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Property and Local Knowledge

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Cover Page Footnote

Associate Professor, University of Alberta Faculty of Law. The author wishes to thank all those who contributed to this article by providing feedback or discussing relevant ideas, including Eric Adams, Sina Akbari, Barbara Billingsley, Andrew Botterell, Molly Brady, Tamara Buckwold, Hanoch Dagan, Andrew Gold, Doug Harris, Eran Kaplinsky, Larissa Katz, Joanna Langille, Moira Lavoie, Alan Miller, Marcus Moore, Christina Mulligan, Jason Neyers, Mariana Pargendler, George Pavlich, Lauren Scholz, Joe Singer, Henry Smith, Stephen Smith, Peter Szigeti, and Sabine Tsuruda, as well as audiences at the North American Workshop on Private Law Theory, the Association for Law, Property, and Society Annual Meeting, the University of Alberta Faculty of Law, and the Western University Faculty of Law. Thanks as well to the students in the author's Jurisprudence (Property Rights) seminar over the past several years for helpful discussions relating to the ideas in the article. Finally, thanks are owed to Elisa Carbonaro, Elisa Genuis, Sarah Hanson, and Connor Vaandering for their outstanding research support for this article.

PROPERTY AND LOCAL KNOWLEDGE

Malcolm Lavoie⁺

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Property rights play an important but largely under-appreciated role in channeling local knowledge into decisions about physical resources. They do this by devolving decision-making authority to a dispersed pool of owners, who are likely to be aware of local conditions relevant to their resources. As a result, property owners are often in a position to make better-informed decisions about the use of the resources than other parties. This article seeks to explain the local knowledge function of property rights, beginning with how arguments from local knowledge can help justify the pervasive institution of private property. The article then goes on to consider how the knowledge function of property can explain some of the fundamental features of property law.

⁺ Associate Professor, University of Alberta Faculty of Law. The author wishes to thank all those who contributed to this article by providing feedback or discussing relevant ideas, including Eric Adams, Sina Akbari, Barbara Billingsley, Andrew Botterell, Molly Brady, Tamara Buckwold, Hanoch Dagan, Andrew Gold, Doug Harris, Eran Kaplinsky, Larissa Katz, Joanna Langille, Moira Lavoie, Alan Miller, Marcus Moore, Christina Mulligan, Jason Neyers, Mariana Pargendler, George Pavlich, Lauren Scholz, Joe Singer, Henry Smith, Stephen Smith, Peter Szigeti, and Sabine Tsuruda, as well as audiences at the North American Workshop on Private Law Theory, the Association for Law, Property, and Society Annual Meeting, the University of Alberta Faculty of Law, and the Western University Faculty of Law. Thanks as well to the students in the author’s Jurisprudence (Property Rights) seminar over the past several years for helpful discussions relating to the ideas in the article. Finally, thanks are owed to Elisa Carbonaro, Elisa Genuis, Sarah Hanson, and Connor Vaandering for their outstanding research support for this article.

Arguments from local knowledge are distinct from other arguments about property's justification. The standard justifications for property rights—those that might be discussed in a first-year Property law course, for instance¹—include: 1) Lockean arguments, according to which a party who labors on a resource has a justified claim to it;² 2) economic efficiency arguments based on the role of property rights in avoiding a “tragedy of the commons,”³ or incentivizing parties to work and invest in resources;⁴ 3) autonomy-oriented arguments based on the role of property in creating a sphere of freedom for the individual;⁵ 4) arguments based on property's potential to promote virtue and human flourishing;⁶ and 5) personhood arguments based on the idea that some objects of property are constitutive of individual identity.⁷ None of these arguments relies, to any significant degree, on the special local knowledge owners acquire regarding their resources. Indeed, discussions of the justification for property almost always leave out the important idea that property owners are often simply better informed about their resources than others and thus better equipped to make decisions about them.

The role of property rights in channeling local knowledge is likely underappreciated, by first-year Property students and seasoned property scholars alike, largely because property rights are so pervasive in contemporary Western societies. We are simply not aware of the many instances that occur every day in which an owner acts on local knowledge that would be difficult or impossible for others to acquire and process. The homeowner who preemptively repairs an old roof, the retailer who offers a new product for sale, and the farmer who

1. See generally JOSEPH WILLIAM SINGER ET AL., PROPERTY LAW: RULES, POLICIES, AND PRACTICES 174–280 (7th ed. 2017); BRUCE ZIFF ET AL., A PROPERTY LAW READER: CASES, QUESTIONS, & COMMENTARY 29–38 (4th ed. 2016).

2. JOHN LOCKE, SECOND TREATISE OF GOVERNMENT 18 (Richard H. Cox ed., 1982); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 171–72 (1974).

3. RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 40–41 (8th ed. 2011); F.H. Knight, *Some Fallacies in the Interpretation of Social Cost*, 38 Q.J. ECON. 582 (1924); Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

4. Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 360–66 (2001) [hereinafter Merrill & Smith, *What Happened to Property?*]; 2 WILLIAM BLACKSTONE, COMMENTARIES *7–8; ADAM SMITH, LECTURES ON JURISPRUDENCE 9–86 (R.L. Meek et al. eds., Liberty Classics 1978); POSNER, *supra* note 3, at 40; Timothy Besley & Maitreesh Ghatak, *Property Rights and Economic Development*, in 5 HANDBOOK OF DEVELOPMENT ECONOMICS 4525, 4529–34 (Dani Rodrik & Mark Rosenzweig eds., 2009) (formal model of the effect of insecure property rights in disincentivizing production).

5. Arthur Ripstein, *Beyond the Harm Principle*, 34 PHIL. & PUB. AFFS. 215 (2006); ARTHUR RIPSTEIN, FORCE AND FREEDOM: KANT'S LEGAL AND POLITICAL PHILOSOPHY 86, 91 (2009).

6. See Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 CORNELL L. REV. 745, 748 (2009); Gregory S. Alexander & Eduardo M. Peñalver, *Properties of Community*, 10 THEORETICAL INQS. LAW 127 (2009); Gregory S. Alexander, *Ownership and Obligations: The Human Flourishing Theory of Property*, 43 H.K.L.J. 451 (2013).

7. Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982); G.W.F. HEGEL, ELEMENTS OF THE PHILOSOPHY OF RIGHT 73–83 (Allen W. Wood ed., H.B. Nisbet, trans., Cambridge Univ. Press 1991).

decides to switch crops are all decision-makers who are empowered through property rights to act on local knowledge that no one else may have. In a society of property owners, we have come to take for granted the vast body of local knowledge that is mobilized by owners with the power to make decisions about their resources.⁸ Importantly, this body of knowledge cannot easily be acquired, processed, and acted upon through centralized, hierarchical decision-making apparatuses.⁹ By decentralizing decision-making authority, property rights help channel local knowledge into decisions about resources.

The knowledge function of property rights is perhaps easiest to see in cases where property rights are removed and replaced by the comprehensive, centralized governance of resources. For instance, the disastrous consequences of the large-scale collectivization of agriculture in the Soviet Union and China in the 20th century are now relatively well known.¹⁰ Agricultural collectivization failed in part because it centralized decision-making, depriving those with knowledge of circumstances on the ground of the ability to act on their knowledge.¹¹

These examples may seem somewhat distant and exotic to contemporary North Americans. Yet North America has its own history of top-down land administration by centralized bureaucracies acting without the benefit of local knowledge. Beginning in the 19th century, “Indian Affairs” departments in both the United States and Canada came to exert far-reaching control over day-to-day life in Indigenous communities, including over land management.¹² These

8. F.A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945) [hereinafter Hayek, *Use of Knowledge*].

9. *Id.* at 524.

10. In both the Soviet Union and China, the collectivization of agriculture led to millions of deaths, primarily from famine. See Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1318 (1993) (citing ROBERT CONQUEST, *THE HARVEST OF SORROW: SOVIET COLLECTIVIZATION AND THE TERROR-FAMINE* 306 (1986)); ROBERT C. TUCKER, *STALIN IN POWER* 639 n. 68 (1990); DMITRI VOLKOGONOV, *STALIN: TRIUMPH AND TRAGEDY* 524 (Harold Shukman ed. & trans., 1991); Nicholas R. Lardy, *The Chinese Economy Under Stress, 1958-1965*, in 14 THE CAMBRIDGE HISTORY OF CHINA 360, 370 (Roderick MacFarquhar & John K. Fairbank eds., 1987); Justin Yifu Lin, *Collectivization and China's Agricultural Crisis in 1959-1961*, 98 J. POL. ECON. 1228, 1229 (1990).

11. FREDERIC L. PRYOR, *THE RED AND THE GREEN: THE RISE AND FALL OF COLLECTIVIZED AGRICULTURE IN MARXIST REGIMES* 138, 147–48, 163–67 (1992) (outlining problems stemming from organization size, including asymmetric information between workers and managers, as well as the consequences of a lack of local autonomy, including lack of knowledge of local conditions); JAMES C. SCOTT, *SEEING LIKE A STATE* 210–18 (1998) (Scott explains how “high-modernist” thinking led Soviet planners to implement schemes for large-scale farming operations with centralized decision-making processes. The plans failed in large part because of the inability to respond to local knowledge.) *But see, e.g.*, Yifu Lin, *supra* note 10 (emphasizing the incentive effect of a lack of exit rights on collective farms).

12. See generally Stephen Cornell, *Remaking the Tools of Governance: Colonial Legacies, Indigenous Solutions*, in *REBUILDING NATIVE NATIONS: STRATEGIES FOR GOVERNANCE AND DEVELOPMENT* 57–60 (Miriam Jorgensen ed., 2007); TERRY L. ANDERSON, *SOVEREIGN NATIONS OR RESERVATIONS?: AN ECONOMIC HISTORY OF AMERICAN INDIANS* 161–76 (1995); 1 COHEN'S

centralized bureaucracies typically displaced pre-existing Indigenous governance structures and property systems.¹³ Decisions about resources that had previously been made at the local level were subject to control, oversight, and approval by a hierarchically structured bureaucracy headquartered in a distant federal capital.¹⁴ This centralization has tended to impair the ability of institutions to take account of local knowledge.¹⁵

To give one particularly egregious example, during the 1870's, Canadian government officials determined that wheat should be among the crops cultivated on government-administered farms for First Nations in what is now Alberta and Saskatchewan.¹⁶ This was despite the fact that the strains of wheat that existed at the time did not have a sufficiently short growing season for the region, and despite a lack of grist mills in the area to process the wheat.¹⁷ The farms were mostly failures.¹⁸ Even when wheat was successfully grown, it sometimes could not be used.¹⁹ There are, in fact, accounts of First Nations people starving next to stacks of wheat, grown at the direction of federal officials, which they could not grind into flour.²⁰ Of course, parties on the ground were aware that wheat was not the best choice of crop under the circumstances, but they were unable to effectively act on that knowledge. On-

HANDBOOK OF FEDERAL INDIAN LAW §1.04 (Nell Jessup Newton et al. eds., 2019); Fred S. McChesney, *Government as Definer of Property Rights: Indian Lands, Ethnic Externalities, and Bureaucratic Budgets*, 19 J. LEGAL STUD. 297, 322–35; Malcolm Lavoie & Moira Lavoie, *Land Regime Choice in Close-Knit Communities: The Case of the First Nations Land Management Act*, 54 OSGOODE HALL L.J. 559, 561 (2017); TOM FLANAGAN ET AL., BEYOND THE INDIAN ACT: RESTORING ABORIGINAL PROPERTY RIGHTS 63–70 (2010); 1 REPORT OF THE ROYAL COMMISSION ON ABORIGINAL PEOPLES 283–85 (1996) (Can.); 2 REPORT OF THE ROYAL COMMISSION ON ABORIGINAL PEOPLES 485–519 (1996) (Can.).

13. For an overview of one traditional Indigenous property system, see Richard Overstall, *Encountering the Spirit in the Land: "Property" in a Kinship-Based Legal Order*, in DESPOTIC DOMINION: PROPERTY RIGHTS IN BRITISH SETTLER SOCIETIES 22 (John McLaren, A.R. Buck & Nancy E. Wright, eds. 2005).

14. Lavoie & Lavoie, *supra* note 12, at 561, 567–68; 1 COHEN'S HANDBOOK OF FEDERAL INDIAN LAW §1.04 (Nell Jessup Newton et al. eds., 2019); FLANAGAN ET AL, BEYOND THE INDIAN ACT, *supra* note 12, at 45–46.

15. See FLANAGAN ET AL, BEYOND THE INDIAN ACT, *supra* note 12, at 125–35; Jessica A. Shoemaker, *Complexity's Shadow: American Indian Property, Sovereignty, and the Future*, 115 MICH. L. REV. 487, 512–22 (2017) [hereinafter Shoemaker, *Complexity's Shadow*]; Jessica A. Shoemaker, *Transforming Property: Reclaiming Indigenous Land Tenures*, 107 CALIF. L. REV. 1531, 1542–53 (2019) [hereinafter Shoemaker, *Transforming Property*]; HARVARD PROJECT ON AMERICAN INDIAN ECONOMIC DEVELOPMENT, THE STATE OF THE NATIVE NATIONS: CONDITIONS UNDER U.S. POLICIES OF SELF-DETERMINATION 5, 9–10, 113, 121, 125–29, 134 (2008).

16. SARAH CARTER, LOST HARVESTS: PRAIRIE INDIAN RESERVE FARMERS AND GOVERNMENT POLICY 79, 91, 96, 99, 103 (1990).

17. *Id.* at 95–96.

18. *Id.*

19. *Id.* at 99.

20. *Id.*

reserve farming operations of that era mostly failed, in large part because Indigenous people were denied the opportunity to engage in the process of trial and error based on local knowledge that characterized the later success of other farmers in the region.²¹ In comparison with off-reserve farmers, First Nations farms were hampered by centralized control over seeds, farming implements, and the location of farms, among other factors.²²

Centralized, bureaucratic control over land management has had dire consequences for Indigenous people, as measured in economic and other terms.²³ Indeed, in both the U.S. and Canada, federal control over local land management continues to impede Indigenous economic development and self-determination to this day. Decisions about Indigenous land often cannot easily be made by those who are physically present in the communities and aware of local circumstances.²⁴ Special rules of land tenure in Indigenous communities, including the federal trust status of Indigenous lands in the United States, are a major source of ongoing bureaucratic control and oversight over decision-making.²⁵ These rules of land tenure go beyond restraining alienation, and often impair ordinary decision-making about the use and management of the land. By contrast, in most contexts outside of Indigenous communities, property rights are the main institution that allows for decentralized control over resources by parties who are likely to have relevant local knowledge.

In what follows, I will argue that channeling local knowledge is one of the most basic things that property law does, in most contexts in which property rights exist over physical resources. Indeed, this knowledge-channeling

21. *Id.* at 94. Beginning in the late 1880's, other policies also came to impair First Nations' agricultural operations, including a government policy of intentionally withholding farming technology. *Id.* at 119, 164.

22. *Id.* at 95, 160–62.

23. See TOM FLANAGAN ET AL., *supra* note 12 at 123–36; ANDERSON, *supra* note 12, at 111–34, 167–68; McChesney, *supra* note 12; Shoemaker, *Complexity's Shadow*, *supra* note 15; Dustin Frye & Dominic P. Parker, *Paternalism Versus Sovereignty: The Long-Run Economic Effects of the Indian Reorganization Act*, in UNLOCKING THE WEALTH OF INDIAN NATIONS (Terry L. Anderson, ed., 2016); Terry L. Anderson & Dean Lueck, *Land Tenure and Agricultural Productivity on Indian Reservations*, 35 J.L. & ECON. 427 (1992); FISCAL REALITIES ECONOMISTS, THE ECONOMIC AND FISCAL IMPACTS OF MARKET REFORMS AND LAND TITLING FOR FIRST NATIONS: EXECUTIVE SUMMARY (2007), http://www.fiscalrealities.com/uploads/1/0/7/1/10716604/economic_fiscal_impacts_of_fn_market_reforms_land_titling.pdf; Terry L. Anderson & Dominic P. Parker, *Economic Development Lessons from and for North American Indian Economies*, 53 AUSTL. J. AGRIC. & RES. ECON. 105, 119–22 (2009).

24. Shoemaker, *Complexity's Shadow*, *supra* note 15, at 512–22; Shoemaker, *Transforming Property*, *supra* note 15, 1542–53; HARVARD PROJECT ON AMERICAN INDIAN ECONOMIC DEVELOPMENT, THE STATE OF THE NATIVE NATIONS: CONDITIONS UNDER U.S. POLICIES OF SELF-DETERMINATION 5, 9–10, 113, 121, 125–29, 134 (2008).

25. Jessica A. Shoemaker, *No Sticks in my Bundle: Rethinking the Indian Land Tenure Problem*, 63 KAN. L. REV. 383, 383–87 (2014). These special property regimes may be capable of serving valuable functions, but in practice, they also often deny effective control over resources by parties on the ground. See Malcolm Lavoie, *Property Law and Collective Self-Government*, 64 MCGILL L.J. 255 (2018) [hereinafter Lavoie, *Collective Self-Government*].

function of property can provide a persuasive justification for property rights. The local knowledge argument justifies property, rather than merely identifying a collateral benefit of property, since it provides a compelling normative account that fits the basic features of existing systems of property law. The local knowledge argument can potentially appeal to those with a relatively diverse set of normative commitments. Many objectives one might wish to achieve through a property system depend to some degree on harnessing local knowledge.

A knowledge-based justification for property rights is in principle consistent with a relatively wide range of institutional arrangements. Notably, it is perfectly consistent with schemes that aim to redistribute wealth. Indeed, as I will discuss below, undue ownership concentration tends to undermine the knowledge function of property rights by centralizing resource decision-making in the hands of a relatively small number of owners. An owner with many physical resources under his or her control may be no better positioned than a government bureaucracy to acquire and act upon local knowledge. If most resources are owned by a narrow ownership class, there will be less physical proximity between owners and resources, and fewer opportunities for owners to acquire local knowledge relevant to their resources.

The idea that property rights channel local knowledge is not novel.²⁶ However, writers who have given detailed accounts of the argument in the past have tended to emphasize the knowledge function of property in facilitating interpersonal coordination, primarily through market mechanisms. According to F.A. Hayek, property rights allow parties to act upon their own “knowledge of the particular circumstances of time and place” in responding to price signals that emerge from a multitude of transactions.²⁷ For instance, if the price of wheat increases, and a farmer owns a field that she knows would be suitable for growing wheat, the farmer can respond to the price signal by exploiting her knowledge of the attributes of her field. At the same time, the price signal itself

26. See Hayek, *Use of Knowledge*, *supra* note 8; 1 FRIEDRICH A. HAYEK, LAW, LEGISLATION AND LIBERTY 85–88, 106–10 (1982) [hereinafter HAYEK, LLL VOL 1]; F.A. Hayek, *Socialist Calculation: The Competitive ‘Solution’*, 7 *ECONOMICA* 125, 141, 144 (1940); F.A. HAYEK, THE FATAL CONCEIT, 29–37, 76–78 (W.W. Bartley, III ed. 1988); Harold Demsetz, *The Exchange and Enforcement of Property Rights*, 7 *J.L. & ECON.* 11, 16–17 (1964); Todd J. Zywicki & Anthony B. Sanders, *Posner, Hayek, and the Economic Analysis of Law*, 93 *IOWA L. REV.* 559, 573–74 (2008); Henry E. Smith, *Mind the Gap: The Indirect Relation Between Ends and Means in American Property Law*, 94 *CORNELL L. REV.* 959, 965–66 (2009) (drawing an analogy between debates in property theory and the socialist calculation debate over the viability of a centrally planned economy) [hereinafter Smith, *Mind the Gap*]; Henry E. Smith, *Property and Property Rules*, 79 *N.Y.U. L. REV.* 1719, 1754, 1760–63 (2004) [hereinafter Smith, *Property and Property Rules*] (Smith argues that property rules form part of an exclusion strategy that decentralizes decision-making. Depending on the nature of the resource, this can result in lower costs, including information costs, as compared with liability rules, which require more centralized decision-making.); Ellickson, *supra* note 10, at 1331 (noting that because owners of small parcels are likely to have better knowledge of their land than others, negotiations between neighbors over a matter affecting both parcels will take place between well-informed parties).

27. Hayek, *Use of Knowledge*, *supra* note 8, at 521, 524–25.

functions as a kind of distillation of knowledge about local circumstances in many different settings. The price of wheat may be going up because of weather events on the other side of the world, for example. But the farmer does not need to know anything about those events, other than what the price signal tells her, namely, to grow more wheat if she can. According to Hayek, prices in a market economy thus work to coordinate the actions of many different parties, each acting on their own specific local knowledge.²⁸

The argument put forward in this article is both simpler and broader in its application than previous arguments about local knowledge and market-based coordination. Delegating decision-making powers to parties with local knowledge is not just useful as a means of facilitating coordination in a market economy. Property rights channel local knowledge into decisions about resources in many contexts that are not linked to market-based transactions. These include many of the decisions made by families about the resources they control, such as the family home, as well as resource-based decisions made by cultural, religious, and charitable groups.²⁹ Being able to rely upon local knowledge to make decisions about a resource is important, regardless of whether those decisions interact with a market. In other words, the knowledge function of property rights is more fundamental, and generally applicable, than the market-oriented role that Hayek and others emphasize.³⁰

The knowledge-channeling function of property depends on systemic features of a property regime, including the decentralization of decision-making authority. It is obviously not the case that every decision made by an owner is informed by difficult-to-acquire local knowledge, nor is it true that every aspect of property law doctrine privileges local knowledge. Yet as Henry Smith has emphasized, when dealing with a complex system with emergent properties, like

28. *Id.* at 526.

29. On the use of property in land as a basis for collective self-government by cultural groups, see Lavoie, *Collective Self-Government*, *supra* note 25.

30. HAYEK, *THE FATAL CONCEIT*, *supra* note 26, at 33–37. The knowledge-channeling function of property in non-market contexts may be implicit in some of Hayek's discussion of customary norms and the development of the common law, though his focus is very much on property's role in facilitating coordination in a market economy. Hayek emphasizes how property rights secure legitimate expectations, which in turn facilitates interpersonal coordination. According to Hayek, rules based on exclusive rights to resources are general and predictable in their application, which serves to facilitate individual planning based on legitimate expectations about the conduct of other parties. For example, Party A, the owner of Blackacre, is able to predict how Party B, a non-owner, will act in relation to Blackacre. The value of local knowledge in non-market-facing decision-making is arguably implicit in Hayek's work, though to my knowledge it is never something he notes explicitly. For instance, on pages 108–09 of HAYEK, *LLL VOL 1*, *supra* note 26, he writes:

The maximal certainty of expectations which can be achieved in a society in which individuals are allowed to use their knowledge of constantly changing circumstances for their equally changing purposes is secured by rules which tell everyone which of these circumstances must not be altered by others and which he himself must not alter.

See HAYEK, *LLL VOL 1*, *supra* note 26, at 85–88, 106–10.

a property regime, it is an error to assume that the attributes of the system as a whole will be reflected in each of the constituent parts.³¹ The argument here is that property *as a system* channels local knowledge into decisions about resources, and that it may do so in a manner that is more effective than alternative resource management approaches. In making this argument, however, the article does attempt to link some of the basic content of property law—including the agenda-setting authority of owners, principles of possession and accession, and the law governing future interests—with these systemic features of property.³²

The argument that follows is distinct from arguments that address the ways that property systems manage their own internal complexity and associated information costs.³³ Rather than seeking to explain how property systems manage the legal complexity they give rise to, this article addresses the more basic question of how property systems deal with the fact that effective decision-making about physical resources often requires access to local knowledge specific to the time and place in which those resources are situated. While property systems create legal complexity that must be managed, they also help solve knowledge-based challenges due to the complexity of the physical world and of human societies. These challenges could be intractable under alternative resource management regimes. I argue that property as an institution helps to address the challenges of decision-making about physical resources in a world in which local knowledge can matter a great deal.

This article proceeds in three parts. In the first part, I explain what local knowledge is, why it tends to be widely dispersed and difficult to acquire, and why it presents a challenge for centralized decision-making structures.³⁴ In the second part, I outline a justification for property rights based on local knowledge.³⁵ I argue that by decentralizing decision-making about physical resources, property rights channel local knowledge into decisions about those resources. This in turn leads to better decisions and better outcomes than would otherwise be possible, according to a range of possible criteria. In the third part, I argue that the knowledge-channeling function of property helps explain important features of existing common law property systems.³⁶ I argue that the theory presented here reinforces a leading descriptive account of property,

31. Smith, *Mind the Gap*, *supra* note 26, at 969–71.

32. In this sense, it may fit within a broader research agenda that links internal and external approaches to private law. See Andrew S. Gold & Henry E. Smith, *Sizing Up Private Law*, 70 U. TORONTO L.J. 489 (2020).

33. See, e.g., Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1 (2000) [hereinafter Merrill & Smith, *Optimal Standardization*]; Henry E. Smith, *Property as the Law of Things*, 125 HARV. L. REV. 1691 (2012) [hereinafter Smith, *Law of Things*].

34. See *infra* Section I.

35. See *infra* Section II.

36. See *infra* Section III.

according to which the essential characteristic of ownership is the owner's exclusive authority to set the agenda for the resource.³⁷ If owners are often best positioned to acquire vital local knowledge about their resources, then it makes sense that property rights delegate to those owners the exclusive authority to make important decisions about them. In this section, I also argue that the local knowledge function of property rights helps explain the role of possession, the principle of accession, and rules that limit the control of past owners over resources.³⁸

My focus in this article is on property rights in physical resources, including land and tangible personal property, but not including intangible resources, such as intellectual property. Knowledge linked to a physical context cannot have the same significance for resources that do not have a physical presence. The fact that local knowledge does not have the same significance for rights to non-physical resources may have implications for how such rights ought to be understood and under what circumstances they are justified. However, that issue is beyond the scope of this article.

I. THE IMPORTANCE OF LOCAL KNOWLEDGE

A. *What Is Local Knowledge?*

What is local knowledge, exactly? Broadly speaking, it can be understood as any knowledge to which parties have privileged access by virtue of their proximity to a physical place or thing, or their engaging in an activity involving the place or thing. Local knowledge stands in contrast to other forms of knowledge that are not as dependent on physical context. For instance, James Scott, following Marcel Detienne and Jean-Pierre Vernant, draws a distinction between “abstract” knowledge and “*metis*,” meaning knowledge embedded in local experience.³⁹ Hayek had previously drawn a quite similar distinction between “scientific” knowledge, on the one hand, and “knowledge of the particular circumstances of time and place,” on the other.⁴⁰ This distinction is a key starting point for understanding local knowledge.

For Hayek, scientific knowledge refers to knowledge of the phenomena of the physical world, and particularly those that can be accurately predicted according to general physical rules.⁴¹ Trained experts are often in a better position to understand and apply scientific knowledge than parties who are close to a place,

37. Larissa Katz, *Exclusion and Exclusivity in Property Law*, 58 U. TORONTO L.J. 275, 278, 284, 289–90 (2008) [hereinafter Katz, *Exclusion and Exclusivity*].

38. See *infra* Section III.B.1–2.

39. SCOTT, *supra* note 11, at 311 (citing MARCEL DETIENNE & JEAN-PIERRE VERNANT, *CUNNING INTELLIGENCE IN GREEK CULTURE AND SOCIETY* (Janet Lloyd trans., Humanities Press 1978) (1974)).

40. Hayek, *Use of Knowledge*, *supra* note 8, at 521.

41. HAYEK, *LLL VOL 1*, *supra* note 26, at 15-16. See generally Hayek, *Use of Knowledge*, *supra* note 8, at 521.

thing, or activity. The physician who has reviewed test results is often better able to predict the likely future course of an illness than the patient who is experiencing it directly. The engineer with appropriate data before her is often in a better position to know how to build a bridge, even in a location she has never actually been to, than an untrained person who is intimately familiar with the location of the proposed bridge or who has performed manual labor on bridges in the past. With respect to scientific knowledge, proximity to a place or thing, or involvement in an activity, is often not particularly crucial. But not all knowledge is scientific knowledge.

The privileged epistemic position of the expert applies only in circumstances in which general rules have predictive power.⁴² This is often not the case in complex, open systems with many interacting variables, nor is it the case where relevant variables are either unknown or are contingent on circumstances that are uncertain.⁴³ A great deal of useful knowledge is not “scientific” in character. With respect to non-scientific knowledge, a distant expert is usually at a distinct disadvantage as compared to a party with first-hand experience of a place, thing, or activity. Hayek provides the following explanation:

We need to remember only how much we have to learn in any occupation after we have completed our theoretical training, how big a part of our working life we spend learning particular jobs, and how valuable an asset in all walks of life is knowledge of people, of local conditions, and special circumstances. To know of and put to use a machine not fully employed, or somebody’s skill which could be better utilized, or to be aware of a surplus stock which can be drawn upon during an interruption of supplies, is socially quite as useful as the knowledge of better alternative techniques. And the shipper who earns his living from using otherwise empty or half-filled journeys of tramp-steamers, or the estate agent whose whole knowledge is almost exclusively one of temporary opportunities, or the *arbitrageur* who gains from local differences of commodity prices, are all performing eminently useful functions based on special knowledge of circumstances of the fleeting moment not known to others.⁴⁴

Hayek’s focus is on how markets can bring about effective coordination of the activities of different parties in an economy, each with their own distinct local knowledge.⁴⁵ As a result, his examples emphasize knowledge of circumstances that can inform market transactions, such as arbitrage opportunities.⁴⁶ But the epistemic point is actually more general than that. Dispersed knowledge linked to parties’ proximity to a place or thing, or

42. HAYEK, LLL VOL 1, *supra* note 26, at 15–16.

43. *Id.*

44. Hayek, *Use of Knowledge*, *supra* note 8, at 522.

45. *Id.* at 521, 525–26.

46. *Id.* at 525.

involvement in an activity, is ubiquitous.⁴⁷ It includes potentially useful knowledge that either does not have immediate relevance to a market transaction or that a party may not be inclined to exploit for market purposes. However, even if local knowledge does not inform a market transaction, a property owner may still be able to use that knowledge to inform decision-making about the resource. For instance, a family making decisions about how to use the space in their home will draw on their knowledge of the physical attributes of the home and the characteristics of the family members, even if these decisions are not linked to markets. Similarly, cultural, religious, and charitable organizations draw on the local knowledge of members in making decisions about the use of resources in their communities, again without necessarily engaging with the market.

A key feature of local knowledge is that it tends to be widely dispersed and difficult for a central authority to aggregate, process, and act upon.⁴⁸ The property owners in a city, for instance, have a dispersed body of knowledge about the land and buildings they own, including, for example: What are the potential uses for the building? Where does water tend to accumulate in the yard? Which rooms are drafty? Will the furnace likely need to be replaced soon? How do you access the attic? How is the furniture best arranged? How are the bedrooms best allocated? What kinds of renovations are feasible? What kinds of renovations might be worthwhile, either for current occupants or prospective future occupants? What norms govern relations with the neighbors? Similarly, farmers in a rural community are often best positioned to answer such questions as: When should seeds be planted on a particular field in light of recent weather conditions? What crops are suitable in a given year in light of the soil conditions? What is the best order in which to harvest crops on different fields, given the potential weather, the available labor force, and the state of the crops?

Decisions about residential home improvement provide a relatable example that underscores the importance of dispersed local knowledge. Homeowners are constantly formulating lists of possible home improvement projects. These projects need to be prioritized, based on factors that include the skills of the homeowner (i.e., what she can do herself), the homeowner's available time and inclination to devote that time to home improvement, the homeowner's available financial resources and inclination to devote those resources to home improvement, the problems experienced by occupants of the home that would be solved by a given home improvement project, the needs and preferences of the current occupants of the home, and the potential needs and preferences of future occupants of the home (which may affect the home's resale value). Seemingly prosaic decisions, like whether to replace the front window or instead

47. See generally SCOTT, *supra* note 11, at 309–41; HAYEK, *THE FATAL CONCEIT*, *supra* note 26, at 77.

48. Hayek, *Use of Knowledge*, *supra* note 8, at 519, 524; SCOTT, *supra* note 11, at 6–8.

enlarge a closet in a bedroom, can rely on local knowledge held by the occupants of the home and no one else.

It would not be practically possible for a centralized authority to acquire all the local knowledge currently held by owners. For one thing, the time and expense might be too great. But even if a great deal of resources were marshalled, the task would still likely be impossible.⁴⁹ Much of this local knowledge is subject to constant change.⁵⁰ The physical properties of a resource and the surrounding context are not static. A building might have previously been optimally used as a warehouse, but it is now better off being turned into lofts. The furnace might be showing signs of slowing down, necessitating a costly repair in the near future. A new child might have been born to the family occupying a house, making it desirable to add a bedroom. The recent weather and soil conditions in a given field in the spring may caution against what would normally be a suitable crop to sow. The constantly changing nature of relevant local knowledge makes it difficult for all but those close to the resource to have an up-to-date understanding of it. Incidentally, this is a fact that is generally taken for granted in the insurance industry, which depends on owners' legal duties to disclose relevant information about insured property, and even then, must account for the problem of adverse selection due to owners' superior knowledge of the risks facing their property.⁵¹

Another problem for attempts to centralize decision-making is that some local knowledge is tacit knowledge, meaning it cannot be effectively communicated to a third party lacking the relevant context or experience.⁵² A farmer may know intuitively from experience that a tilling technique would be unsuitable for a particular field, without necessarily being able to communicate why. Similarly, a traditional hunter may have a sense of where game will be located in light of the recent weather, without being able to articulate the reason in terms of cause and effect. And a longtime homeowner, with a feel for the layout of a house and the habits of those who live in it, may have a sense of how a kitchen should be set up after a renovation. The cumulative body of tacit local knowledge about a resource can be quite significant, putting centralized decision-makers at a further disadvantage as compared with those on the ground.

It is important to emphasize that relevant local knowledge is not limited to knowledge about the physical properties of resources. Locally held knowledge about the people who are likely to interact with a resource can be just as important to effective decision-making. This knowledge can similarly be difficult, or in some cases, impossible, for centralized decision-makers to

49. Hayek, *Use of Knowledge*, *supra* note 8, at 519, 521–24.

50. *Id.* at 522–24.

51. Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets*, 90 Q.J. ECON. 629 (1976); Alma Cohen & Peter Siegelman, *Testing for Adverse Selection in Insurance Markets*, 77 J. RISK & INS. 39 (2010); Francis Achampong, *Uberrima Fides in English and American Insurance Law: A Comparative Analysis*, 36 INT'L COMPAR. L.Q. 329, 338 (1987).

52. See MICHAEL POLANYI, *THE TACIT DIMENSION* 4–5, 8, 20 (1966).

acquire and act upon. The needs and preferences of those who are likely to use the resource are one example. A business owner familiar with a neighborhood may be aware of the unmet demand of potential customers in that neighborhood, just as a homeowner may be aware of changes to the home that would suit the preferences of those currently living in the home or who are likely to live there in the future. Knowledge about local norms can also be important to resource-based decision-making. For instance, certain kinds of activities may be likely to give rise to conflicts with neighbors, which can be costly. Parties who are embedded in a local community are in a much better position to account for such local norms in their decisions. Knowledge about local needs, preferences, and norms differs from knowledge about physical properties of resources in many ways. Yet these forms of knowledge often share the key attributes of being highly dispersed within society and difficult for centralized authorities to account for in making decisions.

An exhaustive categorization of forms of local knowledge may not be possible. However, one can identify a number of different categories: 1) knowledge about the physical characteristics of the resource; 2) knowledge about local conditions relevant to the use of the resource; 3) knowledge about the needs and preferences of those who are likely to use the resource; 4) knowledge about complementary resources that can be used in connection with the physical resource; 5) knowledge about activities or processes that enhance the use of the resource; and 6) knowledge about local norms relevant to the use of the resource in human society. With respect to each of these categories, it will often be the case that a party close to the resource or involved in activities related to the resource will be in a privileged epistemic position relative to outsiders, even outside experts. The specific relevance of this insight to justifying and understanding property rights is explored in greater detail below.

B. Local Knowledge and Organizations

Before proceeding further, it is necessary to acknowledge the role of organizations in decision-making about resources. Many resources are managed by organizations consisting of multiple individuals with their own internal decision-making processes. Examples include business firms, charities, and families. Decisions about resources owned by an organization are not necessarily made by the members of the organization with the most immediate local knowledge about the resource. For instance, employees of a business might have greater local knowledge about a building than the CEO who ends up making a final decision about it. Acquiring, processing, and acting upon local knowledge is a major challenge for organizations, a challenge that typically becomes greater with the size and complexity of the organization.⁵³ However, the local knowledge advantages of decentralized decision-making can

53. ARNOLD PICOT ET AL., *INFORMATION, ORGANIZATION AND MANAGEMENT* 24, 27 (2008).

sometimes be outweighed by other benefits associated with having a larger organization. These include reducing transaction costs and taking advantage of economies of scale.⁵⁴ Organizations may also be better at acting on what Hayek called “scientific” knowledge produced by experts.⁵⁵ To the extent that such knowledge is important to the activity in question—such as, for instance, building a nuclear reactor—a more centralized organizational structure may be favored.

It is possible for well-structured organizations to adopt internal processes to encourage the communication of relevant local knowledge to those making decisions. This will be easiest to achieve in cases where decision-makers share the same context and background information as those with local knowledge.⁵⁶ That said, it will typically not be possible for centralized decision-makers within an organization to take account of *all* local knowledge that is available to those on the ground.⁵⁷

The local-knowledge costs of centralization may differ across activities. Some activities, such as farming, may rely particularly heavily on local knowledge, and so may be resistant to centralized administration, while for other activities, such as operating a general retail business, the costs may be more modest relative to the benefits of a larger organization.⁵⁸ In each case, however, the benefits of centralization must be weighed against the costs, which include a reduced capacity to channel local knowledge into decision-making. These costs and benefits can change over time. For instance, it may be that the optimal scale of certain kinds of farming operations is increasing due to changes in technology and the labor market.⁵⁹ Yet the ability to channel local knowledge of physical conditions into decisions remains an important factor in the success of agricultural operations, and one that tends to limit their scale.⁶⁰ Firm ownership in primary agricultural production remains highly decentralized

54. R.H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937); OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* 96–98 (1985); Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 *J. POL. ECON.* 1119 (1990).

55. Hayek, *Use of Knowledge*, *supra* note 8, at 521.

56. See Henry E. Smith, *The Language of Property: Form, Context, and Audience*, 55 *STAN. L. REV.* 1105, 1125–33 (2003).

57. SCOTT, *supra* note 11, at 6–7, 316.

58. *Id.* at 313.

59. KLAUS DEININGER & DEREK BYERLEE, *RIISING GLOBAL INTEREST IN FARMLAND: CAN IT YIELD SUSTAINABLE AND EQUITABLE BENEFITS?* 30–31 (2011). Average farm size has increased in the US since 2007, as has the number of very large farms of 2,000 acres or more. However, most US farms are still under 180 acres in size. U. S. DEP’T OF AGRI., *2017 CENSUS OF AGRICULTURE: UNITED STATES SUMMARY AND STATE DATA 7* (2019) [hereinafter *2017 CENSUS OF AGRICULTURE*].

60. DEININGER & BYERLEE, *supra* note 59, at 28–30; SCOTT, *supra* note 11, at 318.

compared with most other industries, in part due to the importance of local knowledge.⁶¹

All of this is simply to say that while local knowledge is important, it is not the only thing that matters in decision-making about resources. While local knowledge tends to favor decentralized decision-making, including through the mechanism of property rights, it does not necessarily follow that decision-making should be decentralized to the greatest extent possible. There is an important role for hierarchically structured organizations, even if their ability to process and act upon relevant local knowledge tends to diminish with the size of the organization. However, while decentralizing decision-making to take advantage of local knowledge involves tradeoffs with other variables, approaches that centralize control over all of a society's resources within a single organization appear highly prone to decision failures.⁶²

C. Local Knowledge and "Big Data"

It has recently been suggested that the advent of powerful computers, large data sets, and advanced techniques for interpreting data has diminished the importance of local knowledge, expanding the realm of technical and expertise-driven forms of decision-making.⁶³ In at least some areas, the significance of local knowledge has clearly been diminished by expert data analysis. For instance, drivers' knowledge about the best routes to take on local roads has been largely, if not entirely, rendered irrelevant by navigation software on smartphones that analyzes immense troves of data relating to travel time.⁶⁴

Another area in which data analysis has displaced local knowledge, to at least some degree, is in retailing. Crafting a retail environment has always been a subtle activity that draws upon the practical knowledge and experience of those working in the business.⁶⁵ However, increasingly sophisticated, data-based "scientific" knowledge on questions like how best to lay out a store or what products to stock has led to reduced reliance on local knowledge.⁶⁶ Whereas in the past those working in retail businesses might have relied on their intuitions

61. DEININGER & BYERLEE, *supra* note 59, at 28–30. More than 97% of U.S. farms are owned by an individual, a family, a partnership, or a family-held corporation. These farms represent 92% of the land devoted to farming. See 2017 CENSUS OF AGRICULTURE, *supra* note 59, at 170–71.

62. See Ellickson, *supra* note 10, at 1318; SCOTT, *supra* note 11, at 6; PRYOR, *supra* note 11, at 138, 147–48, 163–67.

63. See Richard A. Epstein, *The Uses and Limits of Local Knowledge: A Cautionary Note on Hayek*, 1 N.Y.U. J.L. & LIBERTY 205, 206–07 (2005).

64. Dan Fumano, 'Rat-Running' and 'the Price of Anarchy.' *Vancouver Copes with GPS-Enabled Cars*, VANCOUVER SUN, Feb. 12, 2020, <https://vancouversun.com/news/local-news/dan-fumano-rat-running-and-the-price-of-anarchy-vancouver-cope-with-gps-enabled-cars>.

65. See Richard A. Epstein, *Takings, Exclusivity and Speech: The Legacy of PruneYard v. Robins*, 64 U. CHI. L. REV. 21, 49 (1997) (discussing the practical knowledge necessary to structure a retail environment).

66. *Id.*

or past experiences in predicting demand for a given product at a given price, today such businesses are much more likely to rely on statistical analysis of consumer data.⁶⁷ However, it would be premature to suggest that decentralizing control of resources to take advantage of local knowledge is no longer necessary, and that centralized control of resources by large, data-driven organizations is the way of the future.

Even for decisions where good data is available, data analysis may not be able to fully replace decision-making by those with relevant local knowledge. For one thing, data analysis is always based on information about past events, but circumstances are always changing. When a change in circumstances occurs for which no past precedent exists, data analysis will necessarily have limited predictive power. When a completely new product is introduced, for instance, demand for that product may be genuinely uncertain, in the sense of not being calculable based on existing information.⁶⁸ In these cases, dispersed knowledge may be important in guiding decision-making, and this may include a business owner's understanding of how the new product will potentially fit with the day-to-day lifestyles of his customers. Similarly, in agriculture, climate change may mean that past data on weather and soil conditions has less predictive power and that more reliance must be placed on the lived experience of farmers who have seen the effects of those changes first-hand.

When relevant formal data is not available, local knowledge continues to be important to the many decisions an owner must make. These include decisions that depend on factors that are too specific to a particular context to be properly informed by data derived from other settings. For instance, "big data" on its own is seldom going to be determinative in many decisions faced by homeowners, such as whether it makes more sense to renovate the kitchen or add a bedroom. Unless the owner plans to immediately put the house on the market, the factors informing a decision like that are likely specific to the home and its residents.

Similarly, data on climate and soil may help to indicate that a particular crop could be suitable to a particular location, but there are a multitude of non-data-based reasons why a farmer with local knowledge might decide not to grow the crop. For instance, the farmer might decline to grow the crop based on his knowledge of the skill set of the local farm labor force. James Scott identifies other factors that scientific agriculture has struggled to account for, including the needs of family and community, "long-term soil structure, ecological diversity, and sustainability."⁶⁹ In each of these areas, the knowledge of those

67. See Andrei Hagiu & Julian Wright, *When Data Creates Competitive Advantage*, HARV. BUS. REV., Jan.–Feb. 2020, <https://hbr.org/2020/01/when-data-creates-competitive-advantage>.

68. An analogy can be drawn to the distinction between risk, which is calculable, and uncertainty, which is not. See RICHARD POSNER, *ECONOMIC ANALYSIS OF LAW* 4 (9th ed., 2014) (citing FRANK H. KNIGHT, *RISK, UNCERTAINTY AND PROFIT* (1921); JOHN MAYNARD KEYNES, *A TREATISE ON PROBABILITY* (1921)).

69. SCOTT, *supra* note 11, at 322.

with local experience may be vital to effective decision-making, and may help explain the remarkable persistence of owner-operated family farms.⁷⁰ While “big data” has expanded the domain of technical decision-making, the realm of local knowledge is still quite extensive.

II. LOCAL KNOWLEDGE AND THE JUSTIFICATION OF PROPERTY RIGHTS

A. How Property Channels Local Knowledge

The essence of the local knowledge argument is that property rights devolve decision-making authority to parties who either have local knowledge or who are well-positioned to acquire it. In other words, property rights tend to unite both decision-making authority over a resource and local knowledge about that resource in the same person. It is reasonably clear that property rights confer a range of decision-making powers on owners.⁷¹ The other half of the equation, though, requires some explanation. There are several features of property rights that lead owners to occupy a privileged position in terms of the local knowledge they have about a resource.

First of all, existing property owners tend to have the opportunity to acquire local knowledge.⁷² Since an owner typically has rights to access and use a resource, she has the opportunity both to achieve physical proximity to the resource and to engage in activities with the resource.⁷³ Physical proximity and engaging in activities with a resource are two key mechanisms for acquiring local knowledge. A person who spends time on a parcel of land, for instance, is likely to acquire information about local conditions and the physical characteristics of the land. The same person is even more likely to acquire such information if he is actively using the resource in some way. And so, the special opportunities an owner has to use and occupy a resource help to explain the owner’s acquisition of local knowledge.

But perhaps just as significant as the opportunities owners have to acquire local knowledge are the incentives that lead them to acquire such knowledge. These incentives stem from property owners’ right to derive benefits from the property, including benefits of use, income derived from the property, and increases in value. Owners may attempt to directly acquire local knowledge about the resource, so as to be better able to derive benefits from it. However, owners also have incentives to use the resource in ways that lead indirectly to the acquisition of local knowledge. For instance, in the course of running a

70. DEININGER & BYERLEE, *supra* note 59, at 28-30; SCOTT, *supra* note 11, at 318.

71. For a leading account of the “incidents” of property ownership, see Tony Honoré, *Ownership*, in MAKING LAW BIND: ESSAYS LEGAL AND PHILOSOPHICAL 161 (1987). For an overview of competing accounts of the concept of property, see Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 730-39 (1998) [hereinafter Merrill, *Right to Exclude*].

72. Merrill, *Right to Exclude*, *supra* note 71, at 730-39.

73. *Id.*

business in a building, a business owner may incidentally learn of ways the building could be more effectively laid out.

The incentive dimension of local knowledge acquisition means that even where an owner does not have relevant local knowledge about the resource at the outset of her tenure as owner, she is likely to acquire it. Someone who recently bought a resource, or who received it as a gift, may not currently have relevant local knowledge, but such a party is immediately subject to incentives to try to learn about the resource and to engage in activities that may lead incidentally to the acquisition of knowledge.

The range of decisions that a property owner can make about resources that are informed by local knowledge is quite extensive. They include decisions about whether to use the resource, and if so, how. A farmer's decision about whether to let a field lie fallow, or to grow wheat or barley, would fit this description. Another example would be a decision about whether to give access or control to some other party for a temporary period, and if so, to whom. For instance, the owner of a business may entrust a delivery truck to an employee, or the owner of a building may choose a tenant. In the case of freely transferable resources, relevant decisions might also include a decision about whether to sell or give the resource away, and if so, to whom. Local knowledge could inform the timing of the sale and the identity of the recipient, among other factors.

Importantly, the kinds of decisions that can be informed by local knowledge include both market-facing decisions and non-market-facing decisions. An owner may choose to use a resource to produce something for sale or choose to sell the resource itself. However, an owner can also draw on local knowledge in ways that improve decision-making without involving the market. Such decisions would include a choice to use the resource for the benefit of the owner, the owner's family and friends, or the wider community. The allocation of space within a family home, or the dedication of a building for use as a community hall are examples.⁷⁴ Gratuitous transfers of resources, for instance to family members or charities, either *inter vivos* or through a will, can also be informed by knowledge of the resource or the recipient. These non-market-facing decisions involve significant amounts of resources, even within modern market economies.⁷⁵ And so, while arguments based on the role of property in channeling local knowledge have historically been linked to defenses of the market, such arguments are in fact not contingent on markets. Indeed, local knowledge can be particularly significant with respect to managing resources

74. See *Caroline (Village) v. Roper*, 37 D.L.R. 4th 761 (Can. Alta. Q.B.) (providing example of land transfer for a community hall).

75. For estimates of average annual charitable contributions in Canada and the United States, see Charles Lamman et al., *Generosity in Canada and the United States: The 2016 Generosity Index*, FRASER RSCH. BULL., Dec. 2016. For an estimate of the scale of intergenerational wealth transfer in one major metropolitan region, see JOHN J. HAVENS & PAUL G. SCHERVISH, *WEALTH TRANSFER ESTIMATES: 2001 TO 2055 - WASHINGTON D.C. METROPOLITAN AREA*, (Ctr. on Wealth and Philanthropy, Bos. Coll. ed., 2006).

that are inalienable and thus kept out of the market, such as lands held by Indigenous communities.⁷⁶

The argument that property rights channel local knowledge into decisions about resources is subject to two important qualifications. Firstly, the argument describes a systemic feature of property systems, not a hard-and-fast rule about the ownership of every resource. It is obviously not the case that property owners always have more local knowledge about a resource than anyone else. The recent buyer of a home knows much less about it than the seller who grew up in the home, for example. The absentee business owner knows less about the building in which a business operates than a dedicated long-time employee. However, even in cases like these, property rights do provide mechanisms to address owners' knowledge gaps. In the first example, the new homeowner is going to have opportunities and incentives to acquire knowledge over time, especially if she lives in the home. In the second example, the absentee business owner may face financial incentives either to become better informed and acquire the knowledge relevant to running the business, or else to sell the business to someone who will do so. A prospective new owner willing to acquire local knowledge would presumably be able to operate the business more profitably than the absentee owner. Accordingly, the prospective owner would be willing to pay more for it than the present value placed on it by the absentee owner.

However, even if the property system does not effectively confer ownership on the most knowledgeable parties all the time, it may still serve a knowledge function at a systemic level. Property systems display systemic complexity, in the sense that the emergent properties of the system as a whole are not readily reducible to the properties of the constituent parts.⁷⁷ One consequence of complexity is that it is not necessarily appropriate to assume that the properties of the system as a whole will always be reflected in the properties of the constituent parts, and vice versa.⁷⁸ Water is composed of water molecules but "wetness" is an emergent property of water that is not present at the level of individual water molecules.⁷⁹ Similarly, characteristics that one might desire in a property system might be present at the level of the system as a whole, even if they are not always identifiable in particular rules, decisions, or transactions within the system.⁸⁰ Channeling local knowledge into decisions about resources is a product of the systemic features of a property rights regime, including in particular, its distribution of decision-making authority. Property rights decentralize decision-making in a way that makes it more *likely* that any given decision-maker will have relevant local knowledge. But property rights do not

76. See Lavoie, *Collective Self-Government*, *supra* note 25; Malcolm Lavoie, *Why Restrain Alienation of Indigenous Lands?*, 49 U.B.C. L. REV. 997 (2016).

77. Smith, *Mind the Gap*, *supra* note 26, at 969–71.

78. *Id.* at 970.

79. *Id.*

80. *Id.*

guarantee that in every particular instance the party making a decision will have the best access to local knowledge.

The second qualification is that local knowledge is not the only factor relevant to a functioning property system. Other important considerations include costs of administration, costs associated with risk and uncertainty, and transaction costs. It would not make sense, for instance, to make ownership legally contingent on the owner's having local knowledge about the resource. A property regime that constantly reallocated rights to parties who could show that they had the best local knowledge about a given resource would be dysfunctional. Such a hypothetical regime would be costly to administer, would create uncertainty for property owners, and would impede mutually beneficial transactions. To say that property systems are justified in part by the function they serve in channeling local knowledge into decisions about resources is not to say that this is the only factor relevant to the structure of a property system. Local knowledge is important and helps explain and justify the broad contours of property law, but it is not everything.

Similarly, while it is possible to decentralize decision-making without property rights, the costs associated with alternative decentralization strategies mean they are unpromising as full-scale alternatives, rather than complements, to property. For instance, decentralization can be achieved through the delegation of decision-making authority within a large organization. This can make sense as a resource management strategy in some cases, due to economies of scale or the ability of a larger organization to minimize transaction costs. However, attempting to manage all of a society's resources through the delegation of control powers from a centralized authority would involve costs that could be prohibitive, at least if those control powers were not linked to other traditional incidents of property. A party with delegated control powers, but not the right to derive benefits from a resource, for instance, would have limited incentives to use the resource effectively. By delegating not just the power to control resources, but also other associated incidents, property systems allow for decentralization while limiting the costs associated with doing so, including the incentive costs associated with dividing control from other traditional incidents of property.

Even subject to these important qualifications, channeling local knowledge provides a compelling justification for property rights. The argument constitutes a *justification* for property, rather than a mere description of collateral benefits associated with property, since it provides a compelling normative account that fits the core content of property as a legal institution. As discussed in greater detail below, the local knowledge argument explains some of the most basic and generally applicable features of property, including an owner's authority to set the agenda for a resource.⁸¹ While the local knowledge argument is contingent on empirical premises regarding the challenges associated with accounting for

81. See *infra* Part II.D.

local knowledge, these challenges are enduring features of the human experience in managing physical resources.

The local knowledge justification for property can be summed up as follows: Property owners tend to have relevant local knowledge about resources. And property rights, in turn, confer decision-making authority on owners that is immune in important ways from outside interference. This decision-making authority puts owners in a position to make decisions that are informed by local knowledge that is not available to others. To the extent that local knowledge is relevant to informing decisions about a physical resource, as it often is, conferring decision-making authority on parties with such knowledge can lead to better decisions and better outcomes than would otherwise be possible.

B. Knowledge and Consequences

The claim that property rights lead to better decisions by channeling local knowledge is, ultimately, a consequentialist argument. A decision made by a party with local knowledge will tend to be “better” than one made by a party without such knowledge, in the sense that it will bring about consequences that are superior to the alternatives. According to what metric are the consequences superior? In principle, arguments can be advanced based on a range of values, including familiar grounds based on welfare maximization or human flourishing. Better decisions could mean decisions that bring about consequences more aligned with satisfying individuals’ subjective preferences,⁸² or alternatively, with some more objective and less relativistic understanding of the conditions of human flourishing.⁸³ If local knowledge improves an owner’s ability to achieve desired ends, then it can in principle allow for better decisions according to whatever criteria inform the owner’s decision-making, subject to institutional constraints that limit the permissible conduct of owners.

It is important to acknowledge here that decision-making about resources involves several components, of which the knowledge held by the decision-maker is only one—albeit a crucial one. In addition to knowledge, decisions are also informed by the values and preferences of the decision-maker, as well as institutional constraints, such as those that serve to limit externalities. The most prominent consequentialist justifications for property rights tend to focus on these latter aspects of decision-making, while mostly taking knowledge and information for granted. On these accounts, property rights internalize the costs and benefits of activities, which tends to align owners’ incentives with what is socially optimal.⁸⁴ Property rights provide incentives to work, produce, improve, and avoid the overuse of resources, and thus to bring about desirable consequences. A party with self-seeking preferences can be led to use a resource

82. LOUIS KAPLOW & STEVEN SHAVELL, *FAIRNESS VERSUS WELFARE* 16, 21, 36 (2006).

83. *See, e.g.*, JOHN FINNIS, *NATURAL LAW AND NATURAL RIGHTS*, 85–90 (2d ed. 2011).

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

efficiently through property rights that ensure she can exclude others and keep the product of her labor.⁸⁵

This article has sought to emphasize that the knowledge held by the decision-maker is crucial to effective decision-making, but that does not mean that these other components of decision-making can be ignored. The incentives to work, produce, improve, and avoid the overuse of resources created by exclusive property rights are important in many contexts. Similarly, laws that limit externalities, such as the tort of nuisance or land use regulations, can be appropriate, even if one acknowledges the importance of local knowledge.

These other components of decision-making also have implications for arguments that seek to justify property rights on the basis of local knowledge. Specifically, a knowledge-based argument for property must explain how it is that decisions made according to the diverse values and preferences of particular owners will ultimately lead to consequences that are viewed as desirable from the point of view of society as a whole. On its own, the argument that property channels local knowledge leading to better decision-making is subject to a major limitation: an owner's decision will only take account of the owner's values and preferences, not those of non-owners. And so, while an owner may be in a position to make a better-*informed* decision than anyone else, that decision will not necessarily be the best one for everyone. For instance, a landowner committed to conservation might decide to leave land in its natural state, without taking into account the interests of people who need housing that could be built on that land. Alternatively, an owner might choose to build a mega-mansion for herself on the land to use as a second home. In both cases, the owner's decision might fail to take account of the needs and interests of other people, even if the owner's decision is informed by local knowledge.

There are at least two possible ways to address the problem of ensuring that a property system is able to harness local knowledge in a way that serves the interests of a broad range of members of the society. The first approach is to focus on the distribution of property rights. One could require that the overall distribution of rights within the property system be such that each person has the opportunity to reflect her own values and priorities in decisions about resources. For instance, Jeremy Waldron has argued for property as a "general right," meaning that every individual in a society ought to have the opportunity to pursue her desired ends through the exercise of property rights.⁸⁶ This would in principle allow for each individual to bring his own values and priorities to bear in making decisions about resources, while at the same time tending to ensure that those making decisions have access to local knowledge about their resources. Under such a property system, local knowledge can be effectively

85. See generally Knight, *supra* note 3; Hardin, *supra* note 3; POSNER, *supra* note 3, at 40–41; Merrill & Smith, *What Happened to Property?*, *supra* note 4, at 360–66; BLACKSTONE, *supra* note 4, *3–5; SMITH, *supra* note 4, at 9–86; Besley & Ghatak, *supra* note 4, at 4529–34.

86. JEREMY WALDRON, *THE RIGHT TO PRIVATE PROPERTY* 390–422 (1988); see also JOSEPH WILLIAM SINGER, *ENTITLEMENT: THE PARADOXES OF PROPERTY* 140–78 (2000).

channeled, while at the same time reflecting the interests of a broad range of members of society.⁸⁷

The other possible response to the challenge of ensuring that the property system serves a sufficiently broad range of interests is to rely on an appeal to markets. One might argue that property rights, when combined with markets, can create the conditions for owners to use their local knowledge in a way that serves the interests of others, ultimately making both owners and non-owners better off. That is essentially Hayek's position.⁸⁸ Where markets are in place, property owners are able to take account of their own local knowledge as well as the information they receive in the form of price signals about local conditions elsewhere. This allows for a degree of economic coordination that would be too information-intensive to be achieved by a centralized authority.⁸⁹ One could argue that the property system is a necessary part of a market economy that serves the interests of a broad range of parties, including those that do not themselves have significant property rights in physical resources. And so, for instance, consumers benefit from the efficient allocation of resources by landowning farmers, in the form of low prices for food, regardless of whether those consumers themselves own land. The argument is essentially that the rising tide of economic growth, fed in part by the local knowledge of property owners, eventually lifts all boats.

While a justification for property based on local knowledge can rely on an appeal to markets, the argument can also depend, to at least some degree, on the distribution of property rights. Owners are able to take advantage of local knowledge to achieve their ends to a degree that more centralized decision-makers would not be able to achieve. To the extent that the pursuit of those ends is justified in light of the values and interests of others in the society, then property rights can be justified as a useful and sometimes necessary means to achieving valued ends by uniting local knowledge and decision-making authority.

The local knowledge justification for property rights is not inconsistent with other justifications, including those based on economic incentives to work, produce, improve, improve, and avoid the overuse of resources, as well as those based on moral rights to property.⁹⁰ The justification set out above is in fact

87. The distribution of property interests could also be informed by special moral entitlements to particular resources. For instance, for reasons of justice one might take the position that the interests and values of an Indigenous community should be prioritized in decisions about its traditional territory. For an argument framing Indigenous property interests in terms of moral rights, see Malcolm Lavoie, *Locke, Hegel, and Rights to Property: Examining the Unstable Ideological Architecture of the Canadian Law of Aboriginal Title*, 69 U. TORONTO FAC. L. REV. 25.

88. Hayek, *Use of Knowledge*, *supra* note 8, at 524–26, 529; 3 FRIEDRICH A. HAYEK, *LAW, LEGISLATION AND LIBERTY* 74–75 (1979).

89. Hayek, *Use of Knowledge*, *supra* note 8, at 524–26, 529; 3 FRIEDRICH A. HAYEK, *LAW, LEGISLATION AND LIBERTY* 74–75 (1979).

90. See, e.g., POSNER, *supra* note 3, at 40; WALDRON, *supra* note 86, at 390–422.

broadly aligned with these approaches and can draw upon them to address concerns about the distribution of decision-making authority.

C. Local Knowledge and Ownership Concentration

The capacity of a property system to channel local knowledge depends on the distribution of property rights in a society. The knowledge function of property is best served when property rights decentralize decision-making authority over resources, allocating it to a dispersed pool of owners who are more likely to have access to relevant local knowledge. When the ownership of resources is highly concentrated, it becomes less likely that owners will actually have relevant local knowledge about the resources they control. The absentee owner of a vast swath of farmland, for instance, is arguably in no better position in terms of local knowledge than a central planning bureaucracy. This caveat regarding ownership concentration is broadly consistent with at least some modern understandings of property. Joseph Singer, for instance, has argued that some degree of dispersal of ownership is built into what it means to have a system of private property.⁹¹

As discussed above, there are considerations other than local knowledge, such as minimizing transaction costs, that may explain the control of resources by larger organizations.⁹² The point at which the benefits of a larger organization are outweighed by the inability to act effectively on local knowledge is context-dependent and difficult to assess as an empirical matter. The degree of decentralized control, within a property system as a whole, that is necessary to best take advantage of local knowledge is also difficult to pinpoint empirically. However, if one acknowledges that one of the functions of a property system is to decentralize decision-making about resources, then there is presumably a point at which ownership concentration would become so great that the property system would no longer adequately serve that function.⁹³

The local knowledge justification for property rights thus comes with an important caveat regarding the distribution of property rights. If ownership is unduly concentrated, then property rights do not, in fact, result in decentralized control over resources by parties more likely to have access to local knowledge. A single owner of a vast territory has fewer opportunities to acquire local knowledge about the land than would be the case if the land were divided into many smaller parcels, each with a separate owner.

The claim that property systems are best able to channel local knowledge when ownership is dispersed within a society aligns with recent empirical work in development economics that establishes two key propositions: 1) secure

91. SINGER, *supra* note 86, at 170.

92. *See infra* Part III.B.

93. The same problem could arise through the concentration of decision-making authority in the officers of corporations, even if the ownership of the shares of those corporations were broadly held.

property rights are important institutional precursors for economic development,⁹⁴ and 2) significant ownership concentration can hinder economic development.⁹⁵

The correlation between secure, formal, private property rights and high levels of economic development is quite strong.⁹⁶ A large body of economic literature supports the importance of property rights to economic development, though the causal link is not straightforward.⁹⁷ Property rights are arguably a necessary element of the institutional package that promotes economic development, even

94. See Douglass C. North & Robert Paul Thomas, *An Economic Theory of the Growth of the Western World*, 23 *ECON. HIST. REV.* 1 (1970); Douglass C. North & Barry R. Weingast, *Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England*, 49 *J. ECON. HIST.* 803 (1989); Douglass C. North, *Institutions and Economic Growth: An Historical Introduction*, 17 *WORLD DEV.* 1319 (1989); Dani Rodrik et al., *Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development* 9 *J. ECON. GROWTH* 131 (2004); Daron Acemoglu et al., *The Colonial Origins of Comparative Development: An Empirical Investigation*, 91 *AM. ECON. REV.* 1369 (2001) [hereinafter Acemoglu et al., *Comparative Development*]; Daron Acemoglu & Simon Johnson, *Unbundling Institutions*, 113 *J. POL. ECON.* 949 (2005) [hereinafter Acemoglu & Johnson, *Unbundling Institutions*]; Daron Acemoglu et al., *Institutions as a Fundamental Cause of Long-Run Growth*, in 1A *HANDBOOK OF ECONOMIC GROWTH* 385 (Philippe Aghion & Steven N. Durlauf eds., 2005); Besley & Ghatak, *supra* note 4, at 4552-58; HERNANDO DE SOTO, *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* (2000).

95. See Philippe Aghion et al., *Inequality and Economic Growth: The Perspective of the New Growth Theories*, 37 *J. ECON. LITERATURE* 1615 (1999); DARON ACEMOGLU & JAMES A. ROBINSON, *WHY NATIONS FAIL: THE ORIGINS OF POWER, PROSPERITY, AND POVERTY* 428-62 (2012) [hereinafter ACEMOGLU & ROBINSON, *WHY NATIONS FAIL*]; Sheilagh Ogilvie and A.W. Carus, *Institutions and Economic Growth in Historical Perspective*, in 2A *HANDBOOK OF ECONOMIC GROWTH* 403, 444-50 (Philippe Aghion & Steven N. Durlauf, eds., 2014) (arguing that property rights facilitate growth when they are “generalized”, i.e., open to all agents in the economy and not just a subset).

96. The list of the top 30 countries in the world as measured by GDP per capita is dominated by countries with secure regimes of formal property rights, which establishes some level of correlation, though not necessarily causation. INT’L MONETARY FUND, *Report for Selected Countries and Subjects*, WORLD ECONOMIC OUTLOOK DATABASE, April 2019, https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?most_recent_value_desc=true (last visited 28 Jan. 2020); see also Ceyhan Haydaroglu, *The Relationship Between Property Rights and Economic Growth: An Analysis of OECD and EU Countries*, 6 *DANUBE* 217 (2015).

97. See North & Thomas, *supra* note 94; North & Weingast, *supra* note 94; Rodrik et al., *supra* note 94; North, *supra* note 94; Acemoglu et al., *Comparative Development*, *supra* note 94; Acemoglu & Johnson, *Unbundling Institutions*, *supra* note 94; Besley & Ghatak, *supra* note 4; DE SOTO, *supra* note 94, at 16-17. But see Ha-Joon Chang, *Institutions and Economic Development: Theory, Policy and History*, 7 *J. INSTITUTIONAL ECON.* 473, 494 (2011) (cautioning against concluding that the strongest possible property rights are always best); ACEMOGLU & ROBINSON, *WHY NATIONS FAIL*, *supra* note 95, at 428-62 (emphasizing the importance of “inclusive” political institutions, which include but are not limited to a stable property rights regime); Naomi R. Lamoureaux, *The Mystery of Property Rights: A U.S. Perspective*, 71 *J. ECON. HIST.* 275 (2011); Michael Trebilcock & Paul-Erik Veel, *Property Rights and Development: The Contingent Case for Formalization*, 30 *U. PA. J. INT’L L.* 397 (2008).

if they are seemingly not a sufficient condition for growth.⁹⁸ One of the more recent empirical insights emphasizes the importance of “inclusive” institutions, including institutions that limit economic inequality, for economic growth.⁹⁹ Others have argued that property rights are most likely to promote growth when they are “generalized,” meaning they are open to all agents in the economy and not just a narrow subset.¹⁰⁰

Conventional explanations for the inverse relationship between inequality and growth include: the association between inequality and “extractive” or corrupt political institutions, limits on access to credit by those without significant property holdings, and enhanced gains from trade and incentive effects when ownership rights can be sold to a wider range of parties.¹⁰¹ However, the knowledge function of property may also help explain why property rights seem to work best where ownership concentration is limited. Where ownership is highly concentrated, property rights are less effective at channeling local knowledge into decisions about resources. In societies in which the ownership of resources is highly concentrated, resources are less likely to be owned by a party with access to relevant local knowledge about them. Parties on the ground, such as the residents of a shantytown, may still acquire local knowledge, but they are prevented from effectively acting on it without a formally recognized property interest.¹⁰² In such cases, the property system denies decision-making authority to those with access to local knowledge, effectively the inverse of a knowledge-channeling property system with more broadly distributed property rights.

Ownership concentration appears to be a particularly important factor for economic development in the agricultural sector. In the mid-20th century, a number of countries, including Japan, South Korea, and Taiwan, achieved high levels of growth in agricultural productivity following land reforms that significantly reduced the ownership concentration of arable land.¹⁰³ These reforms have also been credited as a cause of the rapid growth and industrialization of these economies in the latter half of the 20th century.¹⁰⁴ The associated productivity gains are often attributed to the improved incentives

98. ACEMOGLU & ROBINSON, *WHY NATIONS FAIL*, *supra* note 95, at 429–30.

99. *Id.* at 428–62.

100. Ogilvie & Carus, *supra* note 95, at 444–50.

101. ACEMOGLU & ROBINSON, *WHY NATIONS FAIL*, *supra* note 95, at 368–403; Sarah Voitchovsky, *Inequality and Economic Growth*, *THE OXFORD HANDBOOK OF ECONOMIC INEQUALITY* 549, 559 (Wiemer Salverda, Brian Nolan & Timothy M. Smeeding eds., 2009); Ogilvie & Carus, *supra* note 95, at 444–50.

102. *See, e.g.* DE SOTO, *supra* note 94, at 15–28.

103. Cristóbal Kay, *Why East Asia Overtook Latin America: Agrarian Reform, Industrialisation and Development*, 23 *THIRD WORLD Q.* 1073, 1077, 1079–84 (2002); Yoong-Deok Jeon & Young-Yong Kim, *Land Reform, Income Redistribution, and Agricultural Production in Korea*, 48 *ECON. DEV. & CULTURAL CHANGE* 253, 264–65 (2000); JOE STUDWELL, *HOW ASIA WORKS: SUCCESS AND FAILURE IN THE WORLD'S MOST DYNAMIC REGION* 25–34 (2013).

104. Kay, *supra* note 103, at 1079–84; STUDWELL, *supra* note 103.

agricultural workers face when they are cultivating their own land, and the difficulties associated with monitoring farmers.¹⁰⁵ However, the enhanced ability of owner-cultivators to incorporate local knowledge into their decisions, including decisions to adopt technological innovations, may have also played a part.

The association between ownership concentration and growth in agriculture is especially noteworthy. Local knowledge is particularly important in the agricultural sector, where constantly changing factors specific to a particular place and time, such as soil conditions and weather, are so significant.¹⁰⁶ It is therefore particularly difficult for those without first-hand experience of local conditions to make effective resource-management decisions in this sector. The fact that ownership concentration seems especially significant to growth in a sector in which local knowledge is so important invites further investigation. The function of widely dispersed property rights in channeling local knowledge into decisions may be under-appreciated as a mechanism for growth by development economists. This could be a fruitful topic for future empirical scholarship.

D. Property Institutions and Local Knowledge

In principle, a wide range of property institutions can channel local knowledge. The local knowledge argument can serve to justify both individual property rights as well as collective rights in common-pool resources managed by a defined group of people. An individual owner of a resource is well-positioned to learn about its localized features, but members of a group managing a resource can also acquire and act upon such knowledge under the right circumstances. As long as group membership is limited and internal processes exist for sharing information and making collective decisions based on that information, a group ought to be able to channel local knowledge about a common-pool resource. Indeed, existing literature on common-pool resources indicates that the management of such resources is most likely to succeed in cases involving either small groups or larger organizations that include smaller nested groups.¹⁰⁷ These conditions help to ensure parties can effectively share information relevant to local conditions and act upon it.¹⁰⁸

The local knowledge argument for property is also consistent with a range of other doctrinal specifications that may accompany a property interest. For instance, while the choice to alienate a resource is one important decision that

105. Jeon & Kim, *supra* note 103, at 260–65.

106. SCOTT, *supra* note 11, at 318.

107. Ellickson, *supra* note 10, at 1346–52; ELINOR OSTROM, GOVERNING THE COMMONS 101–02 (Canto Classics ed. 2015); ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 177–78 (1991) (explaining the significance of “close-knit groups” to the development of effective norms, including norms governing a commons) [hereinafter ELLICKSON, ORDER WITHOUT LAW].

108. ELLICKSON, ORDER WITHOUT LAW, *supra* note 107, at 177–78.

can be informed by local knowledge, alienability is not essential to the argument. A property owner without the power to alienate is still able to make other important decisions about the agenda for a resource that can be informed by local knowledge. In cases where special considerations may motivate alienation restraints, such as with respect to Indigenous interests in land, the argument from local knowledge can still explain and help to justify the core characteristics of the interest, including the power of owners to make decisions about the use of the resource.

Similarly, the local knowledge argument for property rights is consistent with restrictions on the use of a resource, as long as a sufficient degree of residual control rests with the owner. A residential homeowner may not have the right to build a multi-story tower on his land, but he can still be empowered to act on local knowledge in many other significant ways. Indeed, the success of urban communities may depend in part on institutions' ability to take account of local knowledge, even if the density of these communities also means there are more likely to be spillover effects on neighbors that motivate land use restrictions.

The urban theorist Jane Jacobs emphasized the pitfalls of seeking to impose development plans through top-down processes that fail to account for the existing diversity of uses.¹⁰⁹ A thriving neighborhood typically includes a mix of homes and businesses suited to the needs and lifestyles of the residents, whereas one of the hallmarks of planned communities in the 20th century was a sterile separation of uses.¹¹⁰ Property rights are one of the key mechanisms that allow locals to act on their knowledge of life in the community in providing for a diverse set of land uses. There may be good reasons to restrict certain uses. For instance, a new tower could conceivably disrupt the pattern of life in a neighborhood in detrimental ways. However, the residual power of owners to make land-use decisions still plays an important role in channeling local knowledge. Even if certain uses are restricted, the availability of a meaningful range of potential land uses allows owners to adapt to local conditions.

Local knowledge arguments can justify property regimes in a number of different institutional settings in part because the argument is consistent with a range of complementary normative principles. However, despite the adaptability of local knowledge arguments, there is one key requirement that must be satisfied. A property system must provide a mechanism for recognizing the decision-making authority of a dispersed pool of owners. If a resource management regime fails to decentralize decision-making authority in this way, then it is not likely to be capable of adequately channeling local knowledge into decisions about resources.

109. JANE JACOBS, *THE DEATH AND LIFE OF GREAT AMERICAN CITIES* 143–49, 435–39 (1961). *See also* SCOTT, *supra* note 11, at 103–46 (contrasting “high-modernist” urban theory, which emphasized visual order, with Jacobs’ work, which starts from the lived experience of urban life).

110. JACOBS, *supra* note 109, at 143–49, 435–39.

E. Property and Subsidiarity

There is a certain affinity between the local knowledge argument for property and the principle of “subsidiarity,” which holds that more centralized authorities should have a subsidiary function, performing tasks that cannot effectively be performed at a more local level.¹¹¹ Originally derived from Catholic social thought, “subsidiarity” came to be adopted in the 20th century as a principle of European Union law.¹¹² The concept has also proven influential in scholarship relating to federalism, international law, and environmental law.¹¹³ Indeed, the growing appreciation for the principle of subsidiarity in these fields has meant that the importance of local decision-making is today more often acknowledged in discussions of public law than it is with respect to property and private law.

The classical justification for subsidiarity is based on moral agency and responsibility, as well as access to human goods associated with the exercise of agency. The basic argument is that centralized authorities should not “absorb” their constituent local associations and members, but rather leave them space for meaningful action.¹¹⁴ People should not be reduced to cogs in a larger machine because doing so deprives them of agency and the human goods associated with contributing in a meaningful way to the decisions that affect them.¹¹⁵ Authority should rest at the most decentralized level that is effective—which could be a family, community association, or local government—not necessarily because these bodies will make “better” decisions, but rather because decentralized authority more fully respects the humanity of those subject to the decisions.¹¹⁶ A traditional defense of property based on subsidiarity would thus emphasize the moral agency of those involved in decision-making, such as individual families and business owners, rather than the local knowledge they may be able to draw upon.

A consequentialist argument for property based on the importance of local knowledge differs in important ways from the classical justification for subsidiarity. My argument has been that the decentralized decision-making that property facilitates tends to be “better” than more centralized decision-making, in terms of the consequences for those affected by it. This argument focuses on the informational content going into a decision and the resulting effects of the

111. FINNIS, *supra* note 83, at 144–47.

112. Robert K. Vischer, *Subsidiarity as a Principle of Governance: Beyond Devolution*, 35 IND. L. REV. 103, 108–26 (2001).

113. *See id.* at 127–42; Paolo G. Carozza, *Subsidiarity as a Structural Principle of International Human Rights Law*, 97 AM. J. INT’L L. 38 (2003); James L. Huffman, *Making Environmental Regulation More Adaptive Through Decentralization: The Case for Subsidiarity*, 52 U. KAN. L. REV. 1377 (2004); Dwight Newman, *Changing Division of Powers Doctrine and the Emergent Principle of Subsidiarity*, 74 SASK. L. REV. 21 (2011).

114. FINNIS, *supra* note 83, at 144–47; Vischer, *supra* note 112, at 108–10.

115. FINNIS, *supra* note 83, at 144–47.

116. *Id.*

decision, rather than the inherent value and human goods associated with participating meaningfully in a decision.

While the local knowledge argument for property is clearly distinct from traditional accounts of the subsidiarity principle, these arguments do align in endorsing decentralized decision-making in the absence of countervailing justifications. The local knowledge argument can thus readily be adapted as a supplementary justification for the principle of subsidiarity. On this account, local decision-making should be preferred not just out of respect for human agency and the human goods associated with meaningful participation in decision-making, but also because local decision-makers are more likely to be able to draw upon valuable local knowledge relevant to the decision.¹¹⁷ Indeed, this local-knowledge-based reinforcement of the subsidiarity principle is relevant not just with respect to property, but also in the various public law domains in which subsidiarity is more commonly invoked. Widely held property rights, like local government, can be viewed as a manifestation of the broader principle of subsidiarity, which in turn is justified on overlapping grounds which include the argument from local knowledge.

III. LOCAL KNOWLEDGE AND PROPERTY LAW

The local knowledge function of property rights helps to answer one of the most basic questions about property rights: why should we have this ubiquitous institution, as opposed to some other, more centralized approach to resource management? But in addition to shedding light on the justification for property rights, the local knowledge function of property law can also help explain a number of basic doctrinal features of property law regimes. Here I will focus on three elements: 1) the agenda-setting authority of owners; 2) the role of physical proximity to a resource under the concepts of possession and accession; and 3) the role of temporal proximity to a resource under doctrines that limit a past owner's power to bind the decision-making authority of current owners.

A. Agenda-Setting Authority

Larissa Katz has persuasively argued that the essential feature of property is the exclusive right of the owner to set the agenda for a resource.¹¹⁸ An owner's exclusive agenda-setting position includes the authority to make decisions such as how the resource will be used and by whom. Katz contrasts her account of the concept of property with the views of "boundary theorists," who emphasize

117. The connection between subsidiarity and these kinds of local knowledge is occasionally made in public law. See, e.g., Huffman, *supra* note 113, at 1378–79 (2004); Aurélian Portuese, *The Principle of Subsidiarity as a Principle of Economic Efficiency*, 17 COLUM. J. EUR. L. 231, 236–37 (2011).

118. Katz, *Exclusion and Exclusivity*, *supra* note 37, at 277–78.

the right to exclude as being the essential feature of the concept of property.¹¹⁹ Her account also stands in contrast to those that allow for a broader range of essential features of property rights, such as the right to possess, the right to use, and the right to income, as well as accounts that hold property to be a purely conventional “bundle of rights” with no essential features.¹²⁰ Katz defends her approach primarily in terms of its descriptive fit with existing property law doctrine. Unlike the right to exclude, which sometimes must yield to other considerations, the right to set the agenda for a resource, at least as against other private parties, is present in virtually all circumstances in which property as a concept is invoked. Moreover, other important rights, including the right to exclude, use, and possess can be understood as subsidiary to the right to set the agenda for the resource.¹²¹ Each of these subsidiary rights can assist the owner in her exercise of the over-arching right to set the agenda for the resource.

The local knowledge function of property helps to reinforce the view that agenda-setting authority is indeed central to the concept of property. The owner’s authority to set the agenda is the key doctrinal element necessary to allow owners to channel local knowledge into decisions about their resources. Property could not serve its knowledge-channeling function if owners were not empowered to act on their knowledge by making important decisions about their resources. The agenda-setting authority of owners is thus central and necessary to the local knowledge function of property. The same could not necessarily be said for other incidents of property ownership. For instance, an owner without a right to exclude could still effectively channel local knowledge into decisions about the resource, as long as other agenda-setting powers were present. Limits on the right to exclude from a quasi-public space like a shopping mall, for instance, would not necessarily deprive the owner of the right to set the agenda for the space by leasing out retail space and building inviting corridors and attractions, and those decisions could be grounded in local knowledge about the mall and its potential customers.¹²²

It must be acknowledged that exclusion and agenda-setting are closely connected. An owner’s right to exclude implicitly protects an indefinite range of uses from which an owner can choose.¹²³ At the same time, it is unlikely that a property system could effectively maintain owners’ agenda-setting authority in many settings without the right to exclude, at least as a baseline

119. See Merrill, *Right to Exclude*, *supra* note 71. See also J.E. PENNER, *THE IDEA OF PROPERTY IN LAW* 68–104 (1997) (arguing “the right to property should be conceived as the right of exclusive use”).

120. Honoré, *supra* note 71; Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 *YALE L.J.* 16, 28–33 (1913); Thomas C. Grey, *The Disintegration of Property*, 22 *NOMOS* 69 (1980).

121. Cf. Merrill, *Right to Exclude*, *supra* note 71, at 740–45 (proposing most other attributes of property may be derived from the right to exclude).

122. See *Harrison v. Carswell*, [1976] 2 S.C.R. 200 (Can.).

123. Smith, *Property and Property Rules*, *supra* note 26, at 1754.

presumption.¹²⁴ Indeed, the right to exclude is often essential to the practical functioning of property systems. From the point of view of channeling local knowledge into decisions, however, agenda-setting authority is conceptually necessary, while exclusion may only be a practical necessity in many cases.

The argument from local knowledge provides a functionalist justification for property that closely fits the descriptive account of property as exclusive agenda-setting authority. In this sense, it may help to complete the agenda-setting account of property as a legal theory that both fits and *justifies* property.¹²⁵ There are other normative arguments that fit with the agenda-setting account of property, including an argument from individual autonomy that Katz herself makes: essentially, the agenda-setting authority of owners helps to create a sphere of autonomy for them.¹²⁶ The account of property as channeling local knowledge can perhaps serve as a functionalist justificatory complement to Katz's rights-based account grounded in individual autonomy.

Indeed, this kind of overlap between rights-based and functionalist accounts of the law fits with a broader trend in private law theory. One of the hallmarks of the so-called "new private law" is a growing understanding of the ways in which functionalist and rights-based accounts of private law converge in explaining and justifying private law doctrines.¹²⁷ To the extent that there is overlap between an understanding of property based on channeling local knowledge and an understanding of property informed by individual autonomy considerations, this would seem to provide further evidence of the moral pluralism underlying private law doctrine.

It is interesting to note that other consequentialist justifications for property, such as those based on internalizing costs and benefits, tend to point to the right to exclude as the essential feature of property. Property creates incentives to work, produce, improve, and avoid the overuse of resources only to the extent that other parties can be excluded. Exclusion is necessary to these arguments, whereas agenda-setting does not seem to be. The incentive to sow today is only enhanced by property rights if one can exclude others from reaping in the future. Similarly, property only creates incentives to avoid the overuse of resources if one can exclude others from using the resource and thus internalize the long-term benefits. Setting the agenda for the resource does not obviously have the same significance to these arguments.

124. On the cost trade-offs associated with using governance rather than exclusions strategies to manage resource conflicts, see Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. 453 (2002).

125. See generally Ronald Dworkin, *Hard Cases*, 88 HARV. L. REV. 1057, 1097–101 (1975) (discussing the criteria of fit and justification).

126. Katz, *Exclusion and Exclusivity*, *supra* note 37, at 311–15.

127. John C.P. Goldberg, *Introduction: Pragmatism and Private Law*, 125 HARV. L. REV. 1640, 1662–63 (2012); Smith, *Law of Things*, *supra* note 33, at 1725–26. See also Andrew S. Gold, *Internal and External Perspectives: On Methodology in the New Private Law*, THE OXFORD HANDBOOK OF THE NEW PRIVATE LAW (Andrew S. Gold et al. eds., 2020).

The truth may be that property is justified on a number of different, overlapping grounds, some of which point to exclusion as the essential doctrinal element and some of which point to agenda-setting. The acknowledgment of moral pluralism underlying property may mean that the attempt to identify a single doctrinal feature as the essence of property is misguided. From the restricted point of view of the argument from local knowledge, however, exclusive agenda-setting authority is the essential feature.

B. Proximity-Reinforcing Doctrines

1. Possession

The knowledge function of property can also help explain the central role of the concept of possession in property law. At common law, possession is presumptive evidence of ownership.¹²⁸ Possession also serves to order the priority of competing claims, with earlier possession taking precedence over later possession.¹²⁹ Perhaps most controversially, under the doctrine of adverse possession, continuous possession over a given period of time can give rise to a claim that can defeat the claim of the title holder.¹³⁰ Scholars have argued that possession, including the doctrine of adverse possession, serves a range of functions that include: 1) incentivizing the productive use of resources, since parties in possession are more likely to be using resources productively;¹³¹ 2) providing a signal to third parties as to who controls the resource and protecting third-party expectations that form based on that signal;¹³² and 3) helping to ensure that objects of property have owners setting their agenda.¹³³

The local knowledge function of property law provides an alternative way of understanding the significant role of possession in property law. Essentially, possessors are more likely to have relevant knowledge about the resource than non-possessors, which means they are presumptively in a better position to make decisions about the resource than non-possessors. Possessors of a resource have

128. THOMAS W. MERRILL & HENRY E. SMITH, *PROPERTY: PRINCIPLES AND POLICIES* 72, 82, 90 (3d ed. 2017) (“First possession is used to establish ownership when the thing being claimed is regarded as unowned—as being up for grabs.”) [hereinafter MERRILL & SMITH, *PROPERTY*]; BRUCE ZIFF, *PRINCIPLES OF PROPERTY LAW* 153, 175 (7th ed. 2018) (“Possession or the right to possession, not ownership or title per se, determines the ability of an owner (or other aggrieved person) to sue in tort in response to a wrongful interference with chattels.”) [hereinafter ZIFF, *PROPERTY LAW*].

129. MERRILL & SMITH, *PROPERTY*, *supra* note 128, at 125, 857; ZIFF, *PROPERTY LAW*, *supra* note 128, at 175–77.

130. 16 POWELL ON REAL PROPERTY §§ 91.01, 3 (Michael Allan Wolf ed., Matthew Bender 2005) (1949); MERRILL & SMITH, *PROPERTY*, *supra* note 128, at 161; ZIFF, *PROPERTY LAW*, *supra* note 128, at 161–62.

131. POWELL, *supra* note 130, § 91.0; MERRILL & SMITH, *PROPERTY*, *supra* note 128, at 173; ZIFF, *PROPERTY LAW*, *supra* note 128, at 163.

132. Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73 (1985).

133. Larissa Katz, *The Moral Paradox of Adverse Possession*, 55 MCGILL L.J. 47 (2010).

physical proximity to the resource and are more likely to be engaged in activities with it, two of the key indicators of local knowledge. Of course, the superior knowledge of parties in possession must be balanced against other factors, including the benefits of certainty of title and facilitating efficient transactions that come with having a concept of ownership that is distinct from possession. Nevertheless, the privileged epistemic position of parties in possession provides a basis for preferring their claims in the absence of evidence of superior title, as well as possibly for preferring the claim of a long-term possessor over that of an owner who has completely disengaged from the resource. Parties in possession have better information, and are likely to make better decisions, and so there would have to be a good countervailing reason to allow someone else to claim the resource.

Local knowledge is thus one of the ideas that helps explain the role of possession in property law. Importantly, the local knowledge function of possession is not diminished or rendered obsolete in any way by reliance on written records, unlike some of the other functions of possession. For instance, the signaling role of possession becomes much less significant when reliable title records are available, especially when records are guaranteed by public title registries. When there are reliable title records, third parties, including potential purchasers or creditors, no longer have to rely on possession as a signal of likely ownership. Rather, they can simply check the records. The existence of land title registries is often cited as one of the main arguments for legal reforms that downgrade the importance of possession, including proposals to abolish adverse possession.¹³⁴ Where registries are in place, reliance interests are arguably better served by protecting the rights of the registered owner, rather than long-term possessors. Indeed, most Canadian provinces with “Torrens” land title registries that guarantee registered interests have abolished adverse possession.¹³⁵

The trend in the law of adverse possession in the U.S. has also been towards greater emphasis on written records rather than actual possession. Some states now require, as a precondition for an adverse possession claim, that an occupant have paid property taxes for the relevant time period or have entered into possession pursuant to a document or deed ostensibly granting title.¹³⁶ These

134. ATLA. L. REFORM INST., ADVERSE POSSESSION AND LASTING IMPROVEMENTS TO WRONG LAND 10–12 (2020), <https://www.alri.ualberta.ca/wp-content/uploads/2020/05/FR115.pdf>.

135. *Id.* at 35, 107–09.

136. *See, e.g.*, ALA. CODE § 6-5-200 (2020) (requiring that an occupant be listed in the relevant county for taxation purposes, hold title under a recorded deed or document, or have inherited the claim from a predecessor in title in possession of the land); CAL. CIV. PROC. CODE § 325 (Deering 2021) (The provision requires the payment of taxes as a precondition for an adverse possession claim. It also creates a heightened standard for possession in the case of claims not founded upon a written instrument, judgment, or decree.) Other states provide for shorter limitations periods where taxes have been paid or the claimant entered into possession pursuant to a deed or other document purporting to grant title. *See* COLO. REV. STAT. §§ 38-41-101, 38-41-108 (2020)

approaches are consistent with the view that the function of possession is primarily one of signaling. Under these reforms, adverse possession claims are limited to cases where other signals of ownership, such as deeds or tax records, are at least ambiguous.

The local knowledge function of possession provides a note of caution with respect to proposals to diminish the legal significance of possession. Property interests that are formally or effectively indefeasible, even against the claims of long-term adverse occupants, allow owners to disengage completely from their resource for long periods of time, without the risk of being replaced as the owner. There are, of course, other features of property rights that encourage active ownership, most notably the positive incentive to derive income and other benefits from the resource. However, it should be concerning that recent trends undermine a doctrine that works to ensure that decision-makers are at least minimally engaged with resources they own. Such reforms make it more likely that there will be absentee owners lacking relevant local knowledge about resources they have the formal power to control, while preventing the property system from conferring legal authority on long-term occupiers who would presumptively have significant accumulated local knowledge.

2. Accession

The argument from local knowledge can also provide a compelling explanation for accession, a general principle of property law for allocating ownership of new resources, including newly discovered resources or newly salient resources.¹³⁷ Under the principle of accession, ownership of a new resource is assigned to the owner of another resource prominently connected to the new resource.¹³⁸ Accession may be conceptualized either as the acquisition of a resource by the original owner or, alternatively, as the delineation of the proper scope of the original owner's claim as including (or not) the new or newly salient resource.¹³⁹

A recent article by Thomas Merrill argues that the principle of accession can explain a wide range of property law doctrines.¹⁴⁰ The ownership of newborn animals is assigned to the owner of the mother.¹⁴¹ The ownership of crops is

(providing for an 18-year limitation period as the default, but also providing for a seven-year limitation period in cases where the claimant entered under color of title and paid applicable taxes). See also 4 TIFFANY REAL PROP. § 1138 (3d ed. 2020); RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 7.14 (AM. L. INST. 2000) (providing for presumptive extinguishment of unrecorded servitudes under recording acts).

137. Thomas W. Merrill, *Accession and Original Ownership*, 1 J. LEGAL ANALYSIS 459, 462–63 (2009) [hereinafter Merrill, *Accession*].

138. *Id.* at 463.

139. The acquisition-based view is advanced by Merrill. *Id.* For the view that accession is about delineating the scope of ownership, see Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1766–71 (2007).

140. Merrill, *Accession*, *supra* note 137, at 463–64.

141. *Id.* at 464–65.

assigned to the owner of the land.¹⁴² Under the doctrine of accretion, the owner of land bounded by water holds the title to land that is created by gradual changes in the water level or alluvial deposits.¹⁴³ Under the doctrine of fixtures, the owner of land also owns chattels annexed to the land.¹⁴⁴ Similarly, with respect to attached chattels, the owner of the larger or more valuable chattel generally holds title to the newly created whole.¹⁴⁵ The owner of land has a claim to chattels that have been mislaid, buried, or stored on the land, subject to the interest of the true owner of the chattels.¹⁴⁶ Merrill pushes the concept of accession beyond these core cases, arguing for instance that the *ad coelum* rule, according to which the owner of the surface presumptively holds title to airspace and subsurface minerals, is also a manifestation of accession. On this way of thinking, newly discovered minerals or airspace that becomes useful to the surface owner can be understood as being assigned to the owner of the surface.¹⁴⁷

There are a number of possible explanations for the principle of accession. It may lower information costs by providing a salient and intuitive solution to the question of the ownership of new resources.¹⁴⁸ It is easy for third parties to understand that the ownership of a foal goes to the owner of the mare, for example. Accession can also avoid some of the problems associated with other approaches to assigning ownership of new things, such as the principle of first possession. For instance, the principle of first possession can give rise to wasteful “races” to be the first to possess, which is something that the principle of accession avoids.¹⁴⁹ However, perhaps the most significant benefit of accession is that it assigns ownership to parties who are likely to be competent owners. The owner of a resource prominently connected to a new resource is likely to have access to the new resource, as well as access to capital to improve it.¹⁵⁰ In many cases, though, the main reason that the owner is particularly likely to be competent will be the local knowledge she holds by virtue of already owning a closely connected resource.¹⁵¹

The owner of a connected resource is likely to have a body of knowledge relevant to using and managing the resource in that context. The owner of a farm is likely to know what to do with the crops growing on it. If the farm is bounded by a river, the owner is likely to know how to put new land created by alluvial deposits to good use. The owner of a boat hull is likely to know what to

142. *Id.* at 465.

143. *Id.* at 465–66.

144. *Id.* at 467.

145. *Id.* at 466.

146. *Id.* at 471.

147. *Id.* at 467.

148. *Id.* at 476–79.

149. *Id.* at 482–83.

150. *Id.* at 489.

151. *Id.*

do with the finished yacht built from the hull.¹⁵² The owner of land is likely to know how to use and manage a house built on the land, including the associated fixtures. The owner of the surface of the land is likely to know how to use the airspace above the land up to a reasonable height, typically for building up from the surface. Incidentally, it should be acknowledged that the owner of the surface may know very little about mining for the minerals below. The local knowledge explanation for accession in the case of minerals does not seem to hold. This may help explain why in many jurisdictions outside of the United States the ownership of minerals is presumptively held by the state and not the surface owner.¹⁵³

Local knowledge is not the only possible justification for the principle of accession. However, in many contexts involving physical resources, it is arguably the most compelling one. Merrill has argued that the principle of accession is “ubiquitous” in the law of property.¹⁵⁴ Its ubiquity may in part reflect the importance of the local knowledge held by owners to a well-functioning property system.

C. Temporal Proximity: Future Interests, Alienation Restraints, and the Numerus Clausus Principle

A range of doctrines work to limit the control of resources by past owners. These include the rule against perpetuities, the rule against unreasonable restraints on alienation, and the so-called *numerus clausus* principle. The rule against perpetuities limits the time period within which a contingent future interest must vest, if it is going to vest at all.¹⁵⁵ The rule against unreasonable restraints on alienation restricts the ability of an owner to impose legally binding restrictions on the future transfer of a property interest, either directly or indirectly.¹⁵⁶ Finally, the *numerus clausus* principle limits the recognition of property interests that do not fit within existing categories of interests, including interests subject to unique restrictions on the power of the owner.¹⁵⁷ Each of these doctrines limits the ability of an owner to place restrictions on a property

152. See *McKeown v Cavalier Yachts Proprietary Ltd*, (1988) 13 NSWLR 303 (Austl.).

153. Thomas W. Merrill, *Four Questions About Fracking*, 63 CASE W. RESV. L. REV. 971, 977 (2013). There are also other possible explanations, including the fact that the optimal scale for extracting minerals seldom overlaps with the optimal scale for surface activities like farming or housing. See Lee Ann Fennell, *Commons, Anticommons, Semicommons*, in RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW 35, 38–39 (Kenneth Ayotte & Henry E. Smith eds., 2011).

154. Merrill, *Accession*, *supra* note 137, at 464.

155. RESTATEMENT (THIRD) OF PROP.: WILLS AND OTHER DONATIVE TRANSFERS § 27.1 (AM. L. INST. 2011); CHARLES HARPUM ET AL., THE LAW OF REAL PROPERTY 320–324 (8th ed. 2012).

156. MERRILL & SMITH, PROPERTY, *supra* note 128, at 858; POWELL, *supra* note 130, §§ 72.01, 77.01; ZIFF, PROPERTY LAW, *supra* note 128, at 303–05.

157. See *Keppell v. Bailey* (1834) 39 Eng. Rep. 1042, 1049; 2 My. & K 517, 535–36; ZIFF, PROPERTY LAW, *supra* note 128, at 66–67; Merrill & Smith, *Optimal Standardization*, *supra* note 33, at 12–14.

interest that would bind a future owner, including restrictions based on the use of the resource or who can come to hold it. These doctrines have been recognized as serving a number of purposes, including: limiting complexity and lowering the information costs that would otherwise be associated with novel property interests;¹⁵⁸ protecting the autonomy interest of current owners, as against past owners;¹⁵⁹ avoiding the excessive decomposition of property interests into “anticommons” property;¹⁶⁰ and reflecting fundamental values about how social relationships should be structured.¹⁶¹

However, each of these doctrines also serves a related purpose of ensuring *temporal* proximity between decision-makers and the resources they control. This in turn makes it more likely that a decision about a resource will be made by a party with local knowledge that is current. The currency of local knowledge can be quite important because circumstances change and newer information is constantly being acquired by parties close to a resource.¹⁶² What may have seemed an appropriate restriction or condition to place on a resource in the past may no longer be so, and current owners are in the best position to assess information about changed circumstances.

For instance, an owner can make an interest contingent on a condition regarding the use of the resource or the identity of the owner, which can be a potent tool for controlling future activities. However, under the rule against perpetuities, the condition cannot remain indefinitely. It must be clear within the lifespan of a living person plus 21 years whether or not the condition has been satisfied.¹⁶³ The result is that, regardless of the content of the condition, eventually a future owner will hold the property interest unconditionally. The rule against unreasonable restraints on alienation and the *numerus clausus* principle also limit the ability of an owner to place restrictions on the use or transfer of a resource that will run with the property interest (as opposed to merely binding a particular successor in title with whom the transferor has privity of contract). The effect is to reinforce the agenda-setting control of the *current* owner,¹⁶⁴ who has closer temporal proximity to the resource and is thus in a better position to make decisions based on current knowledge of the resource.

158. Merrill & Smith, *Optimal Standardization*, *supra* note 33, at 24–42.

159. ZIFF, *PROPERTY LAW*, *supra* note 128, at 304; MERRILL & SMITH, *PROPERTY*, *supra* note 128, at 858.

160. Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 664–65 (1998).

161. Joseph William Singer, *Democratic Estates: Property Law in a Free and Democratic Society*, 94 CORNELL L. REV. 1009, 1049–51 (2009); Nestor M. Davidson, *Standardization and Pluralism in Property Law*, 61 VAND. L. REV. 1597, 1636–55 (2008).

162. Hayek, *Use of Knowledge*, *supra* note 8, at 524.

163. ZIFF, *PROPERTY LAW*, *supra* note 128, at 310.

164. Katz, *Exclusion and Exclusivity*, *supra* note 37, at 305–06.

It is still possible for an owner to bind future owners through easements or covenants running with the land. But these tools come with important restrictions on content that serve to preserve the agenda-setting control of the current owner, who presumptively has the best access to current, local knowledge about the resource.¹⁶⁵ Moreover, all of these interests are subject to modification or termination by a court, on the application of the current owner, where relevant conditions have changed.¹⁶⁶ This provides an avenue to ensure that an owner's full authority can ultimately be restored if the covenant or easement no longer serves its purpose, though admittedly the judge may not be as well-positioned as the owner to assess the change in circumstances.

And so, while the law does permit certain kinds of ongoing restrictions on the power of ownership, these are policed both as to content and as to duration, in a manner that shows a strong preference for the authority of the current owner, who presumptively has the best access to current local knowledge. It is possible that recent trends towards the relaxation or abolition of restrictions on past owner control, including the rule against perpetuities, may be justified on other grounds.¹⁶⁷ However, the local knowledge argument may provide a reason to believe that these doctrines do continue to serve an important function.

IV. CONCLUSION

I have argued here that one of the most basic functions of a property regime is to channel local knowledge of resources into decision-making about them. Property rights unite local knowledge about a resource and decision-making authority over that resource in the same party. If this understanding of the function of property is correct, then it has significant implications. The local knowledge argument provides an important and largely overlooked justification for property rights, at least in certain institutional settings. This justification is potentially contingent on the distribution of resources in a society since the knowledge function of property is impaired when ownership is highly concentrated. The local knowledge function of property also helps us understand the concept of property, along with some of the basic rules of property law. On this understanding of property, the agenda-setting authority of owners is of central significance. Moreover, the range of property doctrines that

165. For instance, in Commonwealth countries, positive covenants generally cannot run with the land. See *Rhone v. Stephens*, (1994) 2 All Eng. Rep. 65; *Durham Condominium Corp. No. 123 v. Amberwood Investments Ltd.*, (2002) 58 O.R. 3d 481 (Can. Ont. C.A.). In the United States, positive covenants are typically allowed to run with the land, but they may be removed if the obligation becomes excessive. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 7.12. See also ZIFF, PROPERTY LAW, *supra* note 128, at 420–25, 469; POWELL, *supra* note 130, §§ 34.02, 60.06.

166. POWELL, *supra* note 130, §§ 60.09, 60.10; ZIFF, PROPERTY LAW, *supra* note 128, at 479–80.

167. On the trend toward abolition of the rule against perpetuities, see Grayson M.P. McCouch, *Who Killed the Rule Against Perpetuities?*, 40 PEPP. L. REV. 1291 (2013); Max M. Schanzenbach & Robert H. Sitkoff, *Perpetuities or Taxes? Explaining the Rise of the Perpetual Trust*, 27 CARDOZO L. REV. 2465 (2006).

privilege the rights of those who are close to the resource, physically and temporally, seem to follow from property's role in channeling local knowledge.

Channeling local knowledge is not the only function that successful property systems must fulfill, but it is an important one. It is also one of the functions of property most consistently neglected by property scholars. To some extent, this neglect is understandable, given that issues related to fine-tuning existing legal institutions tend to be more salient than basic functions we may tend to take for granted.¹⁶⁸ However, a complete understanding of property as an institution requires an appreciation for the knowledge function served by devolving authority over resources to particular owners. I hope this article contributes to a fuller understanding of that function.

168. Merrill & Smith, *What Happened to Property?*, *supra* note 4, at 398.