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Property in Housing

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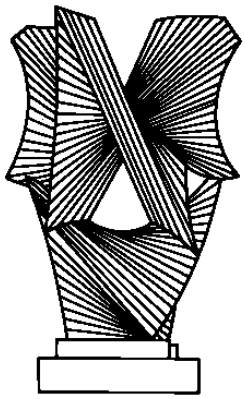

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主題演說

Property in Housing*

Keynote Address

(Delivered on June 16, 2012)

Lee Anne Fennell**

Contents

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I thank Gregory Alexander, Scott Baker, Yun-chien Chang, Ruoying Chen, Donald Clarke, Christopher Fennell, Eduardo Peñalver, Rebecca Tushnet, and participants in the Conference on Property Rights and China's Development and Transformation, Academia Sinica's Fourth Conference on Law and Economic Analysis, and a faculty workshop at Cornell Law School for helpful comments and conversations. I also thank the Stuart C. and JoAnn Nathan Faculty Fund for financial support.
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The question of how to structure and package the residential experience is a deeply interesting and difficult one. How physically large or small should residential holdings be? How densely should they be clustered? Should spaces for working, recreating, cooking, and bathing be contained within the private residential unit, shared with other households, or procured á la carte? How permanent should the connection be between a household and a living space? How much control should households have over the environment surrounding the dwelling unit? Answers to these and many other queries differ both within and between societies. Housing services can be provided in an almost infinite array of configurations, from capsule hotels[1] to large estate homes situated on extensive private grounds.

A law and economics perspective that fully attends to problems of scale can inform the task of configuring residential property optimally. Like other forms of private property, housing entitlements mark off resources from the rest of the world and delegate broad decisionmaking power over them to individuals and groups.[2] Deciding how thickly or thinly to carve up housing resembles other boundary-drawing problems, such as determining the optimal scope of a firm or a farm.[3] In each case,

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1 Capsule hotels provide a small plastic pod (roughly 6 ½ feet long by 5 feet wide) for an individual to sleep in, along with lockers for belongings, and communal bathing and eating facilities. Although the hotels' primary clientele was initially businessmen who had missed their last train home, these hotels began to be used during the recession by long-term guests who rented by the month. Hiroko Tabuchi, *For Some in Japan, Home Is a Tiny Plastic Bunk*, N.Y. TIMES, Jan. 2, 2010, at A1.

2 Henry Smith has associated property rule protection and strong exclusion rights with broad delegations to owners. *See, e.g.*, Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965, 974, 978-85 (2004) [hereinafter Smith, *Exclusion*]; Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1755-64 (2004) [hereinafter Smith, *Property Rules*].

3 *See, e.g.*, Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1332-34 (1993)

the appropriate size and composition of the holding depends on the scale of the underlying activities.[4] Identifying the relevant scale for residential activity is not easy, however. Housing serves a number of distinct goals,[5] and it can be delivered through a variety of property formats.[6] It also plays a crucial role in rationing access to other important goods and services, including education and public safety. An analytic perspective that emphasizes scale illuminates the ways in which law intersects with private decisionmaking to deliver housing. Central to this analysis is the mutability of the functions served by housing. The law, as part of a generative process that interacts with private markets and household decisions, can profoundly influence what happens inside and outside the envelope of the home.

(describing the challenge of setting "efficient boundaries" and the attendant tradeoffs between "internal management" and "external coordination"); Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (papers and proceedings) 347, 358 (1967) ("The greater are diseconomies of scale to land ownership the more will contractual arrangement be used by the interacting neighbors to settle [their] differences."); Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA, N.S. 386 (1937), *reprinted in* RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW 33, 44 (1988) (discussing efficient boundaries for a firm).

4 *See, e.g.*, Ellickson, *supra* note 3, at 1322-35.

5 There is a burgeoning literature on this point. *See, e.g.*, D. Benjamin Barros, *Home as a Legal Concept*, 46 SANTA CLARA L. REV. 255 (2006); Tim Iglesias, *Our Pluralist Housing Ethics and the Struggle for Affordability*, 42 WAKE FOREST L. REV. 511, 530-49 (2007); LORNA FOX, CONCEPTUALIZING HOME: THEORIES, LAWS AND POLICIES 142-77 (2007).

6 These possibilities are often cast in terms of a limited slate of recognized tenure forms, such as the leasehold, the life estate, and the fee simple. This limited menu, and the *numerus clausus* principle it embodies, has been the focus of a great deal of scholarly attention. *See, e.g.*, Henry Hansmann & Reinier Kraakman, *Property, Contract, and Verification: The* Numerus Clausus *Problem and the Divisibility of Rights*, 31 J. LEGAL STUD. 373 (2002); Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The* Numerus Clausus *Principle*, 110 YALE L.J. 1 (2000); Nestor Davidson, *Standardization and Pluralism in Property Law*, 61 VAND. L. REV. 1597 (2008).

This essay proceeds in two parts. Part I considers a variety of dimensions along which housing packages can vary and notes the ways in which the law may restrict or burden particular configurations. Part II examines how a home's physical, spatial, and conceptual boundaries might be optimized, posing questions analogous to those that Ronald Coase asked about firms and that Robert Ellickson and Harold Demsetz asked about property holdings more generally.[7]

I. Housing Packages

At its most essential, a home is a vehicle for delivering a specialized stream of consumption benefits to its occupants.[8] Arrangements that fit within the usual meaning of "home" give a household[9] a variety of temporally extended rights, good against the rest of the world, to a physical structure that affords some measure of shelter,

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7 *See* Coase, *supra* note 3 (addressing firm boundaries). Robert Ellickson, following Harold Demsetz, translated Coase's question about firm boundaries explicitly into the property realm by asking about the appropriate physical and conceptual boundaries of land holdings. Ellickson, *supra* note 3; *see* Demsetz *supra* note 3. Ellickson later engaged in a detailed economic analysis of households that, together with the earlier analysis of property in land, informs the analysis here. *See generally* ROBERT C. ELLICKSON, THE HOUSEHOLD: INFORMAL ORDER AROUND THE HEARTH (2008); Robert C. Ellickson, *Unpacking the Household: Informal Property Rights Around the Hearth*, 116 YALE L.J. 226 (2006).

8 The home may also deliver investment returns to its occupants, depending on tenure form. *See infra* Part I.C.2.

9 A household might be an individual, a family unit, or any other small and relatively stable grouping that elects to regularly share housing and perhaps meals. Robert Ellickson offers a definition that shifts attention from the occupants themselves to the arrangements they have made with each other. *See* Ellickson, *supra* note 7, at 230 (" 'household' is a set of institutional arrangements, formal or informal, that governs relations among the owners and occupants of a dwelling space where occupants usually sleep and share meals").

security, and privacy.[10] For example, the occupying household[11] generally has the right to enter and leave the structure at times of its choosing, to control who else enters the structure and what they do while there, to store and display objects within the structure, and to engage in any of a fairly broad and unspecified set of uses in and immediately around the structure without first having to seek any outsider's approval.[12] The home also serves as a physically tethered delivery portal for additional consumption streams that emanate from outside the property's boundaries, including local public goods and services, and all the other benefits (and detriments) associated with a particular spatial location.[13] Typically, the occupants will also have some formal or informal rights over externality-generating uses that others might make of nearby properties.[14]

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10 *See, e.g.*, Barros, *supra* note 5, at 259-75 (discussing elements of "security, liberty, and privacy" in the home).

11 Some complications are suppressed here by referring to "the occupying household" as if it were a monolith. Internal rules or other governance mechanisms commonly operate within the household to extend or withdraw certain rights to certain household members and to manage their use of the common areas. *See* Ellickson, *supra* note 7, at 297-323 (analyzing a broad array of such mechanisms for governing relationships among co-occupants).

12 Property ownership has been associated with a large and unspecified set of uses. *See, e.g.*, Smith, *Property and Property Rules, supra* note 2, at 1759-60 (noting the many unspecified ways that an owner can use a house); *see also* J. W. HARRIS, PROPERTY AND JUSTICE 65 (1996) (emphasizing the "countless" ways an owner is entitled to "use, abuse, exploit, or transmit" property). While the choice set open to a leaseholder may be smaller than that afforded a homeowner, the same principle applies insofar as many uses can be selected without having to obtain preapproval.

13 The Tiebout Hypothesis stands for the idea that residents select bundles of local goods and services by choosing where to locate. *See* Charles Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956); *see also* LEE ANNE FENNELL, THE UNBOUNDED HOME: PROPERTY VALUES BEYOND PROPERTY LINES 25-44 (2009) (examining the bundled package that comprises the home, including many elements that lie outside the physical structure or parcel).

14 Common law nuisance principles allow owners to enjoin or receive damages for

Despite these commonalities, housing entitlements vary widely. What ends up inside or outside a given housing bundle depends on a complex interplay between legal restrictions, market forces, and household responses. I will start by considering the various dimensions of housing bundles, and the many ways in which law may restrict their content and configuration.

A. Quantitative Dimensions

As an initial cut, property holdings can be defined by reference to their size in space and their length in time. Law frequently regulates both dimensions in the housing context.

1. Space

Real property exists in space and is intuitively defined by its size and shape. Legal systems regulate and impact spatial configurations in many ways. The shape of property holdings can depend on the way in which land is demarcated,[15] and on the way in which vertical space is attached to or detached from surface rights.[16] The law also frequently sets spatial requirements for residential property. For example, many municipal zoning ordinances and private neighborhood covenants specify that homes must sit on lots of a certain minimum size. Cities also

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certain kinds of impact-causing uses, while finer-grained land use controls like zoning and covenants may add many more limits.

15 *See* Gary D. Libecap & Dean Lueck, *Land Demarcation Systems*, *in* RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW 257 (Kenneth Ayotte & Henry E. Smith eds., 2011).

16 *See, e.g.*, STUART BANNER, WHO OWNS THE SKY? THE STRUGGLE TO CONTROL AIRSPACE FROM THE WRIGHT BROTHERS ON (2008) (tracing the interaction between the *ad coelum* doctrine and the demands of air travel); Ellickson, *supra* note 3, at 1363-64 (describing "vertical boundaries" for property holdings).

set minimum square footages for rental units.[17] Building codes that require ceilings of a certain height or laws that require ownership of surface rights to be bundled with sufficient underground support set minima in vertical space.

Some regulations influence space indirectly. Housing codes and fire codes that specify the maximum occupancy for a given space have the effect of requiring a minimum amount of space for each household of a given size. Limits on use can also preclude spatial subdivision. Thus, in an area zoned for single family homes, it is impermissible to subdivide a house and sell separate portions to different families. Spatial maxima might also be specified. For example, homeowners fed up with "McMansions" have been successful in imposing size limits for dwellings in some communities, typically tied to lot size.[18] Measures to limit home energy usage that are tied to housing size, like the one in Boulder County, Colorado, effectively place a tax on larger homes.[19]

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17 A surge of recent interest in small housing units has led to reexamination of some such minima. *See* Venessa Wong, *Will the Middle Class Want Micro-Apartments?* BLOOMBERG BUSINESSWEEK, Jan. 23, 2013, http://www.businessweek.com/printer/articles/92394-will-the-middle-class-want-micro-apartments (reporting on the recent reduction in the minimum size of apartments in San Francisco from 290 square feet to 220 square feet); *id*. (noting that the minimum apartment size of 400 square feet has been waived in New York City to allow for construction of the winning development in Mayor Michael Bloomberg's recent micro-apartment design competition); *see also* Tom Orlik & Esther Fung, *In China, a Move to Tiny Living Space,* WALL ST. J., Oct. 17, 2012 (reporting on a Dongguan developer's model apartment that "measures 160 square feet, about the size of a parking space").

18 These restrictions, unlike the environmentally motivated measures discussed *infra*, are generally designed to keep owners from erecting a house that is deemed too large *for its lot* rather than to restrict size as an absolute matter. Because owners would not be precluded from building larger houses if they bought more land to build it on, these restrictions could be characterized as imposing (lot size) spatial minima rather than (square footage) spatial maxima.

19 *See* Allyson Wendt, *Boulder County Limits Energy Use for Homes*, ENVIRONMENTAL BUILDING NEWS (May 1, 2008), http://www.buildinggreen.com/auth/article.cfm/2008/

As these examples suggest, spatial requirements may be imposed to solve collective action problems of various sorts. Local public goods like "a compact, walkable neighborhood" or "a neighborhood with a spacious, open feel" may be achieved by restricting spatial configurations. Other explanations for mandated lot or home sizes have nothing to do with space as such. For example, spatial minima might be applied to screen on wealth or to ensure a certain property tax contribution.[20] Such restrictions may push housing to a physical scale that impedes the production of local public goods such as a dense and walkable neighborhood, or, at a larger scale, a metropolitan area that is compact to traverse.

In other instances, spatial restrictions may be designed to head off trouble down the road. For example, Michael Heller has suggested that legally mandated spatial minima can forestall the difficult bargaining problems that might result from later attempts to aggregate entitlements.[21] Similarly, spatial minima, coupled with certain limits on uses at the property edges, might minimize future conflicts over cross-border spillovers. Put a different way, and following a geometric point that has been made about fencing,[22] physically large property holdings economize on edges, which are the membranes through which

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4/29/Boulder-County-Limits-Energy-Use-for-Homes/ (describing the Boulder County BuildSmart program and the City of Boulder's Green Points program). Boulder subsequently amended the program to make it less stringent.

20 *See, e.g.*, ROBERT C. ELLICKSON & VICKI L. BEEN, LAND USE CONTROLS: CASES AND MATERIALS (3d ed. 2005) (discussing and citing literature on possible motivations for zoning measures that have the effect of excluding low- and moderate-income households).

21 *See, e.g.*, Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1173 (1999).

22 *See* Ellickson, *supra* note 3, at 1332.

externalities spill out—and in.

Conversely, legally prescribed spatial maxima may reflect a concern for not "overdrawing" a common supply of available land (or associated resources), where a viable pricing mechanism does not exist, or is not employed for distributive reasons. Spatial maxima might also be imposed indirectly, as through "use it or lose it" doctrines that are costly to satisfy for large holdings. Legal rules or enforcement practices that enable squatters to occupy unmonitored land may similarly have the effect of making large holdings more costly to retain, while at the same time carving out new residential holdings from existing property bundles.[23]

2. Time

Property is, by its nature, an enduring institution. The fee simple absolute, the most complete of the estates in land, extends forward indefinitely. Making property more expansive in time serves much the same purpose as making it more expansive in space: externalities are internalized as owners trade off the current and future benefits of particular actions.[24] Yet temporal scaling can be as important as spatial scaling to optimizing the use of property, especially where residential purposes are contemplated. Leaseholds consciously slice off temporally bounded property rights and alienate them to possessors. Similarly, free

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23 *See Modder East Squatters & Others v. Modderklip Boerdery (Pty) Ltd*. 2004 (8) BCLR 821 (SCA) (S. Afr.) (holding that 40,000 illegal occupiers living in thousands of informal dwellings on about 50 hectares of a landowner's property could not be displaced until the government provided alternative property for them, but ordering compensation for the landowner) *discussed in* Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 CORNELL L. REV. 745, 786-91 (2009).

24 *See, e.g*., Demsetz, *supra* note 3, at 355; Ellickson, *supra* note 3, at 1364-71.

alienability of housing allows owners to temporally tailor their property rights to fit their selected length of use, simply by lopping off the unneeded future portion and transferring it to someone else.

Land use controls can place limits on temporal as well as spatial configurations. For example, owners may face restrictions or prohibitions on leasing out their homes.[25] While such measures do not explicitly specify temporal minima—owners remain free to sell their properties outright—they do have the practical effect of extending ownership in time given the costs associated with completing a sales transaction. A flat ban on the alienability of property would preclude formal temporal slicing altogether, although the limited life spans of human beings would effectively accomplish a rough form of slicing. Where limited periods of possession can be transferred through leases, the law may dictate certain temporal minima or maxima, and may even specify that only the tenant, and not her landlord, may later truncate that time span.[26]

B. Qualitative Dimensions

The extent of a property interest depends not only on its physical

25 *See, e.g.*, Ngai Pindell, *Home Sweet Home? The Efficacy of Rental Restrictions to Promote Neighborhood Stability*, 29 ST. LOUIS U. PUB. L. REV. 41, 46-61 (2009) (describing a variety of rental restrictions implemented by local governments and private developers, including municipal bans on short-term rentals in vacation destinations); Zachary M. Rawling, *Reevaluating Leasing Restrictions in Community Associations: Rejecting Reasonableness in Favor of Consent*, 5 J.L. ECON. & POL'Y 223, 224 (2009) (noting prevalence of restrictions on leasing in common interest communities).

26 Rent control ordinances take this basic form by requiring that tenants be given an entitlement to remain indefinitely, subject only to limited exceptions and to the tenant's own decision to leave. In other words, the law requires that both an open-ended time span and the means with which to cut it short be conveyed together to the leaseholder.

size and temporal length, but also on what it permits, forbids, or requires the owners or occupants to do.

1. Use Restrictions

In nearly all sizable U.S. cities, zoning constrains the range of permissible uses.[27] In the residential context, zoning can operate with great specificity. Separate zones might be established, for example, for single family homes on half-acre lots, single family homes on smaller lots, duplexes, triplexes, small apartment buildings, and large apartment complexes. There are often fairly rigid limits on what ancillary uses may be made of property that is zoned residential, with home businesses and accessory dwellings like garage apartments often presenting difficult boundary issues.

As Peter Colwell has observed, functional rights in land use interact in interesting ways with choices about the spatial extent of property rights. More uses can be permitted the larger the area under the control of a single owner, at least as long as edges can be managed appropriately.[28] It is interesting, then, that zoning often couples tight use controls with spatial minima that seem to be in excess of what individuals would demand if left to their own devices.[29] Meanwhile,

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27 Houston, Texas remains the notable exception.

28 Peter Colwell, *Tender Mercies: Efficient and Equitable Land Use Change*, 25 REAL ESTATE ECON. 525, 529 n.6 (1997) ("Another alternative [to zoning] would be to allow developers to do anything they want as long as they have some minimum scale, for example 640 acres, and as long as they do certain things at the edges of their developments (*e.g.*, build very tall berms). Since the developers would internalize most of the externalities produced, their internal zoning could be expected to approach the optimal zoning.").

29 The distortionary effects of spatial minima, especially in the context of large lot sizes, have received attention. *See, e.g.*, Edward Glaeser & Joseph Gyourko, *Zoning's Steep Price*, REGULATION, Fall 2002, at 24; ROBERT H. NELSON, PRIVATE NEIGHBORHOODS

tight use controls make it more difficult for any excess spatial capacity to be used productively.

A similar point might be made about temporally extended property interests. As the law of waste suggests, stricter functional limits must be placed on temporally limited estates, such as life estates, to keep current possessors from offloading costs onto later possessors. Making holdings larger in time and space does not resolve all issues about uses, but it does tend to privatize the management of those issues.

2. Minimum Standards

While use restrictions chip away at what an owner may do, other legal restrictions mandate what an owner must do. Such restrictions are prevalent in the housing context, whether prompted by externalities, paternalism, or concerns about bargaining imbalances, information asymmetries, or cognitive biases. Housing codes as well as the implied warranty of habitability set minimum quality standards for rental housing. Owner occupied properties are also subject to code requirements that specify standards for electrical and plumbing systems and that demand other sorts of upkeep and maintenance. Zoning restrictions and private residential covenants may require compliance with certain aesthetic standards in matters of exterior decoration, lawn care, fencing, and so on.

Some housing restrictions might be aimed at producing network effects across neighborhoods or communities that parties acting independently would have difficulty producing. This rationale has been

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AND THE TRANSFORMATION OF LOCAL GOVERNMENT 185-88 (2005) (citing and discussing the findings of Glaeser & Gyourko).

offered, for example, in the context of accessibility features for people with disabilities: a world in which all properties are accessible is a very different one to navigate than a world in which accessibility is hit or miss, and there may well be nonlinearities associated with reaching certain thresholds of widespread accessibility.[30] Other aspects of housing law, such as rent control, might be directed at preserving community networks against the threat of dispersion.[31]

C. Risk and Returns

Housing packages vary not only along the quantitative and qualitative dimensions just mentioned, but also in their allocation of risks and returns.

1. Reconfiguration and Transfer Surplus

Property in housing, like other forms of property, changes hands. If the transaction is an efficient one, the property is more valuable in the new hands than it was in the old hands.[32] Who will get the associated surplus? In the case of ordinary market transactions involving fee interests, negotiation will determine the division of the gains from trade,

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30 *See* David A. Weisbach, *Toward a New Approach to Disability Law*, 2009 U. CHI. LEGAL F. 47, 98 (noting the possibility that private architectural choices regarding accessibility could have network effects); Robin Paul Malloy, *Inclusion by Design: Accessible Housing and Mobility Impairment*, 60 HASTINGS L.J. 699 (2009) (arguing for "inclusive design standards" for single-family homes).

31 *See, e.g.*, Margaret Jane Radin, *Residential Rent Control*, 15 PHIL. & PUB. AFF. 350, 369 (1986) (discussing this rationale for rent control).

32 On the other hand, the transfer might be inefficient, with the property ending up in the hands of a lower-valuing user. This result might occur if nonmarket processes (like eminent domain) were used to accomplish an involuntary shift that did not account for the takee's full value in the holding. It could also occur through market processes due to factors like information asymmetries, cognitive biases, or liquidity problems. In such cases, there would be no surplus from the transfer, and the question becomes one of who will bear the loss.

based on the negotiating skills and outside options of the parties.

Not all transfers involve selling an entire fee interest outright. For example, owners can produce property in housing by subdividing larger fee interests into shorter-or longer-term leases or life estates. The surplus thereby produced will be divided in market-mediated or legally prescribed ways. For example, if a leasehold is inalienable, the tenant will not be able to enjoy any gains that might be produced by creating and conveying yet smaller time slices.[33] Nor does the tenant typically have any claim on surplus produced at the end of the leasehold, when possession is transferred to someone else. In the case of an ordinary leasehold, then, the tenure form dictates the later division of surplus.

Similarly, property (currently) in housing may be aggregated to produce surplus. If holdout problems impede efforts at aggregation, eminent domain may be employed to overcome the deadlock.[34] Where only fair market value is paid to the homeowners, the surplus from the aggregation (the assembly premium), goes entirely to the government or to the party to whom the property is reconveyed (depending on the terms of the reconveyance).[35] Eminent domain might also be used to move

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33 The statement in the text assumes that the parties will comply with the legal restriction, which may not always be the case.

34 The Takings Clause of the U.S. Constitution limits eminent domain to takings for public use, which rules out purely private transfers from *A* to *B*. Nonetheless, a site can be condemned for redevelopment and transferred to another private party where this will serve a public purpose. *See* Kelo v. City of New London, 545 U.S. 469 (2005).

35 This assumes that fair market value is below the landowner's reservation price—a reasonable assumption for any landowner who does not already have the property on the market. *See, e.g.*, James E. Krier & Christopher Serkin, *Public Ruses*, 2004 MICH. ST. L. REV. 859, 866 (noting that owners' consumer surplus in condemnation cases "has to be positive, for otherwise owners would already have sold their holdings on the market.").

residential property from one party to another, even where no assembly is required.[36] In this case, as with land assembly, the surplus would go the condemning authority or to those to whom it retransfers.

Changes in the uses to which property can be put may also produce surpluses, relative to the existing baseline. For example, a parcel of land that is zoned residential may become much more valuable if it is rezoned for commercial use. Because zoning is not sold on the open market, the division of surplus will depend on the set of monetary and nonmonetary expenditures necessary to bring about the zoning change, as well as on the incidence of any externalities generated by the change.[37]

2. Investment Risk

In addition to serving as occasions for dividing up surplus, transfers serve as trigger points for realizing market gains and losses on housing investments. The issues are related but distinct: surplus division goes to the relationship between the parties' reservation prices and their payoffs in the present transaction, while investment gains and losses go to the relationship between the sales price in the current transaction and the acquisition price in the previous transaction. It is entirely possible for a homeowner to enjoy an investment gain while garnering none of the surplus from a transfer,[38] or to suffer an investment loss but nonetheless

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36 Again, this might be done to get around "thin market" problems and associated monopoly dynamics. *See* Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 76 (1986).

37 For a discussion of how dealmaking over land use rights differs from market exchange, *see, e.g.*, BRENDAN O'FLAHERTY, CITY ECONOMICS 182-85 (2005).

38 For example, an eminent domain proceeding might deliver none of the assembly or transfer surplus to the owner of the condemned property (and indeed might not even produce surplus at all), but could nonetheless return to the owner a gain on her investment in the home, relative to what she paid for it.

obtain surplus from a transfer.[39] Like chances at surplus, investment risk is almost invariably bundled with freeholds and virtually never bundled with leaseholds. But things need not operate this way, and there have been a number of proposals that would rearrange risk, whether by subtracting appreciation potential, downside risk, or both, from homeowners' bundles,[40] or adding an investment stake to the holdings of renters.[41]

3. Losses Due to Appropriation and Legal Change

Property may be appropriated by governmental bodies or may lose value as a result of legal change. Moreover, depending on legal restrictions as well as enforcement levels and penalties, property may be subject to appropriation or devaluation by other private actors.[42] An

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39 This could occur when local economic conditions cause the home's market value to decline, but also cause the home's value to the Sellers to decline even more (if, for example, they have lost employment in the area and must move elsewhere to find a job). Thus, the Buyers may currently value the home more than the Sellers do, but less than the Sellers valued the home in the previous transaction under different market conditions.

40 For discussion of existing and proposed models, *see generally* Lee Anne Fennell, *Homeownership 2.0*, 102 NW. U. L. REV. 1047 (2008).

41 *See* Robert I. Lerman & Signe-Mary McKernan, *Promoting Neighborhood Improvement while Protecting Low-Income Families* 2-3 (Urban Institute Opportunity and Ownership Project No. 8, 2007), *available at* http://www.urban.org/publications/311457.html (proposing financial options indexed to area rents be made available to tenants); O'FLAHERTY, *supra* note 37, at 369 ("Tenants could get a long-run stake in the community if they were required to buy some variety of security that was pegged to the town's or neighborhood's total property value."); *see also* Lee Anne Fennell & Julie Roin, *Controlling Residential Stakes*, 77 U. CHI. L. REV. 143 (2010) (examining how local governments might be involved in implementing such proposals).

42 Consider here adverse possession, prescriptive easements, and statutory mechanisms for condemning private rights of way for accessing landlocked parcels. In addition to these legally approved mechanisms for transferring property, unapproved transfers may occur due to the lack of enforcement. *See, e.g.*, Harold Demsetz, *The Exchange and Enforcement of Property Rights*, 7 J.L. & ECON. 11, 17-18 (1964).

important question, which crops up with special salience in the housing context, is who should bear the associated risks. Where eminent domain is employed and compensation is full, the community as a whole covers the risk to a homeowner.[43] Where eminent domain systematically undercompensates homeowners, the risk is shared: the household bears the risk of losing the difference between the compensation amount and her reservation price, but the community insures against the taking up to the amount of compensation paid. Owners bear the risk of uncompensated appropriations and of many legal changes that reduce property value,[44] except to the extent that private arrangements with third parties buffer this risk.[45]

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43 Thus, as has been well noted, takings compensation operates as a form of insurance against legal change. *See, e.g.*, Lawrence Blume, Daniel L. Rubinfeld & Perry Shapiro, *The Taking of Land: When Should Compensation be Paid?*, 99 Q. J. Econ. 71 (1984); William A. Fischel & Perry Shapiro, *Takings, Insurance, and Michelman: Comments on Economic Interpretations of "Just Compensation" Law*, 17 J. LEGAL STUD. 269 (1988).

44 The law surrounding regulatory takings is a complex mix of per se and balancing rules. Regulations that work even a trivial permanent physical occupation are always considered compensable takings. Loretto v. Teleprompter, 458 U.S. 419 (1982). Likewise, an elimination of all economically viable use that is not a function of background limitations on title will always be a compensable taking. Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992). Regulations that impact property but do not fit within these per se rules are subject to *Penn Central's* multi-factor analysis and may or may not be takings that require just compensation. Penn Central Transportation Co. v. City of New York, 438 U.S. 104 (1978); *see* Lingle v. Chevron, 544 U.S. 528, 538-39 (2005) (reiterating the *Penn Central* factors).

45 The possibility of private takings insurance has been discussed in the academic literature. *See, e.g.*, Steve P. Calandrillo, *Eminent Domain Economics: Should "Just Compensation" Be Abolished, and Would "Takings Insurance" Work Instead?*, 64 OHIO ST. L.J. 451, 499-521 (2003); Eric Kades, *Avoiding Takings "Accidents": A Torts Perspective on Takings Law*, 28 U. RICH. L. REV. 1235, 1238-47, 1270-72 (1994); Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 527-28, 537-49, 602-06 (1986). There is also an implicit form of insurance in place where a lender (and hence the pool of other creditors) will effectively bear part of the loss associated with a large drop in value.

The law can also heighten or reduce the risk of *private* appropriation (as through trespass and nuisance) by selecting enforcement levels and penalties. Owners must bear the risk of unremediated private appropriations, or obtain private insurance to cover those risks.

4. Other Dispossession Risks

The risk of dispossession looms large in housing policy. Aside from the forms of appropriation discussed above, households may be forced to move due to a foreclosure, eviction, or rent increase. The law manages these risks in a variety of ways, often by directly constricting the ability of parties to engage in certain kinds of transactions. For example, rent control statutes confer (with some exceptions) unlimited tenure at controlled rental amounts, and these protections are not waivable. Limits on credit or on the availability of foreclosure similarly reduce the risk of dispossession that households can take on. All such measures, by reducing the control that parties other than the occupants have over the length of the housing stay, help to confer a valuable option to remain—an option that arguably is the single most important element in constructing what is meant by "home."[46] But like other measures that enrich housing packages, protections against dispossession carry potential downsides in the form of reduced access to housing in the first place.

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46 *See* Lee Anne Fennell, *Possession Puzzles*, *in* 11-1 POWELL ON REAL PROPERTY WFL10-1 (Michael Allan Wolf ed., 2010) (discussing the significance of the possessory option). On the importance of the right to remain, *see* Radin, *supra* note 31, at 359-63, 368-70; Florence Wagman Roisman, *The Right to Remain: Common Law Protections for Security of Tenure: An Essay in Honor of John Otis Calmore*, 86 N.C. L. REV. 817, 820-29 (2008).

D. Complementarities and Scale

The discussion to this point has emphasized that the home can be configured in many ways, and that private decisions and legal restrictions interact to determine the shape and contents of the entitlement package. Yet we do not see all possible combinations. Some possibilities (like a too-small rental unit or a too-risky mortgage) may be outlawed, while other combinations may simply fail to emerge. The reason we see some packages and not others may implicate complementarities and indivisibilities—or, to use a more evocative term, "lumpiness."[47] For example, a half-constructed house is not half as valuable as a completed house, even if it costs half as much to build.[48] We might find that other physical and functional characteristics, as well as certain sets of rights, are strongly complementary in delivering what counts as a "home," so that removing any one of them dramatically reduces the value of the remaining components. Indeed, it is even

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47 Lumpy goods do not deliver utility in smoothly increasing increments but rather in discontinuous jumps. *See, e.g.*, Michael Taylor & Hugh Ward, *Chickens, Whales, and Lumpy Goods: Alternative Models of Public-Goods Provision*, 30 POL. STUD. 350 (1982); Russell Hardin, *Group Provision of Step Goods*, 21 BEHAV. SCI. 101 (1976); Jean Hampton, *Free-Rider Problems in the Production of Collective Goods*, 3 ECON. & PHIL. 245 (1987). The notion of lumpiness can be easily illustrated by a bridge over a chasm. If the bridge requires ten segments to span the void, the first nine segments of the bridge deliver no utility at all (except perhaps as unusual urban art). The tenth, however, suddenly produces a huge step-up in utility. *See, e.g.*, RUSSELL HARDIN, COLLECTIVE ACTION 59 (1982) (citing the standard bridge example but noting its limits as an illustration of a step good, given that bridges can vary widely in cost and quality). For further discussion of lumpiness as it applies to property law and theory, *see* Lee Anne Fennell, *Lumpy Property*, 160 U. PA. L. REV. 1955 (2012).

48 Interestingly, this very fact may offer insight into otherwise puzzling patterns of behavior, including the use of partially completed homes as savings vehicles. *See* ABHIJIT V. BANERJEE & ESTHER DUFLO, POOR ECONOMICS: A RADICAL RETHINKING OF THE WAY TO FIGHT GLOBAL POVERTY 183-84 (2011) (explaining that families in many developing countries invest in home-construction efforts that extend over long spans of time, and hinting at possible explanations related to precommitment).

possible to understand certain risk and return packages in this way, if one supposes that homeownership necessarily requires risking property value losses and pursuing gains.

Ultimately, the questions are empirical ones. How does utility grow or shrink as elements are added to or subtracted from housing bundles? Do nonlinearities make additions or subtractions to the bundle useful only if made in certain discrete chunks? Answering these questions leads us to examine why it matters whether some particular element is included or not included within the household's ownership envelope. In important ways, one's home is constructed not only of the elements inside the dwelling, but of many other outside impacts and opportunities.[49] Considered in this way, the home is always co-owned.[50] The larger question to which this essay is addressed, then, is how to manage that co-ownership.

In the balance of this essay, I will focus on the boundaries of the household's property interest in the home. For simplicity, I will refer to this interest as "the home" despite the fact that the value and the quality of the housing services the household receives, and the market value of the home itself, depend crucially on factors lying outside that property interest. Indeed, that is the point. We must consider the impact of

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49 *See* FENNELL, *supra* note 13.

50 Armen Alchian makes a similar observation:

> [I]f the property laws prohibit me from using things in ways that affect your welfare, then in a sense *you* are able to exercise through the law, control over my decisions as to what use will be made or of the thing of which I was called the "owner." Who shall be called the owner? Me, or the rest of society? Isn't everyone an owner in some sense or other, insofar as his interests are influenced in affecting the use to some degree by laws passed (in a democracy)?

ARMEN A. ALCHIAN, SOME ECONOMICS OF PROPERTY 25 (1961).

extending or constricting the private household's holdings on interactions both within the household and between the household and those outside of it. For example, including a bathroom within a living unit avoids the need to queue up for a public restroom, and thus lessens the pressure on those public facilities. At the same time, by making the living unit more expensive, households may have to include more members, and this may lead to other problematic internal interactions across other dimensions.

The next Part works through a theoretical framework for examining these kinds of tradeoffs.

II. A Theory of the Home

If we were going to construct a theory of the home analogous to Coase's theory of the firm, how would we begin? We might start by considering the relevant scale (in time, space, and use) of the residential experience, and the sorts of complementary elements required to produce it. We could then turn to questions of boundary-drawing, recognizing that an expanded envelope will tend to require more internal management and less external transacting, and a constricted envelope will tend to require less internal management and more external transacting. Placing additional factors within the home provides option value and flexibility to occupants (for example, the washing machine can be used at a moment's notice), but it is also expensive, and presents an opportunity cost associated with untapped excess capacity.

Subpart A below begins with the question of efficient boundaries, drawing analogies to the work of Coase on firms and that of Ellickson

and Demsetz on land holdings. Subpart B addresses the problem of excess capacity and its alternatives. Subparts C and D consider how interactions between privately and commonly owned elements, and between elements owned by different parties, respectively, can generate potential incentive misalignments for the law to manage.

A. Efficient Boundaries

Before turning to the problem of efficient *residential* boundaries, it is helpful to briefly review some of the lessons of efficient boundaries in other contexts.

1. Of Firms and Farms

Ronald Coase launched an entire field of law and economics by asking a simple question: why are there firms?[51] If transactions can always be arranged to procure all needed goods and services in all necessary combinations, the practice of grouping together certain elements within the envelope of a firm seems puzzling. The answer given by Coase and elaborated by scholars thereafter is that sometimes the costs of internal organization and management are lower than the costs of external transacting. To the extent (and only to the extent) that this is the case, firms are efficient.

As Demsetz and Ellickson have shown, analogous points can be made about the size and scope of property entitlements. To simplify, property rights draw a circle around a resource and its owner or owners.[52] This line marks off an interior space and, at the same time,

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51 *See* Coase, *supra* note 3, at 37 ("Our task is to attempt to discover why a firm emerges at all in a specialized exchange economy.").

52 *Cf.* Charles A. Reich, *The New Property*, 73 YALE L.J. 733, 771 (1964) ("Property

creates an outward-facing shell. The concept of property is closely associated with this outer shell, which (for most purposes) commands the uninvited to keep off. Thus, Carol Rose has explained that a limited access commons is "property on the outside" to the extent that outsiders can be excluded.[53] At the property line, the mode of property protection switches from (mostly) exclusion to governance.[54] Within the interior space, common owners (if there are more than one) must determine how to use the resource. If the owners invite in tenants or employees or guests or licensees of various sorts, they must manage uses of the resource by these individuals as well.

Owners face another sort of difficulty if they must interact with outsiders to achieve their goals for the property. Indeed, property itself can be understood as a technology for internalizing costs and benefits by (at least roughly) pairing inputs and outcomes.[55] If many inputs must be gathered from other owners on a regular basis to carry out functions within the property holding, or if rights to the returns from activities on the property must be separately negotiated with outsiders in each instance, property cannot do its job effectively. Optimizing property holdings, then, requires that the boundary be pushed outward until the costs of dealing with outsiders[56] are just equal to the costs of internally

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draws a circle around the activities of each private individual or organization. Within that circle, the owner has a greater degree of freedom than without.").

53 *See* Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 155 (1998).

54 *See, e.g.*, Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453, S456 (2002).

55 *See* Demsetz, *supra* note 3 (explaining how property rights can internalize externalities where it is worth the cost of doing so).

56 I use the phrase "costs of dealing with outsiders" here in place of the usual term "transaction costs" because the law's protection of property rights are an important and costly element of this interaction with outsiders. If "transaction costs" are read

managing the holding.[57] Deciding where to place the boundary depends on the scale of the activities that an owner wishes to undertake.

An owner may not select optimal boundaries if she does not internalize all of the costs and benefits of boundary placement. The resource management that takes place on the inside of a property holding is largely privatized, while public enforcement plays a lead role in enforcing exclusion from the outer boundaries and in otherwise managing impacts that emanate from outside the property's edges. Choosing to expand the property envelope, then, may reduce the need for costly interactions with outsiders, but it may also mean giving up what amounts to a public subsidy for those interactions. The placement of temporal and conceptual boundaries around property holdings implicates similar efficiency questions. In each case, it is necessary to examine not only where efficiency would mandate locating the boundary, but also how implicit or explicit subsidies or penalties imposed by law can alter the private calculus in ways that correct for or produce inefficiencies.

Also significant is the fact that property arrangements can rarely, if ever, be reduced to a single "inside" and "outside." Packages of ownership are typically nested within each other in complex ways.[58]

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broadly enough to include the costs of *avoiding* unwanted transactions, then the term would be apt, but not everyone understands the term in this way. *See* Lee Anne Fennell, *The Problem of Resource Access*, 126 HARV. L. REV. (forthcoming 2013) (manuscript at section I.B.2).

57 *Cf.* Coase, *supra* note 3, at 44 (explaining that "a firm will tend to expand until the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm").

58 *Cf.* ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 101-02 (1990) (discussing the "nesting" of different levels

Private property rights appear within collectives. Even in a household or other shared living context, individuals have their own possessions and often their own sleeping quarters. At a larger scale, a neighborhood may share many elements in common, but the homes themselves are privately owned by individual households. Likewise, collectives appear within private property holdings. A privately owned home often contains multiple members who share certain spaces and amenities, and a private development or private club (or any other "limited access commons") will operate like a commons on the inside even as it appears to the outer world as private property.[59] Many more complexly nested private-private and collective-collective arrangements exist.

As these examples suggest, privately and commonly held elements often interact within the same spatial area, and can produce incentive misalignments. The classic example is Garrett Hardin's parable of overgrazing herds.[60] What creates the incentive for herdspeople to add an inefficient number of cattle to a common grazing land is not simply the fact that the grazing land is held in common; rather it is the abutment between the privately owned cattle and the commonly held land.[61] Managing such abutments among ownership types is as central to property law as is managing the relationships between owners and

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of governance).

59 *See* Rose, *supra* note 53 and accompanying text.

60 Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE, N.S. 1243, 1244 (1968).

61 *See, e.g.*, Armen A. Alchian & Harold Demsetz, *The Property Right Paradigm*, 33 J. ECON. HIST. 16, 22-23 (1973) (observing that such an "incongruity between ownership opportunities" can create problematic incentives); Lee Anne Fennell, *Commons, Anticommons, Semicommons*, *in* RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW 35, 37-38 & n.16 (Kenneth Ayotte & Henry E. Smith eds., 2011) (noting that the abutment of ownership forms generates tragedy, and citing literature on this point).

nonowners.[62]

2. The Boundaries of the Home

The home can be understood as a special case of the same boundary-drawing exercises that have featured in the analysis of firms and landholdings. What should go inside and outside of the spatial, temporal, and conceptual package known as a home depends on the scale of the underlying activities—the set of "residential services"[63] that property rights deliver to households.

Spatial scale in the residential context is trickier than it appears. How much space a given household finds necessary for its well-being depends on the cultural context[64] and on which activities are contained within the household, as opposed to being socialized within a larger community or procured privately outside the home. As the "home" sphere shrinks—at the limit, to the size of a sleeping pod—more and more functions are pushed to the outside.[65] Conversely, larger homes may draw within their compass amenities like swimming pools, libraries,

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62 When multiple activities are pursued simultaneously at different scales, the problem of managing mixed property becomes quite complex, and may require measures designed to counter strategic misbehavior. *See generally* Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131 (2000) (examining these points in the context of medieval common fields that were used both for private farming and for common grazing).

63 I am analogizing here to the literature on "ecosystem services," which recognizes multiple streams of benefits that flow from ecological features.

64 For example, the relative size and quality of one's home may matter more to one's well-being than its absolute size and quality. *See, e.g.*, ROBERT FRANK, LUXURY FEVER 10 (1999).

65 As this example suggests, there may be nested layers of "outside," such as the common areas in hotels, condominiums, and private residential communities that are shared by insiders but that exclude outsiders. Similarly, a large private home may contain many spaces within it that by agreement or convention will be largely under the control of a subset of the household, or even a single member.

and observatories that are more commonly shared with people outside the household.

Consider, for example, cohousing communities in which some of the functions commonly associated with the individual dwelling unit—cooking, eating, and relaxing with friends and family—are performed in common kitchens and socialization spaces.[66] Likewise, dormitory rooms might be made intentionally small to encourage students to use common study rooms and socializing areas. Shared bathrooms located outside the residential unit can be found in many places as well, from Beijing hutongs to the Lawn residences at the University of Virginia.[67] Exterior portions of the home, from private backyards to front porches, bring functions within the boundary of the private owner's holding that might instead be pursued in public parks or town squares.

Privately provided substitutes for certain functions of the home also abound. Storage spaces outside of the home, from off-site garages to safe deposit boxes to rented storage units, can reduce the amount of space within the home that is devoted to archiving and preserving one's goods. Private gyms provide exercise and bathing facilities, and restaurants and bars offer food and beverage services outside the home. Private entertainments outside the home can substitute for those in the home.

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66 *See* Mark Fenster, *Community by Covenant, Process, and Design: Cohousing and the Contemporary Common Interest Community*, 15 J. LAND USE & ENVTL. L. 3, 11-12 (1999) (describing cohousing "common houses" which typically include kitchen and dining areas, workshops, meeting rooms, and playroom, and thus "provide not only extra rooms that are either left out of or reduced in size in the individual dwellings, but also facilities that will attract activities shared by the entire community.").

67 *See* Liu Chang, *Bathrooms for Hutong Dwellers Planned*, CHINA DAILY (Aug. 5, 2004), http://www.chinadaily.com.cn/english/doc/2004-08/05/content_359010.htm; *Living on the Lawn FAQs*, U. VA. OFF. DEANS STUDENTS, http://www.virginia.edu/deanofstudents/lawnapplication/lawnlifefaqs.html (last visited Feb. 22, 2013).

Laundromats offer washing and drying services that households could instead provide through the ownership of their own machines. Hotels and other private sleeping spaces can be procured in the private market as well. That these private alternatives are rarely pursued in combinations that make the home superfluous over the long run does not undercut the essential mutability of the home's space requirements, though it may shed light on what are thought to be the home's core functions.

Another input to the home's physical size is household size, which is itself endogenous to the joint production tasks that will be accomplished inside the home.[68] Because not all of these activities will be optimally conducted at the same scale, some judgment must be made about which ones are the most important (or most costly to address if mis-scaled). Arriving at the right answer to the "household size" question, for example, depends on the relative importance of those household products for which economies of scale are important, like space, heat, shelter, and meals, and those products, such as privacy, autonomy, and intimacy, for which there tend to be diseconomies of scale.[69] An important limitation is the fact that housing is cumbersome to resize.[70] Because it is not easy to add or subtract rooms, homes may

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68 ELLICKSON, *supra* note 7, at 76-84; Ellickson, *supra* note 7, at 287-92.

69 *See, e.g.*, Ellickson, *supra* note 7, at 260, 287-92 ("Boosting the number of household occupants, for example, may reduce the per capita costs of providing goods and services such as heating, informal social insurance, and food. On the other hand, adding occupants may give rise to countervailing inefficiencies of scale, such as greater difficulty in governing behavior within the home.") (footnote omitted); O'FLAHERTY, *supra* note 37, at 348-49 (comparing houses to "miniature cities" and examining tradeoffs between economies of scale in housing and concerns about congestion, security, coordination, and privacy).

70 This rigidity is to some extent endogenous to existing social and legal arrangements. The key to making housing more flexible over time is the ability to subdivide or

often have excess capacity in order to accommodate peak loads, such as times when all children are at home, or when guests visit.

Similar points might be made about temporal scale. Brief slices of possession can produce the basic goods of shelter and sleep, as evidenced by the fact that transient rights in hotel rooms, shelter beds, or friends' couches can serve as substitutes in this domain. But larger temporal scales are necessary to internalize the costs and benefits of running a household, raising a family, contributing to a community, or getting a return on one's investment in housing.[71] If some functions that homes perform require longer temporal scales than others, then keeping those functions within the home will push outward the time envelope. Optimal temporal scale will be different for different households, and for the same household under different circumstances.[72] The enduring

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reaggregate living spaces within the same building or on the same lot. Zoning restrictions that do not permit accessory dwelling units present an impediment to this approach. For some proposed approaches to housing that would incorporate multiple accessory dwelling units, *see* Kelsey Keith, *Architects Rethinking Housing for the 21st Century*, CURBED (Nov. 17, 2011), http://ny.curbed.com/archives/2011/11/17/architects_rethinking_housing_for_the_21st_century_city.php.

71 There may, however, be ways to produce these larger scale effects in ways other than through long-term possession of the same home. For example, derivative instruments indexed to housing markets could allow people to invest in housing without the investment being concentrated in one's own personal home, and such investments could obviously be held for a shorter or longer time than one chooses to possess any particular structure. Likewise, investment in a community could be facilitated by moves within the same neighborhood, where the array of housing stock makes this feasible. *See* JANE JACOBS, THE DEATH AND LIFE OF GREAT AMERICAN CITIES 139 (1961) (noting the ability of diverse city neighborhoods to accommodate changes in circumstances and thus allow people to "stay put" over time).

72 We might assume that housing utility generally grows (or shrinks) in discontinuous ways as a function of time in place, as people become attached to (or tired of) a place. Because a wide range of personal and often subjective factors determine the utility associated with staying or leaving at a given temporal point, the occupiers of residential housing are likely to place high value on having control over when to cut short (or avoid having cut short) their possessory interest.

nature of many property interests in housing can be understood as embodying a presumption that possession today is strongly complementary with possession tomorrow—and next week and next month and next year. This saves the household from having to renegotiate possession every day or every week, but it also means that the household may end up with scraps of possessory time that it cannot use but that are too costly to alienate.

Complementarities also come into play where use rights and quality standards are involved. For example, a residential use might be complementary with an in-home occupation like dog training. This complementarity might conflict, however, with other highly complementary rights over noise levels throughout the neighborhood (one loud kennel could disrupt the whole neighborhood). Likewise, a group of well-kept homes in proximity to each other will enjoy reciprocal gains that would not be available to any of them if they were scattered among other uses.

Land use controls attempt to capture positive externalities and control negative externalities within neighborhoods or zones largely by limiting uses, but sometimes also by mandating quality (as where particular lawn care standards are specified within private communities). These restrictions allow individual households to own less land than if they had to buffer themselves and their neighbors from spillovers, and can enable the production of local public goods like a residential community with a particular aesthetic ambience. But these complementarities are not the only ones that must be considered. Creating spatial proximity among one set of uses (such as high-end residential homes) may interfere with the benefits of mixing business and residential uses, or of achieving economic integration among

residences, and thereby avoiding negative synergies associated with concentrated poverty.

B. Excess Capacity, Sharing, and Procuring

As the discussion above suggests, boundaries around the home may be drawn in ways that produce greater or lesser amounts of excess capacity in various domains. A large private backyard might be used just a few hours each week, a spare bedroom might be used a dozen days a year, and a kitchen oven might stand idle for days or even weeks. Some of the most basic residential services that a home provides, such as a place for human beings to eat, sleep, and be sheltered from the elements, may go unused for stretches of time while the home's occupants are away at work or on vacation. Because these forms of excess capacity fall within the envelope of private ownership, outsiders cannot (usually) access the capacity without engaging in a transaction with the owner. Although such transactions do occur at times, and may have become more prevalent (or at least more visible) as a result of new technologies, they are often prohibitively costly.[73]

Selling off slices of excess capacity (time inside my house during the day, for example) may also be inconsistent to a greater or lesser extent with other residential services that the home provides. For example, even when its occupants are away, the home continues to serve as a staging area for the temporarily suspended residential activities,

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73 *See, e.g.*, Penelope Green, *Surfing the World Wide Couch*, N.Y. TIMES (Sept. 20, 2007), http://www.nytimes.com/2007/09/20/garden/20couch.html (describing a social networking site that matches guests with hosts who have spare couches). For discussion of how excess capacity can be addressed through sharing in some contexts, *see* Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L.J. 273 (2004).

allowing them to be seamlessly resumed upon the household's return. The home serves as a continuous and exclusive storage and display unit as well, a place where sensitive items like pets, plants, artwork, and antiques can be maintained in appropriate conditions. It is a shell that can be policed from the outside in ways that make internal monitoring for theft and other forms of interference largely unnecessary.[74] Excess capacity also translates into option value; a bathtub or a washing machine may be used relatively few hours per week, but it stands ready to be used whenever a household member wants to use it.[75]

If excess household capacity is too difficult to transact over, whether because of the ways in which it intersects with capacity that is being actively used or for other reasons, it will stand idle. This result may be perfectly efficient; there may be no alternative arrangement that can deliver more value, given the costs of achieving it.[76] Drawing the boundary lines more tightly can reduce the amount of excess capacity, but at the cost of producing a converse difficulty: spells of inadequate capacity that must be met through outsourcing transactions. For example, a household whose home lacks a spare bedroom may need to arrange for out-of-town guests to stay at a local hotel, and a household whose living spaces are too small for a party that it wishes to throw must secure an off-site party venue.

As these examples suggest, demand for capacity is not exogenously given but may instead depend on capacity levels themselves. Thus, a

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74 *See* Ellickson, *supra* note 3, at 1327-28.

75 I thank Scott Baker for discussions on this point.

76 *Cf*. Peter Iliev & Ivo Welch, *A Model of Operational Slack: The Short-Run, Medium-Run, and Long-Run Consequences of Limited Attention Capacity*, 29 J.L. ECON. & ORG. 2, 3 (2013) (discussing instances in which periods of idleness can be an "optimal design outcome" given the need to respond quickly during peak activity periods).

family whose home cannot hold a large party may decide not to hold the party at all, and a household without a spare bedroom may find that out-of-town guests express less interest in visiting. Similarly, the family that gives up a backyard may lose its interest in spending time outdoors when this will require a trek to the local park. In some instances, the home's excess capacity can be viewed as a form of precommitment to desired expenditures that will be too painful to bear at the margin.[77] The ability to precommit to large blocks of service outside of the home (gym memberships, for example) can serve a similar precommitment function—or can at least attempt to do so.[78] In other cases it may simply be efficient to excise certain functions from the home and not to replace them outside the home, if the loss is less than the cost of including them or procuring them separately.

Sharing arrangements can attempt to address the twin problems of excess capacity and inadequate capacity by expanding the pool of users who are entitled to access the resource. Sharing commonly occurs among household members, and expanding the household increases opportunities for sharing. Other alternatives would include easing access for favored guests to share goods within private homes,[79] or forming

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77 Sometimes this difficulty can surmounted through clever forms of mental accounting. *See* Drazen Prelec & George Loewenstein, *The Red and the Black: Mental Accounting of Savings and Debt*, 17 MARKETING SCI. 4, 20 (1998) (relating the story of a couple that chose a less expensive apartment over one with closer access to good restaurants on the theory that the lower rent would more than pay for taxi rides to good restaurants, and who then set aside earmarked money for this purpose to ensure that the marginal cost of transportation would not derail their plans).

78 Such efforts may not turn out to be as effective as envisioned. *See* Stefano DellaVigna & Ulrike Malmendier, *Paying Not to Go to the Gym*, 96 AM. ECON. REV. 694 (2006) (finding that consumers who selected a monthly gym membership paid significantly more per visit than they would have paid on a pay-per-visit basis).

79 New technologies may make this more feasible, although it is unclear how far the

larger clubs (such as private residential communities) for sharing goods outside the home. These arrangements cut down on excess capacity and on the need for formal transactions to transfer resources, but can introduce incentive difficulties of their own.

C. Abutments between Privately and Commonly Owned Elements

For the reasons just suggested, a smaller compass for the individual home may correspond to an enlarged common or public sphere in which access to resources is shared with those outside the household.[80] This is because many of the substitutes for home-produced services like recreation exhibit jointness of supply: they are too large for any one person to procure on her own. Thus, households may avoid the costs associated with excess capacity in backyard space by forgoing the yard and spending time at a public park, where the shared atmosphere is governed by park rules rather than exclusionary rights.[81] Even when goods like recreation or access to open space are procured privately in settings (like private clubs) from which outsiders can be excluded, the access must be allocated among the insiders in some fashion. It is

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approach can be pushed. For instance, CLOO is a smartphone app that helps a user find a restroom in a private dwelling that she can use for a small fee, following a real-time request that can be accepted or rejected. *See Get a CLOO? App Will Rent Your Bathroom to Strangers*, L.A. TIMES (Sept. 13, 2011), http://latimesblogs.latimes.com/technology/2011/09/cloo-app-bathroom.html.

80 Conversely, a larger compass for the individual home may mean less sharing with outsiders, but could potentially mean more sharing with other household members within the home (to the extent household size correlates positively with the size and scope of the home). Even if more household members are not added when the home takes on more functions, there may be a greater need for household employees or for other parties who enter the home to keep all of the amenities and facilities functional. This introduces internal management issues analogous to those found in the firm setting.

81 *See* Smith, *supra* note 54 (discussing exclusion and governance strategies).

certainly possible to propertize certain aspects of these shared goods, but important aspects of these goods will usually remain unpriced, and hence in a commons (as to the insiders). For example, campers in a state park may obtain possessory rights to a particular campsite while sharing access to hiking trails and bodies of water.

This abutment between privately owned and commonly owned elements can produce misaligned incentives, as Hardin's herdsman story illustrates. Yet it is impossible to avoid drawing the line between private and common elements *somewhere*. Even households that bring the widest imaginable set of functions within the envelope of the home still use roads, other sorts of infrastructure, and larger environments in common with others. Thus, a common resource (such as a road) may be overused as an input into a private consumption stream (such as that provided by a secluded homesite), just as a common field may be overused as an input into a privately owned cow.

There are a variety of ways to address such incentive misalignments. For example, instead of leaving the siting choice for the home inside the owners' package of rights, it might be subjected to a public decisonmaking process.[82] Alternatively, fees might be charged to homeowners that account for the costs associated with their siting decisions, or homeowners might be required to draw their home's boundaries even more broadly so as to privately provide the last stretch of road to the home.[83] Overdrawing the spatial commons (problematic, because it raises the costs of achieving agglomeration benefits) has

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82 Zoning often accomplishes something like this, by limiting where development is permitted.

83 Impact fees and requirements that new development occur within private neighborhoods that maintain their own roads illustrate these possibilities.

generally been associated with "sprawl" and hence with a particular aesthetic of residential life. But the basic problem of private impacts on common elements is not unique to any particular vision of housing or community. It would also be possible for property owners to demand more density than is socially efficient if the costs of managing it fell on others.[84]

Another way to frame the problem is to recognize that the package of residential services that households consume is made up of elements that are most efficiently produced at different scales and under different ownership structures. Inputs to residential enjoyment include not only physical shelter but also relatively unpolluted air and workable infrastructure connecting homes to jobs and other points of interest—elements that cannot be provided by individual households on their own. A useful theory of the home must account for these multiple efficient scales. Households must make, buy, or otherwise acquire (often through the political process) all of the strands that make up their residential experience. Decisions about how to configure the housing bundle is interdependent with the decisions of other households on these matters, and on the legal rules that manage the abutments between different entitlement holders and different ownership types.

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84 There may also be a temporal analog to sprawl – the rigidity in physical and social arrangements that results from granting limitless possessory rights to owners. *See* T. Nicolaus Tideman, *Integrating Land-Value Taxation with the Internalization of Spatial Externalities*, 66 LAND ECON. 341, 347 (1990) (noting, and suggesting charging for, "the diminution of social flexibility that results from putting immobile improvements on land"). Although eminent domain can be used to overcome an owner's veto power, the costs (political and otherwise) of doing so is high.

D. Misalignments of Exposure and Control

Although much of what I have said to this point has focused on questions of physical scale, the rules that govern risks and returns also play a central role in managing ownership abutments of other types. To take the simplest example, the landlord-tenant relationship divides the property entitlement in a way that leaves risks and returns with the landlord, while granting the tenant a consumption stream associated with a particular term of occupancy. As scholars have noted, there is moral hazard on both sides of this relationship, as the landlord will be willing to sacrifice aspects of the tenant's consumption stream for higher returns, while the tenant will seek to maximize her own consumption stream even when it comes at the expense of the landlord's investment interest.[85] Landlord-tenant law, combined with a set of private practices (like credit screening and security deposits), tries to manage this abutment in ownership interests, but does so imperfectly. Homeownership resolves that source of conflict by consolidating in the household both the home's consumption stream and its investment returns. But it introduces another seam in the ownership structure that produces new incentive misalignments.

The homeowner's residential experience and investment returns are both heavily influenced by factors lying outside of her individual household's control.[86] These include conditions in the surrounding block, neighborhood, community, and in locations further afield that affect employment, entertainment, and other opportunities. The package

85 *See* Derek K.Y. Chau, Michael Firth & Bin Srinidhi, *Leases with Purchase Options and Double Moral Hazard*, 33 J. BUS. FIN. & ACCT. 1390, 1391 (2006).

86 *See generally* FENNELL, *supra* note 13.

of local goods and services that the homeowner receives along with her residence, which are in turn influenced by the behaviors and preferences of her co-consumers, will also factor heavily into the value of the residential services the home provides. The scale at which these effects are produced is much larger than the maximum efficient scale for a household's residential activities, and so it is typically managed by a collective through some type of governance arrangement, public or private. In an important sense, then, the neighborhood is a "semicommons" arrangement in which activities involving the same resource are undertaken at different scales and under different ownership regimes.[87] Similarly mixed regimes may exist within the household. For example, students sharing a group house might occupy individual rooms for purposes of sleep and study on school nights, while throwing open the entire house for use as a party site on weekends—but not without potential moral hazard.[88]

These abutments between differently scaled activities are addressed in various ways. Within the household, informal rules backed by norms may suffice. At the neighborhood level, other forms of governance

87 *See* Smith, *supra* note 62, at 132 (defining the semicommons as a property regime in which "both common and private uses are important and impact significantly on each other.").

88 The group house example given in the text replicates in some respects the medieval common field arrangement in which owners privately owned and cultivated strips of farmland but threw the entire area open for grazing during certain seasons. In the medieval common field context, thin, scattered strips may have helped to "strategy proof" the arrangement. *See* Smith, *supra* note 62. In a group house setting, stable private rights over relatively large chunks of space (rooms) could invite the offloading of costs onto others. A system of rotation for private bedrooms or perhaps a strategic dispersal of prized personal possessions throughout the house prior to each party could help to approximate the strategic advantages of the scattering arrangement in common fields. I thank my former Property students for discussions on this point.

emerge. Zoning, coupled with property taxation, forces minimum contributions from householders to support local public goods and services. Not only can zoning ensure that households contribute a minimum share of taxes,[89] the restraints on density and intensity of use force residents to contribute in kind to particular local public goods, like a quiet, spacious, residential neighborhood. These monetary and in-kind contributions may also be managed through private common interest community structures, such as homeowners associations.

These land use solutions effectively move the circle of homeowner control outward; in idealized form, they would produce the equivalent of a single-owner structure for the commonly held elements, much as oil unitization does.[90] The fact that homeowners have such a large stake in their own investment returns makes them highly motivated and vocal participants in the local political process.[91] These high levels of homeowner involvement in issues that impact property values has been the cause of both celebration and consternation.[92] On the positive side, homeowners with a stake in the community might be expected to do all they can to make the community as desirable as possible—taking into account both consumption and investment returns.[93] Although there may be some misalignments even here (for example, between short-

89 *See* Bruce W. Hamilton, *Zoning and Property Taxation in a System of Local Governments*, 12 URB. STUD. 205 (1975).

90 Unitization allows a group of landowners to operate as a single unit in exploiting an oil or gas reserve and dividing up the proceeds. *See generally* Gary D. Libecap & James L. Smith, *The Economic Evolution of Petroleum Property Rights in the United States*, 31 J. LEGAL STUD. S589 (2002).

91 *See generally* WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS (2001).

92 For discussion, *see generally* Lee Anne Fennell, *Homes Rule*, 112 YALE L.J. 617 (2002) (reviewing WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS (2001)).

93 *See, e.g.*, FISCHEL, *supra* note 91, at 150; Jan K. Brueckner & Man-Soo Joo, *Voting with Capitalization*, 21 REGIONAL SCI. & URB. ECON. 453 (1991).

stayers who care more about maximizing investment returns and long-timers who would gladly trade some portion of home value to preserve certain aspects of the community's consumption experience that they uniquely value),[94] most homeowners can get behind policies that will enhance property values.

There are two problems, however. First, to the extent that homeowners as a group are highly risk averse, they may systematically avoid policies that have positive expected value but high variance.[95] The status quo may be suboptimally sticky as a result. Second, strong forms of neighborhood and community control introduce another potentially problematic abutment: between the factors contained within the local circle of control and those that influence many such circles of control simultaneously. From landfill siting to spatial layout to affordable housing, the impacts of local decisionmaking can have repercussions that extend beyond the boundaries of the local jurisdiction.[96] Here, even risk neutral homeowners would rationally choose to offload costs on other communities whenever possible. Reducing the stake that individual homeowners hold in the portion of investment returns attributable to offsite factors would address both factors, although not without introducing another player in the ownership structure who will have her own incentives: the investor who would take on the risk shed by the homeowner.[97]

The problems are complex ones that have been explored in greater

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94 *See, e.g.*, FISCHEL, *supra* note 91, at 150; Brueckner & Joo, *supra* note 93, at 464.
95 *See* FISCHEL, *supra* note 91, at 9-11.
96 *See* Richard Briffault, *The Local Government Boundary Problem in Metropolitan Areas*, 48 STAN. L. REV. 1115, 1132-44, 1149-50 (1996).
97 *See, e.g.*, Fennell, *supra* note 40, at 1098-1109.

depth elsewhere. What the analysis here adds is a sensitivity to the places where one form of ownership meets another, or one entitlement holder's interests run into those of other entitlement holders. These inevitable abutments can never be eliminated, but only managed. Doing so intelligently requires a great deal of careful thought about how residential life might be organized and how its component parts might be produced and distributed.

Conclusion

For all the attention that housing policy and the law and economics of property have separately received, a gulf has remained between them. In this essay, I have tried to make a start at bringing these areas together by thinking in an open-ended way about how property rights in housing might be configured. Applying boundary placement principles developed in other contexts can help to determine the efficient scope of the home. As a prerequisite, however, we must determine what jobs we want housing to do for us. Ultimately, answers to the question "how will housing be configured?" neither emanate entirely from top-down processes, nor grow entirely from the bottom up, but rather depend on a complex interaction between law, markets, and behavior. Although this essay has only scratched the surface in thinking about these interactions, I hope that it will prompt new thinking along these lines.

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