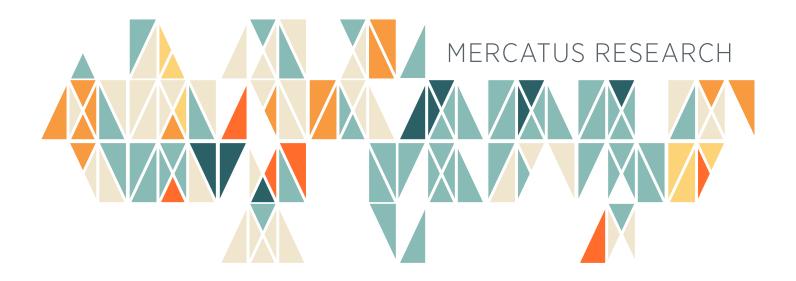
Fixing Urban Planning with Ostrom: Strategies for Existing Cities to Adopt Polycentric, Bottom-Up Regulation of Land Use

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ABSTRACT

Campaigns to address high housing costs by reforming urban planning to allow more housing have had some notable successes, but they continue to face considerable opposition. Proposals often involve top-down preemption of municipal zoning decisions by higher authorities such as state legislatures.

In places where reform remains politically difficult, I suggest trying the opposite tactic to overcome opposition: introducing laws to allow ultralocal, bottom-up land use decisions, which would address spillover and other concerns and enable win-win bargaining to permit more housing. This tactic draws upon research in the field of common-pool resources founded by Elinor Ostrom. Under my suggested approach, small communities would be able to demand a share of the profits from development in exchange for allowing it on terms and in a form that they like.

JEL codes: R520

Keywords: YIMBY, zoning, Ostrom, land use regulation, Coase, heresthetic, housing

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n 2009, 12 owners of two rows of six Victorian townhouses facing each other on Fitzroy Road in London's leafy Primrose Hill decided that they all wished to add another floor to their houses. After five years, despite rules on historic preservation and the need for discretionary permission, the local government finally gave each of them permission to add that additional floor according to an agreed design,¹ restoring previously damaged roof parapets and creating a more attractive and uniform appearance. There was very little objection from their neighbors. They have now each added their additional floor,² as shown in figure 1.

What's more, they managed to extend their houses upward even though the local government required not only that the homeowners *unanimously* sign the application for permission to do so, but that they legally guarantee that all of the extensions would be carried out *simultaneously*. If the authority had accepted a two-thirds majority and had allowed each household to carry out the building work at a time to suit itself, the process would have been far easier.

One resident described the lengthy, tortuous process of getting permission from the local government as a "nightmare." Only an exceptional group of people would go to those lengths. Work that had so little negative impact on other people, and had received so few objections, should have been far easier.

Because each homeowner stood to benefit, the incentives and reactions were very different than in the usual situation in which a developer seeks permits to develop a single site and the surrounding residents see little or no benefit but often significant inconvenience.

In the latter circumstance, strong resistance to more construction is an easily predictable outcome. It may be regrettable or self-centered for people

^{1.} London Borough of Camden Planning Application 2009/5151/P, https://planningrecords.camden.gov.uk/Northgate/PlanningExplorer/GeneralSearch.aspx.

^{2.} Lee Mallett, "Room on Top: 12 Primrose Hill Neighbours Build on Their Roofs in New Homes Model That Could Offer Solution to Housing Crisis," *Evening Standard*, March 13, 2018.



Source: Photo taken by the author.

who are well housed to oppose more housing for others. But in a system that consistently structures incentives so that new development results mainly in disbenefits to local people, it is not surprising when many of those local people fight against new development.

No other section of the economy relies on the consistent goodwill of strangers who may believe that such goodwill risks the value of their most precious physical asset—their home—and the amenity and character of their neighborhood and their community. Systems that share more of the benefits of development with people who already live there may be less likely to provoke a hostile reaction.

Across many suburban areas of cities with high housing prices, there are strong financial and other reasons to replace unremarkable 20th-century two-story buildings with buildings of perhaps five or six floors, increasing occupation of the land. The historic pattern of such densification can be seen in the older parts of many cities in beautiful Edwardian and Victorian buildings, which are generally three to eight floors high (figure 2). But current land use regulations often prevent homeowners from choosing to make considerably more ambitious use of their land. In many areas with high housing costs, receiving the right to do that would double the value of a homeowner's property.

FIGURE 2. AN EXAMPLE OF HISTORIC DENSIFICATION

Source: Photo taken by the author.

If carefully managed, the spillover effects from such small-scale, step-by-step urban densification may be limited to a small group of surrounding residents. Allowing those potentially affected nearby residents to negotiate whether to allow construction beyond the as-of-right entitlements of applicable land use rules—including, if they wish, an agreed-upon design code to ensure the new will look as good as, or better than, the old—could enable communities to be less afraid of new construction. They will have strong reason to do so because they could either enjoy additional development rights for their own land or demand a share of the financial or other benefits from the developer or neighbors who want the right to develop.

This proposal superficially resembles suggestions of "auction zoning" insofar as it requires developers to share more of the profits of development.³ But it is fundamentally different in one crucial way: I suggest processes led by, and under the control of, local residents. Residents—most of whom will generally expect to continue being residents of a neighborhood for decades—will only allow changes that they consider beneficial for their community and their residence. This is in contrast to auctions conducted by government, which may often cause resentment and problems of legitimacy, not to mention both the difficulty of accommodating different preferences and questions of how and to whom any proceeds are to be allocated.

Many people have a profound personal and emotional connection with their home and where they live. They are often hostile to proposals that reduce decisions about change to a purely financial calculation. I suggest supplementary processes that, at a workable scale, let local people take into account all of the factors—including design, proposed improvements in amenity, and other potential benefits to them and their community—in deciding whether to approve further change. That way, they can choose how they want the sense of place and the feel of their street or neighborhood to evolve.

Only if existing residents feel that they are in control will they be completely comfortable with change. This requires a discussion over time to reach a broad consensus on designs that accommodate different perspectives before any final decision on development is made.

One objection to this argument is that society needs *more* majoritarian control, at *higher* levels, to impose more development against local wishes. That

^{3.} Christopher S. Elmendorf and Darien Shanske, "Auctioning the Upzone," Case Western Reserve Law Review 69 (forthcoming 2020).

option raises the question of whether it is politically practical to impose majoritarian control in the face of fierce and organized opposition to such reforms.

From the perspective of urban design and economics, metropolitan areas like the San Francisco Bay Area or London could readily add millions more homes while improving amenities and welfare for everyone. There have been calls in England to impose more development since at least Sir Peter Hall did so in the 1970s,⁴ yet the housing crisis is far worse now than it was then. While I acknowledge the substantial recent victories of housing campaigners in California, the scale of the problem and the shortage of homes in the Bay Area remain vast. The question for campaigners is what will most quickly achieve their goal of helping those in need. I claim no certainty. Surely one should consider any ideas that may plausibly be faster and more effective given political realities. If there are ways to make upzoning popular with existing homeowners, they should be considered.

Some progress has been made in reforming zoning regulations: housing campaigners have recently scored notable victories to allow more housing in states including California, Minnesota, and Washington. But there remains strong resistance to further reform in many states. As I will set out, differently designed reforms may vastly reduce the number of potential losers, while giving local voters more of a feeling that change will be driven and chosen by them—two obvious ways to reduce opposition to reforms.

Urban planning as adopted in many countries over the course of the 20th century often consists solely of top-down central planning in which rules are set by municipalities, states, or large neighborhoods. In recent decades this model of urban planning has, perhaps unsurprisingly, proved inadequate to the task of ensuring plentiful housing and infrastructure within commuting range of highwage job opportunities, given political and other constraints. I suggest urban planning could be greatly improved with a range of different governance and legal techniques inspired from the literature on common-pool resources, a field founded by Nobel laureate Elinor Ostrom.

First, building on the Primrose Hill example, I suggest four specific ideas or approaches that may illustrate avenues for future research or trial. To give the reasoning for those suggestions, I then summarize some of the poor outcomes from current urban land use governance and the scope for substantial increases in welfare from better use of land. After briefly summarizing Elinor Ostrom's

^{4.} Peter Hall, ed., The Containment of Urban England, vol. 1 (London: Allen and Unwin, 1973).

^{5.} Even though local residents may have considerable influence in setting some zoning codes, I suggest that it is the formally top-down nature of the process that gives rise to problems such as the blame avoidance and transaction costs challenges discussed later.

work and its potential relevance, ⁶ I observe that current land use rules mean new construction often generates many losers, and I suggest that rules that better address the externalities of new construction would make such construction less unpopular. Next, I review the challenges of setting good rules for urban land use and offer some reasons why more community-driven, win-win approaches may be helpful. Finally, I set out why community-driven approaches may also help solve the challenges of majority opposition, collective action problems, and transitional losses faced by policy entrepreneurs who aim to secure improvements in urban land use governance.

TOWARD BOTTOM-UP RULES FOR URBAN LAND USE

In urban land use, one formulation of the principle of subsidiarity is that it should be possible to make decisions permitting development and change of use at the smallest possible scale that does not confer harm on others. That is to say, land use decisions should be taken at the most local scale that contains or can address all the negative spillover effects.

To minimize political opposition and negative effects on third parties, new land use rules might optionally require compensation from developers or some other arrangement so that no resident or owner within the area affected by the decision should be made financially worse off by development authorized under the reform (through, for example, loss of amenities, loss of property value, or congestion). This is not to suggest also protecting others outside that area from the effects of additional supply over time on their own housing prices.

Four Examples of Possible Approaches

To illustrate avenues for creating potential land use frameworks that may merit further work or trial, I will list four examples of current practice or new ideas that allow more bottom-up solutions to problems of urban land use.⁷

Where tenants have concerns about displacement and gentrification, such reforms could be restricted to areas where there is little risk of tenants being displaced and to developments that neither displace existing tenants nor replace

^{6.} I thank Nestor Davidson for the point that the Ostromian framework also covers the cultural and psychological aspects of change, which are not addressed in this paper.

^{7.} Each example might be seen as an attempt to define a commons in Elinor Ostrom's framework, at least for the purposes of the land uses subject to alteration under the proposal.

buildings that have been occupied by tenants within the past 10 years, as proposed in Senator Scott Wiener's SB 50 bill in California.⁸ That approach would not entirely eliminate objections from tenants in other buildings who fear that their rents may rise, but under these proposals they, as residents, would be free to vote against the upzoning that covers their street or block and to negotiate with their landlords to find win-win outcomes.

Rules could also be supplemented with transferable development rights (TDRs), as described later, and perhaps with "pliability rules," as suggested by Bell and Parchomovsky, in which on a trigger date or event an absolute prohibition is relaxed into a requirement to compensate.

These proposals are more likely to preserve communities by allowing piecemeal change over time as individual or small groups of households choose to make use of the additional permitted land uses, rather than wholescale displacement of existing residents. Residents will be taking the lead on determining how their own community, in which they expect to remain, will evolve over time. That leadership should help improve the perceived legitimacy of the process. The following ideas may be more effective in contexts with lower housing density and may be less relevant or workable in high-rise contexts such as Manhattan, where each new building affects many more people in many different ways. Where there is already a high density of housing, mechanisms such as TDRs, auctions of development rights, or compensation may be needed, individually or in combination.¹⁰

Waiver of setback rule by adjacent neighbor. A recent law in New Zealand allows any landowner to waive the rule requiring his or her neighbors' property be set back a specific distance from their joint boundary, 11 following a suggestion by housing campaigner Brendon Harre. 12 That is analogous to traditional rights to light, which are waivable by the owner of the right.

^{8.} Matthew Yglesias, "Gavin Newsom Promised to Fix California's Housing Crisis. Here's a Bill That Would Do It," Vox, December 7, 2018.

^{9.} Abraham Bell and Gideon Parchomovsky, "Pliability Rules," *Michigan Law Review* 101, no. 1 (2002). 10. Elmendorf and Shanske, "Auctioning the Upzone."

^{11.} The idea was also hinted at by Robert C. Ellickson, "Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls," *University of Chicago Law Review* 40, no. 4 (1973): 676. Michael C. Gleba, "Making Zoning Alienable: Property Rights, NIMBYism, and Urban Growth" (PhD diss., Northeastern University, 2018) suggests a similar mechanism.

^{12.} Peter Nunns, "Legalising Perimeter Block Housing," Greater Auckland, August 19, 2017.

The law means that two homeowners can mutually agree to extend their buildings laterally all the way to their common boundary line, making much more valuable use of their land without significant harm to others.

In New Zealand, setback and pyramid rules ("boundary rules") are defined by each local government under the framework set out by the Resource Management Act of 1991. If an activity will infringe upon rules relating to more than one boundary, the activity is only permitted if the owner of each boundary waives the respective rule. There does not appear to be any prohibition, judicial or otherwise, on the consenting landowner's taking a fee for such consent. In jurisdictions such as England without formal setback rules, such a waiver might be applied to guidance on sunlight and daylight.

Single-street upzoning. Robert Ellickson suggests allowing a vote by persons on a single stretch of street between two intersections (a face block) to upzone that stretch.¹³ That approach has not yet been tried in practice to my knowledge, ¹⁴ but it is a more powerful version of the upward extensions of Victorian townhouses in London's Primrose Hill, as seen in figure 1.

Stahl notes that the "rule" would disregard Washington *ex rel*. Seattle Title Trust Co. v. Roberge, 278 U.S. 116 (1928). It might be possible to distinguish *Roberge*. First, in *Roberge* the Supreme Court expressly held that there was no evidence on the record of any negative effects from the proposed new land use (sheltered housing for older people). Second, *Roberge* involved a neighbor consent provision rather than a referendum to approve a comprehensive upzoning across an area, which the Supreme Court upheld in City of Eastlake v. Forest City Enterprises, 426 U.S. 668 (1976).

As Stahl notes, it is impossible to draw a consistent line from the existing case law, and it seems at least plausible that, if the issue were to come before the Supreme Court, the Court would uphold votes as suggested here. If zoning may be delegated to municipalities, which can range in size from a few hundred to millions of people, why should it not be delegated to smaller areas? Stahl notes an "unresolved conflict in the jurisprudence."

^{13.} Xiao, Webster, and Orford analyze face blocks ("street segments") as housing submarkets. Yang Xiao, Chris Webster, and Scott Orford, "Can Street Segments Indexed for Accessibility Form the Basis for Housing Submarket Delineation?," Housing Studies 31, no. 7 (2016): 829-51. See also Robert C. Ellickson, "New Institutions for Old Neighborhoods," Duke Law Journal 48, no. 1 (1998): 75. 14. Stahl discusses possible constraints under the US Constitution and casts doubt (footnote 88) on the "suggestion in the case law and other literature that the 'rule' emerging from the Eubank-Cusack-Roberge line is that 'consent provisions are valid if they waive a previously applicable zoning restriction, but are invalid if they impose a new zoning restriction." However, the likelihood of the Supreme Court deeming a street-by-street upzoning provision unconstitutional may be reduced by the difficulty of finding a plausible remedy. Would the Court require that all plots be upzoned to the maximum that could have been permitted by vote of each block or face block? Stahl notes that Ellickson and Nelson showed no concern about the constitutionality of their suggestions. Kenneth A. Stahl, "Neighborhood Empowerment and the Future of the City," University of Pennsylvania Law Review 48 (2013): 939-1008. See also Ellickson, "New Institutions for Old Neighborhoods," 95 and 98-99; Robert H. Nelson, Private Neighborhoods and the Transformation of Local Government (Washington, DC: Urban Institute Press, 2005), 403-8.

In England, the London YIMBY campaign advocates a similar approach under the name "Better Streets." It suggests a supermajority threshold for voting and a requirement to set a design code to ensure that aesthetic concerns are addressed. The final report of the UK government's Building Better, Building Beautiful Commission suggests trials of street-by-street resident-led intensification, citing an earlier version of this paper. ¹⁶

That approach could, over time, allow transformation of single-family homes into taller townhouses or multifamily apartment buildings. On many suburban streets, the total zoned capacity for housing could be increased by a factor of three to five. In some areas such an upzoning is likely to increase the value of the original property by 100 percent or more. That provides a powerful carrot for current residents to vote in favor. A design code could ensure that the resulting streets are more attractive than the houses that are replaced.

The underlying premise of single-street upzoning is that individuals are most affected by changes on their stretch of street. However, to fully capture spillover effects of shade and daylight, it would be necessary to impose limits or compensation rules in relation to loss of light falling on buildings on other streets. Ellickson has also suggested that political opposition might be reduced if the developer were required to pay generous compensation;¹⁷ this could mean a lump sum for each owner to compensate for loss of subjective value and an entitlement to recover for loss of market value plus attorney fees. ¹⁸ This framework might provide a more generous formula if the resulting project were to exceed a specified height.

There is precedent for decisions by residents of a single face block. In Houston, for example, a face block is allowed to opt into a higher minimum lot size.¹⁹

Single-block upzoning. Analogously, a third rule could allow upzoning by supermajority vote of the residents of a city block. Liebmann suggests devolution of various powers to residents in block associations.²⁰ Again, to capture

^{15.} John Myers, Yes In My Back Yard—How to End the Housing Crisis, Boost the Economy and Win More Votes (London: ASI Research Ltd, 2017).

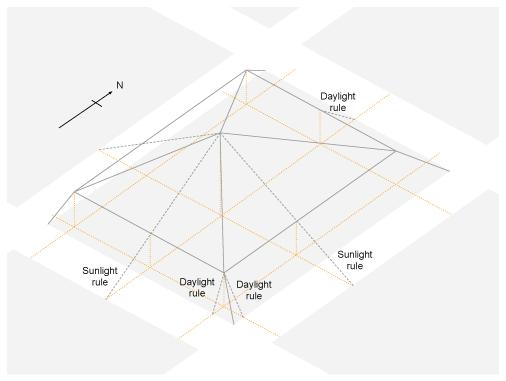
 $^{16. \} Building \ Better, Building \ Beautiful \ Commission, \textit{Living with Beauty: Promoting Health, Well-Being and Sustainable Growth, January 2020, 79-80.}$

^{17.} Robert C. Ellickson, private email correspondence with the author, September 18, 2018.

^{18.} The compensation for loss of market value might even be set at a fixed percentage premium over the actual estimated loss.

^{19.} Jeff Reichman, "Minimum Lot Size in Houston: Maps to Protect Your Block," *January Advisors*, January 14, 2018. Thanks to Adam Millsap and Nolan Gray for noting this in a forthcoming paper. 20. George W. Liebmann, "Devolution of Power to Community and Block Associations," *Urban Lawyer* 25, no. 2 (1993): 335–83.

FIGURE 3. SKETCH OF A POSSIBLE BETTER BLOCK POLICY



Source: Created by the author.

externalities of aesthetics, shade, and daylight, the rule might include restrictions on altering the outward-facing walls of the block and require angled maximum height planes in order to preserve light to other blocks. This proposed rule is sketched in figure 3 and referred to later under the name "Better Blocks." In the case of overshadowing, consent from or compensation for adjacent neighbors might be required.

That may be a way to facilitate accessory dwelling units, which have proven politically feasible in a number of US states, ²¹ or full-scale redevelopment to replace single-family two-story houses with five-story apartment buildings that might step up and back from the street in rows of green terraces to preserve the visual amenity of the residents living opposite on each street. In that way, over time a block in Palo Alto, California, might become more like a block in Paris or Barcelona—making each of the original residents much better off while preserving the amenity and community on the surrounding streets.

^{21.} John Infranca, "The New State Zoning: Land Use Preemption amid a Housing Crisis," *Boston College Law Review* 60 (February 2019): 823.

Extension of urban containment boundary by local community. In England, a recent change now permits a parish to approve development outside its own urban containment boundary (on its "greenbelt"), albeit subject to tight constraints. The reform was proposed in August 2017²² following a suggestion by Pennington,²³ and subject to limits, the core principle was adopted at the national level in 2018.²⁴

It is a recent extension of an existing regime: the English system of "neighborhood planning" discussed later allows local communities to adopt local development plans and authorize specific developments by referendum.²⁵

However, one of the constraints of the new rule is that the development thereby approved must not affect the "openness" of the relevant countryside. That concept is defined by a large body of case law but appears in many cases to involve a limit of no more than six to eight additional homes. That limit may make the effort to undertake the cost, risk, and time of the relevant process unviable for many parishes. If the desire is to protect third parties outside the urban containment boundary in question, a better rule might be to set a minimum distance from any dwelling not within that urban containment boundary.

Many English settlements have urban containment boundaries drawn very tightly near or next to transit, preventing housing on sites within walking distance of stations. Where that is not true, this category of reform may be less useful.

Considerable further work is required to find rules that sufficiently address concerns and externalities. I argue that a polycentric combination of these four (or similar) approaches might allow, over time, much better use of urban land with less political backlash against new construction. Figure 4 sketches an example of how such rules might operate at different scales.

My reasoning partly relies on the work of Nobel laureate Elinor Ostrom and other researchers in the field she founded.

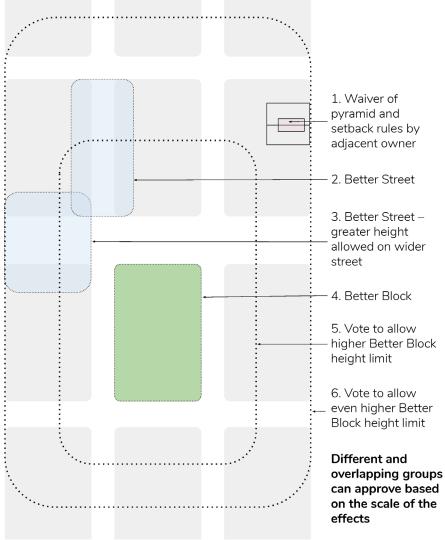
^{22.} Myers, Yes In My Back Yard.

^{23.} Mark Pennington, "Liberating the Land: The Case for Private Land-Use Planning" (Hobart Paper No. 143, Institute of Economic Affairs, London, 2002).

 $^{24. \} English \ National \ Planning \ Policy \ Framework \ paragraph \ 146(f), last \ updated \ June \ 19, 2019, https://www.gov.uk/government/publications/national-planning-policy-framework--2.$

^{25.} Richard Harwood, Planning Permission (Edinburgh: Bloomsbury Professional, 2016).

FIGURE 4. POLYCENTRIC DECISIONS FOR LAND USE



Source: Created by the author.

Elinor Ostrom and Common-Pool Resources

Ostrom's groundbreaking work was in part a response to the "tragedy of the commons" theory earlier proposed by Garrett Hardin.²⁶ Pooled resources such

^{26.} Elinor Ostrom, *Understanding Institutional Diversity* (Princeton, NJ: Princeton University Press, 2005); Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 2015).

as common grazing lands, Hardin argued, will tend to be overused, because each individual has incentives to take more than is optimal for society.

Through extensive analysis of data from a range of fields and fieldwork of their own, Ostrom and her colleagues demonstrated that in practice many communities have evolved successful methods to manage what she called common-pool resources (CPR), such as grazing land, irrigation systems, forests, or fisheries. Some communities have successfully managed such resources for centuries.

Ostrom noted that CPRs do not necessarily involve a prisoner's dilemma with an inevitable incentive for defection and betrayal, as early analysts of the tragedy of the commons had suggested. Instead, CPR management can involve a *repeated* game in which the players can *communicate* with each other, thereby learning to cooperate and to punish bad behavior. Many communities have used those two aspects to build elaborate structures of cooperation to manage CPRs.

Ostrom and her colleagues developed the Institutional Analysis and Development (IAD) framework to assist in the analysis of CPR problems. She sought to distill a set of "design principles" to characterize the regularities that were often common to communities with successful CPR management and that were frequently absent in failed systems.²⁷ Ostrom described those principles as "core factors that affect the probability of long-term survival of an institution developed by the users of a resource":²⁸

- 1A. User Boundaries: Clear and locally understood boundaries between legitimate users and nonusers are present.
- 1B. Resource Boundaries: Clear boundaries that separate a specific common-pool resource from a larger social-ecological system are present.
- 2A. Congruence with Local Conditions: Appropriation and provision rules are congruent with local social and environmental conditions.

 $^{27. \,} Ostrom, \, Understanding \, Institutional \, Diversity.$

^{28.} Elinor Ostrom, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems" (Nobel Lecture, December 8, 2009), citing Michael Cox, Gwen Arnold, and Sergio Villamayor-Tomás, "A Review of Design Principles for Community-Based Natural Resource Management," *Ecology and Society* 15, no. 4 (2010).

- 2B. Appropriation and Provision: Appropriation rules are congruent with provision rules; the distribution of costs is proportional to the distribution of benefits.
- 3. Collective-Choice Arrangements: Most individuals affected by a resource regime are authorized to participate in making and modifying its rules.
- 4A. Monitoring Users: Individuals who are accountable to or are the users monitor the appropriation and provision levels of the users.
- 4B. Monitoring the Resource: Individuals who are accountable to or are the users monitor the condition of the resource.
- 5. Graduated Sanctions: Sanctions for rule violations start very low but become stronger if a user repeatedly violates a rule.
- 6. Conflict-Resolution Mechanisms: Rapid, low-cost, local arenas exist for resolving conflicts among users or with officials.
- 7. Minimal Recognition of Rights: The rights of local users to make their own rules are recognized by the government.
- 8. Nested Enterprises: When a common-pool resource is closely connected to a larger social-ecological system, governance activities are organized in multiple nested layers.

The space in a city outside the buildings can be viewed as a CPR.²⁹ Drab or delightful façades line city streets. The sun warms people over rooftops that they cannot walk on. Every day, people are affected by ugly or beautiful spaces or objects without necessarily stepping in or touching them.

Why is Ostrom's work relevant in areas with high-cost housing? I suggest two ways in which it is immediately helpful. First, it shows that in a range of situations, bottom-up management of shared resources by communities may be better than top-down management by higher authorities. Second, Ostrom's design principles may help reformers shape reform ideas to improve likely effectiveness before proposing them for trial or adoption. Successful reform ideas could bring large benefits for society.

^{29.} Ronald J. Oakerson and Jeremy D. W. Clifton, "The Neighborhood as Commons: Reframing Neighborhood Decline," *Fordham Urban Law Journal* 44 (2017): 411; Lee Anne Fennell, *The Unbounded Home: Property Values beyond Property Lines* (New Haven, CT: Yale University Press, 2009).

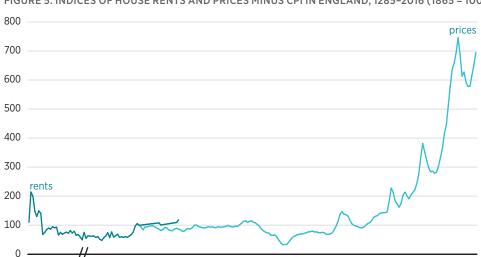


FIGURE 5. INDICES OF HOUSE RENTS AND PRICES MINUS CPI IN ENGLAND, 1285-2016 (1865 = 100)

Note: The double slash on the horizontal axis indicates a time discontinuity. Sources: R. Thomas and N. Dimsdale, "A Millennium of Macroeconomic Data Bank of England OBRA Dataset Version 3.1" (dataset), August 2018, https://www.bankofengland.co.uk/statistics/research-datasets; Gregory Clark, "The Long March of History: Farm Wages, Population, and Economic Growth, England 1209–1869," *Economic History Review* 60, no. 1 (2007): 97–135.

1905

1925

1945

1965

1985

2005

1885

BENEFITS OF BETTER URBAN LAND USE

Many studies indicate that better urban land use could substantially increase welfare, wages, and opportunity. In many major cities with high productivity and wages, the price of a typical dwelling often exceeds the replacement cost of that dwelling—including the cost of the accompanying infrastructure—by more than 100 percent. There is broad evidence that the excess would be substantially reduced with fewer constraints on increased housing supply.³⁰

For perspective on the scale of the problem in urban land use, estimates from the United Kingdom's Office for National Statistics imply that the excess of total UK dwelling prices over the total replacement cost of those dwellings was £3.7 trillion (\$4.8 trillion³¹) in 2015,³² or nearly two-fifths of the entire net value of

1845

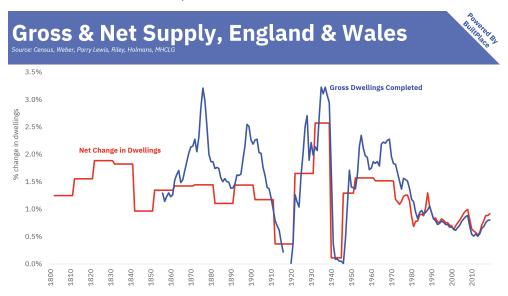
1865

1285

^{30.} Edward Glaeser and Joseph Gyourko, "The Economic Implications of Housing Supply," *Journal of Economic Perspectives* 32, no. 1 (2018): 3–30.

^{31.} At an exchange rate of £1 = 1.31 in December 2019.

^{32.} UK Office for National Statistics, "CGLK" and "MJF8" (datasets) under the definitions used, up to 2015.



Source: Neal Hudson (@resi_analyst), "Gross & Net Change in Dwellings, England & Wales," Twitter, November 16, 2017, 4:20 a.m., https://twitter.com/resi_analyst/status/931089599107162120. Reproduced with permission.

the United Kingdom in the national balance sheet.³³ The value of US urban land in 2010 has been estimated at \$19 trillion.³⁴

English real housing prices have risen since the middle of the 20th century at a speed and scale that appear otherwise unprecedented in the past 700 years (figure 5). "In 1940, housing prices were no greater than they had been six hundred years before when the Bubonic Plague had struck."³⁵

A graph from the analyst Neal Hudson implies that, since the foundation of the current English planning system in 1947, the English and Welsh stock of dwelling units has never increased at the net percentage rate of the 1830s, let alone the higher rate of the 1930s (figure 6).

The problem appears to be repeated across the West.³⁶ In 2017, a report in *The Savills Blog* estimated the total value of global housing at approximately \$169 trillion,³⁷ of which wealthy countries, which tend to have higher housing

 $^{33.\,}UK\,Office\,for\,National\,Statistics,\,National\,Balance\,Sheet,\,``Total\,Net\,Worth\,Series\,S.1"\,(dataset),\,accessed\,February\,14,\,2020,\,https://www.ons.gov.uk/.$

^{34.} David Albouy, Gabriel Ehrlich, and Minchul Shin, "Metropolitan Land Values," *Review of Economics and Statistics* 100, no. 3 (2018): 454–66.

^{35.} Bryan Taylor, "Seven Centuries of Real Estate Prices," Global Financial Data, January 18, 2017.

^{36.} Katharina Knoll, Moritz Schularick, and Thomas Steger, "No Price Like Home: Global House Prices, 1870–2012," *American Economic Review* 107, no. 2 (2017): 331–53.

^{37.} Paul Tostvein, "How Much Is the World Worth?" The Savills Blog, April 10, 2017.

costs, must account for a large share. The unnecessary scarcity owing to suboptimal regulation may therefore account for tens of trillions of dollars.

The shortage of housing in high-productivity cities is estimated to have a significant impact on welfare, productivity, wages, and GDP growth.³⁸ Evidence for this is still not widely known in the housing and urban planning literature, which often seems to assume that housing is a zero-sum game.

Furthermore, such estimates do not consider the cost of the extensive activities to lobby for zoning and other changes. A substantial fraction of those activities are expenses in a negative-sum game that leaves society as a whole worse off, what is often described as "rent-seeking."³⁹

In that respect, urban land use is one of many areas in which better institutions and policy might result in substantially improved economic performance. In particular, better urban land use could lead to better local employment opportunities, encompassing widespread worker access to jobs in high-productivity metropolitan areas with affordable living costs. Alston writes,

Explaining institutional rigidities in the face of poor economic performance is a difficult research agenda. To understand the lock-in [to poorly functioning institutions and economies] requires insights from the disciplines that comprise the NIE [new institutional economics]—anthropology, business organization, economics, history, law, political science, psychology, and sociology. Yet the potential reward from an understanding of the forces that account for poor economic performance is huge.⁴⁰

Elasticity of housing supply is also important because it is a major determinant of whether the benefits of increased productivity accrue to landowners or to workers. ⁴¹ In markets with limited new housing supply, increases in wages owing to increased productivity will simply go to bid up rents for housing, transferring much of the benefits to landlords.

There is also evidence that housing has played a major role in increasing inequality, because the increase in the share of economic returns going to

^{38.} Chang-Tai Hsieh and Enrico Moretti. "Housing Constraints and Spatial Misallocation," *American Economic Journal: Macroeconomics* 11, no. 2 (2019): 1–39.

^{39.} Gordon Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft," *Economic Inquiry* 5, no. 3 (1967): 224–32.

^{40.} L. J. Alston, "New Institutional Economics," in *The New Palgrave Dictionary of Economics* (London: Palgrave Macmillan UK, 2008), 1–11.

^{41.} Enrico Moretti, "Local Labor Markets," in *Handbook of Labor Economics*, vol. 4, ed. David Card and Orley Ashenfelter (New York: Elsevier, 2011), 1237–1313.

capital rather than wages has primarily resulted from an increase in the return on housing, which is mainly owned by wealthy homeowners rather than by lower-income citizens.⁴² In addition, the scarcity and high prices of housing in places like New York City or the San Francisco Bay Area have priced workers with lower skills out of such cities.⁴³

Room for More Homes

Many urban planners advocate that, given political agreement, it is perfectly feasible to add more housing within existing high-wage cities while improving perceived amenity.⁴⁴ Gabriel M. Ahlfeldt and Elisabetta Pietrostefani find that housing density has a positive effect on welfare if housing supply is elastic.⁴⁵

Some increase in housing density can have a positive—or at worst, neutral—effect on welfare and on pleasant streets. For example, the historic townhouses and apartment ("mansion") blocks in popular and expensive areas of central London, such as Kensington, Pimlico, Covent Garden, or Mayfair, have densities of built volume per hectare five times greater than many areas of suburban outer London. Many 18th- and 19th-century buildings have five or more floors. In contrast, in 2015 half the dwellings in London were in buildings of only one or two floors. The density of parts of the suburbs could be increased to the density of historic parts of the center without losing amenities.

Similarly, popular and beautiful city centers such as Paris, Rome, Venice, and Vienna have considerably more housing per acre than do the suburbs of most US or UK cities. Increases in density in the suburbs need not mean the high-rise towers of the movie *Blade Runner* or present-day Manhattan. I express no view on high-rise towers, but their visibility from a distance can make them a particular focus for political resistance to densification.

^{42.} Matthew Rognlie, "Deciphering the Fall and Rise in the Net Capital Share: Accumulation or Scarcity?," *Brookings Papers on Economic Activity* (spring 2015): 1–69.

^{43.} Joseph Gyourko, Christopher Mayer, and Todd Sinai, "Superstar Cities," *American Economic Journal: Economic Policy* 5, no. 4 (2013): 167–99.

^{44.} James Harris, "Settlement Patterns, Urban Form and Sustainability" (London: Royal Town Planning Institute, 2018). Gyourko and Molloy review the economic literature on the welfare implications of regulation. See Joseph Gyourko and Raven Molloy, "Regulation and Housing Supply," in *Handbook of Regional and Urban Economics*, vol. 5, ed. John D'Agata (Amsterdam: North-Holland, 2015), 1289–1337.

^{45.} Gabriel M. Ahlfeldt and Elisabetta Pietrostefani, "The Economic Effects of Density: A Synthesis," *Journal of Urban Economics* 111 (May 2019): 93–107.

^{46.} James Gleeson, "Housing in London 2015" (London: Greater London Authority, 2015).

The study of spatial economics has demonstrated that enabling housing densification is particularly important as economies have moved away from agriculture to manufacturing and then to services. Economists identify three categories of activity that can happen more efficiently in larger settlements: matching, sharing, and learning. Those "benefits of agglomeration" can make cities more productive than dispersed collections of small settlements, and the benefits of agglomeration appear to be far larger for services than for agriculture.

Denser and more walkable cities can also improve average health—people may easily choose to get more exercise by walking more⁴⁷—and can reduce pollution by giving people the viable option of walking or cycling, both of which create less pollution than almost every other means of transport.⁴⁸

Densification Seems to Be Difficult

Early evidence suggests that the process of densification that can be observed over the history of cities like London or Manhattan has become very slow in many parts of cities in the United States and the United Kingdom,⁴⁹ even though it would be highly profitable to add more housing across large areas of those cities in those countries.

Maps from Romem show a large reduction in the pace of the densification of suburbs since $1940.^{50}$ In the 2010s, moderately dense suburbs, which have the strictest land use regulations, demonstrated the lowest growth rate.⁵¹

Densification generally requires construction of more apartments rather than more houses. But from 2010 to 2019 the United States spent one-third as much on building apartments, as a share of GDP, as it did from 1970 to 1979; the United States now spends four times more on home improvements than on building apartments, and still more on building houses.⁵² England has also reduced construction of apartments, but even at its peak, construction of new

^{47.} Chinmoy Sarkar, Chris Webster, and John Gallacher, "Neighbourhood Walkability and Incidence of Hypertension: Findings from the Study of 429,334 UK Biobank Participants," *International Journal of Hygiene and Environmental Health* 221, no. 3 (2018): 458–68.

^{48.} David Owen, *Green Metropolis: Why Living Smaller*, *Living Closer*, and *Driving Less Are Keys to Sustainability* (New York: Riverhead Books, 2009).

^{49.} Salim Furth, "Housing Supply in the 2010s" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2019).

^{50.} Issi Romem, "America's New Metropolitan Landscape: Pockets of Dense Construction in a Dormant Suburban Interior," *Buildzoom*, February 1, 2018.

^{51.} Furth, "Housing Supply in the 2010s."

^{52.} Kevin Erdmann, Shut Out: How a Housing Shortage Caused the Great Recession and Crippled Our Economy (Lanham, MD: Rowman and Littlefield, 2019).

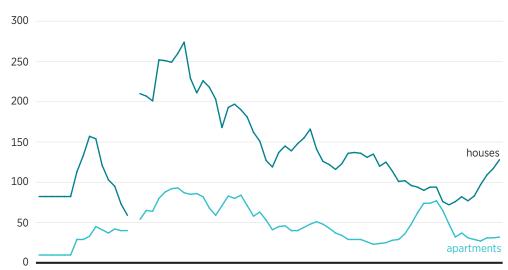


FIGURE 7. HOUSES AND APARTMENTS BUILT (THOUSANDS), ENGLAND, 1945-2017

Source: A. E. Holmans, *Historical Statistics of Housing in Britain* (Cambridge: Cambridge Centre for Housing and Planning Research, 2005); UK Ministry of Housing, Communities and Local Government, "Live Tables on House Building: New Build Dwellings," accessed on May 8, 2019, https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building, tables 209 and 254,

1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015

apartments did not reach one-third of the government's target of 300,000 new homes per year (figure 7).⁵³

All individual homeowners or other landowners have an incentive to build more housing on their land. It is often regulation that either stops them from doing so or from selling to someone else who will. 54

Despite the large potential gains, few win-win bargains are struck between landowners to use their land more efficiently, in the spirit of Ronald Coase's landmark paper on transaction costs and property use. ⁵⁵ Given the elasticity of demand in some high-price areas, Edward L. Glaeser and Joshua D. Gottlieb argue that land values there would be increased by allowing more construction. Current rules make it hard for communities to find win-win solutions that make some

^{53.} A. E. Holmans, *Historical Statistics of Housing in Britain* (Cambridge: Cambridge Centre for Housing and Planning Research, 2005).

^{54.} Edward L. Glaeser, Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier (New York: Penguin Press, 2011).

^{55.} Ronald H. Coase, "The Problem of Social Cost," in *Classic Papers in Natural Resource Economics*, ed. Chennat Gopalakrishnan (London: Palgrave Macmillan UK, 2000), 87–137.

people better off without making anyone else significantly worse off.⁵⁶ Landowners in, say, Palo Alto might well gain substantially on average if the city were zoned more intensively—albeit with some losers, particularly in the short run.

Ostrom's fifth institutional design principle suggests that sanctions should be dispensed in proportion to the scale of the offenses. But the prohibition on construction under most current systems of land use regulation is absolute, with criminal sanctions and injunctive relief for breach. If penalties for construction not compliant with the rules were limited to a fine or an award of damages, the most inefficient prohibitions could be overridden.⁵⁷

Moreover, the government administering the land use rules typically has no general power to award compensation payable by the developer to third parties, which increases political opposition. The fact that land use rules are generally set by officials or politicians rather than by voters directly means that blame avoidance may create a further bias against new development.

In a related context, Ellickson notes that the Anglo-American legal system has evolved to deter breaking up property ownership into small component rights that could lead to gridlock.⁶⁰ Examples include the rule against perpetuities and rules for the termination of land use covenants.⁶¹ Urban planning has no such mechanism for preventing the same kind of de facto political gridlock.

Why do communities fail to maximize land value? The Coase theorem, after all, suggests that side deals between property owners should lead to maximizing joint wealth. One answer is that property rights are murky and that the democratic process is not geared toward such side payments. In many cases the right of an owner to build is the outcome of a complicated regulatory process that cannot be predicted in advance. In other cases explicit legal impediments prevent such side deals. Since each new development creates a windfall for one owner and a host of inconveniences for everyone else, one can understand why democratic decisionmaking would lead to many restrictions on building.

Ihlanfeldt also finds that greater regulatory restrictiveness in cities in Florida decreased land prices. See Keith R. Ihlanfeldt, "The Effect of Land Use Regulation on Housing and Land Prices," *Journal of Urban Economics* 61, no. 3 (2007): 420–35.

^{56.} Edward L. Glaeser and Joshua D. Gottlieb, "The Economics of Place-Making Policies" (NBER Working Paper No. 14373, National Bureau of Economic Research, Cambridge, MA, October 2008), 47n71:

^{57.} Robert C. Ellickson, "Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls," *University of Chicago Law Review* 40, no. 4 (1973): 681.

^{58.} I discuss judge-made rules against "exactions" later.

^{59.} R. Kent Weaver, "The Politics of Blame Avoidance," *Journal of Public Policy* 6, no. 4 (1986): 371–98.

^{60.} Robert C. Ellickson, "Property in Land," Yale Law Journal 102, no. 6 (1993): 1315.

^{61.} Historically, restraints on alienability were also resolved through private acts of Parliament. See Kara Dimitruk, "To Destroy the Settlement of Estate? The Glorious Revolution and Estate Acts of Parliament, 1660–1702" (Working Paper No. 01/2019, Stellenbosch University, South Africa, 2019).

Instead of a commons, therefore, the city has effectively become the opposite of a commons, which Michael Heller called an anticommons—multiple interlocking rights and quasi-rights to block action, unclearly vested, making most potential change impossible, like a patent thicket.⁶² In North's terms, society has become "locked in" to an inefficient system for governing urban land use.⁶³

There may have originally been little intention to create such gridlock. The quasi-rights to block development have become more valuable as they have become more binding and as land values have risen. In earlier stages of urban land use regulation, there is little or no evidence of thoughts of compensation for overriding those quasi-veto rights, perhaps because those rights were worth far less.

THE NEGLECTED IMPORTANCE OF WIN-WIN OUTCOMES IN URBAN LAND USE

The last section reviewed some of the evidence that a better supply of homes coupled with fewer losers from new construction is a possible outcome. If so, literally trillions of dollars have been "left on the sidewalk," as Mancur Olson put it: large gains to society are possible if only that society can overcome the problems of collective action. 64

Reformers seeking to enable some of those potential gains face two challenges.

Finding Systems That Can Allow Better Urban Land Use

First, reformers must specify governance systems that would be effective over the long term in generating enough housing and related infrastructure. That would involve writing regulations that adequately address transaction costs and aesthetic and other spillover effects while not needlessly restricting housing supply.

^{62.} Michael Heller, *The Gridlock Economy: How Too Much Ownership Wrecks Markets, Stops Innovation, and Costs Lives* (New York: Basic Books, 2008). Perhaps because the concept is newer, the literature on facilitating collective action seems less developed for the anticommons than for the commons.

^{63.} Douglass C. North, *Institutions, Institutional Change, and Economic Performance*, The Political Economy of Institutions and Decisions (New York: Cambridge University Press, 1990).
64. Mancur Olson, "Distinguished Lecture on Economics in Government: Big Bills Left on the Sidewalk: Why Some Nations Are Rich, and Others Poor," *Journal of Economic Perspectives* 10, no. 2 (1996): 3–24.

Upzoning procedures in a traditional zoning system,⁶⁵ or discretionary permissions granted by a government official (subject perhaps to various impact fees), are clearly not designed to seek outcomes that are as close to win-win as possible, because the benefits and burdens may fall on different people.

Simple upzoning gets closer to win-win outcomes when all the landowners have purely financial interests in their land and when there is no vertical subdivision of interests. For different homeowners (who may have radically different preferences) and apartment owners (who may see nothing but disbenefit if additional stories are added to surrounding buildings), upzoning provides a very inaccurate way to try to ensure that most or all people benefit from allowing more development. As such, it is hardly surprising that many people in a simple upzoning circumstance oppose new construction.

There is often considerable opposition to more housing from established homeowners and other landowners.⁶⁶ Homeowners are rationally risk averse about what is often their most valuable asset. Renters may also oppose housing in some circumstances.⁶⁷ Rent-controlled tenants have a quasi-ownership interest in their home and may often align with homeowners in opposition to change. Politicians may also seek to avoid displacement and gentrification affecting their supporters.

In this context, calls for simple "deregulation" have had limited success. One person's deregulation is the expropriation of another person's perceived property (quasi-)rights to sunlight or other amenities. Deregulation is easy for victimless crimes, but much harder when the regulation in question, by causing a near-total absence of construction for many decades, has created expectations that are similar to property rights. It may be that legal scholars have not yet fully absorbed conclusions from new institutional economics, which adopts a broader definition of property rights than legal theory does. The fact that existing rights to prevent more construction are de facto and unclearly vested

^{65. &}quot;Upzoning" is used throughout this paper to mean increasing the intensity of permitted land use; the term also, though less frequently, has been used in the opposite meaning.

^{66.} William A. Fischel, *The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-Use Policies* (Cambridge, MA: Harvard University Press, 2005); Christian A. L. Hilber and Frédéric Robert-Nicoud, "On the Origins of Land Use Regulations: Theory and Evidence from US Metro Areas," *Journal of Urban Economics* 75 (May 2013): 29–43.

^{67.} Michael Hankinson, "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism," *American Political Science Review* 112, no. 3 (2018): 473–93.

^{68.} Yoram Barzel, *Economic Analysis of Property Rights*, 2nd ed. (New York: Cambridge University Press, 1997), 90, distinguishes between economic rights and legal rights.

^{69.} Thráinn Eggertsson, *Imperfect Institutions: Possibilities and Limits of Reform* (Ann Arbor: University of Michigan Press, 2005).

may make reforms to reduce transaction costs of negotiating less intuitive to reformers. If such rights were express, the political barriers to expropriating them would be clearer.

Transferable development rights (TDRs) involve the allocation of rights to multiple landowners, ⁷⁰ who may then choose to sell their TDRs to other owners of land that is allowed to be developed once that owner has acquired sufficient TDRs. TDRs have been a limited answer in some cities and may have further potential, ⁷¹ but they do not solve many of the problems of differential effects on different people, in particular the fact that the losers from a zoning change may not be the people who receive valuable TDRs. However, they may be particularly useful as a complement to other approaches discussed later, particularly if implemented in a more radical form. One possibility, subject to applicable law, may be to allocate TDRs to every resident rather than simply to landowners in order to mitigate or eliminate transitional losses where necessary—for example, where some residents own apartments but do not share in the air rights above the building.

Finding Systems with Any Chance of Being Adopted

Second, reformers who seek change in land use rules must solve the political difficulties of moving to a better system, particularly in democracies where homeowner-voters make up the majority.

Much research on urban planning reform addresses the systemic problems but not the political ones. In the old joke, economists "solve" a problem by assuming a nonexistent can opener. In this case, the implausible assumption is a dictator who can wave through the reform proposal. One reason for the gap in the literature may be a systematic bias: Eggertsson argues that economists are prone to underestimating the importance of the political limits to reform.⁷²

Some political economists (e.g., Daron Acemoglu and James A. Robinson) argue that such political limits are the binding constraint holding many

^{70.} Theoretically it might be possible to allocate TDRs more widely, including to voters who do not own any land, in order to reduce opposition to a reform.

^{71.} Roderick Hills and David Schleicher, "Planning an Affordable City," *Iowa Law Review* 101, no. 1 (2015): 91; Roderick Hills and David Schleicher, "Building Coalitions out of Thin Air: Transferable Development Rights and 'Constituency Effects' in Land Use Law," *Journal of Legal Analysis* (forthcoming).

^{72.} Eggertsson, Imperfect Institutions, 5.

lower-income countries in a poverty trap.⁷³ As Rodrik et al. put it, "Institutions rule." In high-income countries, the large scope for further potential improvement in housing supply and welfare is not so starkly obvious because no country at the technological frontier has succeeded in adopting social technologies that can prevent home prices from rising far above the costs of construction and necessary infrastructure. However, some places without large stocks of historic housing in the center of cities and with political environments that differ from the United States or the United Kingdom—such as Seoul, Singapore, and Tokyo—have done far better than others.⁷⁴ Homes in Tokyo, for example, are considerably cheaper than in San Francisco or London, although the fact that buildings in Japan are generally seen as somewhat temporary may well have helped reduce political resistance to demolition and reconstruction.

As Acemoglu and Robinson note, "Economic analysis needs to identify, theoretically and empirically, conditions under which politics and economics run into conflict, and then evaluate policy proposals taking into account this conflict and the potential backlashes it creates."⁷⁵

This type of problem is not new. Lee J. Alston and Bernardo Mueller write, "History is replete with examples of societies failing to change property rights at the optimal times in response to changing scarcity. The reasons for such institutional failures lie in the difficulties of compensating actors who are in a position to veto changes to property rights."

Additionally, Alston writes,

What is missing is a better understanding of the transaction costs associated with getting laws and regulations that are more conducive to better economic performance, especially when it becomes obvious that the existing laws and regulations are not fostering economic growth.... In many scenarios special interests are in a position to either enact legislation or block legislation so that they reap the gains. Yet society is worse off by such

^{73.} Daron Acemoglu and James A. Robinson, Why Nations Fail: The Origins of Power, Prosperity, and Poverty (New York: Crown Publishers, 2012).

^{74.} Dani Rodrik, Arvind Subramanian, and Francesco Trebbi, "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development," *Journal of Economic Growth* 9, no. 2 (2004): 131–65.

^{75.} Daron Acemoglu and James A. Robinson, "Economics versus Politics: Pitfalls of Policy Advice," *Journal of Economic Perspectives* 27, no. 2 (2013): 173–92.

^{76.} Lee J. Alston and Bernardo Mueller, "Property Rights and the State," in *Handbook of New Institutional Economics*, ed. Claude Ménard and Mary M. Shirley (Berlin: Springer Berlin Heidelberg, 2008), 573–90.

activity. The question is: why cannot "we," the citizens or consumers, buy out the special interests?⁷⁷

Alston cites several reasons such transactions may not occur: informational problems, legitimacy of the process that produced the current outcome, 78 collective action problems, and insecurity in political property rights. He notes that the last might be overcome through side payments (compensation) and then points to three explanations of the failure to achieve side payments that may be relevant in housing. First, compensation may be seen as undermining the legitimacy of the system. Second, politicians may be unable to credibly commit to compensating losers over the long term. Third, he notes a "slippery slope" argument that paying for changes in property rights would encourage people to seek the creation of nonoptimal property rights so that they can be paid to move to a more optimal situation—an argument against rent-seeking, the political pursuit of advantages that are detrimental to society as a whole.⁷⁹

In urban land use, I speculate that a fourth problem may exist: many voters may be extremely resistant to any damage to attractive buildings or green fields—even ones that are geographically distant—invoking feelings of disgust or aversion to degradation. ⁸⁰ If so, cash payments may be inadequate, and the only possible way to agree on change may be via mechanisms to ensure that the urban or rural heritage in question is perceived to be enhanced rather than degraded. I suggest that innovation is needed to find workable mechanisms to achieve that, because existing land use systems have generally proved inadequate to that task of enhancement in situations where land is in fragmented ownership.

Furthermore, many such reform proposals appear to start from the assumption that reform must be imposed from above. However, if current

^{77.} Alston, "New Institutional Economics," 6.

^{78.} Which may, in this context, include the principle of zoning being set by municipalities.
79. In the context of housing, I suggest that rent-seeking is unlikely to be encouraged by requiring compensation of those who suffer transitional losses from new construction where additional development is approved through one of the supplementary reforms suggested here. On the contrary, it is the decades-long deficiency in housing supply under present systems that has led to renterism on an epic scale. Furthermore, I do not suggest compensating all landowners across the country in the event of a long-run decline in home prices owing to increased supply; the suggestion is only to address the local externalities of new construction. Nor is there any suggestion of creating formal rights to recognize previously exclusionary practices. Those suburban residents who wish to exclude lower-income groups have the option of living in a privately owned exclusive community. I also do not suggest requiring unanimity to permit new development. Generous compensation should be an adequate remedy for the small numbers with very high aversion to change.

^{80.} Jonathan Haidt, *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (New York: Vintage Books, 2013), 169.

land use regulations are inefficient, by definition there must be subgroups that would have an incentive to adopt more intensive use, even after internalizing all externalities.

Eggertsson writes,

Successful transfer or introduction of new social technologies is a more complex phenomenon than the transfer of new production technologies because preexisting institutional arrangements often undermine the effort. Successful institutional reforms depend on active support from a large portion of relevant actors, which may not be forthcoming. Compliance often requires prior resolution of deep political conflicts as well as synchronization of individual social models.⁸¹

In other contexts than housing, such as emissions trading, fishing entitlements in New Zealand, or taxi medallions in Perth, Australia, economists have been happy to structure reforms to generate fewer losers.

We can combine the two questions: What system can feasibly be adopted that will work better? In political economy terms, this question is, What are the achievable second- or third-best options?⁸² Reformers need to solve for the minimal coalition that can get such reforms passed.⁸³

I suggest, after John Corkindale,⁸⁴ that such systems should facilitate changes in urban land use coupled with compensation paid by the developer as necessary so that land use is much closer to being win-win than under current rules. This will improve political support for new construction and the political resilience of the system. In the next section, I argue that a fundamental but neglected problem in urban land use is finding such systems, and that lessons from the CPR literature are highly relevant in doing so.

 $^{81.\} Eggerts son, Imperfect\ Institutions, 25.$

^{82.} Some institutions, such as the World Bank, the Organisation for Economic Co-operation and Development (OECD), the UK's Department for International Development, and the Overseas Development Institute, use applied political economy analysis to find second- or third-best policy proposals, but I have found little explicit use of such analysis to find workable reforms in the field of urban planning. See Verena Fritz, Brian Levy, and Rachel Ort, eds. *Problem-Driven Political Economy Analysis: The World Bank's Experience* (Washington, DC: World Bank, 2014); Jens Hoj, "The Political Economy of Structural Reform: Empirical Evidence from OECD Countries" (OECD Economics Department Working Paper No. 501, OECD, Paris, 2006); Daniel Harris, *Applied Political Economy Analysis. A Problem-Driven Framework* (London: Overseas Development Institute, 2013).

^{84.} John Corkindale, *The Land Use Planning System: Evaluating Options for Reform* (Hobart Paper No. 148, Institute of Economic Affairs, London, 2004).

GOVERNANCE CHALLENGES IN THE URBAN COMMONS

Much of the literature on the urban commons focuses on community management of public land, construction of community housing, or collective management of existing land uses that affect others, 85 rather than control of development by third parties, though there are exceptions, such as Fennell. 86

Of course, many CPRs (such as fisheries or common grazing land) may involve questions of conservation more than of active construction or modification,⁸⁷ but there are examples of construction and modification of these CPRs, including irrigation systems.⁸⁸

On the other hand, advocates for planning reform in the legal literature mainly divide into two camps. The first camp comprises advocates for better zoning of one form or another, ⁸⁹ which often includes preemption of local-level land use regulations as well as moving planning decisions to a higher level (rather than to a lower level) of decision-making. Moving land use decisions to a higher level of government has been the principle behind reforms in California, Oregon, Washington State, and Minneapolis, and control by national government was a component in successful upzoning in Tokyo.

Many cross-sectional studies show that areas with higher incomes or correlated socioeconomic characteristics tend to have more regulation. ⁹⁰ In the highest-price jurisdictions, such as the San Francisco Bay Area, reform has encountered heavy political resistance, and the California state-level proposals to upzone land near public transit, SB 827 and SB 50, have now been blocked for three years in succession, even though SB 50 would allow municipalities to retain and increase controls on demolition. In such circumstances, it may be worth trying other approaches, at least in parallel. Devolution to very small units (such as single blocks or stretches of street) may provoke less political resistance while providing strong incentives for small groups to choose to double or triple their property values by opting into a more intensive zoning regime.

The second camp advocates property rights approaches instead of topdown imposition of more intensive zoning.⁹¹ However, proposals for devolving

^{85.} Sheila Foster and Christian Iaione, "The City as a Commons," *Yale Law and Policy Review* 34 (2016): 281–349.

^{86.} Fennell, The Unbounded Home.

^{87.} Many thanks to Salim Furth of the Mercatus Center for this point.

^{88.} Ostrom, Governing the Commons.

^{89.} Hills and Schleicher, "Planning an Affordable City"; David Schleicher, "City Unplanning," Yale Law Journal 122, no. 7 (2013).

^{90.} Gyourko and Molloy, "Regulation and Housing Supply," 1307.

^{91.} Fennell, The Unbounded Home.

control of urban land use to smaller areas in existing cities have rarely suggested devolution to areas smaller than the neighborhood level.⁹² This paper suggests devolution to even smaller units.

Given the complexity of urban land use, one should not be surprised if Ostrom's eighth institutional design principle—Nested Enterprises—turns out to be important. In complex circumstances, Ostrom suggests it may be helpful to organize governance in multiple nested layers.

Why Is There So Little Win-Win Bargaining?

The common law of real property allows some win-win bargaining; for example, the law on nuisance, rights to light, and trespass allows waiver, negotiation, and payments. In effect, "I can offer you money if you will tolerate the temporary pile of manure on my land near your business premises. You might offer me something to let you park your car on my land." In English common law, a property owner could choose to waive a right to daylight in return for payment from a neighbor who wished to build.

Incomes have risen and sensitivity to various aspects of urban change has increased;⁹³ building higher has become easier; land ownership has become more fragmented⁹⁴ as the percentage of homeownership has increased over the past century.⁹⁵ These trends have increased the political demand to address externalities.⁹⁶

Over the course of the 20th century, externalities in cities have increasingly been addressed through top-down rules, not individual property rights. Despite the enormous deadweight loss, such urban land use rules often prevent bargaining among different landowners⁹⁷ owing to the high transaction costs

^{92.} See, e.g., Liebmann, "Devolution of Power to Community and Block Associations"; see also William A. Fischel, "Public Goods and Property Rights: Of Coase, Tiebout, and Just Compensation" (Hoover Institution, Dartmouth College, 2000) for further discussion.

^{93.} For example, the streets of a century ago were considerably more beset with noxious fumes from manufacturing. Three hundred years ago, they were often beset with sewage and vastly higher crime rates. The large-scale demolition seen in parts of many cities in the 19th and 20th centuries is rarer today, and expectations have changed accordingly.

^{94.} A single-owner multifamily rental building is less fragmented in ownership than the suburban homes that may now house those families instead, and it should be noted that large tracts of older cities such as London were once owned by aristocratic families.

^{95.} In many places homeownership has declined in recent years, but generally not back to the levels of 1920.

^{96.} Harold Demsetz, "Toward a Theory of Property Rights," *American Economic Review* 57, no. 2 (1967): 347–59.

^{97.} Known as "Coasean" bargaining after Coase, "The Problem of Social Cost."

of negotiating regulatory obstacles. The rights to block development are ill defined, vested across large and uncertain numbers of people, and essentially inalienable, entirely unlike most common-law property rights. It sometimes seems that the outcome of land use decisions depends on who can shout the loudest. In this context, economists have been calling for better definitions of property rights since at least Marion Clawson. 100

De Soto and others have argued for formalization of informal property rights in parts of countries, including Peru and Brazil, in order to permit more efficient use and enable Coasean bargaining. ¹⁰¹ But most of the demand to live and work in the Bay Area is unmet for the reasons outlined previously. Since the absence of formal property rights coupled with the protections of current urban land use regulations prevents residents and landowners in the United States from negotiating more valuable uses of their land, high-income Californian suburbs such as Palo Alto or Atherton might be argued to be the wealthiest favelas in the world.

Good Urban Land Use Rules Are Hard to Find

Urban settings often feature highly fragmented land ownership and many different externalities from new construction. More than in many other legal fields, changes in urban land use often greatly affect many people.

The high numbers of people affected, often with very different preferences and affected in different ways, ¹⁰² mean that consensus on allowing new development is very hard and costly to achieve, and the large differences between effects

^{98.} With exceptions discussed later, there has been a surprising lack of focus in the planning reform literature on reducing transaction costs to permit more Coasean bargaining. England already gives neighborhoods the ability to grant permission for more development under the Localism Act of 2011. There has been no flood of construction in cities as a result. That may be because there has been insufficient devolution of fiscal control; but political resistance to such devolution is a real constraint. Devolution to an even smaller scale must have some prospect of reduced transaction costs, given that the current English "neighborhood areas" may contain as many as tens of thousands of residents. 99. Gleba, "Making Zoning Alienable," expands in detail on this point.

^{100.} Marion Clawson, Suburban Land Conversion in the United States: An Economic and Governmental Process (Baltimore, MD: Published for Resources for the Future by the Johns Hopkins Press, 1971), 369. 101. Hernando de Soto, The Other Path: The Economic Answer to Terrorism (New York: Basic Books, 2002).

^{102.} Charles Tiebout's argument—that people will sort themselves into different communities with uniform preferences in each—has its limitations. See, e.g., Charles M. Tiebout, "A Pure Theory of Local Expenditures," *Journal of Political Economy* 64, no. 5 (1956): 416–24; Roderick Hills and David Schleicher, "City Replanning" (Working Paper No. 12, NYU Marron Institute of Urban Management, New York, August 2014).

on different people mean that allowing change through voting in a way that protects the interests affected is more challenging than, for example, a situation in which shareholders vote in corporate law in proportion to holdings of fungible stocks. The high-housing-cost problems of many cities around the world may be an indication that designing good frameworks to allow governance of urban land use is particularly challenging compared with many other legal or CPR problems.

Ideally, better rules would mitigate current problems of transaction costs, holdout problems, and externalities. But it is hard to find rules and set boundaries that address all of those issues.

Boundaries in the Urban Commons

Ostrom's first institutional design principle notes the importance of clear boundaries in allowing collective action problems to be overcome. Yet drawing boundaries to minimize externalities is particularly hard in cities. The optimal boundaries will often differ as a function of the land uses and effects at issue as well as of the homogeneity of the current uses and ownership patterns.

Existing physical features or barriers may help. For small effects, as in the New Zealand example above, the boundary around two properties may be sufficient.

Oakerson and Clifton note that

a city is partially partitioned by many identifiable boundaries, such as rivers, train tracks, highways, and especially surface streets. Though permeable, these physical boundaries limit, to some extent, the impact of use-related interdependencies among parcels of property. Wide avenues . . . can function as a boundary that runs down the middle of the street. On narrower streets . . . the block-commons consists of both sides of a street: the street-block [i.e., face-block]. Overall, a city is a configuration of interconnected blocks; each street-block is potentially a separable commons. ¹⁰³

Whether viable boundaries can be drawn around a face-block for these purposes may also depend on the proposed use, the length of the backyards separating one row of buildings from that of another street, and the treatment of buildings on street corners.

^{103.} Oakerson and Clifton, "The Neighborhood as Commons," 431.

Difficulties with Individual Property Rights

A pure individual-property-rights approach to urban land use faces substantial challenges, not the least of which are political. 104

Without any rights to block development at all, the history of Manhattan or indeed Mayfair in London demonstrates that densification is possible until there is sufficient political force to change the rules.

It is difficult to define optimal rights and in particular who should have them—and who should not, despite being affected by externalities. That is all the more true from a starting position of high housing prices and minimal new construction.

The suggestion of allowing development by unanimous consent of neighbors dates back to at least Davis. However, a requirement for unanimous consent of more than a few people will lead to holdout problems: both strategic holdouts, by those trying to game estimates of how much they are damaged, and holdouts by those whose preferences genuinely ascribe a very high price to allowing change. Many people are affected differently, because of both topography and their personal circumstances. Also, two people in identical positions may genuinely value an effect very differently.

But many changes affect far more people than the immediate neighbors, so many people will want such veto rights. Rights to compensation might be granted instead of veto rights, but homeowners are rationally risk averse and may genuinely place very different valuations on change. Preferences have too many dimensions for Tieboutian sorting to be anywhere near perfect, given agglomeration effects and the multiple overlapping externalities of urban construction. ¹⁰⁶

Voting is an established way of overcoming holdout problems with individual rights and may also help alleviate resistance to compensation if an individual's veto rights are removed. Ellickson notes that the "possibility of arbitrariness could be reduced by shifting the power to waive mandatory land use standards from local government to the neighbors who would be damaged by the prohibited use," although that could allow those who are least affected to vote through a proposal, damaging those who are more affected. Ellickson suggests a modified

^{104.} Fischel, "Public Goods and Property Rights," argues that zoning constitutes a de facto collective property right but recognizes the collective action problems and notes that he, Fennell, and Gyourko have each pointed out the current transaction cost problems of matching deals between landowners and the agency with the power to modify the regulation.

^{105.} Otto A. Davis, "Economic Elements in Municipal Zoning Decisions," *Land Economics* 39, no. 4 (1963): 375.

^{106.} Tiebout, "A Pure Theory of Local Expenditures"; Hills and Schleicher, "City Replanning."

voting system that "necessarily internalizes the external costs to the most seriously affected neighbors." ¹⁰⁷

There is a clear tradeoff between the percentage supermajority required and ease of action.

Housing Supply as a Function of the Scale at Which Decisions Are Made

Transaction costs increase with the number of players involved. Purely from that perspective, therefore, enabling decisions on land use to be made by smaller groups may reduce transaction costs and enable more Coasean bargaining.

François Ortalo-Magné and Andrea Prat postulate a U-shaped curve of the maximum politically achievable housing stock according to the size of jurisdiction that makes the decision on zoning, 108 given certain assumptions—including the extraction of upzoning gains from each relevant landowner, which is difficult or impossible under current judge-made rules on exactions. At the largest scale, a nation-state will internalize more of the benefits and will therefore choose to produce more housing. At a small scale, single landowners will each build as much as makes sense for them, if they are allowed to. Thorson found that urban areas with fewer zoning authorities tend to have significantly higher housing prices than more fragmented urban areas. 109

Of course, housing supply is much more elastic in, for example, Houston or Atlanta, where land use rules permit more development, than in other cities such as the San Francisco Bay Area or London, where development is extremely restricted.

^{107.} Ellickson, "Alternatives to Zoning," 709–10. Note also the suggestion of allowing neighbors within a specific radius to vote, revived in Alex Morton, *Cities for Growth: Solutions to Our Planning Problems* (London: Policy Exchange, 2011).

^{108. &}quot;The result also suggests that one way to lessen undersupply is to split up jurisdictions. The proposition above implies that, if a city is divided into two identical but independent municipalities, the minimum city size doubles. This is because residents of a particular municipality enjoy the full permit fees but pay only half of the capital loss. It is interesting to combine this observation with the result above that nationalizing housing policy also increases housing supply. Equilibrium city size is in some sense U-shaped in the size of the administrative district in charge of it, and the minimum size is achieved when housing supply is made by districts that correspond to labor markets." François Ortalo-Magné and Andrea Prat, "On the Political Economy of Urban Growth: Homeownership versus Affordability," *American Economic Journal: Microeconomics* 6, no. 1 (2014): 174.

^{109.} James A. Thorson, "An Examination of the Monopoly Zoning Hypothesis," *Land Economics* 72, no. 1 (1996): 43.

^{110.} Hsieh and Moretti, "Housing Constraints and Spatial Misallocation"; Glaeser and Gyourko, "The Economic Implications of Housing Supply."

The experience of Tokyo, where the national government has repeatedly adjusted zoning rules to allow more housing, shows that it can be possible to upzone and increase housing production to reduce dwelling prices. However, zoning rules still constrain construction of new homes in Tokyo; individual landowners would choose to build much higher if they were allowed to. Cities such as Atlanta have succeeded in meeting increased demand with increased supply, label to primarily through horizontal expansion rather than densification, and even Atlanta has its challenges: rents have risen, and more urban parts of the city are more expensive.

Given the contrast between the building frenzy in 20th-century Manhattan before zoning controls and the glacial construction rates of present-day England, where land use rules are set at the national level, it seems plausible that the small-scale extreme of Ortalo-Magné and Prat's curve—individual landowners deciding in the absence of zoning controls—may generate higher housing densities than the large-scale end of the curve, where land use rules are set by states. However, devolution to whole neighborhoods, as suggested by Robert H. Nelson and others, may be insufficient to overcome transaction cost problems, and the devolution of tax powers to such neighborhoods seems to have been politically difficult.¹¹³

In England, the "neighborhood planning" regime created by the Localism Act of 2011, possibly inspired by Nelson's work, allows each neighborhood to write a "neighborhood development plan," adopted by majority vote of registered voters in the neighborhood. That plan, subject to limits, governs the discretionary decisions of the higher planning authority, which determines whether to approve almost all development under the English system. The regime may have led to planning for some more homes, 114 particularly in areas

^{111.} Robin Harding, "Why Tokyo Is the Land of Rising Home Construction but Not Prices," *Financial Times*, August 3, 2016; James Gleeson, "How Tokyo Built Its Way to Abundant Housing," February 19, 2018; André Sorensen, Junichiro Okata, and Sayaka Fujii, "Urban Renaissance as Intensification: Building Regulation and the Rescaling of Place Governance in Tokyo's High-Rise Manshon Boom," *Urban Studies* 47, no. 3 (2010): 556–83.

^{112.} Glaeser and Gyourko, "The Economic Implications of Housing Supply."

^{113.} Robert H. Nelson, "Privatizing the Neighborhood: A Proposal to Replace Zoning with Private Collective Property Rights to Existing Neighborhoods," *George Mason Law Review* 7, no. 4 (1999): 827; Robert H. Nelson, Kyle R. McKenzie, and Eileen Norcross, "From BIDs to RIDs: Creating Residential Improvement Districts" (Mercatus Policy Series Policy Comment No. 20, Mercatus Center at George Mason University, Arlington, VA, May 2008).

^{114.} A UK government report claimed that "those plans in force that plan for a housing number have on average planned for approximately 10% more homes than the number for that area set out by the relevant local planning authority." Department for Communities and Local Government, *Fixing Our Broken Housing Market* (London: HM Government, 2017), 1.41.

with lower housing prices,¹¹⁵ but it has not led to a substantial increase in development commensurate with the economic opportunities in high-cost but low-density suburban areas with good public transport connections. The regime also allows neighborhoods to grant a "neighborhood development order," conferring as-of-right development permits for specified developments within a specified area, though the neighborhood development orders have not been used much.

English neighborhoods often contain hundreds or thousands of voters. I conjecture that with those numbers, it is often too costly and time consuming for residents to discuss, persuade, and negotiate permitting additional development that would benefit nearly all of them—development using agreed designs, with a share of the profits flowing to the local community.¹¹⁶

To make bargaining and negotiation easier, instead of devolution of land use decisions to neighborhoods, I propose devolution of such decisions to even smaller scales—streets, city blocks, and even two adjacent neighbors. That may be a way to increase society's "adaptive efficiency." ¹¹⁷

Spillover Effects to Be Considered

Even if challenges of legitimacy can be addressed through resident-driven processes to approve more development, I suggest that there are many potential losers from negative spillovers or "externalities" that a well-designed system would seek to address in order to reduce opposition. Some externalities—particularly sunlight, daylight, and visual amenities—may be inescapable functions of the built form. Following, I consider a short, noncomprehensive list of possible negative externalities.

 Sunlight and daylight. The externalities of overshadowing can be large. Sunlight has considerable benefits for psychological and physical health. Lack of sunlight may cause seasonal affective disorder and depression. Without direct sunlight (not passing through glass), the human body cannot synthesize vitamin D, which may lead to deficiencies in the absence

^{115.} Quintin Bradley and William Sparling, "The Impact of Neighbourhood Planning and Localism on House-Building in England," *Housing, Theory and Society* 34, no. 1 (2017): 110–13.

^{116.} The very concept of a "neighborhood" does not provide a unique partitioning of a city. Setting a boundary in a particular place may be controversial, which may provide an incentive to set fewer boundaries by making each "neighborhood" larger.

^{117.} North, *Institutions, Institutional Change, and Economic Performance*. Webster and Lai propose a "subsidiarity rule." Christopher J. Webster and Lawrence Wai-chung Lai, *Property Rights, Planning and Markets: Managing Spontaneous Cities* (Cheltenham, UK: Edward Elgar, 2004).

of sufficient dietary sources. In those circumstances, lack of sunlight can have a more negative effect on ethnic groups with darker skin pigmentation, because they require more sunlight to synthesize a given amount of vitamin D.¹¹⁸

In addition to having an impact on health, sunlight is a source of heat energy. The solar constant is 1.37 kilowatts per square meter. Taken at a typical cost of electricity of 12 cents per kilowatt-hour, that could be worth \$300 per year per square meter, depending on latitude and cloud cover.

This externality might be positive or negative depending on whether heating or cooling is needed. That effect might alter political opposition to overshadowing. ¹¹⁹ It should be noted that some of the streets with the least daylight in the world—the narrow passageways of Venice, for example—are among those most sought out by tourists.

Apart from other concerns, such as objections to "luxury housing," it may also be that high-rise towers upset some people not necessarily because of the loss of sunlight or daylight, but because of their aesthetic preferences. Gradualism may be a way to mitigate that. High-rise buildings will provoke less reaction from people far away if they do not stick out far above the surrounding roofline.

2. Transport congestion. More construction may increase congestion of roads, parking, and public transportation. Congestion of car traffic is less tractable than that of other services, such as public transit or utilities, which may be easily scaled up. However, any externalities of car traffic congestion could be addressed by pricing mechanisms such as road pricing; parking fees; resident parking permits allocated in a microzone in front of new buildings to prevent effects on other residents; or less subsidy for public transport fares to make it more economical to expand the capacity of public transport. Such changes could be coupled with more assistance for those on low

^{118.} Michael F. Holick, "Sunlight and Vitamin D: Both Good for Cardiovascular Health," *Journal of General Internal Medicine* 17, no. 9 (2002): 733–35.

^{119. &}quot;No variable can better predict [US] city growth over the past fifty years than January temperature, yet it is unclear a priori why warm places have grown so dramatically." Edward L. Glaeser and Joshua D. Gottlieb, "The Wealth of Cities: Agglomeration Economies and Spatial Equilibrium in the United States," *Journal of Economic Literature* 47, no. 4 (2009): 984. See also Paul C. Cheshire and Stefano Magrini, "Population Growth in European Cities: Weather Matters —but Only Nationally," *Regional Studies* 40, no. 1 (2006): 23–37, for the position in Europe, and Alain Bertaud, *Order without Design: How Markets Shape Cities* (Cambridge, MA: MIT Press, 2018), 298.

incomes to prevent transitional losses.¹²⁰ Examples of places where such mechanisms have been tried include Singapore, which has road pricing,¹²¹ and Tokyo, which does not permit on-street parking.¹²² Addressing the transitional losses from the proposed adoption of such a mechanism may not be easy.

- 3. Congestion of other local services. Adequate solutions to address externalities (e.g., competition for services such as public education), ¹²³ and thus reduce opposition to more intensive zoning, may vary depending on whether those services are provided privately or by various tiers of government. For further discussion, see Furth, who in considering public schools in the United States suggests that "reformers must make little plans. Big plans would stir men's blood to oppose them and see to it that they are not realized." ¹²⁴
- 4. Noise and other pollution. Soundproofing may mitigate externalities of noise; regulation may mitigate or eliminate pollution. Reform proposals may need to include additional rules to address noise or pollution to overcome opposition to the reform.
- 5. *Aesthetics*. Aesthetics may be more important in some places and for some voters than others.
- 6. *Displacement*. Concerns about displacement and gentrification are often expressed by tenants opposed to new development.¹²⁵ Such concerns may be addressed by antidisplacement provisions similar to those in Scott Wiener's California SB 50 bill. Not all kinds of displacement are viewed negatively, however: displacement of criminal gangs may be a positive externality for other tenants, whether on low incomes or not.¹²⁶

^{120.} Michael J. Terbilcock, *Dealing with Losers: The Political Economy of Policy Transitions* (New York: Oxford University Press, 2014).

^{121.} Mark Goh, "Congestion Management and Electronic Road Pricing in Singapore," Journal of Transport Geography 10, no. 1 (2002): 29–38.

^{122.} Donald C. Shoup, *The High Cost of Free Parking*, updated (Chicago: Planners Press, American Planning Association, 2011).

^{123.} Or healthcare, in countries such as England where it is provided publicly.

^{124.} Salim Furth, "The Two-Board Knot: Zoning, Schools, and Inequality," *American Affairs* 1, no. 4 (2017): 18.

^{125.} Hankinson, "When Do Renters Behave Like Homeowners?"

^{126.} Oakerson and Clifton, "The Neighborhood as Commons."

GETTING TO POLYCENTRICITY MAY ALSO BE MORE POLITICALLY FEASIBLE

Politics is clearly important whenever major changes in urban land use regulation are proposed, but the study of local government law has not kept up with advances in economics and positive political science.¹²⁷

I noted previously that, under many current urban land use regulations, new construction often generates substantial uncompensated negative externalities. Such new construction is often perceived to damage or place at risk the interests of people who are directly, visibly, and substantially affected. In that sense, urban land use regimes, insofar as they do permit overshadowing and other negative effects without compensation, pay far less attention to preserving the value of third-party assets than many other areas of property law, such as nuisance, trespass, or rights to light. It is hardly surprising that calls for further "deregulation" of urban land use, with the risk of more negative externalities to nearby residents, can lead to fierce resistance. Zoning is a popular perceived defense against these negatives.¹²⁸

Society as a whole might be better off in the long term with better rules on land use, but the renters and others who lose under the current system face considerable collective action problems in organizing themselves to lobby for and achieve reform.¹²⁹

Gordon Tullock proposed the concept of a transitional gains trap, where poorly designed regulation has raised the value of some assets (such as licenses, taxi medallions, or property), but where many of the original beneficiaries of that rise in prices have sold to new owners, who would now lose out from fixing the regulation. In many jurisdictions, housing is a particularly pernicious example of such a trap because the homeowners and other landowners who benefit from the current system, at least in the short run, comprise a majority of voters. Rising house prices are not surprising when regulation gives a majority of homeowner-voters a means to achieve them.

^{127.} Schleicher, "City Unplanning." This may be one manifestation of a broader divide among the disciplines. I have not found extensive cross-citation between papers in local government law or property law, CPRs, economics, and political science on the one hand and housing and urban planning literature on the other.

^{128.} William A. Fischel, *The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-Use Policies* (Cambridge, MA: Harvard University Press, 2005). 129. Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, MA: Harvard University Press, 2003).

^{130.} Gordon Tullock, "The Transitional Gains Trap," Bell Journal of Economics 6, no. 2 (1975): 671.

In England, it is an express objective of the national government for housing prices to rise (albeit more slowly than earnings). ¹³¹ In contrast, I am unaware of any OECD jurisdiction with an express target of rising prices for any other basic necessity such as food or clothing, possibly because owners of farms or clothing factories are rarely a voting majority.

A further problem for collective action is that sudden deregulation may lead to a rapid decline in housing prices. In this scenario, landlords quickly discount the expected long-term reduction in future rents (imputed or otherwise) owing to expected increases in housing construction, even though that decline in rents would take time to materialize as the housing stock increases through new construction. The losses from reform through declining housing prices would therefore be quickly and highly visible, whereas the future benefits to renters would be uncertain and distant, and therefore probably perceived to be small (except by any renters who are suddenly able to afford to by a home at the reduced prices, should they have the courage to try to catch a falling knife).

The reform proposals in this paper should face far fewer collective action problems because they are designed to reverse that dynamic by making small groups substantially better off and ensuring that any losses are distant in time and space, widely dispersed, and uncertain.

Current urban land use regulations restrict the supply of housing because municipalities use the police power within their borders against smaller groups or subcommunities that would like to build on their own land. In many cases, the framework of land use regulation is itself set at the state level, and municipalities must operate zoning or planning regimes, often with limited scope to experiment. For example, the process and body by which zoning must be determined is set by a state zoning law, and state regulations such as California's Environmental Quality Act cannot be amended by a municipality, even in cases in which additional homes in an urban core might benefit the environment overall by reducing pollution from commuting.

^{131.} Letter from Sajid Javid, MP, to Oliver Letwin, MP, January 14, 2018, https://www.gov.uk /government/publications/review-of-build-out-terms-of-reference. For discussion of the role of politics in housing and planning in England, see Mark Pennington, *Planning and the Political Market: Public Choice and the Politics of Government Failure* (London: Athlone, 2000); Miguel Coelho, Sebastian Dellepiane-Avellaneda, and Vigyan Ratnoo, "The Political Economy of Housing in England," *New Political Economy* 22, no. 1 (2017): 31–60; Brian Lund, *Housing Politics in the United Kingdom: Power, Planning and Protest* (Bristol, UK: Policy Press, 2016); and Andrew Cox, *Adversary Politics and Land: The Conflict over Land and Property Policy in Post-War Britain* (New York: Cambridge University Press, 1984).

That is contrary to Ostrom's third IAD design principle, that most individuals affected by a resource regime should be authorized to participate in making and modifying its rules. ¹³² As Oakerson and Clifton write, "Unlike many natural resource communities around the world, city residents lack authority to make and enforce their own neighborhood rules." ¹³³

Many jurisdictions allow self-organization through restrictive covenants, but very few allow existing statutory land use restrictions to be amended or waived by small groups of local people. In most existing urban settings, it would be very difficult to try to scrap all statutes and move to an entirely private system. New cities are outside the scope of this paper.

Furthermore, judge-made rules on "exactions," such as the *Nollan*, *Dolan*, and *Koontz* line of cases in the United States, ¹³⁴ by preventing municipalities from "selling" upzonings also contravene the third IAD design principle and form another barrier to Coasean bargaining. ¹³⁵ Ostromian self-organization by small groups that wish to make better use of land may be difficult or impossible under such frameworks.

Upzonings imposed by the state are often unpopular. It may be much easier politically for states to enact reforms that enable self-organization for those groups that wish to do so, conforming with the third institutional design principle.

As Liebmann notes, "Allowing a dispensing power to neighborhood associations similarly enjoys an acceptability which would not extend to the proposals for outright sale of zoning rights or the neighborhood consent provisions." ¹³⁶

He continues, "The idea of selling zoning makes us uneasy because [it] breaks down the traditional barriers between public and private.' . . . There would be nothing to preclude the associations from conditioning permission on exactions similar to those now obtained by local government. Under the new scheme, however, the benefit of the exaction would accrue not to bureaucrats or a diffused citizenry but to those immediately impacted by the new project."

^{132.} Ostrom, Governing the Commons.

^{133.} Oakerson and Clifton, "The Neighborhood as Commons," 432.

^{134.} Lee Anne Fennell and Eduardo M. Peñalver, "Exactions Creep," *Supreme Court Review* 1 (2013): 287–358. The United Kingdom has a similar legislative rule derived from case law. See Harwood, *Planning Permission*, 364.

^{135.} William A. Fischel, "The Economics of Land Use Exactions: A Property Rights Analysis," *Law and Contemporary Problems* 50 (1987): 101–13; Fischel "Public Goods and Property Rights." 136. George W. Liebmann, "Devolution of Power to Community and Block Associations," *Urban Lawyer* 25, no. 2 (1993): 346.

^{137.} Liebmann, "Devolution of Power to Community and Block Associations," asserts that the Supreme Court's objections to neighbor-consent provisions do not extend to local referendum

In the terms of Alston's reasoning mentioned previously, I therefore suggest that more polycentric governance of land use would allow many of the interest groups that are blocking more housing to be brought into the fold—"bought out" by sharing in the benefits of allowing better uses of land.

Polycentricity as a Means to Overcome Political Resistance

Rational choice theory suggests that a regulatory cartel involving a majority of voters might be broken by allowing small groups of voters to defect and profit by their defection.

William Riker coined the term "heresthetic" for the tactic of creating a bundle of issues that can unite a winning coalition for a proposal. Allowing bottom-up setting of urban land use rules can be seen as one example of that, because it may unite a winning coalition of voters by splitting the blocking homeowner-voter majority and allowing former objectors to defect from the regulatory cartel and benefit from more intensive land use. 139

One promising path to the adoption of reforms for better use of urban land, therefore, may be to allow small local groups—with boundaries drawn and other rules set with the aim of minimizing externalities—to defect from certain land use regulation constraints. ¹⁴⁰ In that way they could capture the benefits for themselves, either by development on their own property or through negotiating a division of the profits with the landowner in question. Such reform would be popular with the local groups, whereas any reduction in the overall average price of a home across the country would be limited, distant, and uncertain. That should serve to reduce political opposition.

To be clear, the suggestion is not that the small groups should be able to increase restrictions on change of use or reduce the volume permitted by the current zoning envelope. The suggestion is that, as an alternative and supplementary means of permitting development, residents in specifically drawn small

requirements. Similarly, in England a community is at liberty not to grant a neighborhood development order unless the landowner offers sufficient benefits.

^{138.} William H. Riker, *The Art of Political Manipulation* (New Haven, CT: Yale University Press, 1986).

^{139.} Riker, *The Art of Political Manipulation*; Andrew Hindmoor and Brad Taylor, *Rational Choice*, 2nd ed. (Basingstoke, UK: Palgrave, 2015). Many thanks to Professor Andrew Hindmoor of Sheffield University for this point.

^{140.} Scholars from various fields have all suggested localism as a way forward: Ellickson, "New Institutions for Old Neighborhoods"; Liebmann, "Devolution of Power to Community and Block Associations"; Nelson, "Privatizing the Neighborhood"; Mark Pennington, *Liberating the Land*; Morton, *Cities for Growth*.

areas should have the power to authorize specified development within their own boundaries, subject to constraints on externalities outside those boundaries. In that way, such changes are unlikely to reduce the supply of housing, because existing means for approval of development would continue.

Such rules are consistent with strong support for localism. Local people speaking up in favor of more housing—because that is currently unusual and because local people are often perceived to be the most affected—could have powerful rhetorical force.

Those rules may also help bypass the judicial restrictions on "exactions." An upzoning that benefits every landowner on a street can provide incentives to each of those landowners without constituting an unlawful exaction.

Many writers in urban planning theory now promote a move away from top-down planning practices and increased use of collaborative planning or codecision with local communities. ¹⁴¹ Daniel P. Selmi noted that using direct democracy to determine land use continued to be popular in states where it was allowed. ¹⁴²

Bruce Bueno de Mesquita and Alastair Smith argue that an effective strategy for political entrepreneurs is to design a policy that will win votes for the politician who adopts it. ¹⁴³ Giving small local groups more power to permit better uses of land may be seen as an example of that tactic.

CONCLUSION

I suggest a new direction for urban planning and the law of urban land use built upon lessons from the line of research started by Elinor Ostrom. The aim is to make small-scale, negotiated, win-win solutions easier in an urban context.

I argue that such reforms may both be substantially more politically feasible and also considerably improve the supply, affordability, and quality of housing, leading to significant increases in welfare through increases in opportunity,

^{141.} Patsy Healey, *Collaborative Planning: Shaping Places in Fragmented Societies* (Basingstoke, UK: Macmillan, 1997). In a related field, the growing interest in participatory and deliberative democracy may also be helpful: Archon Fung and Erik Olin Wright, *Deepening Democracy: Institutional Innovations in Empowered Participatory Governance* (London: Verso, 2003).

^{142.} Daniel P. Selmi, "Reconsidering the Use of Direct Democracy in Making Land Use Decisions," *UCLA Journal of Environmental Law and Policy* 19, no. 2 (2002).

^{143.} Bruce Bueno de Mesquita and Alastair Smith, *The Dictator's Handbook: Why Bad Behavior Is Almost Always Good Politics* (New York: PublicAffairs, 2012).

amenity, health, and productivity. If so, it is remarkable that so little work is currently being done in that direction. Such research might allow a revival of the process of gentle densification that, over centuries, created some of the most cherished parts of the world's historic cities.

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