands by changing kiosk location. However, kiosks are often located in prominent pedestrian areas in front of empty stores. Third, merchants may be more vulnerable to regulatory holdups in a fixed commercial location than in a movable kiosk. See id. ("Other would-be storeowners cite Moscow's hesitation to privatize its commercial space, bureaucracy, crime, and corrupt government officials as barriers to retail expansion."). But city regulators and mafia gangs are equally adept at tapping kiosks and stores as a source of informal revenue. Fourth, merchants prefer kiosks because store rents are high. However, this reasoning is backward. Store rents are high because space is scarce. If store leases were more readily available, prices would drop from current levels. There is pervasive excess demand for stores, but they may not be available at any price in an anticommons.

68 See, e.g., Celestine Bohlen, Moscow Journal: It's a Kiosk! It's a Mall! No, It's Slavyansky Ryad!, N.Y. TIMES, Dec. 23, 1992, at A4 ("So far, it is still a sidewalk empire, given the continued difficulties of getting adequate store space. 'Until now, it was simply not worth spending a year and [a] half fighting the bureaucracy to get space on a first floor,' [said a kiosk owner].")
new entrepreneurs moved in.\textsuperscript{69} Leasing of stores,\textsuperscript{70} conversion of industrial land to commercial use,\textsuperscript{71} new commercial real estate development,\textsuperscript{72} and other alternatives to privatization of existing stores all stalled during the first years of transition.

2. \textit{The Moscow Storefront in a Legal Context}. — Within the legal and institutional context of the Moscow storefront, the main actors are a wide variety of state and quasi-state organizations.\textsuperscript{73} During the early stage of transition in 1990, formal ownership of real estate was decentralized from federal to regional (\textit{oblast}) and local governments.\textsuperscript{74} In a monograph on commercial real estate markets in Russia, April Harding notes that a major source of the ambiguity of local government ownership can be explained by “conflicting efforts on the part of the federal government to strengthen general ownership and property rights, while it is also trying to constrain the property rights of local governments.”\textsuperscript{75}

The initial assignments of state property to different levels of government were opaque and varied.\textsuperscript{76} Through a complex set of federal decentralization laws and decrees, local and regional government agencies emerged as the key players, with nearly monopolistic control over property such as commercial real estate.\textsuperscript{77} The initial decentralization

\begin{footnotesize}
\begin{enumerate}
\item Lally, \textit{supra} note 63.
\item See Frenkel, \textit{supra} note 24, at 296–300.
\item The paralysis in Russia's commercial real estate markets is also analogous to reforms of Russian enterprises, which privatized rapidly but which have moved slowly in restructuring assets toward more productive uses. The partial success of enterprise privatization can be explained because decentralization and privatization have plausibly created an anticommons at the plant level. See section \textit{IVA} (discussing enterprise privatization); see also \textit{Maxim Boycko, Andrei Shleifer & Robert Vishny, Privatizing Russia} 69–95 (1995) (detailing the process of enterprise privatization).
\item This discussion of the players and their roles in the commercial real estate market in Russia is drawn primarily from a paper by Harding, cited above in note 46, at 6–14 and 18–19, and from my work in Moscow for the World Bank on transition countries during 1991–94. See generally Heller & Harding, \textit{supra} note 22, at 1–3 (suggesting methods to eliminate “barriers to commercial real estate markets”).
\item Harding, \textit{supra} note 46, at 8. According to Harding: “This struggle to seize control over real estate assets is a key front in the much wider power struggle between central and local governments... This lack of transparency, combined with the weakness of the lessees means that there is little pressure on the regulatory agencies to cooperate in freeing up space, or to refrain from intervening in activities after the lease is signed.”
\item Id. at 8–9.
\item See id. at 6–7.
\item See id. at 7. Harding summarizes five types of administrative bodies that operate on the property stage.
\end{enumerate}
\end{footnotesize}
process led to numerous competing claims among local, regional, and federal authorities.\textsuperscript{78} Harding notes that, within this organizational setup, four categories of rights-holders emerged during the transition.\textsuperscript{79} Each of these categories of rights-holders are "owners" in the sense that they could block other rights-holders from using a store without permission.

(a) Owners. — Owners begin transition with limited and ambiguous rights. Although the local government council (duma) is the formal owner of much commercial real estate and is empowered to sell, lease, or mortgage assets, it holds weaker rights than those usually associated with ownership in market economies. The federal government retains some control, such as the rights to specify a sale or lease process and to define the range of possible prices.\textsuperscript{80}

(b) Users. — Users or occupants of commercial property, often workers' collectives of the state enterprise assigned to the space, also

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\textsuperscript{78} For example, Harding highlights the situation in which "[a] building listed on the balance-sheet of a privatizing enterprise may have restaurant facilities (which should go to municipal authorities) and a medical clinic (which should go to oblast officials) — to whom should the building be handed?" \textit{Id.} at 7.

\textsuperscript{79} This framework and the following descriptions are drawn from HARDING, cited above in note 46, at 8–9.

\textsuperscript{80} See \textit{id.} at 8.
have ambiguous rights, derived in part from the strong occupancy rights under seventy years of socialist law. Local property committees are trying to convert squatter-type rights of current occupants into more formal lease arrangements.

(c) Balance-Sheet Holders. — "Balance-sheet holders" represent an archaic Soviet form of property ownership that is analogous to a trust relationship in the West. The balance-sheet holder was a subordinate state organization or individual who had rights to use and dispose of property formally owned "by the people" as state property. The conversion of balance-sheet holders' rights into a form of rights compatible with marketability has been uneven. Depending on the strength of the particular balance-sheet holder, it may now have no rights or may be included as a co-lessor, subordinate to the owner of leased property.

(d) Regulators. — Six agencies must approve all leases, including the city architect, the Committee on Preservation of Architecture and Historical Monuments, and the land-reform committee. This overlap in the regulatory function of these agencies does not differ substantially from standard Western models; however, the regulators are included here because the rights they exercise are often decisive in blocking market use of property. Local agencies often find themselves using their rights as if they were owners because they lack indirect mechanisms of governmental control over real estate, such as zoning boards and property taxes.

3. Emergence of the Anticommons. — During the process of privatization, the new legal regime in Russia ratified some existing socialist and informal use rights while it superimposed a new set of market ownership rights. For example, the socialist distinction between ownership of land and of structures has carried over. As a result, in post-socialist Russia, a heterogeneous set of owners have been thrown together in any given store (Figure 2). Some of the owners, such as state enterprises, research institutes, and maintenance organizations, may be

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81 See id.
83 See HARDING, supra note 46, at 9.
84 See WORLD DEVELOPMENT REPORT, supra note 2, at 60.
86 According to one commentator:
Private ownership of immovable (real) property other than land is far less controversial politically and is much more firmly settled in Russian law, although, the practice of transferring rights ... in buildings, houses, installations and other commercial properties also tends to be plagued by the very same bureaucratic problems of local authorities unwilling to effect registration or perform some other ministerial tasks necessary for a valid transfer of ownership or lease rights.
Frenkel, supra note 24, at 266.
87 See HARDING, supra note 46, at 12. Figure 2 collates the actors discussed above in note 77 with the categories of ownership discussed in the text above.
private or quasi-private; the others are local, regional, and federal governmental bodies.

<table>
<thead>
<tr>
<th>PROPERTY RIGHT</th>
<th>OWNER</th>
</tr>
</thead>
</table>
| Right to sell           | Local administration
                          | Property committee
                          | Committee for Architecture and Historical Preservation
                          | State enterprise or institute (as balance-sheet holder)
                          | Budget organization
                          | Relevant council                                                                 |
| Right to receive sale revenue | Federal government
                          | Oblast administration
                          | Local administration
                          | Property committee
                          | Committee for Architecture and Historical Preservation                                                                 |
| Right to lease          | Property committee
                          | State enterprise or institute
                          | Maintenance organization                                                                 |
| Right to receive lease revenue | Relevant administration
                          | Property committee
                          | Committee for Architecture and Historical Preservation
                          | State enterprise or institute
                          | Maintenance organization                                                                 |
| Right to determine use  | Planning committee
                          | Property committee
                          | Balance-sheet holder                                                                 |
| Right to occupy         | Workers’ collective                                                                 |

**FIGURE 2. Owners of Storefront Rights**

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This right is locally determined. The most frequent recipients are listed.

The "right to determine use" exists apart from similar rights ordinarily held by local zoning regulators in Russia and market economies:

The legal documents [for a retail store] may require that the area be used for a specific area of retail activity, often stipulating that a space must be used for its previous function — for example, as a bread store or housewares shop. The landlord of the site must make additional payments to relevant authorities if the retail tenant wishes to change the use of a store. The process takes time, and the landlord cannot guarantee that tenants are automatically granted a change of use upon signing lease or purchase documents.

Figure 2 suggests further complexities for transition in Moscow storefronts. First, multiple parties may share most rights. In this example, such multiple owners must agree among themselves to exercise their “ownership” stick in the property bundle. Second, local government agencies may be distinguished from the bureaucrats who occupy decisionmaking roles and control use of the property. Because the difference between municipally-set rents and market rents is significant, the exercise of lease rights can become a source of revenue for local officials in their private capacity. 

Put more colloquially, officials may exchange leases at below-market rents for bribes.

Because multiple parties may hold the same right, almost any use of the storefront requires the agreement of multiple parties. Even if only one party opposes the use, that party may be able to block others from exercising their rights. The Moscow storefront thus meets my definition of anticommons property, that is, a property regime in which multiple owners hold rights of exclusion in a scarce resource. The tragedy of the storefront anticommons is that owners waste the resource when they fail to agree on a use. Empty stores result in forgone economic opportunity and lost jobs. As of 1995, about 95% of commercial real estate in Russia remained in some form of divided local government ownership.

Of this commercial real estate, a significant portion was

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90 See HARDING, supra note 46, at 12–13.
91 Andrei Shleifer applies the terms “legal” and “physical” control rights to describe this distinction. See Shleifer, supra note 3, at 95; see also Sanford J. Grossman & Oliver D. Hart, The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, 94 J. POL. ECON. 691, 694 (1986) (defining property rights in terms of control rights over assets).
92 See WORLD DEVELOPMENT REPORT, supra note 2, at 60.
93 As Frenkel notes:

[A variety of leasing arrangements] are often used when the lessor does not have legal capacity to grant any lease or even sublease interests in a land parcel. Often the lessor has subleased the rights from the city or holds land use rights, but has not obtained any right to sublease to third parties. Often, the Russian lessor is a governmental or a state-owned entity without clear ownership or even possession rights to the premises it currently occupies.

Frenkel, supra note 24, at 297–98.
94 Owners exercise their rights to block use in a variety of ways, from formal measures such as requesting court intervention, to informal or self-help measures that characterize the Russian retail scene. See STEPHEN HANDELMAN, COMRADE CRIMINAL: RUSSIA'S NEW MAFIYA 59–72 (1995); Vladimir Shlapentokh, Russia: Privatization and Illegalization of Social and Political Life, WASH. Q., Winter 1996, at 65, 76–77. From the perspective of an entrepreneur looking to set up a shop, even the threat of informal measures from competing claimants to the storefront may be enough to deter long-term investment.
95 Continued local government ownership of stores suggests an alternative explanation for why stores remain empty. Local governments may not behave like private profit-maximizing actors in managing their real estate portfolio. This public-private distinction may help explain some storefront vacancies. However, the fact of public ownership does not help explain the difference between the poor performance of storefronts and the vibrancy of kiosk markets. First, both are publicly owned spaces. Second, local governments in some countries in transition, such as Poland, were able to market credible leases quickly. See EARLE, FRYDMAN, RAPACZYNSKI & TURKEWITZ, supra note 58, at 181–83. Third, local governments in transition countries do have incentives to act as profit-maximizers. They are desperate for revenue because they have significant social-welfare responsibilities and little by way of independent fiscal capacity or intergovern-
4. Overcoming the Anticommons. — Moving a storefront from anticommons to private property ownership requires unifying fragmented property rights into a usable bundle. In other words, creating private property requires moving from too many owners, each exercising a right of exclusion, to a sole decisionmaker, controlling a bundle of rights. To have private property in a storefront, a sole owner must in principle be able to sell or lease the property, receive the revenue from the sale or lease, occupy the premises, and determine how a lessee may use the property.

After transition governments accidentally create anticommons property by ratifying pre-existing socialist rights, owners face two main ex post routes by which their rights can be assembled into usable bundles: through markets or through governments. In markets, entrepreneurial property bundlers may assemble control over stores by negotiating with all the holders of rights of exclusion. Over time, store by store, individual market transactions can convert an anticommons. Indeed, some evidence suggests that this process may be happening already in Russia. Alternatively, the market route to bundling rights might fail altogether if the transaction costs of bundling exceed the gains from conversion, or if owners engage in strategic behavior such as holding out for the conversion premium.

The market route to bundling may be further subdivided into two types: legal and illegal market transactions. In a legal transaction, a property bundler would buy each right from its holder through formal, enforceable contracts. In the storefront example, because of the divergent incentives between public agency owners and their bureaucratic transfers. Store leases could make up an important source of revenue. Finally, apart from the fiscal pressures on local governments, storefronts represent a significant potential source of illicit wealth for local government officials. See WORLD DEVELOPMENT REPORT, supra note 2, at 60. If these officials have proven their ability to create illegal markets in space for street kiosks, why not for storefronts?

96 See supra note 61.

97 Cf. Mechelman, supra note 9, at 5 (identifying principles of initial acquisition and reassignment fundamental to a private property regime). After a sole owner collects a standard bundle of rights, she may subsequently decide to break up her bundle along spatial or temporal dimensions, such as by selling a portion of the space or leasing it for a period of time. Part II discusses how market economies prevent excessive fragmentation by a private owner through hierarchical controls that establish priority and resolve conflicts among competing rights-holders. These rules for priority are missing in anticommons relations and are a locus of conflict in Moscow storefronts.


A look at nine buildings on Tverskaya Ulitsa [a prime downtown Moscow street] found 4,100 square meters of commercial space that was either empty or was illegally occupied by firms with forged documents. These firms, instead of contributing to the city budget, are either paying someone off on the side or paying nothing at all. ... The figure of 4,100 square meters refers to just nine Moscow buildings. What would we find if we surveyed the entire city? Or the entire country?

Id.
agents, negotiations may only be possible through informal or corrupt channels.\textsuperscript{99} Over time, these corrupt channels can be routinized and may replace legal transactions. However, routinized corruption imposes its own, hard-to-measure costs on economic efficiency, particularly in terms of forgone long-term investments.\textsuperscript{100}

The alternative route to bundling is for government to intervene by redefining and reallocating property rights. The national government could abolish rights previously granted, eliminate subordinate levels or agencies of government, or expropriate or condemn existing rights. Local governments could exert more control over their subordinate agencies and transfer rights to, or consolidate rights in, the equivalent of a "sole owner," a single public decisionmaker able to act as an owner on behalf of the local government. However, existing rights-holders, including local government agencies and the private actors who have invested in reliance on the current property regime, may cling tenaciously to their rights. Many now have plausible claims that their rights have vested, and redefining rights to bundle them more sensibly would amount to a compensable taking of their property.\textsuperscript{101}

Were the government to revoke or confiscate existing rights without compensation, current and potential investors in Russia might be even more discouraged from entering the market.\textsuperscript{102} Because of their precarious fiscal condition, neither the national government nor local governments in Russia are likely to pursue the alternative route of redefining the rights more sensibly and paying compensation to those whose rights are taken.\textsuperscript{103} More generally, transition governments may be

\textsuperscript{99} See id. Leiye writes:

According to current legislation, there are two ways to obtain a lease on commercial property in Moscow. Either one can participate in competitive bidding or one can pass along a complex bureaucratic chain, gathering numerous signatures and approval forms. . . . Needless to say, there are always those who don't want to go through all this red tape and who therefore try to find some way around that is faster and cheaper. So, naturally, a third variant has developed — going straight to the director of a certain property and striking a direct deal to lease a portion of it. That is why . . . so far not a single desirable property in the center of the city has come up for competitive bidding.

\textsuperscript{100} See SUSAN ROSE-ACKERMAN, CORRUPTION: A STUDY IN POLITICAL ECONOMY 106-07 (1978); WORLD DEVELOPMENT REPORT, supra note 2, at 95-96; Andrei Shleifer & Robert W. Vishny, Corruption, 108 Q.J. ECON. 599, 615 (1993).

\textsuperscript{101} The formal right to compensation for expropriation of private property is now established in Russian law, though the practice is undeveloped. See, e.g., Law of the Russian Federation on Basic Principles of the Federal Housing Policy, supra note 24. The issue of compensation for intergovernmental takings is more complex and less documented. It is bound up in the larger struggle in Russia between central and local governments. See supra pp. 635-37.

\textsuperscript{102} See Michelman, supra note 14, at 1214-18 (elaborating the calculus of settlement and demoralization costs for use in deciding whether a government should compensate for a regulatory change).

\textsuperscript{103} Compulsory unitization of anticommons rights could provide governments with an alternative method of assembling private property bundles that may avoid the compensation-demoralization trap. Under United States law, unitization is the process by which all of the rights-holders in an asset (such as landowners located over an oil field) are formed into a single unit,
forced to choose either to defend badly designed property rights and to wait for the market to sort out the problems, or to intervene in the market and to undermine investor confidence.

C. Moving Along the Gradient: Kiosks, Apartments, Komunalkas

Storefronts represent only one point along a gradient of socialist property in transition. Experience at other points along this gradient suggests possible paths into and out of the tragedy of the anticommons. This section first moves outside to examine street kiosks. Then, the section moves upstairs to study residential real estate: individual apartments and komunalkas.

1. Street Kiosks.

(a) Appearance of the Kiosks. — What explains the persistence of the anticommons in stores, in contrast to the resolution of the anticommons on the streets? During the early years of transition, kiosk merchants were also faced with an anticommons: a property regime in which numerous parties, holding both formal and informal rights, could block street access. However, by the early 1990s, merchants could acquire informal rights on the streets to set up commercial outlets. Kiosk merchants negotiated around the anticommons regime through

which then operates the asset as if it were held by a single owner. Proceeds from the unit are distributed to the owners according to a preset formula. See 2 AMERICAN LAW OF PROPERTY 750-55 (A. James Carter ed., 1952 & 1977 Supp.); JESSE DUKEMINIER & JAMES KRIER, PROPERTY 54-55 (3d ed. 1993).

An analogous process of "land pooling and readjustment" has operated in Germany, Australia, Korea, Taiwan, and Japan. See WORLD BANK, supra note 49, at 132 ("Two of the main requirements for success are consensus among landlords and trust in the implementing organization." (citing Yasuo Nishiyama, Western Influence on Urban Planning Administration in Japan: Focus on Land Management, in URBAN DEVELOPMENT POLICIES AND PROGRAMMES: FOCUS ON LAND MANAGEMENT 315, 327-52 (Haruo Nagamine ed., 1986))). Similarly, in Russia, governments could establish a process by which multiple owners of a storefront could trade their rights for a percentage share in a unit that leased or sold the asset. However, compulsory unitization in Russia would run into familiar problems of valuation and administrative incapacity.

104 The government had always tried to block kiosk street access, but kiosks persisted:

[O]n one hand, Moscow has always been filled with kiosks and, on the other, ... the government has always been trying to get rid of them. Even before Moscow had real books or very many people who could read them, there were wooden kiosks throughout the city .... In the days of Ivan the Terrible, you could stop by a neighborhood kiosk for a refreshing cup of kvas. And back when the Kremlin was still made of wood, the government — even though it did not have those special kiosk-removal trucks — had to order the kiosks cleared from Red Square because of the danger of fires. ... Even Stalin could not get rid of them entirely.


105 As one article notes:

Kiosks trace their roots to Soyuzpechat, the government agency responsible for newspaper and magazine sales in the former Soviet Union. But around 1990, these glass booths began attracting fledgling entrepreneurs. Publications gradually gave way to items such as cigarettes, liquor, food, and toiletries. At kiosks, which now resemble small metal fortresses, consumers can buy anything.

Khrushchev, supra note 63, at 86.
ex post contracting: they executed corruption contracts with local government rights-holders and protection contracts with the mafia. By contrast, storefronts continue to remain relatively empty, despite entrepreneurs' willingness either to follow formal procedures, or to bribe city officials and to pay protection money to criminal organizations in order to get access to the space.

Kiosks provided an early solution to the problem of establishing commercial outlets in a country desperately short of retail services. Indeed, the market for kiosks and storefront real estate are linked. The success of kiosks may have reduced pressure to overcome the anticommons in stores. On the streets, no complex web of rights needed to be bundled. Instead, kiosk merchants had to bribe only a limited number of municipal officials and an easily identifiable criminal organization. By routinizing the corruption process, entrepreneurs quickly reduced the transaction costs of assembling quasi-private bundles of rights in kiosk locations:

[R]egular payments must be made to local officials and a powerful mafia .... "You have to pay bribes to get financing," [Karlamov, a kiosk owner,] said. "You have to pay bribes to get permission to put your kiosk up on a promising site. And even after things are all set up, you have to pay bribes to make sure they don't close you down. The mafia is the easiest of all to deal with. They don't charge too much, they tell you exactly what they want up front, and when an agreement is made, they live up to it. They don't come back asking for more. ... The hardest part was finding out who was the right person to bribe," he explained. "At first, we had no idea who could do what, so we began visiting the local prefect's office almost every

106 As one article notes:
[Andrei, a kiosk owner,] has had to bribe tax inspectors, pay protection money to mafia toughs and fork over 'gifts' to officials whose approval is needed for a business license. .... To start his business Andrei needed to get a host of city officials — firefighters, electricians, architects — to sign his permit request. ... When a date was set for delivery of the kiosk, Andrei and his partner took care of a key business matter: making peace with the 'protection' racketeers who have carved Moscow up into fiefdoms and who punish those who resist.

107 See supra note 67 (examining reasons that businesspeople may prefer kiosks to stores in the early stages of transition).

108 See Barnard, supra note 64 ("Stuffed with everything from canned peas to kiwi liqueur to fur coats, kiosks have blossomed as the first alternative to nearly empty Soviet-era stores.").

109 See Khrushchev, supra note 63, at 86. Khrushchev writes:
[Getting started is a bureaucratic nightmare and often requires millions of rubles in bribes. But entrepreneurs can get the necessary permits for about $100, not from government licensing authorities but from non-official businessmen such as owners of nearby stores .... [Most of the illegal kiosks are protected by groups (read mafia) .... [That] lease extensive parts of the city for a 'nominal price' (gigantic bribes) and then divide them into tiny squares that are rented out. The group is czar and god over its territory. It protects the traders and solves any problems they have with local officials and other gangsters. It even handles taxes.

Id.
day. We gave candy and other presents to people we met there, and eventually they directed us to people who could help.\textsuperscript{110}

Creation of commercial space through corruption and protection contracts can be reasonably stable over time when procedures become routinized and entrepreneurs come to rely on formal forbearance and informal ex post assembly of anticommons rights into private property rights.

However, the kiosk system does not generate the levels of economic activity that could be achieved by a well-functioning retail sector. Hernando de Soto, a leading theorist on the connection between law and economic development, discusses this issue indirectly.\textsuperscript{111} Noting the prevalence of the informal economy in developing countries, he makes two points. First, he argues that the vibrant informal economy should be viewed as an important contribution to the overall economic performance, rather than a drain.\textsuperscript{112} Second, and just as importantly, he contends that commentators should not mistake vibrancy for optimality, either along efficiency or distributive dimensions.\textsuperscript{113} People are in the informal economy because the formal legal system drives them there. Informal merchants could contribute much more to the economy if the legal system made it possible for them to work in the formal sector.\textsuperscript{114} For de Soto, “third world under-development” arises from the combination of badly specified formal property rights and their ex post rearrangement through illegal contracts.\textsuperscript{115} The informal economy rep-

\textsuperscript{110} James P. Gallagher, \textit{Russia’s Kiosk Capitalists Keep Wary Eye on Hard-Line Premier}, CHI. TRIB., Jan. 5, 1993, at 1; see also Frank Brown, \textit{Life in a Metal-and-Plexiglass Box}, MOSCOW TIMES, Apr. 5, 1994, available in LEXIS, News library, Arcnews file (“Although [one kiosk owner] complained about racketeers, bribes and stealing, she said the monthly fee paid to the mafia ‘is worth it.’”). In the words of another reporter:

Most kiosks don’t pay taxes. The state, of course, requires tribute but has no practical way of collecting. Tax inspectors can’t verify kiosks’ earnings and therefore don’t know how much to collect. [Mafia] routinely help their kiosks hide earnings and inform them when tax inspectors are about to show up. The [mafia] groups have become increasingly important to kiosk owners. Unlike government officials, they act like industrious owners. For example, while the state imposes a 50 percent or more tax on profits, [mafia] are satisfied with a 5 percent to 10 percent cut. [Mafia] also protect traders from rival gangsters.


\textsuperscript{112} See id. at 60–62.

\textsuperscript{113} See id. at 151–72.

\textsuperscript{114} See id. at 72, 152, 173–77.

\textsuperscript{115} See id. De Soto argues that the potential efficiency of informal systems is bounded by the need to hide from or bribe the public sector:

Having established that there are costs to being illegal, we asked ourselves whether eliminating those costs would be enough to transform informality into the best of all possible worlds. [We are convinced that this would not be] true and that informals suffer not only from their illegality but also from the absence of a legal system that guarantees and promotes their economic efficiency — in other words, of good law.
THE TRAGEDY OF THE ANTICOMMONS

represents a second-best solution, \(^6\) the triumph of ingenuity in the face of bad law. De Soto argues that a better solution would be to create the “good law” that characterizes successful economies, such as property registries, patent protection, and provisions for inexpensive enforcement of long-term contracts.\(^{116}\)

The proliferation of kiosks in Russia suggests that one path to overcoming a tragedy of the anticommons may be by tolerating informal corruption contracts. However, de Soto’s work suggests that the resulting quasi-private property rights will likely operate at a lower level of economic efficiency than will well-bundled formal property rights, in part because the incentives for long-term investment are blunted.

(b) Disappearance of the Kiosks. — Recently, the Moscow city government has tried to eliminate kiosks from the streets, with mixed results.\(^ {117}\) The apparent reduction in the number of kiosks from 1994 to 1996 could be interpreted in two ways that relate to the storefront anticommons. The first interpretation is that the government has successfully specified a better set of property rights in retail storefront space, and that market actors have relied on those rights to shift away from kiosks. As storefronts become more available, rents might drop, and merchants might decide to replace kiosks with storefronts.\(^ {118}\) Under this interpretation, the gradual decrease in kiosks reflects the gradual resolution of the storefront anticommons.\(^ {119}\)

\(^{116}\) See id. at 161–62 (property registries), 164–71 (long-term contracts), 177 (patents).

\(^{117}\) See supra notes 62, 64, 104 (discussing crackdowns on kiosks).

\(^{118}\) As one reporter has stated:

[T]hese once ubiquitous symbols of Russia's free-market transformation are on their way out, no longer needed by a country that has clearly moved up a rung on the economic development ladder.

Former state-owned stores, now in private hands, are well stocked, lines have disappeared, and salespeople, astonishingly, have learned to be more polite. . . .

In Moscow, where kiosks began, officials have declared an end to the era of the “box,” as its occupants call them. The government has begun slowly clearing them away, calling them crime traps and eyesores. Last year there were 17,000 kiosks in Moscow; today there are 10,000 . . . . By next year, . . . most of them should be gone.

“We believe that kiosks have fulfilled their role,” [a city official said.] “It was natural that kiosks developed when they did[.]” . . .

Dusty old state-owned stores that officially had been privatized in 1992 but continued to operate as inefficiently as before have finally started to recognize the bottom line and adapt. Margaret Shapiro, Kiosks, Once Symbol of Free Market, Giving Way to Capitalism's Success: Moscow Stores' Service, Variety Rendering Sidewalk Stands Obsolete, WASH. POST, Apr. 2, 1995, at A33.

\(^{119}\) From sketchy accounts, this interpretation does seem to describe the kiosk to storefront trajectory in Poland. In Poland, the small-scale privatization program quickly eliminated most competing owners from legal or practical control over commercial space and assembled tradable private property bundles for retail space. See Barnard, supra note 64 (reporting that kiosks “sprouted in Warsaw for about a year as the free market gained a foothold, and then ‘naturally disappeared’ without pressure from city authorities as merchants moved into shops”).
Alternatively, and more plausibly, the apparent decline in the number of kiosks is not linked to resolution of the storefront anticommons. Instead, with the use of sufficient force, the city could enforce existing laws against kiosks and effectively repudiate the corruption bargains that kiosk owners have made with government officials. In property theory terms, the local government could convert anticommons property in sidewalks into "state property" used by pedestrians. Under this interpretation, the disappearance of kiosks worsens the local retail economy and creates even higher repressed demand for retail space. Indeed, if the storefront anticommons persists, the recent crackdowns will likely fail:

Economists have said that ideally, kiosks should have died out of their own accord, as owners move into more stable premises. In Moscow, they said, that isn't taking place. "There is the huge challenge of business premises, which are so horrendously expensive," said Semyon Bekker, head of the city's Department for the Development of Small Business. "In some sense kiosks should regulate themselves, since stores will eventually take their place. That hasn't happened yet." In de Soto's terms, the persistence of kiosks reflects the continued failure of the federal and local governments to provide "good law." Without good law, the storefront real estate market is not sufficiently elastic.

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120 See Ellen Barry, City Bid To Clear Kiosks Falling Short of Targets, MOSCOW TIMES, Jan. 25, 1995, available in LEXIS, News library, Arcnws file. Barry writes: The common kiosk will move one step closer to extinction next week, when Mayor Yury Luzhkov's latest clearing order comes due, but statistics from city inspectors show the process has hit some snags.... Andrei Sergeyev, who is in charge of cleaning up the western region of the city, is sweating a little. [Although he] agrees with the mayor's policy, he said its pace was straining his resources and shoppers' patience, since new stores had not yet arisen to replace kiosks. "This is the type of thing that has to be done gradually," he said.

121 See Ellen Barry, Kiosk Issue Explodes in One District, MOSCOW TIMES, Jan. 31, 1995, available in LEXIS, News library, Arcnws file ("[O]fficers with machine guns watched as a fork lift hoisted one kiosk after another onto a flatbed truck.").

122 "State property" can be defined as a property regime in which the following conditions exist: (1) principle, material resources are answerable to the needs and purposes of society as a whole, whatever they are and however they are determined, rather than to the needs and purposes of particular individuals considered on their own. No individual has such an intimate association with any object that he can make decisions about its use without reference to the interests of the collective. [Jeremy Waldron, What Is Private Property?, 5 OXFORD J. LEGAL STUD. 316, 328-39 & n.45 (1985); see also C.B. Macpherson, The Meaning of Property, in PROPERTY: MAINSTREAM AND CRITICAL POSITIONS 1, 5-6 (C.B. Macpherson ed., 1978) (offering substantially the same definition of state property).]

123 See, e.g., Tanner, supra note 63 ("[W]ould-be storeowners cite Moscow's hesitation to privatize its commercial space, bureaucracy, crime, and corrupt government officials as barriers to retail expansion.... [A]fter the city removed hundreds of [kiosks], they gradually resurfaced in other parts of Moscow.").

124 Barry, supra note 62.
to respond to the continued high demand for retail space, and kiosks may simply reappear when repressed.125

The kiosk example shows how property regimes are connected: the resolution of the anticommons on the streets and the persistence of anticommons property in stores reinforce each other. Illegal contracts help overcome the street anticommons by creating quasi-private property. One cost of this path to overcoming anticommons property, however, is that governments in transition may create inefficient “third-world” market structures.

2. Individual Apartments. — The creation of private property in apartments lies at the opposite end of the protection and performance gradient from storefronts.126 Apartments provide a useful counterpoint to storefronts, in part because the physical space is often identical. In a typical Russian apartment building, the ground floor may be commercial, while the matching units directly above are residential.127 Thus, the difference in performance can be attributed more to the legal regime and cultural milieu in which the object is embedded than to intrinsic physical distinctions in the space.

New housing markets have been remarkably successful across the former socialist world, not only in terms of raw numbers of units sold, but also, more importantly, in the private property relations that have been created.128 This is not to say that private property markets in

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125 See Ellen Barry, City Kiosks Outrun the Mayor, MOSCOW TIMES, Mar. 7, 1995, available in LEXIS, News library, Arcnews file. Barry writes: Those wily kiosk owners. After Mayor Yury Luzhkov’s latest crackdown limited the number of kiosks in every subprefectorate, many traders simply installed wheels and took them on the road, keeping one step ahead of the city inspectors... [Nevertheless,] according to city estimates, the number of kiosks inside the Garden Ring has dwindled from 4,000 to 1,500 over the last year, and the total number has dropped from 16,000 to about 7,000.


127 See Struyk, supra note 51, at 5.

128 See id. at 46 ("The real estate market has developed rapidly during the period of reforms... The real estate market which has sprung to life with the easing of restrictions on private ownership and market transactions is developing on two fronts: new housing construction and the sale of existing units."). Although housing is often overlooked as an economic good, it rivals enterprise privatization in importance. See RUSSIA, HOUSING REFORM, supra note 126, at 15-23, 27-34; WORLD DEVELOPMENT REPORT, supra note 2, at 61-63.
housing work as well in post-socialist economies as in Western market economies. Many countries are still struggling to create the basic framework for private property in housing: real estate taxation systems need to be implemented, land registries designed, boundaries drawn, ownership disputes resolved, condominium rules established, and the entire apparatus of modern regulation of property — zoning, eminent domain, and so on — created. Despite the lack of this legal and institutional infrastructure, apartment owners have created vibrant real estate markets, even in remote parts of Russia.

In socialist legal regimes, the standard property bundle for apartments was divided between private and public actors. After a local government or enterprise assigned an apartment to a family, the family owned a lifelong inheritable tenancy. This socialist form of property included strong tenancy rights and some rights to devise. Various government departments held the balance of rights, but no one could sell or lease the unit at market rates. Generally, residential privatization laws offered to the sitting tenant, either for free or for a very low price, the ownership and control rights previously held by the state. Rights to sell and receive sale revenue, lease and receive lease revenue, occupy, devise, and mortgage were collected by households, with little competition from other potential stakeholders such as local governments or state enterprises. Governments reserved only the regulatory rights typical in advanced market economies: rights to zone, eminent

Privatization of housing may represent the single largest transfer of wealth during the transition process, despite its decentralized and relatively invisible nature. By comparison, even the British "Right to Buy" program, which offered tenants large price discounts, sold only about 20% of British social housing units during 1979–82. See Struyk, supra note 51, at 23. As Struyk notes, "most countries in the former Soviet bloc have bettered the British record." Id. For example, housing in Russia now constitutes only about 20% of national reproducible assets, as compared with 29% in the United States and 43% in France. See RUSSIAN FEDERATION HOUSING PROJECT, supra note 126, at 3. As financial and legal reforms deepen, the share of housing in national wealth can be expected to increase toward the market economy range.

See generally Struyk & Kosareva, supra note 126, at 5–9 (describing the ownership rights previously associated with Russia's state housing sector).

See Russia, HOUSING REFORM, supra note 126, at 149–50; Struyk, supra note 51, at 53. See Russia, supra note 126, at 89–90. See Struyk, supra note 51, at 53.

See id. at 22–28 (describing housing privatization patterns in the former Soviet Bloc); WORLD DEVELOPMENT REPORT, supra note 2, at 61–63 (providing a summary of housing privatization across transition countries). See generally RUSSIA, HOUSING REFORM, supra note 126, at 15–44 (analyzing privatization of housing in Russia).
domain, and so on, with some implied limitations on the scope of government intervention. Combined with pre-existing personal property rights, privatization gave tenants control of a property rights bundle in apartments that would be recognizable to a Western condominium owner.

One price of achieving these well-functioning bundles is that governments have ignored certain distributive goals. In the apartment privatization process, most people were given apartments with negligible or negative net present economic value because of poor maintenance, high energy costs, or bad locations. The large number on waiting lists, particularly young families living in their parents' homes, simply lost out. By contrast, a small number of well-connected aparatchiks (high officials of the old regime) used their previous positions to receive high-value, well-maintained apartments in city centers. During privatization, these aparatchiks, and their elderly neighbors who had received units decades earlier, kept the valuable apartments. Privatization of housing was not distributively just in terms of market values conveyed, but it did discourage aparatchiks from blocking reform and it was administratively manageable. Also, from a property rights perspective, housing privatization was a coherent process. Unlike storefronts, in which many parties had some rights, apartments were conveyed in the form of near-standard market legal bundles.

Not surprisingly, some Western legal academics tried to persuade governments to make the tradeoff differently: namely, to achieve more distributive justice by dividing the windfalls from privatization more equally. For example, Duncan Kennedy, a leading critical legal scholar, proposed dividing rights to equity and capital appreciation among sitting tenants and local governments. These proposals were not well received and were not implemented during the early period of transition, when there was great enthusiasm for a relatively laissez-faire
Even tenants who were net losers in the privatization process often rejected such proposals because of an apparent consensus on what constitutes an ordinary property bundle in a market economy. Tenants resisted proposals that kept governments involved in their lives and that diverged from their understanding of private property ownership.

The apartment example suggests that there may be a tradeoff between avoiding anticommons tragedy and achieving distributive goals in the initial endowment of property rights. When governments transfer coherent bundles of initial endowments in familiar objects, well-functioning private property markets may emerge even without supporting legal institutions. People can trade standard property bundles when they own them.

3. Communal Apartments.

(a) The Property Bundler’s Equation. — Komunalkas are a subset of apartments that have engendered a special loathing across the former Soviet Union, where they were prevalent. Komunalka performance also proves to be a fruitful example to contrast with storefront anticommons behavior. Many komunalkas were large prerevolutionary apartments, well-situated in downtown apartment buildings. At some points in Soviet history, several dozen people might have shared


147 In one amusing example, my World Bank team and I were called “communists” in a public forum held to discuss a proposed loan for housing rehabilitation in Budapest. Our sin was to propose that some of the profits from the sale of municipally rehabilitated apartments be used to help capitalize a fund that would help pay off the rehabilitation loans of elderly and low-income tenants.

148 In the words of the novelist Mikhail Bulgakov:

The news of Berlioz’ death spread through the building with supernatural speed, and from seven o’clock on Thursday morning Bosoi started to get telephone calls. After that people began calling in person with written pleas of their urgent need of vacant housing space. Within the span of two hours Nikanor Ivanovich had collected thirty-two such statements. They contained entreaties, threats, intrigue, denunciations, promises to redecorate the apartment, remarks about overcrowding and the impossibility of sharing an apartment with hoodlums. Among them was a description, shattering in its literary power, of the theft of some meatballs from someone’s jacket pocket in apartment No. 31, two threats of suicide and one confession of secret pregnancy.


Not long ago, a fight took place in our communal apartment. Not just a fight, but an out-and-out battle. . . .

The main reason is — folks are very nervous. They get upset over mere trifles. They get all hot and bothered. And because of that they fight crudely, as if they were in a fog.


one komunalka, with each family, comprising up to three generations, assigned one room. Kitchen and bathroom facilities were shared. During privatization, tenants received some ownership rights in their room and, indirectly, the right to block others from using the whole apartment as a single-family or office space. In other words, each owner could keep any other owner from renting out the entire apartment in its most valuable market use.

This division of rights in the communal apartments helps introduce the concept of a spatial anticommons, distinct from the legal anticommons discussed so far. In a spatial anticommons, an owner may have a relatively standard bundle of rights, but too little space for ordinary use. By contrast, in a legal anticommons, substandard bundles of rights are allocated to competing owners in a normal amount of space, such as a storefront.

In the case of komunalkas, the apartment qua apartment remains empty so long as any room-owner can effectively veto use. If all the owners were to sell their rooms and leave the unit, the whole apartment could be marketed as a single piece of real estate. Entrepreneurs, often in partnership with one of the existing tenants, quickly discovered that the well-situated komunalkas could be converted to private property by exchanging the owners’ rights to rooms for complete apartments on the city outskirts. To give a numerical example, in the case of some old, centrally located komunalkas in Moscow, the market value of the entire apartment might approach $500,000. Assume such a komunalka had

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150 *See id.*

151 *See infra* sections IV.B, IV.C (describing additional examples of spatial anticommons).


153 The numbers used in this hypothetical reflect approximate values for good downtown Moscow komunalkas during the last few years. *See, e.g.*, Leiye, *supra* note 98 (“It is well known that an apartment in the center of the city now costs roughly as much as a similar apartment in New York.”). Note that although some komunalkas were well-situated and had high market values, many were poorly located or in run-down buildings. In such cases, market pressures may not have operated to convert these marginal komunalkas to single-family use. As of 1996, 12.5% of Moscow families and 22.4% of St. Petersburg families still lived in komunalkas. *See* Yulia Ulyanova, *This Is a Communal Country*, *Izvestia*, Oct. 26, 1996, at 3, translated and excerpted in *44 Current Digest of the Post-Soviet Press*, Nov. 27, 1996, at 19. Ulyanova reports that:

The process of relocating communal apartment dwellers went on at a fairly brisk pace for a little over two years... but then it slowed abruptly.

Now upscale housing is being built in every major city, and it's no longer necessary to agonizingly relocate fussy communal apartment dwellers and then invest enormous amounts of money in renovating these Augean stables....

[Real estate agents have an economic interest only in the “cream of the crop” — those communal apartments that can be turned into prestigious or fairly good housing. Most communal apartments, even in the two capital cities, do not meet this criterion. ]
four tenants, each occupying one room. Because of the discomforts and irritations of communal living, each of four communal rooms might have had a market value of only $25,000 if the rooms were kept in anticommons use, so that the whole apartment would have an anticommons value of $100,000. Converting the komunalka from anticommons to private property creates a $400,000 gain that the existing tenants and the bundler can divide after paying the transaction costs of conversion.

Many komunalka owners wanted a place of their own, not just a room with a view. Once an apartment was put in play and conversion seemed possible, tenants would not sell out for $25,000 each, but would typically demand a substitute apartment instead. Adequate substitute apartments could be bought on the city outskirts for perhaps $75,000 each. In this example, by accepting the substitute apartment, each tenant places an implicit $50,000 value on the option giving the property bundler the right to convert the komunalka. In sum, removing the four room-owners and collecting a usable bundle of rights in the apartment might cost an entrepreneur $300,000. In this example, the tenants collectively were able to capture $200,000 of the available economic rent through their option value on the right of conversion.

In addition to paying the implicit option value on conversion, entrepreneurs incur the transaction costs of bundling anticommons property

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154 Of course, some of that potential gain from conversion is re-capitalized into the value of a single room. In a well-functioning market, the value of the room would represent the sum of its value as an anticommons space and the expected value from conversion to private property use.

The strategic moves for tenants and developers are complex: developers may prefer take-it-or-leave-it offers to the group to avoid holdout problems. Tenants, too, could maximize their individual values by forming a single bargaining unit among themselves so that developers do not have to discount for the transaction costs of bundling. No tenant should sell first, because the last tenant can then hold out to extract the gains from conversion. Cooperation with the other tenants may be the best strategy for each tenant.

On the other hand, the best strategy for a developer may be to pick off a single apartment at the beginning of conversion in order to block other developers from entering the bidding for the space. Once a developer has a foot in the door, she can scare off other bidders and thus pay the remaining tenants a below-market price for the whole. If other tenants refuse to sell, the developer can rent the room to a particularly noxious neighbor until the holdouts capitulate. The tenant who sells out first may be able to command a lock-up premium from the developer. In this case, defection may be the best strategy for each tenant.

155 Restated, society bears a large deadweight loss if the apartment remains in anticommons form, despite the tenants' and bundler's desire to convert it to private property. By definition, a deadweight loss occurs whenever the costs of an individual's self-interested act exceed the individual's benefits from the act. See Robert C. Ellickson, Property in Land, 102 YALE L.J. 1315, 1326 (1993).

156 See Richard Posner, Economic Analysis of Law 9–10 (4th ed. 1992) (defining "economic rents"); World Development Report, supra note 2, at viii (noting that economic rents "can arise through the acquisition of a claim on a resource whose ownership was ambiguous or weakly exercised, or through a change in government policy that creates an artificial scarcity").
into private property form. These costs involve finding and negotiating with komunalka owners, locating and buying alternative apartments, renovating the empty apartment, finding renters or buyers for the new private property unit, policing the deal, and incurring various carrying costs and market risks. Assume such transaction costs total $50,000 for this deal. Thus, in this simple example, overcoming the anticommons might leave a profit for the entrepreneur of $150,000 ($500,000 in market value minus $300,000 in relocation costs and $50,000 in transaction costs). Whether the deal takes place is an empirical question that depends on the entrepreneur’s ability to keep costs of conversion low and to sell the apartment high (Figure 3).

Potential Gains from Conversion = $400K

<table>
<thead>
<tr>
<th>Private Property Value</th>
<th>+500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 private apt. @ $500K</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anticommons Value</th>
<th>-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 rooms @ $25K = $100K</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option Value of Conversion</th>
<th>-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 rooms @ $50K = $200K</td>
<td></td>
</tr>
</tbody>
</table>

| Transaction Costs of Bundling | -50 |

| Profits for Property Bundler | =150 |

**Figure 3. The Property Bundler’s Equation**

In this sort of multi-party bargain, each tenant is a monopolist with an incentive to engage in familiar types of strategic behavior, such as holding out for the bundling surplus.\(^{157}\) In practice, however, entrepreneurs have often been able to keep down the transfer of the economic rents from conversion and total transactions costs by coercing komunalka owners. Some property bundlers have achieved conversion quickly by intimidating or murdering recalcitrant tenants:

The trend is particularly noticeable in the centre of [Moscow], where competition for prestigious addresses among members of Russia’s emerging

\(^{157}\) See Robert Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 17–20 (1982). If the komunalka owners act strategically, they may increase transaction costs in excess of the net gains from trade, at which point the entrepreneur will abandon the deal. Ellickson speculates that adjoining owners “are likely to be bound by norms that dictate cooperative behavior in routine interactions.” Ellickson, *supra* note 155, at 1330 n.56. However, for each tenant, disbanding the komunalka is a one-shot deal around which such norms may not coalesce.
business class and well-heeled foreigners has sent prices soaring. The area has many former mansions that the Bolsheviks converted into barracks-like communal apartments after the 1917 revolution. And for the enterprising developers there is only one obstacle to reconverting those once-elegant buildings to high-quality private housing: the current tenants.158

Rather than walk away from a deal, property bundlers may reveal their reserve price by murdering holdouts. In this spatial anticommons, there are only a small number of owners, often elderly tenants.159 An unintended consequence of creating anticommons property during privatization of communal housing has been the creation of a group of komunalka tenants who are particularly vulnerable to predatory private property bundlers. Further, the brutal effects of overcoming the komunalka anticommons may have unnecessarily discredited market reforms generally.160

(b) Transaction Costs and Strategic Behaviors in Bundling. — What allowed anticommons property in well-situated komunalkas to be overcome while ground-floor stores in the same buildings often remain empty? The different outcomes are explained in part by five factors relating to the transaction costs of bundling and strategic behaviors of owners locked in bilateral monopolies:161

(i) Type of Anticommons Owner: Public or Private. — The transaction costs of negotiating with private owners may be lower than those of negotiating with state and corporate parties. Komunalka owners are private individuals, often elderly, who are not well-positioned to resist concerted market pressures exercised by aggressive entrepreneurs.

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158 Malcolm Gray, Capitalist Crimes, MACLEANS, Jan. 10, 1994, at 17, 17. Gray quotes the deputy commander of Moscow’s missing persons unit as saying: “Privatization of apartments started in October 1991, and it soon led to a new problem: homeowners, most of them old people, started disappearing.” Id. On this trend, see Bohlen, cited above in note 152; Victoria Clark, Dying To Get a Home of One’s Own, THE OBSERVER (LONDON), Nov. 28, 1993, at 28; Fred Hiatt, The Dark Side of Privatization: To Moscow Con Men, Scant Housing is Worth Killing For, WASH. POST, Nov. 13, 1993, at A1; and Warren, cited above in note 152.

159 See Ulyanova, supra note 153, at 19.

160 See generally Richard H. Pildes, The Unintended Cultural Consequences of Public Policy: A Comment on the Symposium, 89 MICH. L. REV. 936, 936–40 (1991) (advocating an increased focus on the cultural consequences of public policy decisions). It would be interesting to consider further the unintended social consequences of property bundling mistakes. By mistaking anticommons relations for ordinary private property, people in transition countries have given the idea of a market economy a worse reputation than perhaps it merits. “Wild capitalism,” a common pejorative term to describe the early stages of transition to markets, results perhaps as much from bundling mistakes as from any intrinsic element in moving to markets. See Carey Goldberg, Moguls at the Gates; Part Robin Hood, Part Robber Baron, Russia’s Wild Capitalists Are Skirting the Law, Making Fortunes and, Maybe, Saving the Country, L.A. TIMES, Aug. 29, 1993, Magazine, at 22, 23 (“The chaos and illogic of Russia’s transition from socialism … is now known here as ‘wild capitalism.’”); Ann Imse, Russia’s Wild Capitalists Take Aluminum for a Ride, N.Y. TIMES, Feb. 13, 1994, at C4 (discussing “the ugly brand of Russia’s ‘wild capitalism’”).

161 Though strategic behaviors may be considered to be a class of transaction costs, see A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 18 n.11 (9d ed. 1989), instead of a distinct explanatory category, such labeling does not affect the analysis that follows.
Komunalka owners in Russia could be tracked down in part through *propiska* records (essentially, internal passport information that identified each individual in each residence). Such records give entrepreneurs some assurance that, once all the listed people are bought off, additional claimants will not appear. Bundlers can avoid holdouts among komunalka owners by sharing the economic gains of conversion and by engaging in intimidation. By contrast, storefronts began mostly with corporate, quasi-state, and state owners. Storefront owners have relatively more access to power and protection and may not be as easily intimidated by deviant property bundlers. Instead, public and corporate owners must be bribed. It may be more difficult initially to identify whom to bribe, and to enforce such corruption contracts later. Finally, public owners may not behave in profit-maximizing ways and may not perceive the lost revenue from the storefront to be central to their decisionmaking.

(ii) *Number of Anticommons Owners/Homogeneity of Interests.* There are fewer owners, with more homogeneous interests, in komunalkas than in stores, with the result that transaction costs are lower and intimidation against komunalka owners is more effective. Even with few anticommons owners, familiar problems of bilateral monopoly could surface, but they have not in the komunalka case for the reasons discussed above. By contrast, in the case of storeowners, there are a larger number of corporate and state owners, with more heterogeneous interests ranging from current income to long-term bureaucratic survival. Bribes to one bureaucratic owner may not bind other owners even within the same organization, at least until such bribery channels are routinized.

(iii) *Boundary of the Anticommons.* Each komunalka could be easily bounded as private property. Of course, without condominium-like laws, the status of much of the remainder of the apartment building may be unclear. Who controls the land, party walls, façade, hallways, roofs, elevators, lobbies, basements, attics, and so on? Nevertheless, people generally seem to agree that the living area of each apartment is the core object of value. By contrast, store boundaries are not as trans-

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163 As one author notes:
For starters, buyers should make sure that the apartment’s seller is indeed the owner and that the guardians of any children involved have signed off on the deal. . . . Many realtors shy away from flats that already have been sold several times, as each sale increases the chance that a past owner will appear to restake his or her claim.
164 See supra note 95 (discussing incentives of public owners).
165 See supra p. 654.
166 See Struyk & Kosareva, supra note 126, at 23 (citing presidential decree assigning common parts of condominiums to share ownership, but limiting the right of alienation).
parent. For example, a workers’ cooperative may claim that the single bakery that they occupy constitutes the object of property subject to their private ownership. Another owner, such as a defunct state bread-making enterprise, may claim that the entire chain of several dozen enterprise bakery outlets is a single, indivisible corporate asset. Indeed, underused real estate is often the only potentially valuable asset of former socialist enterprises. Finally, the local administration may claim that all local bakeries belong to it and are thus subject to privatization through auction. What is the ordinary boundary of this object of property?  

(iv) Spatial or Legal Anticommons. — Overcoming a spatial anticommons such as privatized komunalkas is potentially less difficult than overcoming a legal anticommons, in which rights are difficult to exchange credibly. In a storefront, the problem is not that the space was overly subdivided, but rather that legal rights were handed out to too many owners. These dispersed rights may be more difficult to delineate and trade than tangible physical control over discrete spaces, such as rooms in a komunalka.

(v) Starting Point in Transition. — Tenants in komunalkas began the transition to markets holding more of the familiar bundle of property rights than did owners of property such as storefronts. Komunalka tenants had rights that gave them most of what families seem to expect from ownership, including physical possession and strong rights of exclusion, but without rights of alienation. When komunalkas were privatized, local governments gave up their socialist control rights, so komunalka tenants received relatively standard legal bundles. By contrast, stores often began empty, as part of the holdings of bankrupt state and local organizations. Legal rights were scattered among many owners, as discussed above in the Moscow storefront case study.

(c) Contingent Values in Anticommons Property. — In addition to transaction costs and strategic behavior explanations, uncertainty about the future may also help explain differences in bundling komunalka and store anticommons property. Different types of uncertainty about the future give rise to speculative value in an object. For example, the “fair market value” of an ordinary home includes some premium, however slight, for the possibility that oil or diamonds may be discovered underneath, and some discount for the possibility that government may adversely change zoning or tax laws.

Two of these speculative values affect the value of a right in an object but do not affect its private property value: what may be called the option value and the contingent value. The option value has already

167 See Frenkel, supra note 24, at 293–96.
168 See infra section IV.D (discussing the spatial anticommons problem in the context of property allotment to Native Americans).
169 See supra pp. 635–40.
been discussed in the komunalka-bundling context. It reflects the expected gain from converting anticommons property to private property through market transactions — an economic value. The contingent value represents the expected gain from rent-seeking that privileges one owner at the expense of the others — a political value. Either option or contingent value may dominate an anticommons owner’s decision on how to deploy her rights.

If the owner believes that the property rights regime will remain relatively stable, the option value may determine whether the anticommons property is converted to private property. For example, in komunalkas, tenants often appear to set the option value on their rights at a level that allows conversion to go forward. These tenants appear to value their contingent or political claims at close to zero, as it is unlikely that one anticommons owner in a komunalka will be able significantly to improve her position vis-à-vis another through politics. Komunalka tenants can maximize the value of their rights by trading them in economic rather than political markets. In trying to capture economic rents from conversion, komunalka tenants unintentionally help re-create the apartment as private property and put it to use. Kiosk owners also probably place no contingent value on holding streets empty, because redefining property rights in a way that would legalize the clusters of kiosks is unlikely. Because the alternative to kiosks is to keep the streets clear for public access, kiosk owners focus on maximizing current economic value.

Storefront owners may face a similar equation if they expect stability in the property rights regime. Given that storefront values in Moscow today are among the highest in the world, owners may convert their rights into private property when they can overcome transaction costs and holdout problems. On the other hand, if owners perceive their storefront property rights to be unstable, savvy owners may prefer to keep their stores empty, hold onto their rights, and use them as leverage in political battles rather than in economic markets. Control of the right to maintain or lease out a store may give an individual bureaucrat a reason for continued employment and could provide a source of illicit income that would dwarf the bureaucrat’s formal salary. Additionally, political maneuvering may, in time, award the entire private property ownership bundle to the current owner of a single right. The contingent value of the right may exceed the option value from conversion. In

\[170 \text{ See Commercial Space Becoming More Expensive, MOSCOW NEWS, June 2, 1995, available in LEXIS, News library, Arcnews file; Russia: Shortage of Office Space Makes Moscow Rents World’s Second Highest, BBC SUMMARY OF WORLD BROADCASTS, Feb. 8, 1996, available in LEXIS, World library, Allnews file (“Foreign firms pay an incredible average of DM125 per sq.m. per month [for Moscow office space], compared with DM80-85 per sq.m. in London and Paris, DM60 per sq.m. in New York and DM45-50 in Chicago and Berlin. Only Tokyo, where a square metre costs DM280, is more expensive than Moscow . . . .”).} \]
this context, keeping the store empty may be a signal of the continuing validity of the owner's right, which ensures the value of the contingent claim. In unstable regimes, ownership of a disaggregated property right may become a lever for rent-seeking through politics, rather than profit-maximizing in economic markets.

The outcomes for owners of komunalka and storefront anticommons property are likely to differ (Figure 4). This Figure suggests that a komunalka owner may value the contingent claims at zero and the conversion option moderately, while a storefront owner may value the conversion option at zero and the contingent claims quite highly. The Figure also assumes that transaction costs for converting a storefront are somewhat higher than for a komunalka, because of the relative homogeneity and ease of intimidation of komunalka owners. The sum of these values suggests that the komunalka may ultimately be bundled into an ordinary apartment, while the store remains as an anticommons and sits empty.

\[
\text{Market Value in Private Property Form} \\
\begin{array}{c}
\text{Komulka is converted} \\
\text{Anticommons Value} + \text{Option Value} + \text{Trans. Costs} \\
\text{Anticommons Value} + \text{Contingent Value} + \text{Trans. Costs} \\
\text{Storefront is not converted}
\end{array}
\]

**Figure 4. Differences in Bundling Komunalkas and Storefronts**

4. Conclusion. — For each point along the property gradient, governments may be tempted to create anticommons property, perhaps to respond to pressure by existing stakeholders, or to address short-term distributional concerns. Rather than assigning a usable bundle in a scarce resource to a sole owner, governments may assign rights in an object to multiple owners, so that many people can get a piece of each pie.

Governments in transition may have tried to solve too many problems at once. Although a comprehensive political analysis of why governments created anticommons property is beyond the scope of this Article, several reasons stand out. Decentralization eliminated the control rights of many federal actors, but it strengthened those rights at the state and local level and often created competing centers of local power. Downsizing of government functions created intense competition among threatened bureaucrats to hold onto plausible property rights, not just because of the corruption potential for individual state actors, but also because of a more general desire to preserve their institutional existence. Privatization faced resistance from existing stakeholders, who demanded protection and inclusion. In many countries, transition leaders faced the redistributive challenge by co-opting existing stakeholders. In Russia, reformers may have parcelled out rights broadly to avoid facing the politically challenging prospect of declaring
winners who received the entire property bundle and losers who got nothing.

Once anticommons property is created, markets or governments may have difficulty in assembling rights into usable bundles. After initial entitlements are set, institutions and interests coalesce around them, with the result that the path to private property may be blocked and scarce resources may be wasted. Deviant strategic behaviors, ordinary transaction costs, and contingent values may block bundling. So far, storefronts seem to represent a paradigmatic case of the failure of bundling and appearance of the tragedy of the anticommons. Under some conditions, people will be able to renegotiate around fragmented rights through illegal or legal ex post contracts. Kiosks show the benefits and costs of taking the path from anticommons to illegal quasiprivate property. In the case of komunalkas, property bundlers were often able to convert anticommons to private property legally, albeit against a backdrop of intimidation and violence. At the other end of the gradient of property in transition, with respect to individual apartments, governments have avoided creating anticommons property by trading off distributional concerns.

Overcoming the tragedy of the anticommons is not synonymous with creating well-functioning markets in private property. Even with full ownership of well-specified formal property bundles, reformers will have to be attentive to the familiar difficulties in building markets, including the problems of correlating formal rights with informal norms, creating a stable economic environment that induces investment, committing to a credible political order that diverts attention from rent-seeking, and establishing an effective legal and administrative infrastructure to enforce contracts and reduce incentives for corruption. Bundling property rights to avoid anticommons property is one element that may determine whether countries progress to First World prosperity or spiral downward to Third World despond.

171 See Mark J. Roe, Chaos and Evolution in Law and Economics, 109 Harv. L. Rev. 641, 646-47 (1996). Roe uses the concept of path dependence to explore the consequences of legal rules today on economic outcomes tomorrow. Creation of anticommons property could be an example of "path dependence . . . [leading] to highly inefficient structures that society cannot eliminate." Id. at 647. The standard example of inefficient path dependence is the persistence of the QWERTY keyboard, named for the placement of those letters in the keyboard's upper-left corner. See, e.g., W. Brian Arthur, Competing Technologies, Increasing Returns and Lock-in by Historical Events, 99 Econ. J. 116, 126 (1989). But see S.J. Liebowitz & Stephen E. Margolis, The Fable of the Keys, 33 J.L. & Econ. 1, 2-3 (1990) (contending that use of the QWERTY keyboard is efficient, given the current understanding of keyboard design).
III. THE TRAGEDY OF THE ANTICOMMONS

Property theory has long worked with categories such as private property, commons property, and state property. However, the category of anticommons property has scarcely figured. This Part makes the anticommons a more accessible and precise term for property theory. Section III.A isolates elements of private property that contrast with anticommons property. Section III.B explains the limited appearance of the anticommons in the property literature and offers a more useful definition. Section III.C defines the "tragedy of the anticommons" and explores ways of overcoming the tragedy.

A. Private Property

1. This Land is My Land; This Land is Your Land. — Few social understandings are more deeply intuited and less considered in developed market economies than core private property rights: for example, the sense of "my land" and "your land." When land is sold, sellers, buyers, neighbors, and governments seem to know what constitutes ownership. In the everyday course of business, people exchange property through contract but do not create new types of property rights. The same intuitive understanding of property in land may extend to private property more generally. People know, or think they know, what it means to own a toaster, car, house, or corporation. People seem to know private property when they see it.

172 These shorthand labels parallel the conventional usage. See Duncan Kennedy & Frank Michelman, Are Property and Contract Efficient?, 8 Hofstra L. Rev. 711, 715–16 (1980); Michelman, supra note 9, at 5–6; Waldron, supra note 122, at 326–33.

173 Property rights differ from contract rights in that property typically does not represent or derive from formal private agreement among individuals defining the content of the relationships. The world of contract assumes a pre-existing process for defining entitlements and distributing those rights initially among stakeholders, both individual and state. Once rights are defined and distributed, contract represents the ordinary process of voluntary exchange. Ordinary exchange through contract can give rise over time to new property rights, as when merchants develop business norms, which in turn are codified as property rights. See generally Ellickson, supra note 19, at 52–64 (discussing the development of extra-legal norms of dispute resolution); Lisa Bernstein, Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms, 144 U. Pa. L. Rev. 1765, 1765–1821 (1996) (drawing on the National Grain and Feed Association's contract dispute-resolution mechanism to illustrate problems in the externally imposed Uniform Commercial Code system); Eric A. Posner, The Regulation of Groups: The Influence of Legal and Nonlegal Sanctions on Collective Action, 63 U. Chi. L. Rev. 133, 133–34 (1996) (collecting the classic legal-realist and law-and-society sources emphasizing the importance of non-legal mechanisms in regulating behavior). Similarly, property rights can be created through legislative schemes, not just through norm codification: for example, through tradable pollution rights or auctions of bands of the radio spectrum.

174 That people think they know what property is may be enough. As the utilitarian philosopher Jeremy Bentham pointed out long ago: "Property is nothing but a basis of expectation. . . . There is no image, no painting, no visible trait, which can express the relation that constitutes property. It is not material, it is metaphysical; it is a mere conception of the mind." Jeremy Bentham, Theory of Legislation 111–12 (Richard Hildreth trans., Fred B. Rothman & Co. 4th ed. 1987) (1931).
Of course, even in settled market economies, property rights remain unclear on the margins, despite the web of legal rules, institutions, and informal norms. Information costs may be one source of ambiguity in property rights. For example, it may be too costly to pin down in advance the exact boundaries of land relative to the gain from certainty. Ambiguity also may arise because of unresolved conflicts and changing values regarding ownership, such as how far the government may restrict certain land uses without compensation. Nevertheless, most workaday activities that require property exchange take place without negotiation over the definition of the thing being exchanged or of the constitutive rights of the property bundle. If people thought deeply about the property they used, perhaps they would see that even the core meanings are historically contingent and indeterminate. However, the everyday perspective on property masks its mysterious character.

2. What Is Private Property? — According to the classical theorists, “property” is a thing, and “property theory” defines the relationship between a person and a thing. For example, according to the view commonly (though mistakenly) attributed to William Blackstone, the right of property is “that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.” Thomas Grey explains the power that the classical metaphor holds by situating it in a historical context:

To the rising bourgeoisie, property conceived as a web of relations among persons meant the system of lord, vassal, and serf from which they were struggling to free themselves. On the other hand, property conceived as the control of a piece of the material world by a single individual meant freedom and equality of status.

The classical metaphor of property as thing-ownership still exercises a grip on the popular imagination.

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175 As Stephen Munzer notes: “[T]he idea of property is indeterminate at the margin. No litmus test can separate rights of property from, say, those of contract in all cases.” Stephen R. Munzer, A Theory of Property 24 (1990).


178 See 2 William Blackstone, Commentaries *2.

179 Id. In fairness to Blackstone, he “would have admitted that his sentence ... was hyperbolic. His treatise explicitly discussed, for example, a variety of legal privileges to enter private land without the owner’s consent.” Ellickson, supra note 155, at 1362 n.237; see also Dukeminier & Krier, supra note 103, at 99 (same). Ellickson also points out that the concept of property as thing-ownership is not original with Blackstone but rather comes from the older civil law tradition, a tradition that continues today in much of the world. See Ellickson, supra note 155, at 1377 n.312.

180 Grey, supra note 4, at 73–74.

181 See Bruce A. Ackerman, Private Property and the Constitution 98–100 (1977) (discussing the prevalent layperson’s view of property as thing-ownership); Munzer, supra note
However, during the twentieth century, property theorists have fundamentally re-imagined property as a *bundle of rights*. Contemporary property theorists focus on the relationships owners establish with each other regarding use of an object. According to Wesley Hohfeld, property "consists of a complex aggregate of rights (or claims), privileges, powers, and immunities." At this level of generality, the bundle-of-rights metaphor can describe any type of property relationship, including private, commons, and anticommons property. The distinction between private property and other property types depends centrally on three elements:

(a) **The Possibility of Full Ownership.** — Private property requires that one owner have full decisionmaking authority over an object, subject to some common law and regulatory limits. More precisely, Frank Michelman defines private in the following way: "The rules must allow that at least some objects of utility or desire can be fully owned by just one person. To be 'full owner' of something is to have complete and exclusive rights and privileges over it ...." Similarly, Jeremy Waldron defines private property to be a system in which "a rule is laid down that, in the case of each object, the individual person whose name is attached to that object is to determine how the object shall be used and by whom. His decision is to be upheld by the society as final."

(b) **Rights and Bundles.** — The bundle of rights represents all of the infinite number of potential relations and non-relations that people may have with each other over any given resource. In any particular

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175, at 16 (contrasting the "popular conception" of property as things with the "legal conception" of property as relations).

182 See DUKEMINIER & KRIER, supra note 103, at 86 ("For lawyers, if not lay people, property is an abstraction. It refers not to things, material or otherwise, but to rights or relationships among people with respect to things."); MUNZER, supra note 175, at 23; Grey, supra note 4, at 69 (distinguishing between the metaphors of property as thing-ownership and bundle of rights); J.E. Penner, The "Bundle of Rights" Picture of Property, 43 UCLA L. REV. 711, 713-14, 713 n.8 (1996).

183 Hohfeld, supra note 9, at 96; see also A.M. Honore, Ownership, in OXFORD ESSAYS IN JURISPRUDENCE 107, 107-28 (A.G. Guest ed., 1961) (specifying the standard bundle of rights that constitutes ownership).

184 Michelman, supra note 9, at 5. Michelman, in turn, draws on the work of Hohfeld. See Hohfeld, supra note 9, at 96.

185 Waldron, supra note 122, at 327 (emphasis omitted). These standard definitions of private property are assumed in discussions of the transition from socialist to market economies. For example, Frydman and Rapaczynski define private property as follows:

[A] social and economic order defining a new set of expectations that individuals may have with respect to their ability to dispose of the assets recognized as 'theirs' by the legal system. . . . The concept of a private property regime is designed to reflect the delicate balance, struck by each economically successful society, between private action and state administration.

FRYDMAN & RAPACZYNSKI, supra note 3, at 169-70; see also WORLD DEVELOPMENT REPORT, supra note 2, at 48-49 ("Property rights are at the heart of the incentive structure of market economies. They determine who bears risk and who gains or loses from transactions.").

186 For example, in conversation with the author, Brian Simpson notes that full ownership of a sweater may include not just the standard rights to sell or lend it to another, but also the non-standard rights to eat or to burn the sweater.
society, however, some subset of rights is likely to be considered essential, such that, if these rights are pulled from the bundle, we will no longer consider a person to be an owner. What property rights make up the core of the bundle of rights? A.M. Honoré proposed a list of eleven “standard incidents” that he claims make up private property, including the rights to exclusive possession, personal use, and alienation.\textsuperscript{187} Honoré’s list is now commonly accepted by property theorists as a starting point for describing the core bundle of private property rights in Western market economies,\textsuperscript{188} although some theorists challenge the inclusion of one incident or another.\textsuperscript{189} Further, the limits of these individual incidents vary from country to country.\textsuperscript{190} For example, in the United States and England, the maximum bundle of ownership rights has coalesced in the “fee simple,” which incorporates nuanced restrictions on each of Honoré’s eleven incidents.\textsuperscript{191} Any individual incident

\textsuperscript{187} See Honoré, supra note 183, at 112–28. Honoré lists these incidents as:

\begin{enumerate}
\item the right to exclusive possession;
\item the right to personal use and enjoyment;
\item the right to manage use by others;
\item the right to the income from use by others;
\item the right to the capital value, including alienation, consumption, waste, or destruction;
\item the right to security (that is, immunity from expropriation);
\item the power of transmissibility by gift, devise, or descent;
\item the lack of any term on these rights;
\item the duty to refrain from using the object in ways that harm others;
\item the liability to execution for repayment of debts; and
\item residual rights on the reversion of lapsed ownership rights held by others.
\end{enumerate}

\textit{See id.; see also JEREMY WALDRON, THE RIGHT TO PRIVATE PROPERTY 49 (1988) (summarizing Honoré’s list of incidents); Ellickson, supra note 155, at 1362–63 (attributing some of these private entitlements to a “Blackstonian” bundle).}

\textsuperscript{188} See, e.g., LAWRENCE C. BECKER, PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS 7–23 (1977) (integrating Hohfeld and Honoré); MUNZER, supra note 175, at 27 n.14 (“The Hohfeld-Honoré analysis is common among philosophers.”); ANDREW REEVE, PROPERTY 14–21 (1986).

\textsuperscript{189} Waldron, for example, would leave the prohibition on harmful use out of a list of incidents of private property and regard it instead as a more general restriction on action.\textsuperscript{See WALDRON, supra note 187, at 49.} Grey would go further and claim that the notion of property has fragmented too much to allow for a general theory of property along the lines suggested by Hohfeld and Honoré.\textsuperscript{See Grey, supra note 4, at 74; see also MUNZER, supra note 175, at 31–32 (discussing Grey).}

\textsuperscript{190} For example, the classic trilogy of rights of possession, use, and disposition of property are established by the civil law of industrial countries.\textsuperscript{See Richard A. Epstein, Private Property and the Public Domain: The Case of Antitrust, 24 NOMOS 48, 57 (1982).}

\textsuperscript{191} See generally A.W.B. SIMPSON, A HISTORY OF THE LAND LAW (2d ed. 1986) (detailing origins of fee simple in land in England). Ellickson captures Blackstone’s image of property as thing-ownership and transforms it to modern bundle-of-rights terms.\textsuperscript{See Ellickson, supra note 155, at 1362–63.} He creates a “Blackstonian” Bundle of Land Entitlements” that includes:

\begin{itemize}
\item ownership by a single individual (“that sole and despotic dominion which one man claims”)
\item in perpetuity
\item of a territory demarcated horizontally by boundaries drawn upon the land, and extending from there vertically downward to the depths of the earth and upward to the heavens
\item with absolute rights to exclude would-be entrants
\item with absolute privileges to use and abuse the land, and
may be absent from the list in a given country or as to a given owner. Generally, though, if a person controls all or most of these incidents with respect to a certain thing, he or she is said to "own" it. In looking at the range of rights on Honoré's list and the range of legal regimes in the world, Becker notes that "there are a wide variety of sets of rights which, when they are held by someone, can justify the claim that that person owns something."

(c) Restrictions on Extreme Decomposition. — Along with the possibility of full ownership and a core bundle of rights in each object, a third essential characteristic of a private property regime is that it imposes some restrictions on "decomposition of full ownership into . . . rights without their congruent privileges." Thus, one private property owner is initially endowed with a core bundle of rights in one object and is at least nominally free to use his or her object without permission from others. Following this initial endowment, the owner may break up the bundle of rights, subject to the restriction that he or she may not "decompose" the bundle in ways that overly impair the object's marketability. In the American law of property, numerous restraints limit an individual's capacity to break up property bundles too much. The effect of these rules against decomposition is that prop-

Id. Ellickson intends the graphic image of the Blackstonian bundle to describe a more general or "ideal typical" form of private property that shares key characteristics across many legal systems. Id.

192 For example, in American law, a person contemplating bankruptcy may sell property at its "reasonably equivalent value" but does not have the right to make a gift of the same property. 11 U.S.C. § 548(a) (1994); see also Moore v. Regents of the Univ. of Cal., 793 P.2d 479, 510 & n.9 (Cal. 1990) (Mosk, J., dissenting) (citing bankruptcy law to support the proposition that "some types of personal property may be sold but not given away"). Nevertheless, we consider a near-bankrupt person to be otherwise a legal owner of his or her property. As to other resources, owners may have the right to give away their property but not to sell it. One example would be wild fish or game caught or killed pursuant to a license. See CAL. FISH & GAME CODE §§ 3039, 7121 (West 1984); see also Moore, 793 P.2d at 510 & n.10 (Mosk, J., dissenting) (arguing that one can own one's internal organs as property even though one may not have the standard bundle of rights). See generally DUKEMINER & KRIER, supra note 103, at 86–87 (discussing market inalienability of some types of property; Susan Rose-Ackerman, Inalienability and the Theory of Property Rights, 85 COLUM. L. REV. 931, 937–61 (1985) (noting range of justifications for restrictions on transferability).

193 See MUNZER, supra note 175, at 22 ("These incidents are jointly sufficient, though not individually necessary, for ownership."). Further, each of these incidents can be defined in various ways different enough from one another to alter the emphasis and practical consequences of the incident. See BECKER, supra note 188, at 19–20.

194 Id. at 22.

195 Michelman, supra note 9, at 95; see also id. at 8–21 (defining "composition" and providing examples).

196 Each owner must, however, comply with the normal regulatory constraints in a market economy. Honoré's bundle does not include the right to be free from such regulation. See MUNZER, supra note 175, at 24.

197 See Ellickson, supra note 155, at 1374–75; Michelman, supra note 9, at 9.

198 See Ellickson, supra note 155, at 1374 ("To deter destructive decompositions of property interests, the Anglo-American legal system has developed a complex set of paternalistic rules. . . ."
Property is generally kept available for productive use, in an alienable form, and with a clear hierarchy of decisionmaking authority among those who have an interest in the object.

3. **Privileges of Inclusion/Rights of Exclusion.** — A useful way to understand marketability of "decomposed" bundles is to examine whether multiple incidents function as *privileges of inclusion* or *rights of exclusion*.\(^1\) Multiple privileges of inclusion are non-exclusive. Owners of such privileges may use an object without permission from, or coordination with, other such owners. For example, in a common field or lake, multiple owners may use the property based on their ownership of some or all of the incidents in Honoré's list, subject to the privileges of inclusion of other owners. American property law generally allows an owner to decompose her bundle by granting multiple privileges of inclusion in an object, such as a tenancy in common or joint tenancy.\(^2\) However, co-owners always have the right to partition their undivided common property, with the result that each owner holds a core private property bundle in part of the original commons.\(^3\)

Rules that govern the interpretation and termination of sub-fees also tilt against creation and continuation of interests 'repugnant to the fee.' (footnotes omitted).

Under United States property law, one cannot create new types of estates in land. A conveyance that purports to limit inheritance to a particular class of heirs creates a fee simple, inheritable by heirs generally. See *Johnson v. Witton*, 34 N.E. 542, 542 (Mass. 1893) (Holmes, J.) ("A man cannot create a new kind of inheritance."); *Dukeminier & Krier*, supra note 103, at 211 (discussing *Johnson*). The infamous Rule Against Perpetuities also functions to prevent the breakup of the standard bundle of property rights over time. See *Cribbet & Johnson*, supra note 11, at 82-85. Contingent grants of property that act as restraints on marriage may be disallowed. See *Restatement (Second) of Property: Donative Transfers* § 6.1 (1983). In the area of covenants, the doctrine of changed circumstances and rules on re-recording prevent stale restrictions from limiting current use of land. Real property taxes and escheat for non-payment can also function to prevent people from breaking up property into too small units for too long. See infra pp. 682-83.

\(^{199}\) Many of Honoré's standard incidents may function as privileges of inclusion or rights of exclusion under certain circumstances. An incident functions as a privilege of inclusion if each owner must allow other owners to exercise their incidents in the object. An incident functions as a right of exclusion if each owner can block use by other owners.

Privileges of inclusion and rights of exclusion need not be based on formal legal rights but may also reflect informal control rights, such as the ability to delay regulatory approvals. See *supra* note 91 (noting Shleifer's distinction between legal and physical control rights).

\(^{200}\) See *Cribbet & Johnson*, supra note 11, at 105-14.

\(^{201}\) See *id.* at 114. The right to partition joint tenancy and tenancy in common has been available at common law since 1539. See 31 HEN. 6, ch. 1 (1539) (Eng.), cited in CORNELIUS J. MOYNIHAN, INTRODUCTION TO THE LAW OF REAL PROPERTY 213 (2d ed. 1988); see also 7 RICHARD R. POWELL, POWELL ON REAL PROPERTY ¶ 607, at 50-47 to 50-61 (Patrick J. Rohan ed., 1997) (detailing modern availability of right of partition by sale or in kind).

As an aside, excess partition in *kind* of land can create an anticommons as parcels become uneconomically small after successive partitions. See *infra* section IV.D (discussing analogous fractionation in Native American allotted lands). I believe the modern trend toward partition by sale is explained in part by the desire to avoid creating anticommons property in land.
By contrast, multiple owners of rights of exclusion in an object each have a veto on others’ use. Rights of exclusion are as fundamental as privileges of use. In the American law of property, for example, the right to exclude others has long been recognized as “one of the most essential sticks in the bundle of rights that are commonly characterized as property.” Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979); see also DUKEMINIER & KRIER, supra note 103, at 58 (noting that Demsetz and Felix Cohen each stress the right of property owners to exclude others); Felix S. Cohen, Dialogue on Private Property, 9 Rutgers L. Rev. 357, 373 (1954) (“Private property is a relationship among human beings such that the so-called owner can exclude others from certain activities or permit others to engage in those activities and in either case secure the assistance of the law in carrying out his decision.”); Morris R. Cohen, Property and Sovereignty, 13 Cornell L.Q. 8, 12, 21, 26 (1927) (discussing various limitations on property rights, including the right to exclude).

The storefront might not sit totally unused, because someone may risk use despite the possibility of removal or sanction by another anticommons owner. See supra notes 98–99.

One example of inescapable multiple privileges of inclusion would be riparian owners of a watercourse who have equal and correlative rights to use the water. See id. at 407. To resolve conflicts among owners locked together along the watercourse, American law has developed a doctrine of “reasonable use.” Id.; see also Restatement (Second) of Torts § 850A (1979) (identifying nine factors relevant to whether a riparian use is reasonable).

It is more difficult to imagine a situation in American law in which an owner can create inescapable multiple rights of exclusion. One example is the so-called “one stock” rule for the use of “profits à prendre” (namely, the right to come onto another’s property and remove a resource such as fish or timber). See Miller v. Lutheran Conference and Camp Ass’n, 200 A. 646, 651–52 (Pa. 1938); Cribbet & Johnson, supra note 11, at 377 & n.54 (discussing misapplication of the “one stock” rule in Miller); Dukeminier & Krier, supra note 103, at 850. According to the “one stock” rule, joint owners of a profit must exercise their rights as if they were a single owner. Each can block use by the others. There is no provision to partition such a profit if the two owners fail to reach an agreement on use. This rule has been criticized as obsolete. See Note, The Easement in Gross Revisited: Transferability and Divisibility Since 1945, 39 Vand. L. Rev. 109, 128–34 (1986).
individual can control all or most of the core bundle, such that the owner’s decision on inclusion or exclusion will be treated as relatively final by society. Third, owners may break up the core bundle, subject to constraints on decomposition that keep objects available for productive use, in an alienable form, and with a clear hierarchy of decision-making authority among owners. Fourth, owners of private property may not break up the core bundle by granting too many privileges of inclusion or rights of exclusion in an object for too long a time.

B. Anticommons Property

1. Previous Definitions. — Anticommons property has received scant attention in the property literature. In his 1982 article challenging the presumptive efficiency of private property, Frank Michelman introduces the equivalent of an anticommons through his speculative definition of a “regulatory regime.” He defines a “regulatory regime” to be a type of property “in which everyone always has rights respecting the objects in the regime, and no one, consequently, is ever privileged to use any of them except as particularly authorized by the others.” Michelman’s understanding of the anticommons is derived from a sense of abstract legal symmetry. If a regime exists in which all are privileged to use whatever objects they wish and in which no one holds exclusionary rights (that is, a commons), then, as a matter of logic, an anticommons also could exist where no one is privileged to use objects and everyone has the right to exclude.

However, Michelman’s definition of an anticommons has virtually no counterpart in real-world property relations. As a result, property theorists have not developed the concept. In contrast with the vast number of pages that have been devoted to analysis of private property and commons property regimes, the scholarly literature makes only two brief mentions of anticommons property following Michelman’s introduction of the term. Robert Ellickson omits the anticommons from his table of the types of land regimes but mentions it in a footnote as a “land regime in which each member of a public owns a right to exclude, and consequently for which no one owns a privilege of entry and use.” He imagines one hypothetical example to be “a wilderness preserve that ‘any person’ has standing to enforce.” Jesse Dukeminier and James Krier define an anticommons as property “to which everybody has the right to exclude everybody else, and nobody has the right

207 Michelman, supra note 9, at 6.
208 Id.
209 See id.
210 Ellickson, supra note 155, at 1322 n.22.
211 Id.
to include anybody. Using this definition, they pose the existence of anticommons property as a question for classroom discussion; however, in my experience, students are unable to come up with real-world examples.

At this level of generality, the anticommons is more of a "thought experiment" than a useful category for property theory or policy analysis. In speculating about possible real-world anticommons property, property theorists have come up with few candidates, in part because they have sought to imagine property that is best used in an anticommons state. Examples include Ellickson's hypothetical wilderness preserve or perhaps a hypothetical nuclear-waste dump. Holding such property in anticommons form would prevent anyone from being able to enter, even if a supermajority of the community were to decide that entering was desirable. Each individual in the society would have standing to exclude every other individual. Because no one may enter without unanimous consent from all holders of exclusion rights, and because such consent would be nearly impossible to achieve, the resource would never be used. Converting a resource to anticommons form would ensure its non-use, which may be consistent with the highest social value of the hypothetical wilderness preserve or nuclear waste dump.

2. A More Useful Definition. — This Article defines anticommons property as a property regime in which multiple owners hold effective rights of exclusion in a scarce resource. This definition departs from previous definitions along four dimensions: the universality of rights of exclusion, the implication of non-use as optimal, the formality of rights, and the scale of anticommons property.

First, because Michelman and others define an anticommons to include only situations in which everyone has a right to exclude, they have missed the existence of real-world anticommons property, in which a limited group of owners have rights of exclusion. In Michelman's definition, consent of every single individual in an anticommons would be even more difficult to obtain than agreement by the state to use the property, in which perhaps a majority would be sufficient. Thus, an anticommons is the most efficient property regime for resources for which no use ever is the best use — a vanishingly small number of real-world cases.

212 DUKEMINIER & KRIER, supra note 103, at 58 (paraphrasing definitions of inclusion and exclusion by Felix Cohen, in article cited above in note 202).
213 See id.
214 See id. In discussion with the author, James Krier has suggested a hypothetical nuclear waste dump so dangerous that everyone in the community has standing to exclude.
215 If the object were held as state property, the state may eventually decide that people could enter and use land previously set aside as a wilderness preserve. See supra note 122 (defining "state property" as a property theory category). The state could employ its ordinary administrative mechanisms for reaching such a decision, reserve the decision to a legislature, or put the matter to a popular vote. In any of these circumstances, a majority or super-majority could decide to allow access. By contrast, if held as an anticommons under Michelman's definition, every single person holding a right of exclusion would have to agree before access could be allowed.
216 According to this example, consent of every single individual in an anticommons would be even more difficult to obtain than agreement by the state to use the property, in which perhaps a majority would be sufficient. Thus, an anticommons is the most efficient property regime for resources for which no use ever is the best use — a vanishingly small number of real-world cases.
nition, a threshold requirement of “near simultaneous unanimous consent” ensures that anticommons property will not be used by anyone. However, the examples presented in Part II demonstrate that non-use can occur even when a few actors have rights of exclusion in a resource that each wants to use.

Second, although perpetual non-use of property may be optimal in a few situations, there are more situations in which non-use exists but is not socially desirable. Michelman focuses on demonstrating that, in theory, alternative property regimes may be as efficient as a private property regime. However, the fact that an anticommons may be an efficient regime for certain types of property does not preclude the possibility that an anticommons may exist even when it is inefficient. For the resources discussed in this Article, and indeed for most resources that people care about, some level of use is preferable to non-use, and an anticommons regime is a threat to, rather than the epitome of, optimal use.

Third, multiple rights of exclusion need not be formally granted through the legal system for anticommons property to emerge. For example, in the kiosk case in which state authority is quite weak, mafia groups hold informal rights of exclusion, which would-be kiosk owners must assemble to secure their space. By contrast, Michelman focuses on what the “legal order” allows or prohibits.

Finally, anticommons property may occur at the level of a particular use of a scarce resource, rather than at the level of an entire property regime. For example, in a komunalka, an individual room may be held as private property, while the whole apartment is owned in anticommons form. It is sufficient to note that anticommons property in an object may appear at an efficient scale of use, without requiring that all possible uses of the object be characterized by anticommons ownership.

When these four aspects of the previous definitions are modified, the idea of anticommons property begins to move from a peripheral to an important role for property theory. The term helps identify real-world puzzles that are otherwise unexplained and suggests the importance of focusing on how rights are bundled. Understanding how anticommons property operates may in turn inform practical policymaking.

217 Michelman, supra note 9, at 6.
218 Thus, the author disagrees with Ellickson’s statement that “[b]ecause anticommons yield no profits, they are typically owned by either governments or nonprofit organizations.” Ellickson, supra note 155, at 1322 n.22. In conversation with the author, Ellickson noted that property theorists have considered only the possibility of an open-access anticommons, which indeed may be rare, and have overlooked the example of a limited-access anticommons, which appears more often.
219 See supra pp. 643–44 (discussing informal rights in a kiosk anticommons); see also De Soto, supra note 111, at 19–33 (discussing informal property rights).
220 Michelman, supra note 9, at 4–5.
3. Private Property and Anticommons Property. — The difference between private property and anticommons property as defined by this Article can be expressed in terms of the bundle-of-rights metaphor. In a legal anticommons, rights, rather than bundles, are the locus of property endowments. An object is held as anticommons property if one owner holds one of Honoré’s core rights in an object, and a second owner holds the same or another core right in the object, and so on, with no hierarchy among these owners’ rights or clear rules for conflict resolution. Many of the core rights can function as rights of exclusion. For example, the owner of a right of possession may be able to prevent the owner of the capital value from realizing the value of the asset, and vice versa. Unlike owners in a private property regime, owners in an anticommons regime must reach some agreement among themselves for the object to be used (except perhaps for some relatively low-value uses such as day-to-day occupation subject to eviction by other owners).

This distinction between private and anticommons property can also be expressed graphically (Figure 5). Private property usually breaks up the material world “vertically,” with each owner controlling a core bundle of rights in a single object, subject to allowable forms of decomposition,222 up to the skies and down to the depths.223 By contrast, anticommons property creates “horizontal” relations among competing owners of overlapping rights in an object.224

In Figure 5, boxes 1, 2, and 3 represent familiar objects, such as land parcels, and the heavy lines represent the initial endowments of property rights. The left side of the Figure shows a private property regime, characterized by vertical lines separating bundles of core rights in objects. That is, owner A is initially endowed with a core bundle of rights in object 1, owner B gets object 2, and owner C gets object 3. By contrast, the right side of the Figure shows an anticommons property regime, characterized by horizontal lines separating rights of exclusion in each object. An assortment of owners, including A, B, and C, are initially endowed with rights of exclusion in objects 1, 2, and 3.225

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221 This low-value use would still provide less security in occupation than street kiosk use, because street kiosk use is relatively stable once the proper authorities or mafia members are paid off. See supra notes 98–99.
222 See supra p. 665.
223 Cujus est solum, ejus est usque ad coelum et ad infernos (whoever owns the soil, owns to the skies and to the depths). See Dukeminier & Krier, supra note 103, at 138.
224 A commons property regime might be shown without either horizontal or vertical heavy lines. Owners A, B, and C would then each have the privilege to use objects 1, 2, and 3 without seeking permission from the others.
225 Note that the anticommons owners of object 1 are not necessarily the same as those of objects 2 or 3. Thus, one can imagine owners D, E, and F having rights of exclusion in object 2, and owners G, H, and I in object 3. Neither the vertical nor the horizontal endowments of property necessarily correspond with any preferred distributive scheme; some owners might control several rights or objects, others might have none.
Private property owner $A$ may decide to divide her core rights in object $i$, perhaps by leasing out a portion or mortgaging her object. The effect of this subsequent division by a private owner, however, differs from an initial endowment as anticommons property. When anticommons owners are thrown together, there is no hierarchical decision-making or coordinating relationship among them. By contrast, in market legal systems, even if owner $A$ breaks up her core private property rights in object $i$, someone remains an identifiable "owner" who exercises control over the other rights-holders. As discussed above, private property regimes have evolved to include rules against excessive decomposition that make it difficult for an owner to re-create her property permanently in anticommons form.\(^{226}\)

The graphical image of the anticommons in Figure 5 can also be used to illustrate the distinction introduced in Part II between a legal anticommons and a spatial anticommons.\(^{227}\) In a legal anticommons, the horizontal lines demarcate core rights of exclusion held by different owners. The Moscow storefront is an example of such an anticommons because the core bundle of rights — rights of ownership, leasing, use, and so on — were initially given to different owners. In a spatial anticommons, by contrast, the horizontal lines demarcate the physical subdivisions of an object. Each anticommons owner receives a core bundle of rights, but in too little space for the most efficient use in the given time and place.\(^{228}\) For example, in a komunalka, each owner receives a

\(^{226}\) See supra p. 665.

\(^{227}\) A spatial anticommons, though not by this name, has been the subject of some economic modeling in the pollution context, in which many owners may be given the individual right to keep pollution off their plots unless bought out by the polluter. See V.V. Chari & Larry E. Jones, A Reconsideration of the Problem of Social Cost: Free Riders and Monopolists 4–7 (July 1997) (unpublished manuscript, on file with the Harvard Law School Library).

\(^{228}\) Defining the normal boundaries of an object is difficult, in part because it assumes that an efficient or socially optimal scale of use exists. This Article attempts to elide this difficulty by focusing on objects for which the normal scale of use is reasonably uncontroversial, such as a store or an apartment. Even for such objects, however, an efficiency analysis may not easily capture non-
core bundle of rights in a room, while the preferred use appears to be as a single-family apartment.

4. Commons Property and Anticommons Property. — Anticommons property can be further defined in terms of its relationship to commons property. In discussing commons property, theorists usually consider multiple privileges of use as its defining feature. However, C.B. Macpherson defines a commons as a regime in which owners hold rights not to be excluded. This alternative definition captures the close link between anticommons and commons property. In both property regimes, there is no hierarchical relationship among owners such that society recognizes as final the decision of any single owner regarding the object.

Theorists have usually used commons property to describe a property regime that is not private property. For example, Michelman describes a commons as “a scheme of universally distributed, all-encompassing privilege ... that is opposite to [private property].” More generally, as Yoram Barzel notes, the standard economic analysis of property has “tended to classify ownership status into the categories all and none, the latter being termed ‘common property’ — property that has no restrictions put on its use.” Thus, property theory tradi-

utilitarian values such as the community solidarity that komunalka living could generate. See Margaret Jane Radin, Residential Rent Control, 15 PHIL. & PUB. AFF. 350, 352–53 (1986) (advancing a non-utilitarian rationale for immobility generated by rent controls). But see supra p. 650 & n.148 (noting the hostility generated by communal living).

A different line of criticism argues that no single efficient scale of use exists for some objects because wealth or framing effects may dominate. See Craswell, supra note 16, at 385–91 (discussing wealth effects and framing effects). Defining the “normal” scale of an object becomes even more difficult as social conditions change, such as when a city considers using eminent domain to convert a residential neighborhood into an industrial plant. See Poletown Neighborhood Council v. City of Detroit, 304 N.W.2d 455, 457 (Mich. 1981). Does one consider the subjective values that neighbors experience from living in a vibrant community, or only the objective market value of the lots?

See, e.g., Michelman, supra note 9, at 5 (explaining that, in a commons, “there are never any exclusionary rights. All is privilege. People are legally free to do as they wish, and are able to do, with whatever objects (conceivably including persons) are in the [commons].”).


Michelman, supra note 9, at 9.

BARZEL, supra note 176, at 71.
tionally dichotomizes commons (non-private) property and private property. This dichotomy is too limited to capture the diversity of real-world property relations. Part II of this Article has shown that the anticommons idea helps to explain the behavior of property across the gradient of property in transition; Part IV will suggest the usefulness of the anticommons construct in addressing puzzles in developed market economies as well. More generally, property relations are better characterized as a triumvirate of commons, private, and anticommons.

This Article distinguishes anticommons property from private and commons property along four dimensions. First, anticommons property is a property regime in which multiple owners hold effective rights of exclusion to a scarce resource. Second, ownership of anticommons property includes the ability by each owner to prevent other owners from obtaining a core bundle of rights in an object. Third, keeping most objects of value in anticommons ownership means that the objects may not be readily alienable, may not be available for productive use, and may not be subject to a clear hierarchy of decisionmaking authority among owners. Fourth, non-private property may be analyzed either as anticommons property if rights of exclusion dominate use, or as commons property if privileges of inclusion dominate.

C. The Tragedy of the Anticommons

1. The Anticommons Is Not Necessarily Tragic. — Why should it matter if owners hold rights of exclusion, rather than core bundles of rights in objects? By itself, the appearance of anticommons property is not necessarily a problem for the efficient use of resources. First, in a world without transaction costs, owners should rearrange initial endowments through ex post bargaining. Such bargains would put resources to their highest-valued use, perhaps by assembling anticommons rights into private property. Of course, we do not live in a

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234 An influential strand of scholarship on property rights has come from economists building on a commons property analogy. For a sampling, see, for example, Barzel, cited above in note 176, at 71-72; Douglass C. North & Robert Paul Thomas, The Rise of the Western World: A New Economic History 23 (1973); and Demsetz, cited above in note 19, at 355-57.

235 Cf. Michelman, supra note 9, at 3-6 (identifying private property, state of nature, regulatory regime, and forced-sharing-of-needs regime).

236 The classic citation is Coase, cited above in note 16, at 8. Assuming no transaction costs or holdouts, owners may keep property in anticommons form and perfectly coordinate its use so its performance mimics that of private property. Cf. Lloyd Cohen, Holdouts and Free Riders, 20 J. Legal Stud. 351, 356 (1991) (explaining the circumstances that give rise to holdouts and free-riders and the consequences that result).

237 Even in a world without transaction costs, people would not necessarily bargain to put the anticommons resource to a unique use. Because of the presence of wealth or framing effects, there may be multiple efficient uses for an anticommons resource, depending on who initially holds the rights of exclusion. See Robert C. Ellickson, Carol M. Rose & Bruce A. Ackerman, Per-
transaction-costless world, as Ronald Coase recognized.\textsuperscript{238} If people hold multiple rights to exclude each other from a resource, they must incur the transaction costs of finding out with whom to negotiate. Despite the presence of transaction costs, people will be able in many cases to negotiate with each other to overcome an anticommons and put the property to more efficient use (as in some of the komunalka examples). On the other hand, even if the number of parties and transaction costs are low, the resource still may not be efficiently used because of bargaining failures generated by holdouts, as sometimes seems to happen with Moscow storefronts.\textsuperscript{239}

A second reason that the appearance of anticommons property may not matter for efficient use can be understood by analogy to commons property. Elinor Ostrom has shown that people may be able to manage non-private property efficiently by developing and enforcing stable systems of informal norms.\textsuperscript{240} Efficient, informal management of property in anticommons form could develop over time and could promote certain communitarian values — for example, cooperation among multiple dwellers in a komunalka — that may be lost in a private property regime.\textsuperscript{241} For some anticommons resources, such as street space for kiosks in Moscow, informal norms seem to have developed that allow some use, albeit at a level of efficiency below that of the retail sector in a well-functioning market economy.

Third, some resources may be most efficiently held as anticommons. This assertion corresponds to the idea advanced by Carol Rose that roads and waterways sometimes may be more efficiently held in commons than in private property form.\textsuperscript{242} Using my definition of an anticommons, one could imagine familiar property rights arrangements, such as a scheme of restrictive covenants in a residential subdivision, to

\textsuperscript{238} See COASE, supra note 18, at 174.
\textsuperscript{239} See supra p. 639. See generally Cohen, supra note 236, at 553-56 (distinguishing holding out from free riding); Cooter, supra note 157, at 17-19 (noting that, even when transaction costs are zero, disputes over distribution may lead to inefficient results).
\textsuperscript{240} See OSTROM, supra note 10, at 58-102 (detailing examples of informal norms successfully regulating commons use and avoiding commons tragedy). Robert Ellickson refines this analysis by distinguishing closed-access commons such as those described by Ostrom, in which close-knit groups may develop efficient norms to conserve scarce resources, from open-access commons, which anyone may enter. In an open-access regime, close-knit groups may not be effective in norm enforcement, and a tragedy of the commons is more likely to result. See generally ELICKSON, supra note 19, at 177-82 (suggesting that the effectiveness of informal norms depends on groups having adequate information about members and multiple opportunities to sanction and reward members).
\textsuperscript{241} See, e.g., Rose, supra note 17, at 723, 774-81; but see supra note 148 (noting the hostility generated by communal living).
\textsuperscript{242} See Rose, supra note 17, at 723; see also Barry C. Field, The Evolution of Property Rights, 42 KYKLOS 319, 320-21 (1989) (arguing that, under certain circumstances, property may shift away from private to commons ownership when it may be more efficiently used as a commons).
be a form of anticommons property. Each homeowner in such a scheme holds her unit as private property and holds a veto right, through the restrictive covenant, to prevent changes at the community level. To the extent that creating such a scheme increases property values more than it imposes negative externalities, the developer’s decision to convert raw land to anticommons form can be an efficiency-enhancing move. In the transition economy context, however, anticommons property was not created for efficiency-maximizing motives, but rather was the unintentional result of decisionmaking by governments acting under political and economic constraints.

Finally, property theorists have shown that the efficiency of a property regime cannot be derived ex ante from a limited set of axioms, such as the assumption of rational, self-interested individuals. In the typical commons, with multiple privileges of use, one worries about overuse by rational actors. But one can imagine underuse of a commons despite multiple privileges of use. For example, if a common pond had a rule that any community member could appropriate fish until the moment of consumption, people might prefer to wait on shore and poach others’ catches rather than invest in boats and bait. Whether underfishing or overfishing happens on “Poach Pond” will depend on the gains from fishing and the costs of netting the catch and fending off poachers.

It is worth reiterating that private property systems place limits on an owner’s ability intentionally to create such an anticommons because of the risk that the anticommons may outlive its economic value and paralyze future use. Kennedy and Michelman disprove the presumptive efficiency of private property as an abstract proposition. For example, in a commons that people can pillage, farmers might nevertheless not be discouraged from planting. Instead, farmers may plant more so that they end up with a reasonable amount of food after others have pillaged. At this level of abstraction, the commons might be more efficient than private property if farmers are more efficient than poachers at farming. See Kennedy & Michelman, supra note 172, at 718-19; see also James E. Krier, The Tragedy of the Commons, Part Two, 15 HARV. J.L. & PUB. POL’Y 325, 338 n.44 (1992) (discussing the contradictory need for cooperation from self-interested individuals when creating a private property regime); Carol M. Rose, Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory, 2 YALE J.L. & HUMAN. 37, 38-39 (1990) (arguing that classical property theorists resort to narrative gambits, rather than deriving the creation of private property from ex ante principles).

Demsetz gives the example of fur trapping among Labrador Indians. Before the advent of the fur trade, animals were held in common, and trappers took what they needed for themselves and their families. The increased commercial value that came with trade led to hunting on an increased scale and the depletion of fur stocks. Each trapper could gain the benefit of selling furs without taking into account the externalities imposed by free hunting. See Demsetz, supra note 19, at 351-53.

I am indebted to William Miller for this point. Miller notes that property theorists often confuse commons property regimes with commons property assets within a larger private property regime. In a commons property regime, in which the fish remain subject to others’ rights of use after being caught, no tragedy of overuse may occur, because people might not fish at all. The tragedy of overuse often occurs only in the latter case, in which individuals can transform common assets such as fish into private property and where a market for such privately owned fish exists. Thus, the tragedy of the commons, like the tragedy of the anticommons, is a problem only within
Similarly, one can imagine overuse in an anticommons. For example, assume California has a property regime such that any community member — environmental group, neighbor, or local government agency — could block development of a coastal plot. Nevertheless, the California coast might still be overbuilt relative to an efficient level (assuming neighborhood and environmental externalities are internalized), if exercising a right of exclusion is sufficiently costly. Each community member may prefer to wait for the others to block the development. Thus one can imagine that “free riding” coastal property owners and government agencies might fail to block overbuilding. Whether under- or overbuilding happens in the “Free Ride Coast” anticommons cannot be determined abstractly. It depends on the gains from development and the external costs imposed, including the costs of exercising rights to exclude (Figure 6).

<table>
<thead>
<tr>
<th>COMMONS</th>
<th>OVERUSE</th>
<th>UNDERUSE</th>
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<tr>
<td></td>
<td>1. Demsetz’s Forest</td>
<td>2. Poach Pond</td>
</tr>
<tr>
<td>ANTICOMMONS</td>
<td>3. Free Ride Coast</td>
<td>4. Moscow Storefronts</td>
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**FIGURE 6. Resource Use in Commons and Anticommons Property**

The real-world effect of multiple rights of exclusion or privileges of inclusion in an object is not a theoretical absolute, but rather an empirical matter. Boxes 2 and 3 are theoretically possible (as is optimal use per Ostrom’s and Rose’s observations). Practical examples, however, seem to fall mostly in Boxes 1 and 4, such as in the Labrador forest discussed by Demsetz, and in the Moscow storefronts discussed by this Article. Expectations about overuse or underuse of property, and our policy responses, must be grounded in experience and observation.

2. **Commons and Anticommons Tragedy.** — Although the commons and the anticommons are not necessarily tragic, they often will be in a world of positive transaction costs, strategic behavior, and imperfect information. To the extent one believes that a “pessimistic view of human

the context of a market economy and does not exist intrinsically within the category of commons property.

247 See Cohen, supra note 236, at 351–52 (defining free riders).

248 See Demsetz, supra note 19, at 351–53. Though the theoretical contributions of Demsetz’s work are robust, the empirical foundations of his article have been criticized. See, e.g., WILLIAM CRONON, CHANGES IN THE LAND 184 n.7 (1983) (explaining that Demsetz “misconstrue[s] the social and ecological nature of property rights”); DUKEMINIER & KRIER, supra note 103, at 61–62; Eric T. Freyfogle, Land Use and the Study of Early American History, 94 YALE L.J. 717, 740 n.73 (1985) (criticizing Demsetz’s use of “incomplete historical data”).
capacity for trustful cooperation"249 is a good predictor of behavior, the tragic cases may be dominant. On the other hand, to the extent one has a more optimistic understanding of human nature, one might expect that people will find efficient management strategies both for commons and for anticommons resources.250 This section briefly defines the parallel tragedies of wasted resources that may occur in a commons and in an anticommons.

A tragedy of the commons can occur when too many individuals have privileges of use in a scarce resource. The tragedy is that rational individuals, acting separately, may collectively overconsume scarce resources. Each individual finds that she benefits by consumption, even though she imposes larger costs on the community. Using my definition, the anticommons is prone to the inverse tragedy. A tragedy of the anticommons can occur when too many individuals have rights of exclusion in a scarce resource. The tragedy is that rational individuals, acting separately, may collectively waste the resource by under-consuming it compared with a social optimum.

When an owner of a common pond catches a fish, she gains because she can eat or trade the fish. An owner benefits from keeping a storefront empty, in contrast, by excluding others because exclusion preserves the value of the right, perhaps for later trade to property bundlers, or perhaps for use in rent-seeking.251 The right of exclusion is valuable precisely because others want to use the resource and will pay something to collect the right. Keeping a Moscow storefront empty is relatively inexpensive because an owner need only drive by now and then to peer in the windows. Monitoring costs increase when the store is occupied and each owner must ensure that the use does not exceed the permission granted.252 If a property bundler can use the store without acquiring some owner’s rights, those rights no longer function as rights of exclusion and may decline in value.

3. Overcoming Anticommons Tragedy. — There are several ways to overcome anticommons tragedy while still keeping property in anticommons form. For example, as discussed above, close-knit groups may over time develop informal norms that help them manage the re-

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249 Michelman, supra note 9, at 29. As Hardin notes:

"Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. . . ."

[For example, in the pollution context,] "The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of "fouling our own nest."

Hardin, supra note 10, at 1244–45.

250 See, e.g., Ostrom, supra note 10, at 182–85.

251 See supra pp. 657–59 (discussing possible contingent values of anticommons rights).

252 See Ellickson, supra note 155, at 1327–28 ("Monitoring boundary crossings is easier than monitoring the behavior of persons situated inside boundaries. For this reason, managers are paid more than night watchmen." (footnote omitted)).
source relatively efficiently. However, informal norms are not a likely solution in many cases in which an anticommons develops, such as when one-shot deals convert komunalkas into individual apartments, or when anticommons owners are not close-knit, as in the Moscow storefronts.

In the commons case, property theorists have proposed that societies may overcome tragedy by evolving toward private property relations. For example, Demsetz suggests that communities move to private property in a resource when technological or population pressures increase the differential between individual gain and social cost.253 When the effects of resource use are fairly localized, private property better aligns each owner’s interest with the efficient level of use because each owner faces the full costs of overconsumption.254 In other words, the private property owner internalizes externalities for which the commons owner need not account.255 The theoretical arguments on the commons carry over, by analogy, to the problem of overcoming an anticommons. In the anticommons case, moving to a private property regime may better align each owner’s interest with efficient use, because a private property owner faces the full cost of underconsumption.

The puzzling question, then, is by what mechanism resources shift from commons or anticommons form into private property. This question is underdeveloped in the literature on the economics of property rights, except for a vague evolutionary story.256 In time, much anticommons property, including the examples discussed in Part II, will probably be converted into private property, although the process may be brutal and uneven. Markets will rapidly convert assets with the largest differential between anticommons and private property values, the lowest transaction costs of conversion, and negligible contingent value for rent-seeking. The mechanisms for conversion of other anticommons property are less clear.257

253 See Demsetz, supra note 19, at 350.
254 See Ellickson, supra note 155, at 1327–30. In addition, to the extent there are some spillover effects in resource use, private property reduces the number of people with whom an owner must negotiate. See id. at 1330. By reducing the number of decisionmakers, private property reduces the transaction costs of internalizing the remaining externalities.
255 See Demsetz, supra note 19, at 356.
256 Carol Rose has noted the vague quality of the classical story and has explored the narrative gambits that classical theorists use to describe the shift from commons to private property. See Rose, supra note 244, at 37–40; see also Krier, supra note 244, at 338 & n.44 (noting that the standard economic accounts of property contain a contradictory story for cooperation by self-interested individuals when they create private property regimes). Ellickson takes up the challenge “to identify a collective-action mechanism through which a group would succeed in generating cooperative land rules [by offering] some speculations on evolutionary dynamics of property in land.” Ellickson, supra note 155, at 1321 n.19. He suggests a focus on the dynamics of close-knit groups for the evolution of efficient norms within the group. See id. at 1366.
257 The enclosure of the medieval open fields perhaps offers a parallel to the conversion of Moscow anticommons property. The shifts in both property regimes appear to enhance efficiency overall, while dispossessing and brutalizing certain groups. Both shifts were accomplished partly
Part II of this Article proposed some paths out of the anticommons toward private property, based on either market or regulatory mechanisms. But these paths are fraught with difficulty: markets may fail because of transaction costs and strategic bargaining, and governments may fail because of the cost and administrative complexity of compensation and the fear of demoralizing potential investors by reforming property rights without compensation. Although some anticommons resources may make the transition to private property, many other valuable resources may remain stuck on a poorly-performing path.

What is to be done?

IV. APPLICATIONS AND IMPLICATIONS

Empty storefronts are not an idiosyncratic artifact of post-socialist transition. Anticommons property appears more often than might at first be expected, in guises ranging from the trivial to the tragic. It may emerge both in transition and in developed market economies, whenever governments define new property rights. This Part very briefly sketches four practical applications that indicate the range of the anticommons idea and directions for future research.\textsuperscript{258}

Section IV.A, on enterprise privatization, shows how an anticommons analysis could help explain the poor performance of privatized state enterprises. When privatizing many classes of state assets, transition governments may have excessively fragmented rights. In market economies, legal systems have developed mechanisms that usually through market forces and partly through legislative fiat. See Ellickson, supra note 155, at 1391-92 (discussing the mixed record of the enclosure movement and citing the relevant literature).\textsuperscript{258}

Although the question comes from Lenin, one answer may lie in game theory-modeling of the anticommons, a direction for future research.\textsuperscript{259}

Section IV.B, on copyright, shows how an anticommons analysis could help explain the fragmented status of American copyright law. Under current law, copyright assignments are irrevocable and copyright can be divided by death. This Part very briefly sketches a possible legal solution to the problem of fragmented copyright.

Section IV.C, on the land use area, shows how an anticommons analysis could help explain the fragmented status of American land use controls. The Part very briefly sketches a possible legal solution to the problem of fragmented land use controls.

Section IV.D, on the Internet, shows how an anticommons analysis could help explain the fragmented status of Internet law. The Part very briefly sketches a possible legal solution to the problem of fragmented Internet law.

258. Although the question comes from Lenin, one answer may lie in game theory-modeling of the anticommons, a direction for future research.

259. Within United States law, powerful applications of the anticommons idea appear often in the intellectual property and the land use areas. In a forthcoming article, Rebecca Eisenberg and I use an anticommons analysis to show how increased patentability of basic biomedical research may lead to the development of fewer useful pharmaceutical products. See Heller & Eisenberg, supra note 20, at 1-2. Another intellectual property example occurs in the emerging multimedia field, in which multiple ownership and licensing requirements could create a “Brady Bunch anticommons.” Use of The Brady Bunch has required agreement from each of the actors portraying Brady kids (and their parents, while the actors were still minors), the Brady parents, and the Brady housekeeper, Alice — as is typical of licensing agreements for such shows. The difficulty of getting agreement, particularly from Maureen McCormick (“Marcia Brady”), is reported in BARRY WILLIAMS & CHRIS KRESKI, GROWING UP BRADY 139, 149, 153 (1992). I am indebted to Carey Heckman for this multimedia application.

258. Although the question comes from Lenin, one answer may lie in game theory-modeling of the anticommons, a direction for future research.

hibit private owners from fragmenting their rights too much for too long. The Big Inch Giveaway example in Section IV.B highlights several of these bundling mechanisms. Sometimes, however, governments disable or overwhelm the bundling mechanisms. For example, since World War II, the Japanese government has given private individuals too many veto rights in urban redevelopment decisions. The Kobe earthquake material in Section IV.C shows the consequences of creating an anticommons in an established market economy. After governments fragment rights, overcoming the resulting tragedy of the anticommons may prove difficult, both for private individuals and for government decisionmakers. The final section, on Native American Land, shows how anticommons tragedy can persist for many decades after mistakes in the initial allocation of property rights.

A. Rapid Enterprise Privatization and Slow Restructuring

Enterprise reform has been the most discussed, and most puzzling, point in the literature on the transition from socialism. Despite rapid privatization of state-owned enterprises, many of these newly private firms have not yet begun to restructure their operations in a market-oriented direction. The anticommons prism might usefully reflect on this puzzle.

In Russia, for example, the fragmentation of ownership of the socialist firm might help to explain the slow pace of change. Privatization broke up the socialist bundle of corporate governance rights among a heterogeneous set of managers, workers, and local governments. These new owners may now hold excessive rights of exclusion, such that each prevents the others from restructuring corporate assets.

260 For a useful introduction to the literature, see WORLD DEVELOPMENT REPORT, cited above in note 2, at 151-52 (providing an annotated bibliography on enterprise privatization). An analysis of the role of anticommons property in enterprise privatization is beyond the scope of this Article.

261 See id. at 50-58 (providing a brief overview of goals, methods, and outcomes of enterprise privatization in transition countries).

262 Andrei Shleifer, one of the architects of the 1992-1993 Russian mass privatization program, said that his fundamental goal was “to consolidate the removal of control rights over firms from the central bureaucracy and to allocate those rights to enterprise managers and shareholders.” Shleifer, supra note 3, at 112; see also Boycko, Shleifer & Vishny, supra note 71, at 60-66 (noting that privatization and corporatization provide the reformer with the most efficient means of ownership); Roman Frydman, Andrzej Rapaczynski & John S. Earle, THE PRIVATIZATION PROCESS IN RUSSIA, UKRAINE AND THE BALTIC STATES 76-77 (1993) (stating that the purpose of recent corporatization has been to “make enterprises managerially more independent from managerial administration”); Cheryl W. Gray & Kathryn Hendley, WORLD BANK, POLICY RESEARCH WORKING PAPER NO. 1538, DEVELOPING COMMERCIAL LAW IN TRANSITION ECONOMIES: EXAMPLES FROM HUNGARY AND RUSSIA 21-26 (1995) (discussing the move toward enterprise autonomy as well as privatization in Russia).

263 See Rapaczynski, supra note 13, at 100 (“Maximizing the value of the firm is often not the most important objective of these insiders. Maximizing employment, for example, is clearly important for the employees. The management is often busy plundering corporate assets. . . . All the while, the insiders try to disempower the minority outside owners . . . ”).
gain support for rapid privatization from socialist-era stakeholders, Russia may have transferred socialist ownership at the state level to anticommons ownership at the plant level.

Similarly, in Hungary, corporate insiders such as plant managers were able to hold onto their rights of exclusion when the government took control of, and then privatized, large enterprises. New owners of Hungarian enterprises now find that their assets may come with old owners still hanging onto control. By contrast, the Czech Republic has tried to create dominant outside owners to act as “a powerful lobby for the interests of shareholders not otherwise related to the corporation.” Perhaps Czech enterprises will be able to restructure more quickly because they did not create anticommons enterprise property during privatization. Their more coherent bundling of corporate-governance rights, however, may come at the expense of setting aside distributional concerns of existing managers, workers, creditors, and local governments.

Finally, China has experienced tremendous economic growth, particularly among “township and village enterprises,” apparently without “clearly defined” property rights. While analysts such as Andrei Shleifer suggest that clarifying rights will prove essential to continued growth, the anticommons perspective suggests that clarifying property rights may be only part of the story. Political and fiscal decentralization in China may have kept the core bundle of property rights

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264 Rapaczynski elaborates on this point: Hungary has standard property rights on the books, but perhaps the most confusing and fragmented ownership structure in the world. Here, because the state was never able to regain its own full ownership rights to the nominally state property, it was never really able to transfer those rights to new owners. As a result, managers of former state firms used this vacuum to perpetuate their control through a series of cross-ownerships, joint ventures, pyramids of holding companies, legal entities created solely to hold debts or liabilities, and other structures so arcane as to leave much of the productive assets in Hungary with no conventional owners at all.

Id. (citing David Stark, Networks of Assets, Chains of Debt: Recombinant Property in Hungary in Corporate Governance in Central Europe and Russia 109–50 (Roman Frydman, Cheryl W. Gray & Andrzej Rapaczynski eds., 1996)).

265 Id. at 101.

266 See WORLD DEVELOPMENT REPORT, supra note 2, at 56 (noting the success of dominant shareholders in spurring restructuring of privatized Czech enterprises).


268 WORLD DEVELOPMENT REPORT, supra note 2, at viii (“‘Township and village enterprises’ are a form of enterprise organization unique to China in which local government owns all or most of the enterprise but local individuals hold implicit property rights.”).


270 See Shleifer, supra note 3, at 106 (“The efficiency of Chinese village enterprises is fragile. Unless local bureaucrats effectively privatize these firms through full nomenklatura privatization, at some point the village enterprises are likely to suffer the same afflictions as public firms elsewhere in China and the rest of the world.”).
relatively intact at the local level. Even though rights are not "clearly defined," perhaps a sole decisionmaker can exercise effective control over assets of each "township and village enterprise." If further research confirms this hypothesis about Chinese enterprise reform, the content of bundles of control rights may be even more important than the clarity of those rights during transition.271

These enterprise examples suggest that transition policy should focus on the particulars of property bundling during political decentralization and enterprise privatization, the paths by which anticommons property is either formed or avoided.

B. The Quaker Oats Big Inch Land Giveaway

This Article borrows from one of the most successful promotional gimmicks in advertising history to show how market legal systems prevent individuals from creating spatial anticommons property.272 In a 1955 radio broadcast, the fictional "Sergeant Preston of the Yukon" promised every child who purchased a box of Quaker Oats cereal a deed for one square inch of land in the Yukon.273 The advertising executive who thought up the idea flew to the Yukon and bought about nineteen acres on behalf of Quaker Oats.274 Quaker Oats then transferred the land to a subsidiary that subdivided the land into square-inch parcels, printed up deeds, and packed them in twenty-one million specially marked boxes of cereal, which flew off the shelves.275

The twenty-one million deeds live on and have generated a lore of their own. One deed owner offered to donate his three square inches to create the world’s smallest national park; another declared independence on his.276 One young boy sent the local title office four toothpicks so they could fence in his inch,277 neglecting to note that the "language on the deeds said that each owner must acknowledge the right of every other owner to cross his inch at will."278 Unfortunately for deed holders, Quaker Oats never registered the subdivision and never paid taxes

271 The differences between Chinese and Russian enterprise reform are profound. See, e.g., Sachs & Woo, supra note 267, at 1. An anticommons explanation is one factor, among many others, that may account for the apparent success of China and apparent failure of Russia.

272 "And so began the Great Klondike Big Inch Land Caper, one of the most successful sales promotions in North American business history." Andrew H. Malcolm, Quaker Oats’ Land Scam: A Case for Sgt. Preston, N.Y. TIMES, Sept. 28, 1980, at F7 (reporting that on Jan. 27, 1955, Quaker Oats began placing “legal-sounding” deeds to one square inch of Yukon land in each box of Puffed Rice and Puffed Wheat).

273 Id. ("[T]he promotion was begun on the Sergeant Preston radio show, which despite the husky barks and Yukon wind sound effects, originated in Detroit.").


275 See id.

276 See Malcolm, supra note 272.

277 See id.

278 Greene, supra note 274 ("Also, it was spelled out that no mineral rights were involved . . . ").
on the land, which escheated whole to the Canadian government in the mid-1960s. Not surprisingly, others have imitated the Quaker Oats promotion: now it is possible to buy a deed that conveys one square inch in all fifty states, and even to buy one square foot of the ranch where the television series Dallas was filmed.

Well-functioning market economies appear to contain a number of mechanisms that encourage owners to create high-value anticommons property and that limit owners’ ability to create a low-value anticommons. As a profit-maximizing firm, Quaker Oats had an incentive to create the most valuable Big Inch anticommons that it could. Also, the Canadian government reserved access and mineral rights for itself.

Thus, the legal regime allowed Quaker Oats to create anticommons property as to some uses of the land, while the land was kept as private property for other purposes. In addition, the requirements that owners incur the costs of registering title and paying property taxes, and the subsequent escheat of the land for failure to do so, functioned as powerful mechanisms to return the low-value spatial anticommons created by Quaker Oats to a bundle of usable private property.

More generally, such mechanisms ensure that decisions by private owners to create anticommons property will not paralyze the alienability of scarce resources for too long or diminish their value too drastically. If the recipients had registered the deeds, and if the government had not levied any taxes, it is unlikely that anyone would have ever

279 See Greene, supra note 274 (“The individuals who had received the deeds in the cereal boxes had become the owners of the land,” [a Quaker Oats employee] said. ‘Obviously, none of them ever paid taxes on it. So the ownership of the land went back to Canada. The promotion was long over, anyway.’); Malcolm, supra note 272 (“[The government] repossessed all the land back in 1965 for nonpayment of $37.20 in property taxes.”).

280 See Bill Cunniff, Catalog Can Help Rehabbers in Hunt for Right Item, CHI. SUN-TIMES, Jan. 29, 1993, at 35 (reporting that, according to Scott Moger, who created the deeds, “[it was just as hard getting the legal approval as it was acquiring the land. I had a highfalutin legal firm looking into it.”); Rick Hampson, Looking for Piece of Land? He’ll Take Care of It for You, CHI. TRIB., Dec. 1, 1991, at 2A (“After some legal maneuvering — ‘I spent more on lawyers than land’ — [Moger] was cleared by New York state and the federal Securities and Exchange Commission, which ruled he was selling a novelty gift item, not an investment.”); see also Nina Munk, A Cheap Ticket to the Promised Land?, FORBES, Feb. 1, 1993, at 90, 90 (“There’s a strong suspicion that poor Chinese customers are being had. Some of them seem to believe that owning even a tiny slice of America increases one’s chances of winning U.S. citizenship or at least a visa.”).

281 As one article noted:

Now the same gimmick is being used to popularize not cereal but a serial. . . . “We have actual deeds we send out with the documents to transfer the land to the new buyer,” [J.R.] Duncan said. Those who buy the land will have only limited rights to it [not including grazing rights]. . . . Mr. Duncan has also arranged to pay property taxes so the city clerk will not have to send thousands of assessment bills around the world.


282 See Greene, supra note 274.

283 The medieval open field system offers an analogy. Ellickson suggests that the system created commons property as to uses for which there were efficiencies of scale, such as harvesting, fencing, shepherding, and private property as to uses for which there were no scale efficiencies, such as planting, weeding, and thinning. Ellickson, supra note 155, at 1391.
used the land again once ownership had been broken up at the square-inch level. (One collector did amass 10,800 of the Quaker Oats deeds and asked the company to consolidate them into one parcel of "his land," comprising about seventy-five square feet, but the company dissuaded him. He eventually profited by selling the deeds as collectibles.  

C. Post-Earthquake Reconstruction of Kobe, Japan

Unlike in the Quaker Oats case, the mechanisms to prevent emergence of anticommons property have failed dramatically in Japan. When these mechanisms fail and governments accidentally create anticommons property, interests vest, and the consequences can last for decades or more. Japan's residents pay the highest prices for housing in relation to income of any industrialized country in the world, in part because of the "world-class tangle of real-estate laws, a thicket that makes New York's labyrinth of rent regulation look simple by comparison." In Japan, the costs of failure to prevent the emergence of anticommons property appeared recently during the rebuilding following the 1994 Kobe earthquake. Although $30 billion has flowed into the city, and highways, held in undivided state ownership, have been rebuilt, much of the rest of the city still lies in rubble, because "a single angry tenant can block urban renewal. And does."  

Anticommons property has appeared because of mistakes in Japanese land laws enacted after World War II. Under these laws, some land in Kobe has been divided to the point where there are "thousands of parcels the size of a U.S. garage," and a building "can be based on a plot that is actually dozens of smaller parcels thrown together by developers." In one block of Kobe, over 300 renters, lessees, landowners, and subletters own often-overlapping claims, and each one must agree before rebuilding can go forward. According to a city official, "[i]t's like trying to get thousands of little corporate presidents to agree on one plan."  

Once anticommons property has been created, it is difficult to find a way out. Japan faces a set of historical and cultural constraints on local government intervention. "The city could conceivably evict any tenant

284 Michael Gershman, Try, Try Again, FOOD & BEVERAGE MARKETING, Dec. 1990, at 28, 32; see also Joseph P. Mastrangelo, Protocol, Presidents and the Yukon Rush, WASH. POST, Nov. 20, 1978, at D1 ("The deeds were not in sequence and the great land grab fizzled out.").  
285 See Gershman, supra note 284, at 32.  
286 WORLD BANK, supra note 49, at 97.  
288 Id.  
289 Id.  
290 See id.  
291 Id.
or landlord and buy the land under laws of eminent domain. But Japanese authorities frequently decline to seize property because of the nation's preference for harmony and consensus.\textsuperscript{292} Instead, several years after the Kobe earthquake, seven out of ten buildings remain damaged or in rubble; rebuilding plans are set, but are blocked by owners.\textsuperscript{293} "[T]he only bargaining chips left to the participants in this debate are property rights."\textsuperscript{294} The effect of bad real property law spreads beyond housing costs:

The whole system is a drag on the economy and can even pose trade barriers. Japan's bad loan crisis will take years to mop up, in part because squatters and deadbeat debtors have such strong rights to stay put. Tokyo's Narita Airport is still unfinished 18 years after opening, because farmers refuse to give up land on what would become a second runway.\textsuperscript{295}

\section*{D. Fractionation of Native American Allotted Lands}

The facts behind the Supreme Court decisions in \textit{Hodel v. Irving}\textsuperscript{296} and \textit{Babbitt v. Youpee}\textsuperscript{297} graphically illustrate how government mistakes in breaking up the core bundle of property rights have created anticommons property in the United States, and how difficult it is subsequently to rebundle property sensibly. In the 1880s, Congress enacted a series of Land Acts that dismantled many Native American reservations and allotted 160 acres of communal lands to Native American individuals, with heads of households receiving 320 acres.\textsuperscript{298} In part to protect Native Americans from white settlers, the United States held these lands in trust, and the Native Americans could not alienate or partition the parcels.\textsuperscript{299} In practice, individuals could transfer land only through devise or, in most cases, through intestacy.\textsuperscript{300}

As the Court noted in \textit{Hodel}, "[t]he policy of allotment of Indian lands quickly proved disastrous for the Indians. . . . Because the land was held in trust and often could not be alienated or partitioned, the fractionation problem grew and grew over time."\textsuperscript{301} As early as 1928,
Congress realized that the program was not working and that "good, potentially productive, land was allowed to lie fallow, amidst great poverty, because of the difficulties of managing property held in this manner." In trying to reform the allotment program in 1934, one member of Congress noted:

[T]he administrative costs become incredible. . . . On allotted reservations, numerous cases exist where the shares of each individual heir from lease money may be 1 cent a month. . . . The Indians and the Indian Service personnel are thus trapped in a meaningless system of minute partition in which all thought of the possible use of land to satisfy human needs is lost in a mathematical haze of bookkeeping.

Reforms finally ended further allotment, but could not solve the problem of the millions of acres that already had been allotted and continued to fractionate. Further failed attempts were made in the 1960s to solve the problem. By the 1980s, according to the Court, the average allotted tract had 196 owners and the average owner had undivided interests in fourteen tracts. One particularly egregious tract, Tract 1305 of forty acres, produced $1080 in annual rents and was valued at $8000. It cost the Bureau of Indian Affairs $17,560 annually to find and pay the 439 owners and manage the property. On Tract 1305, two-thirds of the owners received less than $1 in annual rents, one third received less than a nickel, and one owner was to receive a penny once in 177 years. Thus, the Court noted that the fractionation had become "extreme" and "extraordinary" by the time Congress passed the 1983 Indian Land Consolidation Act. Section 207 of this Act

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302 Id. at 707-08.
304 See Hodel, 481 U.S. at 708; see also John Leavitt, Hodel v. Irving: The Supreme Court's Emerging Takings Analysis — A Question of How Many Pumpkin Seeds Per Acre, 18 ENVTL. L. 597, 611-12 (1988) (describing the difficulties that the Bureau of Indian Affairs faces in selling or leasing allotments today); Suzanne S. Schmid, Case Comment, Escheat of Indian Land as a Fifth Amendment Taking in Hodel v. Irving: A New Approach to Inheritance?, 43 U. MIAMI L. REV. 739, 741-42 (1989) ("The fractionation of individually owned Indian trust or restricted land represents one of the outstanding problems in Indian law.").
305 See Hodel, 481 U.S. at 708-09.
306 See id. at 712.
307 See id. at 713. In 1934, John Collier, Commissioner of Indian Affairs, noted:

[The Indian Service is forced to expend millions of dollars a year. The expenditure does not and cannot save the land, or conserve the capital accruing from land sales or from rentals. . . . For the Indians the situation is necessarily one of frustration, of impotent discontent. They are forced into the status of a landlord class, yet it is impossible for them to control their own estates; and the estates are insufficient to yield a decent living, and the yield diminishes year by year and finally stops altogether.

Readjustment of Indian Affairs: Hearings on H.R. 7902 Before the House Comm. on Indian Affairs, 73d Cong. 117-18 (1934).
308 See Hodel, 481 U.S. at 713.
309 See id. at 712.
tried to consolidate these overly fractionated parcels by providing for small allotment interests to escheat to the tribe on the owner’s death.\textsuperscript{311}

Once governments create anticommons property, it may be difficult for them to redefine rights without either paying compensation or suffering a blow to their credibility. In the American constitutional context, given current takings jurisprudence, the Court found \textit{Hodel} to be a relatively easy case. The regulation was unconstitutional because Congress made no provision for compensating Native Americans when they regulated away the possibility of devise and descent of small undivided property interests in allotted lands.\textsuperscript{312} The Court held that “the regulation here amounts to virtually the abrogation of the right to pass on a certain type of property — the small undivided interest — to one’s heirs.”\textsuperscript{313} Because the Court considered the fractionated interest to be ordinary private property, it took away one potential mechanism by which the government could reassemble allotted land into usable form.

In 1984, while \textit{Hodel} was pending, Congress made several changes to § 207 of the Indian Land Consolidation Act in an attempt to ensure the statute’s constitutionality.\textsuperscript{314} The \textit{Hodel} Court expressed no opinion on the amended § 207.\textsuperscript{315} However, the Ninth Circuit struck down this new attempt to overcome the tragedy of the allotment anticommons,\textsuperscript{316} a decision that the Supreme Court recently affirmed.\textsuperscript{317} It is difficult to imagine how Congress or the Native American tribes can overcome the tragedy of the allotment anticommons.\textsuperscript{318} One must wonder how these resources will be returned to productive use.\textsuperscript{319}

\textbf{V. CONCLUSION}

Anticommons property is prone to the tragedy of underuse. Once anticommons property appears, neither markets nor subsequent regulation will reliably convert it into useful private property, even if the

\begin{thebibliography}{99}
\bibitem{311} See \textit{id.} at 2519.
\bibitem{312} See \textit{Hodel}, 481 U.S. at 717-18.
\bibitem{313} Id. at 716.
\bibitem{315} See \textit{Hodel}, 481 U.S. at 710 n.1.
\bibitem{316} See \textit{Youpee v. Babbitt}, 67 F.3d 194, 196 (9th Cir. 1995).
\bibitem{317} See \textit{Babbitt}, 117 S. Ct. at 733 (“The narrow revisions Congress made to § 207, without benefit of our ruling in \textit{Irving}, do not warrant a disposition different than the one this Court announced and explained in \textit{Irving}.”).
\bibitem{318} By analogy to the Quaker Oats Big Inch example, one solution to fractionation of Indian lands could be the imposition of property taxes. However, as the Court in \textit{Babbitt} noted, “Indian lands were not subject to state real estate taxes, . . . which ordinarily serve as a strong disincentive to retaining small fractional interests in land.” Id.
\bibitem{319} In a conversation with the author, Don Herzog suggested that non-use of allotted lands need not be viewed as tragic. Ironically, the government might have created a legal regime that inadvertently preserves Native American conceptions of trusteeship over nature, not ownership, use, and exploitation. This alternative view suggests that the idea of “underuse” may assume the values of a pre-existing market economy.
\end{thebibliography}
property rights are "clearly defined" and contracts are subject to the "rule of law." Transaction costs, holdouts, and rent-seeking may prevent economically justified conversion from taking place. Over time, markets may develop formal or informal mechanisms that allow rights-bundling entrepreneurs to assemble private or quasi-private property. More directly, governments can tinker with the rights regime through policy reforms to change individual incentives in favor of bundling, or they can risk the instability that comes from revoking excessive rights of exclusion. However, this Article has shown that once anticommons property has emerged, both markets and governments may fail to re-bundle it into usable private property.

Governments must take care to avoid creating anticommons property accidentally when they define new property rights. One path to well-functioning private property is to convey a core bundle of rights to a single owner, rather than rights of exclusion to multiple owners. Subsequently, owners of standard bundles may fragment their ownership. Well-functioning market legal systems allow this conversion, but have numerous safeguard mechanisms to ensure that rights can be re-bundled and the property can be put to use within a reasonable period. When these mechanisms fail, anticommons property can become entrenched, even in developed market economies.

Property theory and transition practice have given insufficient weight to the role that the bundling of rights plays in avoiding anticommons tragedy. Both theorists and practitioners assume that the key to creating private property is to define rights clearly, enforce contracts predictably, and let the market sort out entitlements. The experience of anticommons property in transition suggests that the content of property bundles, and not just the clarity of property rights, matters more than we have realized. We pay a high price when we inadvertently create anticommons property.