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Remixing Resources

Lee Anne Fennell[†]

This Essay argues for an approach to resource access that connects rather than separates questions of efficiency and distribution. It proceeds from the premise that putting together the most valuable combinations of resources—including human capital—is of central and increasing normative importance. Structuring law to facilitate these combinations should be a primary task for property scholars working in the law and economics tradition. Doing so requires engaging with the processes through which complementary resources produce value in a modern society, recognizing how property doctrines work to put together and keep together complementary resource sets, and confronting the ways in which material inequality and unremediated injustice stand in the way of realizing valuable complementarities. Because a complementarity-based vision of property holds the potential to promote efficiency and distributive goals simultaneously, it illuminates how an integrative approach might offer policy-relevant traction toward both objectives.

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Introduction

For decades, law and economics sidelined questions of distribution, banishing them from the heartland of substantive legal analysis and relegating them to the realm of tax and transfer.¹ Increasingly, scholars are rejecting this intellectual division of labor and the premises on which it rests.² It is now clear that law and economics cannot progress as a policy-relevant field without confronting the problems of inequality and injustice roiling society. Nor can it ignore, even by its own lights, the ways in which distribution impedes or advances the modern production of value—a deeply interdependent process that depends critically on mixing and remixing separately held resources into the most valuable combinations over time.

In this Essay, I consider one avenue through which property theory might contribute to this new law and economics agenda—and, not incidentally, secure the continuing relevance of property itself as a modern field of inquiry. I have suggested elsewhere the importance of reframing property to focus on the significance of complementarities among resources in generating value.³ At one level, this approach seems to be all about pursuing efficiency, a familiar normative goal of law and economics. But a complementarity-based vision of property also carries profound distributive implications with which law and economics scholars can and should engage. Not only does distribution bear on the welfare implications of resource arrangements, it determines the ways in which human capital and other resources can be combined to generate value. Resource complementarity also sheds light on the law’s past and potential responses to misappropriation and expropriation, an arena in which distribution and efficiency come together.⁴

Property might seem like an unlikely vehicle for pursuing distributive aims.⁵ It is, by design, inertial and accretive in ways that might be thought

1. In law and economics, this move is most strongly associated with the work of Louis Kaplow and Steven Shavell. See *infra* note 12 and accompanying text.

2. See, e.g., Lee Anne Fennell & Richard H. McAdams, *The Distributive Deficit in Law and Economics*, 100 MINN. L. REV. 1051 (2016); Zachary Liscow, *Reducing Inequality on the Cheap*, 123 YALE L.J. 2478 (2014); Alex Raskolnikov, *Distributional Arguments, in Reverse*, MINN. L. REV., (forthcoming 2021), www.ssrn.com/abstract=3692798 [https://perma.cc/X93K-P5Y7]; Richard Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489 (2018). Some recent work has been catalyzed by the publication of THOMAS PIKETTY, *CAPITAL IN THE TWENTY-FIRST CENTURY* (Arthur Goldhammer trans., 2014). See, e.g., Shi-Ling Hsu, *Inefficient Inequality*, 5 IND. J.L. & SOC. EQUALITY 1 (2016).

3. Lee Anne Fennell, *Property as the Law of Complements*, in RESEARCH HANDBOOK ON PRIVATE LAW THEORY 155 (Hanoch Dagan & Benjamin Zipursky eds., 2020).

4. I am using “distribution” broadly in this Essay to refer to the spread and concentration of resources and opportunities among people, regardless of the basis for the claims that individuals might have on those resources and opportunities. See *infra* Section I.C (discussing the relationship between distributive justice and corrective justice).

5. See, e.g., Ezra Rosser, *Destabilizing Property*, 48 CONN. L. REV. 397, 436 (2015) (“Property is arguably an odd choice of mechanism for the protection of low-income people . . .”); Thomas W. Merrill, *The Property Strategy*, 160 U. PA. L. REV. 2061, 2093-94 (discussing property’s tendency to increase inequality).

to advance investment efficiency and protect expectations, but that also tend to entrench inequality and widen wealth disparities.⁶ Yet property law has also proven itself more than willing to upend entitlements and destabilize expectations under a variety of conditions.⁷ Both of these tendencies, and the tensions between them, can be usefully illuminated by examining the ways in which they preserve, disrupt, and pursue complementarities. Recentering attention on the way property law creates value by assembling and protecting complements reveals untapped opportunities to advance efficiency and distributive objectives simultaneously—and, in so doing, to break through impasses that have long stymied progress on foundational societal problems.

Although I focus here on property law as viewed through the particular theoretical lens of complementarity, my point is broader: that law and economics should look for ways to connect, rather than separate, inquiries into efficiency and distribution.⁸ There are multiple ways in which such integrative projects might proceed and a variety of contributions that economic analysis might make within them.⁹ We should not expect distributive and efficiency aims to always align, of course, but neither should we assume that they will always diverge. To find paths forward that take account of both goals, law and economics must reinvent itself as a diverse and accessible field—one marked by pluralistic approaches, collaborative efforts, and robust normative disagreement. In working through the example of property complementarities, my analysis points up broader complementarities among lines of scholarly inquiry.¹⁰

This Essay proceeds in two parts. Part I explains why distribution as well as efficiency should be part of the economic analysis of law, with special attention to the role of property. Part II suggests that reframing property in terms of realizing complementarities can advance both efficiency and equity.

6. See, e.g., Thomas W. Merrill, *Accession and Original Ownership*, 1 J. LEGAL ANALYSIS 459, 499, 502-03 (2009) (discussing the regressive tendencies of property, given accession doctrines); see also Zachary Liscow, *Is Efficiency Biased?*, 85 U. CHI. L. REV. 1649, 1680 (2018) (discussing the tendency of efficiency-based policies to exhibit a “rich get richer” dynamic).

7. See *infra* Section II.B.

8. This Essay thus offers a counterpoint to the claim that normative law and economics should proceed in a modular fashion in which the discrete contributions of economic analysis are cabined off from other important concerns with which they will be combined at some other point by some other actor. See Eric A. Posner, *The Boundaries of Normative Law and Economics*, 38 YALE J. ON REG. 657 (2021). While modularity might seem to have the virtue of humility, disregarding the ways efficiency intersects with distribution is likelier to be mistaken for hubris—an effect that can only be counteracted, if at all, by ever more clearly announcing the irrelevance of the work to law and policy.

9. See *infra* Section I.D.

10. For analogous observations about complementarities between empirical and theoretical work, see Jennifer Arlen, *The Essential Role of Empirical Analysis in Developing Law and Economics Theory*, 38 YALE J. ON REG. 480 (2021); and Saul Levmore, *The Eventual Decline of Empirical Law and Economics*, 38 YALE J. ON REG. 612 (2021).

I. Efficiency and Distribution

Law and economics has characteristically (or at least stereotypically) concerned itself with the efficiency of legal rules and doctrines, setting distribution aside for separate treatment.¹¹ No matter what distribution one thinks is best, the argument runs, it can always be achieved more cheaply—with less distortion and deadweight loss—through the tax and transfer system than through legal rules.¹² There is an associated normative claim: that legal rules should focus on growing the pie, leaving slicing to be worked out in the domain of tax and transfer using whatever distributive principles one wishes to adopt.¹³ This intellectual division of labor has the advantage of freeing law and economics scholars to focus on tractable questions rather than sinking into a morass of distributive justice conundrums.¹⁴

But the argument for separating efficiency from distribution in this manner depends on a faulty assumption: that distributive outcomes are invariant to the means through which they are pursued.¹⁵ In fact, legal rules may be capable of producing welfare-enhancing distributive consequences that are unattainable through tax and transfer mechanisms (and that will not be offset through such mechanisms).¹⁶ Property law, because of its power to structure access to *particular* resources, provides an especially promising avenue for pursuing such distributive ends. These distributive results matter: not only do they influence welfare directly, they can also feed back into efficiency.

11. For legal scholars, “efficiency” has generally meant Kaldor-Hicks efficiency, a criterion that requires that winners from a given approach gain enough that they *could* more than compensate the losers, whether or not they actually do so. The stricter standard of Pareto efficiency, which requires that a policy or rule change generate no losers and at least one winner, stands as an unattainable ideal. *See, e.g.*, ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 14, 42-43 (6th ed. 2012); Posner, *supra* note 8.

12. This claim traces back to Aanund Hylland & Richard Zeckhauser, *Distributional Objectives Should Affect Taxes But Not Program Choice or Design*, 81 SCANDINAVIAN J. ECON. 264 (1979), although it achieved primacy in law and economics due to a series of papers by Louis Kaplow and Steven Shavell. *See* Louis Kaplow, *The Optimal Supply of Public Goods and the Distortionary Cost of Taxation*, 49 NAT’L TAX J. 513 (1996); Louis Kaplow & Steven Shavell, *Should Legal Rules Favor the Poor? Clarifying the Role of Legal Rules and the Income Tax in Redistributing Income*, 29 J. LEGAL STUD. 821 (2000); Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient Than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667 (1994); Steven Shavell, *A Note on Efficiency vs. Distributional Equity in Legal Rulemaking: Should Distributional Equity Matter Given Optimal Income Taxation?*, 71 AM. ECON. REV. 414 (1981).

13. There has been significant pushback against this view. *See supra* note 2 (collecting recent critiques). Many earlier papers also challenged this prescription. *See, e.g.*, Chris William Sanchirico, *Taxes Versus Legal Rules as Instruments for Equity: A More Equitable View*, 29 J. LEGAL STUD. 797 (2000); Kyle D. Logue & Ronen Avraham, *Redistributing Optimally: Of Tax Rules, Legal Rules, and Insurance*, 56 TAX L. REV. 157 (2003). For the pie metaphor, see, for example, A. MITCHELL POLINSKY, *AN INTRODUCTION TO LAW AND ECONOMICS* 7 (4th ed. 2011) (“[E]fficiency corresponds to ‘the size of the pie,’ while equity has to do with how it is sliced.”).

14. On the appeal of dodging distributive questions and its potential role in generating resistance to more useful and realistic formulations of theories, see Lee Anne Fennell & Richard H. McAdams, *Inversion Aversion*, 86 U. CHI. L. REV. 797, 813-14 (2019).

15. *See* Fennell & McAdams, *supra* note 2, at 1078-1108.

16. *Id.*

A. How Distribution Influences Welfare

To my knowledge, no law and economics scholar today views wealth maximization as the law's ultimate normative objective. Instead, those working in the law and economics tradition are typically welfarist in their orientation, although the specific form of welfarism may vary (and is usually left unspecified).¹⁷ Welfarism is a consequentialist approach that aggregates (in some manner) the impacts of a given state of the world on people's well-being or utility (variously measured).¹⁸ Wealth only has significance, on a welfarist account, to the extent that it proxies for or facilitates welfare improvements for individuals.¹⁹

Distribution impacts societal welfare in multiple ways. Even the least distributively sensitive form of welfarism, utilitarianism, involves summing utility or well-being, not wealth. Given the diminishing marginal utility of money, total societal utility could be expected to grow (other things equal) as money is moved from richer members of society to poorer ones.²⁰ Other social welfare functions are sensitive to the way in which utility or well-being *itself* is distributed among people.²¹ Material inequality might also impact utility or well-being through myriad other conduits, such as crime and unrest.²²

The fact that distribution matters to welfare does not tell us, on its own, that it is normatively undesirable to confine distributive inquiries to the realm of tax and transfer. But it does render that claim contingent on the tax-and-transfer system being able to get the distributive job done at least as well as any other doctrinal tools can. As Richard McAdams and I have argued elsewhere, there is no reason to believe that the amount of redistribution that can be feasibly accomplished is invariant to the way in which it is carried out—and many reasons to think otherwise.²³ We used the idea of variable “political action costs” to capture the intuition that re-

17. The approach I develop in this paper is also broadly consistent with nonwelfarist frameworks that emphasize human flourishing, autonomy, and pluralistic progressive values. But because welfarism is the dominant normative approach of law and economics scholars and has often been employed in ways that give short shrift to distributive issues, I focus on it here.

18. For a recent primer on welfarism and its many variants, see generally MATTHEW D. ADLER, *MEASURING SOCIAL WELFARE: AN INTRODUCTION* (2019).

19. The use of willingness-to-pay as a metric thus presents difficulties to the extent it fails to serve as a good proxy for impacts on welfare. See Oren Bar-Gill, *Willingness-to-Pay: A Welfarist Reassessment*, 38 *YALE J. ON REG.* 503 (2021).

20. The idea that a marginal dollar has a smaller impact on the well-being of a person who already holds more dollars assumes that interpersonal comparisons of utility are possible, an unheroic but unprovable and sometimes controversial proposition. See, e.g., ADLER, *supra* note 18, at 35-36.

21. See *id.* at 15-19.

22. See, e.g., Richard H. McAdams, *Economic Costs of Inequality*, 2010 *U. CHI. LEGAL F.* 23, 41 (2010) (“Economic theory and considerable empirical evidence shows that material inequality increases street crime.”). See generally Hsu, *supra* note 2 (surveying connections between inequality and allocative inefficiency).

23. Fennell & McAdams, *supra* note 2, at 1078-1108.

sistance to redistribution may be higher or lower in a given context depending on framing, perceptions of fairness, and other factors.²⁴ As a result, the magnitude of realized distributive changes may vary depending on the method of distribution pursued, and, crucially, may vary in ways that will not be fully offset elsewhere.²⁵

These arguments for including distributive considerations in the economic analysis of legal rules are fairly general. But I also want to make a more specific claim: that property scholars are uniquely situated to contribute to a research agenda in law and economics that encompasses distributive concerns. Property rights represent a way of framing and packaging distribution, and their design interacts strongly with political feasibility. For example, emerging problems of environmental degradation or natural resource depletion may be difficult to address without extending transition relief to those who have come to depend on a particular extraction regime.²⁶ Entitlements over resources can also influence the amount of utility that a given distributive shift adds or subtracts. For example, owners may suffer “demoralization costs” if distinct, sharply defined resources are taken away without compensation.²⁷

Conversely, resource shifts that are characterized as vindicating rights—in other words, no shift at all once the baseline is appropriately defined—may be more welfare-enhancing, and more politically feasible, than those explicitly framed as redistributive.²⁸ Moreover, the fact that people derive more value from certain *combinations* of resources means that both efficiency and well-being depend on the distribution of opportunities to put together (and keep together) those complementary combinations. Property law, in other words, encompasses both the roots of certain claims on resources and the means necessary to realize those claims.

24. *Id.* at 1056.

25. *See id.* at 1082-92.

26. *See, e.g.*, Carol M. Rose, *Evolution of Property Rights*, in 2 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 93, 97 (Peter Newman ed., 1998); Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677, 1730 (2007); Saul Levmore, *Changes, Anticipations, and Reparations*, 99 COLUM. L. REV. 1657, 1665-66 (1999).

27. *See* Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of “Just Compensation” Law*, 80 HARV. L. REV. 1165, 1214-15 (1967). On the other hand, compensation for losers might be distributively inappropriate where the change involves the moral rejection of a past legal regime. *See generally* T. Nicolaus Tideman, *Takings, Moral Evolution, and Justice*, 88 COLUM. L. REV. 1714 (1988). For further discussion of legal responses to “extraordinary” upheavals in property law, see Carol M. Rose, *Property and Expropriation: Themes and Variations in American Law*, 2000 UTAH L. REV. 1.

28. *See, e.g.*, Daphna Lewinsohn-Zamir, *In Defense of Redistribution Through Private Law*, 91 MINN. L. REV. 326, 357-60 (2006). This point connects closely to questions about the appropriate distributive baseline and the potential role of “pre-distribution” in reducing inequality. *See infra* notes 85-87 and accompanying text.

B. How Distribution Drives Efficiency

Resource distribution affects social welfare not only by directly impacting utility or well-being, as discussed above, but also by feeding back into the efficiency of resource arrangements. Distributive rules affect efficiency through two main channels: by shaping incentives to do valuable things, and by mediating access to valuable resources.²⁹ In other words, how law distributes resources influences both what people choose to do with the resources they have, and what resources they can access in the first place.

This first channel—how the distribution of tomorrow constructs the incentives of today—clearly falls within the domain of traditional law and economics. For example, the idea that people will only bother to sow if they can also reap forms an efficiency-based justification of a distributive rule that assigns crops to the owner of the land in which they were planted. Although incentives may be the analytic focus, resource allocation protocols are *also* distributive rules. As such, they may have long-run impacts on efficiency that appear in contexts different from, or that flow through different mechanisms than, the incentive effects they are thought to foster.³⁰ For example, a person without land who has an ingenious idea for efficiently turning crops into food or fuel cannot carry it out if she cannot access the relevant crops.

This brings us to the second channel through which resource distribution affects efficiency—by influencing what resources people can access, and in what combinations. At one level, this point simply builds on the familiar foundation of positive transaction costs.³¹ Much work in law and economics examines how to bring about the allocation of resources that would obtain in the absence of such frictions. Here, our landless protagonist with the brilliant idea should be able to sell her idea to the landowner, or buy the land (or even just access to the crops) from the landowner. But suppose she cannot: her only marketable asset is her own human capital against which it is difficult to borrow. Indeed, she cannot even live long enough to work out the idea if she cannot make claims on resources sufficient to sustain life. Ensuring that human capital combines with raw materials to generate new innovations sounds like an efficiency problem. But it cannot be solved without confronting a distributive problem.

A current distribution that embeds unrectified past violations of principles of efficient allocation (as ours manifestly does) is especially likely to have continuing dampening effects on the production of new wealth going

29. These two channels roughly track investment efficiency and allocative efficiency.

30. Whether a given resource regime produces the advertised incentive effects is itself an empirical question, and one whose answer is far from obvious. See Duncan Kennedy & Frank Michelman, *Are Property and Contract Efficient?*, 8 HOFSTRA L. REV. 711 (1980). A resource rule that does not perform the incentive work attributed to it still operates as a distributive rule and should be evaluated on that basis.

31. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

forward. For example, the inability of people to locate in places where their human capital can be put to its best use generates a large efficiency loss,³² one that finds roots in past injustices that continue to distort housing markets. The extent to which embedded past violations continue to produce inefficiencies is an empirical question, as is the question of how best to counter such effects at minimum cost. But these are matters at least as deserving of attention as any claim that the sowers of today must reap in full, or that currently entrenched interests must remain so for efficiency's sake.

C. The Role of Corrective Justice

As the observations above suggest, distributive changes are not only and always sought as ends in themselves but also often as means to achieving other ends. In addition to advancing efficiency, distributive changes may be undertaken to redress past societal wrongs. This section examines how these corrective goals connect to distributive analysis.

It is standard for legal theorists to distinguish corrective justice (the righting of wrongs) from distributive justice (fairly divvying up access to societal resources), and to view the former as the domain of private law and the latter as the responsibility of public law.³³ As Kyle Logue has observed, this division of labor resembles the one law and economics scholars draw (and that I and others have rejected) between pursuing efficiency in legal rules and pursuing distribution via tax and transfer.³⁴ Just as distribution should not be cordoned off from efficiency in the economic analysis of law, neither should corrective justice considerations be hived off from work directed at improving the distribution of societal resources.

Although the question is at some level a terminological one, I resist the premise that it is meaningful to separate corrective and distributive justice when it comes to property law (my focus in this Essay). This is not because property wrongs are not really wrongs, but rather because property law itself is a doctrinal area constantly in search of its own baseline. It is also a field that is, appropriately, deeply uneasy about its own origins.³⁵ We cannot measure (or even establish) a wrong involving access to or control of resources without some theory of how access and control should be divvied up, and what entitlements go with ownership.³⁶ Those baseline-generating theories are distributive theories.

32. See *infra* note 101 and accompanying text.

33. See, e.g., Kyle D. Logue, *Reparations as Redistribution*, 84 B.U. L. REV. 1319, 1329-30 (2004).

34. *Id.*

35. For discussion of various approaches to the anxiety that underlies existing property distributions, see Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601 (1998).

36. See Hanoch Dagan, *The Distributive Foundation of Corrective Justice*, 98 MICH. L. REV. 138, 146-53 (1999).

Baselines are both endlessly contested and profoundly mutable. Consider regulatory takings law, where whether property has been taken (and thus requires the corrective measure of just compensation) depends on what entitlements one was thought to have before the government acted. That question, in turn, requires some distributive theory about what rights to resources are shared in common. For example, one's beachfront property cannot have been taken when the state opens a public access path across it, if that access path constitutes part of an inalienable public trust held by the people collectively. Does it? The question takes us back to who has rights to resources as a background matter, a distributive question.

Nor is there some stable historical baseline that we could somehow discover once and for all. Instead, the requirements of distributive justice are contingent on conditions that are subject to change.³⁷ For example, if a particular resource that was previously plentiful becomes extremely scarce due to an exogenous shock or changes in population, an earlier distributive protocol (such as assigning all rights to the people who are physically nearest the resource) might become deeply unjust.³⁸ The reverse situation might also occur, as where a well-fed individual steals a loaf of bread for kicks but then finds that it becomes essential to sustaining his life following a sudden disaster that cuts him off from all food supplies.³⁹ Here, eating the bread is not a wrong, even though stealing it was. The way that property prototypically operates—durably extending rights to resources across time—means that distributive justice and corrective justice are continually entwined.

To say that there is no free-standing vision of corrective justice that exists independent of questions of distribution is not to deny that corrective justice has some independent meaning as a philosophical matter.⁴⁰ But the claims of distributive and corrective justice run together in practice, if not in theory, especially when pervasive, long-running, state-sponsored wrongs are involved.⁴¹ Consider the large-scale expropriations wrought by conquest and slavery, and the long tail of state-sponsored discrimination in the property domain (and many other domains). The wrongs of public and private actors engaging in these practices, although devastating in their

37. See Jeremy Waldron, *Superseding Historic Injustice*, 103 ETHICS 4, 14-26 (1992) (discussing ways in which claims to resources might change over time as a result of altered expectations or circumstances).

38. See, e.g., *id.* at 21 (“A scale of acquisition that might be appropriate in a plentiful environment with a small population may be quite inappropriate in the same environment with a large population, or with the same population once natural resources have become depleted.”).

39. See *id.* at 23-24 (observing that the same act may be an injustice under one set of conditions and not another, and illustrating the point with an example involving the appropriation of water holes).

40. See generally Dagan, *supra* note 36 (accepting the distinctiveness of private law in its focus on corrective justice but maintaining that contested distributive questions underpin the requirements of corrective justice).

41. See, e.g., ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 230-31 (1974) (suggesting that a more equitable forward-looking distribution may be the best available proxy if there is insufficient information to accurately carry out rectification for past wrongs).

scope and impact, were not even legally recognized *as* wrongs until the law revised its distributive premises.

As property law continues to apply a set of inertial and amassing distributive rules to the unredressed patterns of holdings that were unjustly established, it piles continuing wrongs upon past ones.⁴² In an important sense, property law itself is the perpetrator of ongoing harm by officially backing, amplifying, systematizing, and entrenching cumulative individual and collective wrongs.⁴³ As important expressively and politically as a corrective justice frame may be, measuring the extent of these wrongs and formulating a plan for addressing them requires attention to distribution.⁴⁴

D. Combining Forces

If, as I have suggested, law and economics should tackle both efficiency and distribution, with corrective justice concerns folded in as well, how is it to undertake that project? Different scholars will approach the task with different goals in mind and different normative priors. Principles of efficiency, distribution, and corrective justice might variously appear in law and economics projects as prime motivators, as normative side constraints, as sources of operational guidance or political palatability, or as markers of fortuitous or unwanted side effects.

For example, a scholar whose normative perspective emphasizes efficiency might focus on the way that unequal distributions interfere with optimal investments in human capital. Other academics might start with a normative orientation that emphasizes distributive justice and employ ideas from law and economics to discover the most effective and least distortionary ways to diminish wealth disparities and make access to resources more egalitarian. Or a researcher interested in the political economy of distribution might consider how different doctrinal or policy vehicles stack up in generating distributive changes, given the costs of political action. Additionally or instead, a scholar committed to reparations for historic injustices might consider how such measures might be designed to maximize political feasibility and minimize deadweight losses.

Most interestingly, some domains—and I argue that property falls in this category—offer the prospect of advancing more than one normative goal at once. Finding such points of convergence is an important task for law and economics because it suggests opportunities to build an overlapping consensus among people with different normative perspectives.

42. See, e.g., RICHARD ROTHSTEIN, *THE COLOR OF LAW: A FORGOTTEN HISTORY OF HOW OUR GOVERNMENT SEGREGATED AMERICA* (2017); Waldron, *supra* note 37, at 14-15.

43. In saying this, I do not mean to deflect personal responsibility away from the human beings involved in committing wrongs, but only to suggest that the institution of property itself has continued to generate harm beyond the acts (and lives) of many of those individuals. That a human-created set of institutional arrangements can generate long-lasting harm is important to recognize in contexts where the law is unable to reach the original perpetrators.

44. See Logue, *supra* note 33, at 1323-24.

Where distributive moves that would improve resource access on a welfarist account can also be justified on corrective grounds, for example, structuring and justifying them in ways that resonate with that objective might sidestep opposition to purely redistributive shifts. Alternatively, the fact that corrective ends can be served through changes that are premised on distributive justice rationales may be important in contexts where corrective efforts are resisted politically or would appear to require impossible-to-construct counterfactuals. Those who resist both corrective and distributive justifications may be moved by efficiency considerations that, in some contexts, move in the same direction. And so on.

Obviously, such convenient congruence will not always occur, and different scholars will have different answers about how to proceed when objectives diverge. But identifying domains in which efficiency and distributive considerations align, even in part, will offer more alternatives for making inroads against the hardest societal problems.

II. Remixing Access to Resources

Property offers an ideal context in which to illustrate the importance of connecting efficiency and distribution. Recentering property around complementarities, I argue, offers the prospect of progress on both fronts. This Part will develop that claim.

A. Complementarities

Any given resource or “thing” is likely to derive a large proportion of its value from its proximity to or joint use with other resources. A home is a good example. Its value comes not only from its structure, which offers shelter and privacy, but also from its proximity to nearby amenities, infrastructure, and neighbors.⁴⁵ Similar points can be made about nearly all kinds of resources or assets, however defined; they may have some value in isolation, but much of their value depends on how they are combined with other resources. For this reason, property is importantly about complementarity—putting together, and keeping together, the most valuable combinations of resources.⁴⁶

1. Complementary Resources

To start with an intuitive definition: two goods are complementary to each other if having both increases the value of each.⁴⁷ This might be be-

45. See generally LEE ANNE FENNELL, *THE UNBOUNDED HOME* (2009) (developing this claim).

46. See Fennell, *supra* note 3.

47. See Peter Newman, *Substitutes and Complements*, in *THE NEW PALGRAVE DICTIONARY OF ECONOMICS* 13269, 13273 (3d ed. 2018) (“If x and y are complements in the rough

cause they are best consumed together, or because using both together enables the production of other, more valuable goods and services. I will use the idea of complementarity broadly to encompass different units of the same resource (like acres of land where economies of scale are present) as well as combinations of different resources, including labor and other human inputs. Complementarities often pass unnoticed until they are disrupted or become unattainable for some reason.⁴⁸ Consider, for example, the effect of removing one piece from a jigsaw puzzle, one card from a deck,⁴⁹ or one cog from a machine.

Because complementarities are most likely to become an issue when the relevant resources start out or wind up under separate ownership or control, the manner in which access to resources is concentrated or dispersed matters greatly. For this reason, a focus on complementarities brings together questions of distribution and efficiency. Sometimes these considerations are in tension, as where bringing more complements under a single owner's control would avoid holdout or holdup problems, but would lead to greater concentration of ownership. Or the two considerations may point in the same direction, as where a broader distribution of access to resources would enable more valuable pairings of human capital with other assets.

Seeing how property law has dealt with complementarities and indivisibilities across a range of contexts offers some footholds for adapting doctrines in ways that can advance distribution and efficiency. Attention to complementarities also suggests why access to *particular* resources may offer more traction on distributive problems than simply redistributing money. To see how and why ensuring access to complements matters, it is necessary to first understand the ways in which that access can be blocked or thwarted.

2. Monopoly Power

Property rights, by design, grant monopolies over specific owned things.⁵⁰ Whenever an entitlement is protected by a "property rule," its owner can veto its transfer to any would-be buyer or demand any price she

everyday sense, one would expect that as one has more y one would be willing to pay more for a marginal unit of x , while if they are substitutes one would be willing to pay less.").

48. See, e.g., CARL MENGER, PRINCIPLES OF ECONOMICS 64 (James Dingwall & Bert F. Hoselitz trans., 1976).

49. See Robert C. Ellickson, *Two Cheers for the Bundle-of-Sticks Metaphor. Three Cheers for Merrill and Smith*, 8 ECON. J. WATCH 215, 218 (2011) (suggesting that Michael Heller might analogize property rights to a deck of cards rather than a bundle of sticks).

50. Hence the claim that "[p]roperty is only another name for monopoly." ERIC A. POSNER & E. GLEN WEYL, RADICAL MARKETS 41 (2018) (quoting W. STANLEY JEVONS, THE THEORY OF POLITICAL ECONOMY xlvii (Macmillan 5th ed. 1957)).

chooses.⁵¹ Typically, this nominal monopoly is meaningless.⁵² Who cares if I have a monopoly over a particular parcel of land if there are many other identical parcels that will work just as well for your purposes?

But when a good is unique and essential to another party's consumption or production plans, the owner's effective monopoly can set the stage for a holdout or hold-up dynamic. Where relevant inputs can be supplied only by specific transacting partners—each and every one of the landowners along a planned highway route, say—actors may be unable to assemble valuable sets of complements.⁵³ Similar problems can arise in intellectual property contexts where access to a certain set of inputs is essential to a finished product.⁵⁴

Putting together complements becomes more necessary and more difficult as interdependence among separately owned and controlled resources grows. Agglomeration economies in urban areas make spatial complementarities among land uses crucial, for example, but control over those uses tends to be scattered not only among the owners of the relevant parcels but also among political and regulatory bodies that must sign off on development. But even prosaic settings—two suburban neighbors arguing over their fenceline—can produce acrimonious and costly bilateral monopolies.

3. The Human Factor

As the foregoing suggests, realizing complementarities is, foundationally, a problem of assembly (or, alternatively, avoiding disassembly). And it is a central concern of property—a field that is all about setting the terms for control over resources and enabling combinations that will produce value. Yet what is being assembled, ultimately, is not just the resources themselves, but the cooperation of those in control of the resources. This framing shifts the emphasis to one of coordinating human inputs. Those inputs include all forms of labor, skill, and ingenuity, as well as cooperation relating to control (individual and collective) over existing tangible and intangible resources. People own and control their own labor, but the distribution of control over other resources has profound implications for their ability to create value with that labor.

51. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092 (1972).

52. See, e.g., Richard A. Epstein, *Justified Monopolies: Regulating Pharmaceuticals and Telecommunications*, 56 CASE W. RES. L. REV. 103, 108-09 (2005).

53. See generally Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998) (discussing difficulties that arise when the entitlements necessary to produce a useful assembly are fragmented among different owners).

54. See, e.g., ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 162-76 (2011).

This emphasis on human cooperation might seem obtuse and unnecessary. If markets are competitive and well-functioning, and property interests are well-defined, prices can coordinate human behavior around resources without any need for conscious cooperation.⁵⁵ Complementarities, in and of themselves, do not change this—markets readily supply left and right shoes, coffee and cream, tires in useful sets of four, and so on. But two factors create difficulties. The first is the fact that many of the most important combinations of resources require assembling the cooperation of people who hold monopolies over necessary components, as we have seen.

The second is that material inequality makes willingness-to-pay a poor proxy for the welfare effects of different patterns of resources.⁵⁶ It is tough to be the high bidder on any resource without money, and difficult to get access to money without resources that can serve as collateral. If one's primary resource is one's own human capital, and there is no way to borrow against it, then opportunities to pair it with other resources in optimizing ways will be unavailable.⁵⁷

Under these conditions, we cannot count on price signals to automatically channel behavior, and hence resources, into the most valuable combinations. If we can't count on prices, what *can* we count on? We can start by looking at some of the ways in which the law already configures property rights to pursue complementarity.

B. Realizing Complementarities

Property's design operates in often unnoticed ways to bring together and keep together resources that produce value in combination. As Henry Smith has emphasized, one foundational move is defining lumpy "things" that embody strong complementarities.⁵⁸ Things endure, enabling owners to capture value over a long time horizon through their investments.⁵⁹ And because property puts things together in sensible bundles, it is not necessary for people to build up sets of complements moment by moment, day by day, by transacting over ultra-thin entitlement slices relating to each and every attribute of interest.⁶⁰ By strongly protecting things, property can enable owners to hang onto complementary combinations. However, many

55. See F.A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 526-28 (1945).

56. See Bar-Gill, *supra* note 19.

57. See MILTON FRIEDMAN, CAPITALISM AND FREEDOM 102 (1962); Stewart E. Sterk, *Restraints on Alienation of Human Capital*, 79 VA. L. REV. 383 (1993).

58. See, e.g., Henry E. Smith, *Property as the Law of Things*, 125 HARV. L. REV. 1691, 1693 (2012) ("Property organizes this world into lumpy packages of legal relations—legal things—by setting boundaries around useful attributes that tend to be strong complements.").

59. See, e.g., Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 356 (1967).

60. See Henry E. Smith, *Economics of Property Law*, in 2 THE OXFORD HANDBOOK OF LAW AND ECONOMICS: PRIVATE AND COMMERCIAL LAW 149, 153 (Francesco Parisi ed., 2017);

valuable resource combinations cross thing-boundaries.⁶¹ How does property law pursue complementarities in these contexts?

In a wide range of instances, the doctrine of accession helps to keep complementary assets together even when they take the form of new and distinct resources.⁶² A calf is a different “thing” than a cow but they are best owned in combination, making sense of the rule that the calf goes to the cow’s owner.⁶³ Importantly, this way of proceeding leverages the owner’s incentives to care for the cow in ways that will nurture the calf and pairs up the owner’s cow-care skills with a new asset that can be expected to make use of those skills in closely related ways (calf care).⁶⁴ As Thomas Merrill has observed, however, accession operates in a regressive manner inasmuch as it gives more resources to those who already own closely related resources.⁶⁵ So while it helps to achieve complementarities between the previously owned and new resources, it reduces the opportunities for people other than the initial owners to combine their labor inputs with resources.

Owned things, even augmented by accession, are not enough on their own to produce value. Human inputs are obviously essential, as already noted. Legal doctrines and regulations often supply other essential ingredients. For example, certain forms of forbearance by neighboring owners (like not operating a smelly or noisy factory) are thought to be important complements to a dwelling, capable of together producing the valuable good of residential living. An owner of a residence could simply obtain a larger “thing”—a home with more buffer space—and exclude others from it. But the law may instead provide sufficient tranquility through governance mechanisms, including nuisance law, zoning, and other land use controls.⁶⁶

Once we conceptualize restrictions on ownership as providing complements to other parties, we can see how governance produces a wide range of “regulatory public goods” that are complements to private ownership.⁶⁷ Some of these goods involve the enforcement of private property

Thomas W. Merrill & Henry E. Smith, *Making Coasean Property More Coasean*, 54 J.L. & ECON. S77, S94-95 (2011); Brian Angelo Lee & Henry E. Smith, *The Nature of Coasean Property*, 59 INT’L REV. ECON. 145, 147-48 (2012).

61. See Fennell, *supra* note 3, at 161-64.

62. See generally Merrill, *supra* note 6.

63. See *id.* at 481.

64. See *id.* at 489.

65. *Id.* at 502-03.

66. See Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453, S455 (2002).

67. This term appears in literature on collective action. See, e.g., N. SCOTT ARNOLD, IMPOSING VALUES: AN ESSAY ON LIBERALISM AND REGULATION, 165-88 (2009); Philip G. Cerny, *Globalization and the Changing Logic of Collective Action*, 49 INT’L ORG. 595, 608-09 (1995).

rights; others support markets in ways that lower transaction costs and enable people to acquire complementary goods on their own.⁶⁸ Still other public goods take the form of infrastructure or amenities—roads, parks, utilities, and so on.⁶⁹ Because these goods expand the consumption and production frontiers of everyone who has access to them, they are important complements to both private property and human capital.

In providing these complements, law sometimes overrides owners' veto powers—often for reasons relating to additional forms of complementarity, such as those among segments of a highway, pipeline, or trail. Eminent domain cuts through property rule protection that would otherwise allow any one owner to block the entire valuable assembly. The need to work around holdout problems also accounts for other institutional arrangements that dispense with unanimity requirements, from governance regimes in common interest communities to compulsory oil and gas unitization.⁷⁰ The law's remedial choices can similarly unblock access to sets of complements. The Supreme Court's decision in *eBay v. MercExchange*, which stepped away from presumptive injunctive relief for patent infringement, is a case in point.⁷¹ Law can also preserve complementarities among entitlements by requiring that transactions occur in certain minimum chunks, as where a leasehold is legally packaged with nonwaivable rights for the tenant.⁷²

Some of the most interesting examples of law's solicitude for complementarities involve legal responses to unauthorized private actions that have intermingled resources in ways that are difficult or impossible to undo.⁷³ Suppose, for example, that *A* innocently builds a house that extends over her property line and onto *B*'s property. When the mistake is discovered, a nonconsensual mixing of *A*'s and *B*'s resources has already occurred: *A*'s labor and improvements have become entwined with part of *B*'s land holdings. There is no easy way to unscramble the egg due to indivisibilities in the picture: *B*'s land cannot be readily pulled apart from *A*'s encroaching house, nor can *A*'s labor be extracted from the encroaching pieces. In order for either party to make sensible use of the commingled resources, some realignment in entitlements is necessary. But a private

68. See Cerny, *supra* note 67, at 608-09.

69. See, e.g., Yochai Benkler, *Commons and Growth: The Essential Role of Open Commons in Market Economies*, 80 U. CHI. L. REV. 1499 (2013) (reviewing BRETT M. FRISCHMANN, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* (2012)).

70. See, e.g., ROBERT H. NELSON, *PRIVATE NEIGHBORHOODS AND THE TRANSFORMATION OF LOCAL GOVERNMENT* 80 (2005) (discussing voting rules short of unanimity to alter covenants in private communities); Gary D. Libecap & James L. Smith, *The Economic Evolution of Petroleum Property Rights in the United States*, 31 J. LEGAL STUD. 5589, 5596 (2002) (discussing compulsory unitization for oil and natural gas).

71. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

72. Similarly, an employer who provides housing to his workers may also be required to provide sufficient access rights to permit his workers to receive certain visitors. See *State v. Shack*, 277 A.2d 369 (N.J. 1971).

73. See Yun-chien Chang, *An Economic and Comparative Analysis of Specificatio (the Accession Doctrine)*, 39 EUR. J.L. & ECON. 225 (2015).

deal that does this may be impossible due to the bilateral monopoly situation that now exists. So the law steps in to realign entitlements—for example, by forcing a sale of the encroached-upon land from *B* to *A*.⁷⁴

Although the mistaken improver in this story carried out a physical commingling on her own, it took the law's affirmative act to make her the owner of the encroached-upon land as well as the encroaching house.⁷⁵ Small-bore adjustments like this one might seem unrelated to the kinds of large-scale distributive realignments necessary to unlock human capital or address injustice. I raise this example not for its own significance, but rather to illustrate a conceptually powerful doctrinal move that the law already has in its repertoire—one that reappears in other guises and that can be scaled up and adapted to new contexts. Notably, the entitlement realignment in the encroachment story, as opposed to the initial building mistake, represents a conscious choice to loosen property protections to realize a more valuable combination—something that also occurs when existing entitlements are reconfigured through approaches like eminent domain. In these cases (and many more), the law withdraws veto power from an owner who might otherwise make it impossible for another party to achieve or maintain a valuable combination of resources.

Consider a very different example, this time from South Africa. In *Modder East Squatters v. Modderklip Boerdery*, a large number of squatters built and occupied dwellings upon land without permission of the landowner.⁷⁶ When the landowner sought to evict them, they invoked their constitutional right to housing. The Supreme Court of Appeal and the Constitutional Court of South Africa both agreed, denying the landowner the power to evict them unless and until substitute housing became available—although, significantly, they did require the government to compensate the landowner for the encroachment.⁷⁷ Here too, we see complementarities between people, land, and housing protected against an owner's prerogatives.

Such examples also underscore the power of gaining enough access to resources, even without authorization, to mix them with one's own inputs. Doing so changes the world, and while it may not extinguish all other

74. See generally *id.* (discussing possible remedial approaches, including forced sales).

75. The fact that physical commingling preceded the entitlement realignment rather than following it matters only insofar as that commingling heightens the bilateral monopoly problem. In other contexts where physical commingling has not yet occurred, the monopoly position of resource owners may be less clear; there may be alternative aggregations available, or substitutes for particular components. But as outside options narrow and holdout potential rises, the situations start to resemble each other. It should not be surprising, then, to see legal doctrines that override the veto power of property owners in both types of situations.

76. 2004 (8) BCLR 821 (SCA) (S. Afr.).

77. See *Modder East Squatters & Others v. Modderklip Boerdery (Pty) Ltd* 2004 (8) BCLR 821 (SCA) (S. Afr.); *President of the Republic of South Africa v Modderklip Boerdery (Pty) Ltd* 2005 (5) SA 3 (CC); see also Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 CORNELL L. REV. 745, 786-91 (2009) (discussing *Modderklip*).

claims, it can create combinations that become difficult to undo outright.⁷⁸ To be sure, there are reasons to be skeptical of approaches that prioritize what we might think of as the brute facts on the ground: who manages to grab hold of something belonging to someone else and hang onto it. Owners' expenditures to protect their assets, and nonowners' efforts to overcome those protections, introduce deadweight loss and an arbitrariness based on raw power.⁷⁹ And validating results brought about by brute force can encourage and reward unjust as well as justified efforts at resource appropriation.

Of course, we need look no further than our own property system to find pervasive protection of resources assembled from unjustly obtained inputs. Today's patterns of property holdings stand on a foundation of expropriated inputs of labor and land, among other injustices. What, if anything, can we learn by placing this fact alongside smaller examples of complements assembled without authorization? The most obvious lesson is that misappropriations that are incorporated into new combinations will at least give rise to compensation obligations, even if the appropriator is allowed to retain the finished product—an observation with pointed implications for reparations. But additional insights flow from examining *why* the law might allow a new combination of resources to remain in a misappropriator's hands at all.

A core argument against giving resources back, that what was taken has become so thoroughly incorporated into the lives and projects of current owners as to defy disaggregation,⁸⁰ boils down to a claim about complementarities between people and resources. We need not accept this claim at face value, especially where past expropriations act as continuing deprivations that leave behind painful gaps in people's lives.⁸¹ Still, to the extent the law privileges complementarities over prior claims on resources, it should be consistent in doing so. This observation suggests a strategy that law and policy can consciously pursue: expanding opportunities for people to access resources that complement their productive capacities.

78. Cf. EDUARDO MOISÉS PEÑALVER & SONIA K. KATYAL, PROPERTY OUTLAWS: HOW SQUATTERS, PIRATES, AND PROTESTERS IMPROVE THE LAW OF OWNERSHIP 140-41 (2010) (discussing how civil disobedience can change the world by overcoming political inertia and “imaginative deficits”).

79. See generally Richard L. Hasen & Richard H. McAdams, *The Surprisingly Complex Case Against Theft*, 17 INT'L REV. L. & ECON. 367 (1997) (discussing the inefficiency of protective measures and countermeasures, as well the strategy of avoiding owning resources that might be taken).

80. See, e.g., Gregory S. Alexander, *The Complexities of Land Reparations*, 39 L. & SOC. INQUIRY 874 (2014).

81. See Ezra Rosser, *The Political Possibilities of Reparations*, 1 L. & SOC. INQUIRY F. 20, 20 (2015) (observing that “for some people identity is marked by absence of property as much as by ownership of property”).

C. Remixing and Unmixing

Property law has a tendency toward entrenchment that fosters stability but can have highly undesirable system-wide distributive effects over time.⁸² It acts as an accumulating machine that continually layers new accretions onto holdings shaped by a history of pervasive injustice. Carrying out a reset of some kind is essential to both distribution and efficiency.⁸³ Enabling people to access tangible and intangible resources for which their own labor serves as complements can help to counter some of property's inherently regressive tendencies. But what form should such access take? And on what conceptual footing should it stand?

Some concrete examples can be found in past populist policies, including the Homestead Acts—which, despite serious failings, sought to democratize land ownership.⁸⁴ As Anna di Robilant has explained, these policies are echoed in modern calls for “pre-distribution” reforms.⁸⁵ Instead of redistributing wealth or income *ex post*, pre-distribution focuses on altering market structures and resource access *ex ante* in ways that encourage a more egalitarian set of results.⁸⁶ A reform agenda that focuses on access to key resources like housing, education, and credit harnesses complementarities to make human capital more productive.⁸⁷ Such reforms can and should revisit what it means to own particular assets, including the extent to which ownership entails the power to veto access.⁸⁸

An idea implicit in *Modderklip*—that property ownership is inherently contingent, and that its content and protection depends on other societal arrangements for meeting basic needs—offers further guidance.⁸⁹ A

82. See JACK KNIGHT, INSTITUTIONS AND SOCIAL CONFLICT 38 (1992) (observing that stability's normative valence “depend[s] on the substantive nature of the outcomes” and noting the way in which it can entrench disadvantage).

83. Cf. JOSEPH WILLIAM SINGER, THE EDGES OF THE FIELD 51 (2000) (discussing the “periodic redistribution” contemplated by the Jubilee Year).

84. See Anna di Robilant, *Populist Property Law*, 49 CONN. L. REV. 933, 945-57 (2017); see also Rosser, *supra* note 5, at 450-51 (observing that although the Homestead Acts sought to democratize access to capital, “the settlement of the Midwest relied upon dispossessing Indians”).

85. di Robilant, *supra* note 84, at 982-85. The term “pre-distribution” was coined by Jacob Hacker. See generally Jacob S. Hacker, *The Institutional Foundations of Middle-Class Democracy*, in PRIORITIES FOR A NEW POLITICAL ECONOMY: MEMOS TO THE LEFT 33 (2011); Jacob S. Hacker, *Foreword: The Promise of Predistribution*, in THE PREDISTRIBUTION AGENDA: TACKLING INEQUALITY AND SUPPORTING SUSTAINABLE GROWTH (Claudia Chwalisz & Patrick Diamond eds., 2015).

86. See, e.g., di Robilant, *supra* note 84, at 982-85.

87. See *id.* So too does ensuring that everyone has access to critical environmental goods like clean air and safe drinking water.

88. See KATHARINA PISTOR, THE CODE OF CAPITAL: HOW THE LAW CREATES WEALTH AND INEQUALITY 3-6, 15-18 (2019) (noting how law encodes resources as capital and protects them through state force). See generally HANOCH DAGAN, A LIBERAL THEORY OF PROPERTY (2021) (developing an approach to property that emphasizes the interests of nonowners as well as owners).

89. Cf. JEREMY WALDRON, LIBERAL RIGHTS: COLLECTED PAPERS 1981-1991, at 244 (1993) (“The welfare state is a way of ensuring that no one should ever be in such abject need that he would be driven to violate otherwise enforceable rules of property.”).

recent U.S. example, *Martin v. City of Boise*, takes a similar tack by forbidding (on Eighth Amendment grounds) the city's enforcement of rules against sitting and lying down in public against homeless individuals so long as there is insufficient shelter space to house them.⁹⁰ Although not framed in these terms, the case is really about complementarities: access to physical space is strictly complementary to life itself, given that life-sustaining activities like sleeping must occur somewhere.⁹¹ If the city wants to keep its public spaces free of sleepers, it must provide an alternative. This same idea of contingency rooted in complementarity appears in other property contexts. For example, the public's right to the foreshore, embodied in the public trust doctrine, is worthless without a complementary good—some means to access the beach. But the extent to which private landowners will be required to provide that access may depend on what other options for access exist.⁹²

More broadly, we can understand all property entitlements as accruing subject to claims by other members of society. As we see from existing property doctrines, appropriations of the inputs of others can generate such claims. We need not look far to find such past appropriations.⁹³ But even in the absence of the intentional and systematic expropriation that our history undeniably contains, property entitlements characteristically draw from a common stock in ways that might be understood to generate some sort of debt to the public at large. For example, the Lockean proviso—"enough, and as good, left in common for others"—suggests a condition in which the raw materials converted through labor are sufficiently plentiful that no one is deprived of a similar opportunity to mix their labor with such resources. But this condition is not met—or is no longer met—if resources thus converted are later monopolized in ways that preclude just such mixing.⁹⁴ Similarly, a variety of "use or lose doctrines" make an owner's claim to a resource contingent on her continuing use of it.⁹⁵ This idea echoes Locke's proviso that one should take no more than one can put to use before it spoils.⁹⁶

Recognizing a societal claim against current property holdings need not depend on adopting a Lockean vision of property, however. The same

90. 920 F.3d 584 (9th Cir. 2019).

91. See Jeremy Waldron, *Homelessness and the Issue of Freedom*, 39 UCLA L. REV. 295, 296 (1991).

92. See *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 369-70 (N.J. 1984).

93. For an approach basing claims on the gains enabled by past wrongful appropriations, see ROBERT MEISTER, *AFTER EVIL: A POLITICS OF HUMAN RIGHTS* 232-59 (2011).

94. See, e.g., SINGER, *supra* note 83, at 29; Rosser, *supra* note 5, at 448-53.

95. See, e.g., Daphna Lewinsohn-Zamir, *More Is Not Always Better Than Less: An Exploration in Property Law*, 92 MINN. L. REV. 634, 655-56 (2008) (discussing "use it or lose it" character of certain water rights); Joseph William Singer, *Property as the Law of Democracy*, 63 DUKE L.J. 1287, 1317-18 (2014) (discussing a variety of examples, including adverse possession and homesteading).

96. See Eloise Harding, *Spoilage and Squatting: A Lockean Argument*, 26 RES PUBLICA 299 (2020) (deriving a limited defense of squatting from the Lockean spoilage proviso).

point can be made by observing all the ways in which commonly owned or publicly supplied inputs (including infrastructure of all types) make private property more valuable.⁹⁷ Improving resource access directly may be both more feasible and more effective than delivering cash compensation to the public at large for its contributions to the creation of private wealth. A focus on resource access also has the potential to improve the targeting of a distributive program that is premised, at least in part, on the ways in which the monopolization of resources through ownership limits opportunities.

The fact that current accretions are built on a foundation of historic injustice provides an independent basis for claims on owned resources. An access-expanding approach answers a frequently raised objection to reparations, that it is impossible to know what the counterfactual world would have looked like in the absence of widespread injustice.⁹⁸ There is perhaps no more direct way to move closer to the modern conditions that would have obtained in that counterfactual world than to remove the barriers to resource access that past systems of injustice erected and that remain today through the operation of an inertial, accretive property system.⁹⁹ The results provide a self-executing way of delivering, however imperfectly and inadequately, some measure of that counterfactual world.

To take an especially salient current example, consider access to housing. Housing access has been dramatically and wrongfully limited in the past through state-sponsored segregation and complicity in private racial exclusion—wrongs that continue to shape residential patterns today.¹⁰⁰ As a result of this history as well as ongoing laws and policies that constrain housing opportunities, many people are unable to access a good that is an essential complement to optimizing their own human capital. Here, inequity gives rise to a much-noted modern inefficiency: people cannot locate in the labor markets where their own skills and talents can be most productive.¹⁰¹

Why is it not possible for any individual capable of succeeding in a given city to be the high bidder on an ideally located housing unit? One

97. See, e.g., Benkler, *supra* note 69. See generally LIAM MURPHY & THOMAS NAGEL, *THE MYTH OF OWNERSHIP: TAXES AND JUSTICE* (2002) (explaining that any meaningful conception of private property rights must account for the role of tax-funded goods and services in making those rights possible).

98. See, e.g., MEISTER, *supra* note 93, at 249-50; Waldron, *supra* note 37, at 7-14.

99. This is not to suggest that this is the only form reparations should take, only that it is one property scholars could contribute to developing. For other recent perspectives on reparations, see, for example, WILLIAM A. DARITY, JR. & A. KIRSTEN MULLEN, *FROM HERE TO EQUALITY: REPARATIONS FOR BLACK AMERICANS IN THE TWENTY-FIRST CENTURY* 256-70 (2020); and Ta-Nehisi Coates, *The Case for Reparations*, *ATLANTIC* (June 2014), <https://www.theatlantic.com/magazine/archive/2014/06/the-case-for-reparations/361631/> [<https://perma.cc/4F4E-65X4>].

100. See, e.g., ROTHSTEIN, *supra* note 42.

101. See, e.g., David Schleicher, *Stuck! The Law and Economics of Residential Stagnation*, 127 *YALE L.J.* 78, 102-04 (2017); Chang-Tai Hsieh & Enrico Moretti, *Housing Constraints and Spatial Misallocation* (Nat'l Bureau of Econ. Research, Working Paper No. 21154, 2017), <https://www.nber.org/papers/w21154> [<https://perma.cc/DK3M-2EUA>].

issue is liquidity. It is impossible to outbid competitors for a prized housing unit if one's only asset is one's raw human capital that has not yet been paired with a maximizing employment opportunity, and cannot be borrowed against. A second problem is even more intractable, and it illustrates why ensuring access to specific resources can offer a more effective solution than simply rearranging money: the amount one must bid on a housing unit is artificially elevated because land use regulations have suppressed housing supply.¹⁰²

In other words, one is not even able to bid on the right thing: the neighbors' NIMBY blocking rights that keep more housing from being built. Better housing supply would broadly expand resource access for everyone for whom property in a given locality is an input to their best plans, but no one acting alone can overcome the incumbents' effective monopoly. Development approval is a strict complement to each new unit of housing, and the government holds a monopoly on it that it exercises on behalf of those with the most political power—incumbents. Resources, including a great amount of human potential, go to waste as a result.

Making property holdings more explicitly contingent and complementarity-based offers a possible way forward.¹⁰³ Finding the best ways to accomplish that task is a project much larger than this Essay. But it is the sort of project that property scholars, including those working in law and economics, should tackle.

Conclusion

This Essay has shown one way in which law and economics can push into new normative terrain. By focusing on the ways in which resources and human inputs combine to produce value, it becomes possible for property scholars to engage with issues of distribution, fairness, and historic injustice—all within a normative framework that accommodates economic analysis. In suggesting these possibilities, I have two aims in mind.

The first is to trace some implications of a complementarity-focused understanding of property. A focus on complements offers a way of breaking the deadlock between those who see property as a system of efficient incentives and those who see it as a system for promoting progressive distributive values. Neither camp can advance its agenda without finding better ways to address societal inequality and historic injustice. We are in need of fresh ideas, and I hope that the incomplete sketch I have offered here will catalyze some further thinking in this vein.

102. See, e.g., Peter Ganong & Daniel Shoag, *Why Has Regional Income Convergence in the U.S. Declined?*, 102 J. URB. ECON. 76, 85-90 (2017); Edward Glaeser & Joseph Gyourko, *The Economic Implications of Housing Supply*, 32 J. ECON. PERSP. 3 (2018).

103. See Rosser, *supra* note 5, at 450-52 (discussing how granting development rights, including self-executing remedies for developers, can sidestep monopolies and broaden access to property).

My second goal is to make a larger meta-point, in keeping with the theme of this conference, about the domain of modern law and economics. If law and economics scholars can begin thinking about how to break destructive cycles of cumulative disadvantage in what is probably the most inertial field known to law, property, then the possibilities are truly boundless.