

Article

Property in Land

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There is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property; or that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe

—*William Blackstone, Commentaries* (1766)¹

The proletariat will use its political supremacy to wrest, by degrees, all capital from the bourgeoisie, to centralize all instruments of production in the hands of the State, i.e., of the proletariat organized as the ruling class. . . .

[I]n the most advanced countries, the following [measures] will be pretty generally applicable.

1. Abolition of property in land. . . .
3. Abolition of all right of inheritance. . . .
8. . . . Establishment of industrial armies, especially for agriculture.

— *Karl Marx and Friedrich Engels, The Communist Manifesto* (1848)²

INTRODUCTION

Because human beings are fated to live mostly on the surface of the earth, the pattern of entitlements to use land is a central issue in social organization. As the epigraphs suggest, this issue has been the subject of fierce ideological controversy. Blackstone's paean to private property comports with the mainstream Anglo-American exaltation of decentralized ownership of land. This vision underlies the Homestead Acts, the Jeffersonian wish for a polity of yeoman farmers, and the American dream of homeownership. Defenders of private ownership of land argue that it promotes individual liberty, political stability, and economic prosperity. Indeed, some economic historians have identified the emergence of freehold land tenure in Western Europe after the Dark Ages as a major source of the great release of energy that ensued there.³

To commentators such as Marx and Engels, by contrast, the creation of private property in land is a fount of evils, particularly inequality in wealth and

1. 2 WILLIAM BLACKSTONE, COMMENTARIES *2.

2. Karl Marx & Friedrich Engels, *The Communist Manifesto*, in KARL MARX: SELECTED WRITINGS 221, 237 (David McLellan ed., 1977).

3. DOUGLASS C. NORTH & ROBERT PAUL THOMAS, THE RISE OF THE WESTERN WORLD 18 (1973) (comparing property rights systems of Holland and England with those of France and Spain).

the splintering of more organic communities into atomized, untrusting social environments of individual competition. The vision of collective living on shared land has had a broad and enduring appeal. It has inspired, among others, the Protestant sectarians, secular kibbutzniks, and counterculture experimentalists who have founded intentional communities. During the past century, skeptics of private property in land have come into power in a number of nation-states. In Israel, where the prevailing philosophy holds that land should belong collectively to the Jewish nation, 93% of the land area is state-owned; the Israeli Basic Law of Lands prohibits the government from transferring any of it except under special circumstances.⁴ Hewing to the program of Marx and Engels, Stalin collectivized Russian agriculture from 1929 to 1933 at the price of some nine million lives.⁵ Drawing on the same inspiration, Mao began China's Great Leap Forward in 1957, precipitating a famine that killed some 20 million.⁶ Two decades later, land collectivizations contributed to a million deaths in Kampuchea and another million in Ethiopia.⁷ Beyond dispute, botched land policies have been the chief domestic source of human woe during the past century.

This Article has four aims. First, and most conventionally, it aspires to identify and explore fundamental issues of land ownership—the rules that

4. See Conrad Black, *Why Israel is Still an Economic Basket Case*, JERUSALEM POST, Aug. 27, 1992, available in LEXIS, Nexis Library, Jerusalem Post File (quoting 93% figure); Basic Law: Israel Lands, 14 L.S.I. 48 (1960), reprinted in 8 CONSTITUTIONS OF THE COUNTRIES OF THE WORLD (Albert P. Blaustein & Gisbert H. Flanz eds., 1988). In reality, the State of Israel commonly transfers land to collective farms and cooperative settlements by long-term renewable lease at nominal rent. See HARVEY H. SMITH ET AL., AREA HANDBOOK FOR ISRAEL 289 (1970).

5. Stalin forced both independent farmers and communal villagers into state-supervised collective farms. This dekulakization campaign and the ensuing famine of 1930-1933 were particularly devastating in the Ukraine. The number of fatalities is an ideologically freighted issue and has been much disputed. For estimates based on Soviet archival sources first opened in the late 1980's, see, e.g., ROBERT C. TUCKER, STALIN IN POWER 639 n.68 (1990) (reporting Murray Feshbach's estimate of 7-10 million famine deaths); DMITRI VOLKOGONOV, STALIN: TRIUMPH AND TRAGEDY 524 (Harold Shukman ed. & trans., 1991) (estimating 8.5-9.0 million peasant deaths). Other calculations have run higher. See, e.g., ROBERT CONQUEST, THE HARVEST OF SORROW: SOVIET COLLECTIVIZATION AND THE TERROR-FAMINE 306 (1986) (14.5 million deaths).

6. The Great Leap Forward collectivized the remaining private land holdings and placed local farm cooperatives under the direction of larger organizations named brigades and communes. For calculations of the fatalities in the ensuing famine of 1959-1962, see, e.g., 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) (estimating 16 to 27 million deaths); Justin Yifu Lin, *Collectivization and China's Agricultural Crisis in 1959-1961*, 98 J. POL. ECON. 1228, 1229 (1990) (placing death toll at 30 million, "the worst catastrophe in human history").

7. In 1975-1978, Pol Pot's regime expropriated all Kampuchean lands and organized workers into large production teams within which compensation was unrelated to work performed. The death toll from the regime's aggregate terrors came to about a million lives. FREDERIC L. PRYOR, THE RED AND THE GREEN: THE RISE AND FALL OF COLLECTIVIZED AGRICULTURE IN MARXIST REGIMES 113 (1992) [hereinafter PRYOR, RED AND GREEN]. In 1975, Ethiopia's Marxist leadership nationalized all land and delegated agricultural management to collective farms, state farms, and Peasant Associations (a type of redistributive commune, Russian examples of which are discussed *infra* text accompanying notes 392-402). See DAWIT WOLDE GIORGIS, RED TEARS: WAR, FAMINE AND REVOLUTION IN ETHIOPIA 265-80 (1989). Roughly 1.2 million Ethiopians died in 1984-85 when drought exposed the foolishness of this and other policies of the regime. *Id.* at 355.

establish the foundation of virtually all human activity.⁸ Some of these issues, including the time span of private rights, alienability, and the role of public lands, are relatively familiar subjects of property scholarship. Others, such as the selection and organization of landowning entities and the efficient location of boundaries, are not.⁹ Because the Article focuses on fundamentals of property in land, it proceeds on a level more abstract than the one on which a practicing real estate lawyer operates (although not nearly as abstract as the one favored by philosophers of property).¹⁰ By staying with basics, the Article strives to demonstrate that customary land rules are not a shapeless jumble, but instead form an unauthored strategy that cleverly allocates a prized resource with confoundingly complex attributes.¹¹

Second, the Article brings to bear on this policy terrain a particular theoretical perspective, namely the rational-actor model that many social scientists employ. In this effort, the Article strives to build on, for example, the transaction-cost economics of Harold Demsetz, the organization theory of Oliver Williamson, and the rational-choice sociology of Michael Hechter. In many social contexts, land rules arise not so much from law as from customary norms that are enforced through diffuse social sanctions.¹² For this reason, the Article rarely refers to “land law,” but instead to “land regimes”—amalgams of law and custom. Rational-choice sociology is a particularly valuable perspective on the evolution of customary land rights.

Third, to keep the theory grounded, the Article amasses historical evidence on the evolution of land institutions. Included are case studies of the land regimes at the Jamestown, Plymouth, and Salt Lake settlements; Hutterite colonies and Israeli kibbutzim; Mexican *ejidos*; and medieval open-field villages. In addition, evidence drawn from historical and anthropological surveys is brought to bear on specific issues, including for example the sharp

8. Perhaps because land regimes have recently been relatively stable in Western economies, scholarship from the legal academy on basic land-tenure issues has been sparse. For a notable exception, see generally ROY L. PROSTERMAN & JEFFREY M. RIEDINGER, *LAND REFORM AND DEMOCRATIC DEVELOPMENT* (1987). This inattention is unfortunate because reformers in the newly independent states of Eastern Europe and the former Soviet Union are looking for guidance on land policy.

9. My conceptualization of land issues has been much influenced by a brilliant and greatly underappreciated article by Frank I. Michelman, *Ethics, Economics, and the Law of Property*, in *NOMOS XXIV: ETHICS, ECONOMICS, AND THE LAW 3* (J. Roland Pennock & John W. Chapman eds., 1982). Other useful scholarly reviews of the subissues packed within the concept of property rights are Lawrence C. Becker, *The Moral Basis of Property Rights*, *NOMOS XXII: PROPERTY 187*, 190-91 (J. Roland Pennock & John W. Chapman eds., 1980); and Edella Schlager & Elinor Ostrom, *Property-Rights Regimes and Natural Resources: A Conceptual Analysis*, 68 *LAND ECON.* 249 (1992). The first great effort to sharpen the vocabulary employed to describe legal entitlements was, of course, Wesley N. Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 *YALE L.J.* 16, 28-57 (1913) (distinguishing *rights*, *privileges*, and *powers*, among other concepts).

10. See *infra* note 370.

11. The most fundamental features of a land surface are: immobility; uniqueness of location; infinite duration (relative indestructibility); lack of natural boundaries; ascertainable neighboring surfaces; and suitability for multiple uses. Singly and in combination, these attributes shape the evolution of land institutions.

12. See *infra* notes 249-258 and accompanying text.

debate between Richard Posner and Frank Michelman on whether granting farmers private property in crops serves to augment agricultural output.¹³

Fourth, and finally, from both theory and evidence, the Article derives and advances a number of positive and normative propositions about the evolution of land regimes.¹⁴ The most general of the positive propositions, the *efficiency thesis*, asserts that *land rules within a close-knit group evolve so as to minimize its members' costs*.¹⁵ This upbeat proposition envisions that people on the ground recognize that property in land is a positive-sum game and play it cooperatively. For example, this thesis asserts, contrary to Garrett Hardin's analysis in the *Tragedy of the Commons*,¹⁶ that a traditional village's grazing commons is unlikely to be tragic.

In a seminal article on the economics of property rights, Harold Demsetz propounded a related hypothesis that should be distinguished at the outset from the efficiency thesis advanced in this Article. Demsetz theorized that property arrangements in all societies evolve efficiently in response to changes in technology, demand, and other economic conditions.¹⁷ As his major example, Demsetz cited anthropological evidence that the Indians of Canada's Labrador Peninsula established exclusive hunting territories for fur-bearing animals only after the development of the commercial fur trade with Europeans had made the costs of establishing land boundaries worthwhile. Demsetz's hypothesis predicts that *all* land regimes evolve in a cost-minimizing direction; this Article embraces the same substantive prediction, but restricts its compass to the land rules that *close-knit groups* generate. A close-knit group is a social entity within which power is broadly dispersed and members have continuing face-to-face interactions with one another. By providing members with both the

13. See *infra* text accompanying notes 415-421.

14. Because land-tenure arrangements are basic, many analysts treat them as exogenous independent variables when attempting to explain other phenomena, such as economic productivity, social equality, and the like. In this Article, a land regime is treated as a dependent variable that is affected by technologies, scale efficiencies, risks, ideologies, and other variables regarded as independent. Some are skeptical of this sort of hubris. See, e.g., Lawrence C. Becker, *supra* note 9, at 199-200 (doubting if universal principles underlie land institutions).

15. This thesis is an application of my broader theory of the evolution of nonfoundational social rules. See ROBERT C. ELLICKSON, *ORDER WITHOUT LAW* 167-83 (1991) [hereinafter ELLICKSON, *ORDER WITHOUT LAW*]. *Efficiency* is defined *infra* text accompanying notes 30-34, and *close-knit group*, *infra* text accompanying note 18. On both theoretical and empirical grounds, some scholars who employ the rational-actor model are skeptical of the efficiency of evolved institutions. See, e.g., GARY D. LIBECAP, *CONTRACTING FOR PROPERTY RIGHTS* 19-28 (1989) [hereinafter LIBECAP, *CONTRACTING*] (groups, especially large and heterogenous ones, may fail to achieve Kaldor-Hicks efficiency); Brian R. Binger & Elizabeth Hoffman, *Institutional Persistence and Change: The Question of Efficiency*, 145 J. INSTITUTIONAL & THEORETICAL ECON. 67 (1989) (stressing unadaptive persistence of open-field agriculture). Some of this skepticism derives from the Folk Theorem, a deduced game-theoretic proposition which holds that groups are apt to become stuck at suboptimal equilibria. See, e.g., Drew Fudenberg & Eric Maskin, *The Folk Theorem in Repeated Games with Discounting or with Incomplete Information*, 54 ECONOMETRICA 533 (1986).

16. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968). Evidence on the issue is adduced *infra* note 380.

17. Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 350 (Pap. & Proc. 1967).

information and opportunities they need to engage in informal social control, conditions in such groups are conducive to cooperation.¹⁸ Because the Labradoran tribe that Demsetz discussed *was* a close-knit group, that particular example supports both versions of the efficiency thesis. However, when a nation-state makes laws, or a strong group overpowers others, Demsetz's thesis anticipates the emergence of efficient land institutions, whereas this Article does not, because the individuals making the rules are not closely knit with those who must obey them.¹⁹ Historical examples such as the institution of slavery and Stalin's dispossession of Ukrainian kulaks pose problems for Demsetz's thesis but not for the one advanced here.²⁰

This Article differs from Demsetz's in another significant respect. While Demsetz focused strictly on efficiency, the analysis below addresses other vital human concerns conventionally regarded as noneconomic: liberty, privacy, equality, and community. As Part III's case studies of the kibbutzim and other intentional residential communes make plain, rules of property in land importantly influence nonmaterial aspects of life.

Because the journey has unavoidable convolutions, a rough roadmap is in order. The first three Parts of the Article analyze, in increasing depth, the situations in which it is best to put land in the hands of a "private," as opposed to a "public," owner. This is the issue on which Blackstone and Marx were at loggerheads. These portions of the analysis identify major advantages in private ownership of land, but they also point out desirable attributes of group-owned property that may be decisive in some contexts. In Parts IV-VI, the Article addresses the initial bundling of land entitlements, their debundling by owners, and their alienability. These issues have also provoked intense controversy. Part VII reconsiders the choice between private and public ownership in a fresh context and points out the overwhelming case for public ownership of some lands. Part VIII invokes the examples of the open-field village and multimember household to demonstrate the complexity of the utilitarian land regimes that close-knit groups have pragmatically generated to govern their home territories. The Conclusion summarizes the main propositions and commends attention to the history of land institutions.

18. For fuller discussion, see ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 177-82.

19. Demsetz has been criticized for neglecting to identify a collective-action mechanism through which a group would succeed in generating cooperative land rules. *See, e.g.*, Richard A. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 289 (1979). This Article therefore includes some speculations on evolutionary dynamics of property in land. *See infra* text accompanying notes 210-214 & 249-258.

20. Observers from a broad range of perspectives would be similarly unlikely to endorse Demsetz' unalloyed efficiency thesis. *See, e.g.*, NORTH & THOMAS, *supra* note 3, at 7-8 (governments are typically better able than private groups to define and enforce property rights, but at the same time they are more prone to capture by rentseekers); KARL MARX, 1 CAPITAL, pt. 8 (1867) (capitalists may use force and fraud to obtain land from customary feudal groups).

I. THE CASE FOR INDIVIDUAL OWNERSHIP OF LAND

The issue that Blackstone and Marx contested—the merits of the institution of private property in land—warrants the priority they gave it. Because the term *private property*, and its counterpart *public property*, are both formless composites, the first order of business is to sharpen the vocabulary of land institutions. Coordination among land users becomes more difficult as the number of users rises; it is therefore useful to subclassify land regimes according to the number of persons who own routine privileges to enter and use a parcel.²¹ *Private property* conventionally refers to a regime in which no more than a small number of persons have access to a resource. When more than a small number do, *public property* is present.

Table 1 indicates the subcategories of private and public property that figure in this Article's analytic scheme.²² Listed are two forms of private property: *individual* ownership and *household* ownership. The latter denotes ownership by a multiperson entity with no more than, say, a dozen members.²³ The Table also identifies three varieties of public property. *Group* property refers to ownership by a collectivity whose membership is larger than a household's but small enough to permit intermittent face-to-face interaction (and hence the possibility of close-knittedness). An *open-access* land regime is one in which privileges of entry are universal. Land on which entry privileges are not quite that unlimited, but are more widespread than those given to the membership of a group, is *horde* property.

21. This approach fails to account for ownership of rights to exclude, but this limitation is of little consequence in most contexts. *But see infra* note 22.

22. Table 1 omits the *anticommons*, a land regime in which each member of a public owns a right to exclude, and consequently for which no one owns a privilege of entry and use. A classic example is a wilderness preserve that "any person" has standing to enforce. Because anticommons yield no profits, they are typically owned by either governments or nonprofit organizations. Frank Michelman first conceived of this land institution, which he called an extreme "regulatory regime" in which authorization to use required "near simultaneous unanimous consent." Michelman, *supra* note 9, at 6.

23. Corporate and limited-access government lands (such as military bases) do not fit neatly into the categories in Table 1. Shareholders and voters typically lack privileges to enter these lands, but they help select those who control these privileges.

Demsetz distinguished among three land regimes: private ownership, communal ownership, and state ownership. Demsetz, *supra* note 17, at 354. His definition of communal property failed to distinguish between open-access and group-ownership regimes, which are now conventionally recognized as differing in important respects. *See, e.g.*, GLENN G. STEVENSON, COMMON PROPERTY ECONOMICS 8-84 (1991); *infra* text accompanying notes 24-26. In addition, Demsetz did not explain why the state should be singled out conceptually as a different form of ownership entity. The state certainly has greater authority to tax, to regulate, and to exercise powers of eminent domain; it also has a distinct governance structure. However, when a government acts in its proprietary role as a land manager, it shares many attributes with a nongovernmental group with a constituency of comparable size.

TABLE 1. *Land Ownership Regimes*

	<i>Ownership Regime</i>	<i>Number of Privileged Entrants</i>
<i>Private Property</i>	Individual	1
	Household	2—c.12
<i>Public Property</i>	Group	c.13—c.1,000
	Horde	c.1,000—millions
	Open-access	all

A. *Three Simple Land Regimes*

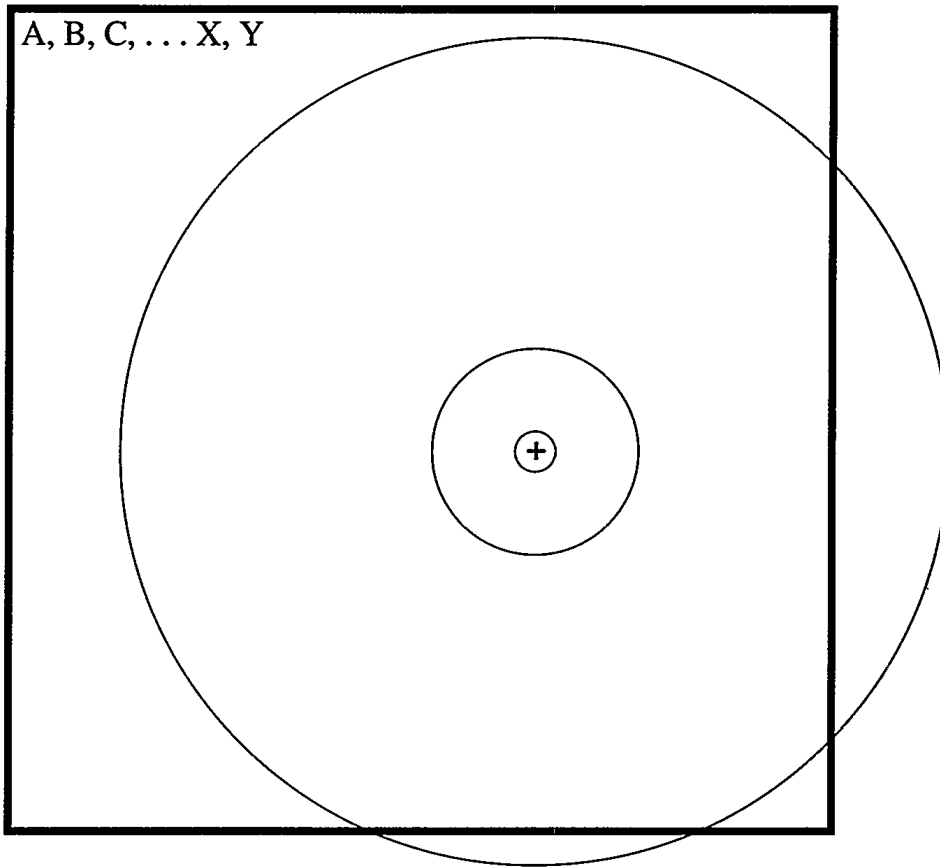
Because land issues involve so many facets, it is prudent to start by comparing the merits of just three of these five land regimes.²⁴ Suppose that a close-knit group of 25 adults, identified by letters A through Y, was to control the land within the perimeter of the large square pictured in Figures 1 and 2. Suppose further that this group had to choose to govern this territory either as open-access property, group property, or individual property—regimes that it could establish either by formal rule or informal practice. Recall that under the first of these three alternatives, the open-access regime, anyone at all, including persons other than A . . . Y, would be completely privileged to enter and use the land within the perimeter. Both theory and practice suggest that this regime would likely be beset by tragedy.²⁵

Under the second alternative, group ownership, the 25 members would jointly own both privileges to use the land within the perimeter and rights to exclude all others from it. The 25 would manage the land collectively by means of some relatively democratic governance system.²⁶ Figure 1, in which there are no internal division lines within the perimeter, illustrates group ownership by A . . . Y.

24. Of the five alternatives listed in Table 1, the household, a hugely important landowner entity, is the only significant form omitted from this initial comparison. Household ownership is examined *infra* text accompanying notes 403-411. The dynamics of horde ownership are much the same as those of an open-access regime.

25. See sources cited *infra* note 32. *Commons*, an ambiguous term, is employed in this Article only when the context makes clear whether the reference is to a group-ownership, horde-ownership, or open-access regime. *Commune* denotes a land-based group that embraces an explicitly communitarian ideology. See *infra* notes 133-136 and accompanying text.

26. Some varieties of group governance are examined *infra* text accompanying notes 157-176.

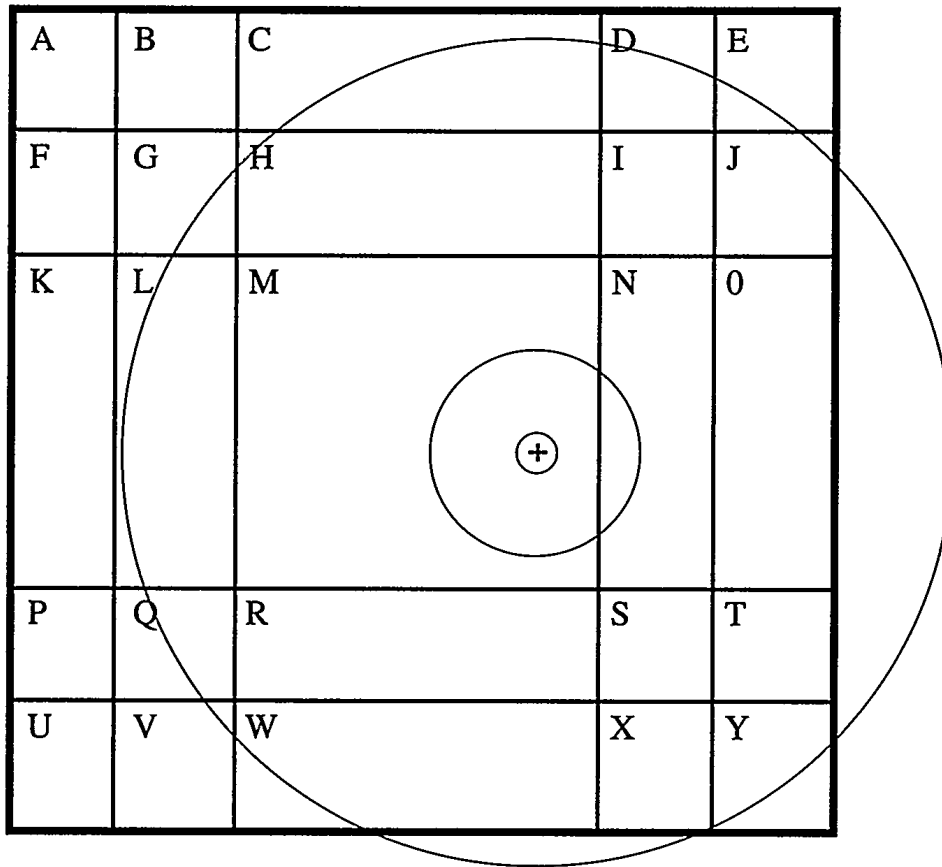
FIGURE 1. *Group Ownership.*

To create the third regime, individual ownership, *A . . . Y* would subdivide all of the land within the square into 25 parcels, one of which would be assigned to each member. Figure 2 shows one of the many possible divisions they might create. In this instance, all land within the perimeter of the square has been subdivided into 25 rectangles of unequal area, and each rectangle has been allotted to the individual owner indicated in its upper left corner.²⁷ At this point in the inquiry, an individual owner of a parcel can be regarded as having unfettered privileges of use as well as absolute rights to exclude.²⁸

A person's action (or inaction) may affect the physical condition of land. To highlight the significance of differences in the spatial consequences of actions, both Figures 1 and 2 include identical sets of concentric circles drawn around a common center at which a human action is hypothesized to occur.

27. In the three pioneer settlements discussed *infra* text accompanying notes 77-117, the groups actually adopted more egalitarian land-distribution rules.

28. Private landowners' standard bundles of entitlements are considered in greater depth *infra* text accompanying notes 237-278.

FIGURE 2. *Individual Ownership.*

These circles deserve highly sophisticated adjectives. The innermost circle illustrates the minor land area that is substantially²⁹ affected by a *small event*, such as the cultivation of a tomato plant. The intermediate region circumscribes the territory substantially affected by a *medium event*, such as the building of a small dam to create a pond in a stream. Lastly, the outside circle delimits the domain substantially affected by a *large event*, such as a fire that emits choking fumes over a wide-ranging area.

Before these Figures can be employed to elucidate the relative efficiency of alternative land regimes, the potentially ambiguous term *efficiency* must be clarified. The rational-actor model assumes that an individual calculatingly pursues his self-interest.³⁰ This implies that a member of a social group will be tempted at times to undertake a land activity that is individually rewarding

29. Even a spot action usually has some slight broad effects, perhaps on the water table, atmosphere, or ecosystem. The circles in the figures indicate not where external effects cease but where they become *de minimis*—that is, not worthy of attention.

30. On the strengths and weaknesses of the approach, see Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors*, 65 CHI.-KENT L. REV. 23 (1989).

but socially wasteful. Whatever the land regime, an individual's self-interested, opportunistic act will create a *deadweight loss* whenever the costs it inflicts on others exceed the individual's benefits from the act.³¹ When land is group-owned, each group member may be tempted to grab too many of the parcel's assets, to pollute the property with wastes, and to shirk from useful work that would enhance the land's value.³² Conversely, when land is individually owned, a self-interested owner may be tempted to use it without regard to the costs and benefits conferred on neighbors or others. Individuals may be able to reduce deadweight losses by (1) enforcing existing property rights; (2) transferring property rights to better managers; or (3) redefining property rights so as to create better-tailored incentives for appropriate economic activity.³³ Each of these responses, however, would give rise to *transaction costs*. Different land regimes therefore involve different combinations of transaction costs and deadweight losses. A change in land rules is *efficient* when it reduces the sum of these two sorts of costs.³⁴

31. Negative "externalities" do not necessarily give rise to deadweight losses, because a party whose activity creates spillover effects may gain more from it than those affected lose.

32. See Hardin, *supra* note 16 (classic discussion of this dynamic). For evidence of tragedy on an open-access commons, see, e.g., Gary D. Libecap, *Government Policies on Property Rights in Land*, 60 AGRIC. HIST. 32, 41-45 (1986) (describing overgrazing on open ranges in the western United States).

33. See LIBECAP, CONTRACTING, *supra* note 15, at 10-11.

34. Three important issues are buried here. First, although market prices and their equivalents fail to reveal individuals' true values (subjective valuations), third-party rulemakers can do no better than to base their decisions on "objective" measures of value. See ELLICKSON, ORDER WITHOUT LAW, *supra* note 15, at 170-72.

Second, discussion of the costs and benefits of alternative systems of property in land is circular unless one has identified some foundational property entitlements that precede the decision on the land system. Because foundational rules create the markets and other methods of exchange from which objective valuations of costs and benefits flow, cost-benefit analysis cannot be used in the selection of foundational rules. See *id.* at 174-76, and sources cited therein; see also Alexander James Field, *The Problem with Neoclassical Institutional Economics*, 18 EXPLORATIONS IN ECON. HIST. 174 (1981) (one must start with some exogenous rules to predict the development of institutions). Michelman, in the course of his plea for identification of the premises that underlie the normative case for private property, best articulated what those foundational rules might be. See Michelman, *supra* note 9, at 5, 20-21. Modifying Michelman's list, this Article generally assumes the existence of three foundational entitlements that are independent of land rules: (1) *self-ownership* of one's body and labor power; (2) *ownership of one's hand-made products*; and (3) *power to transfer* all or part of the property thereby created, subject perhaps to constraints on extreme decomposition. The first two of these entitlements scatter human capital broadly among individuals; the third legitimizes labor markets and exchanges. Together these three entitlements would generate prices and shadow prices, saving a discussion of the costs and benefits of alternative land institutions from the circularity problem identified above. Examination of migration between regimes may provide an alternate escape from circularity. See *infra* text accompanying notes 208-236.

Third, when a group can best spread risks among its members by means of its land institutions, the efficiency calculus it applies to appraise land rules should take account of the ordinary member's level of risk aversion. Therefore, as a technical matter, the efficiency thesis should be recast to assert that a close-knit group tends to adopt land rules that maximize its members' objective utilities, rather than ones that minimize members' objective costs. On risk, see *infra* text accompanying notes 119-128.

B. *Small Events: The Relative Ease of Monitoring Boundaries*

1. *The Genius of Individual Land Ownership*

In his classic work, Demsetz showed that individual ownership of land completely internalizes to owners the effects of what this Article calls small events.³⁵ In essence, the parcelization of land is a relatively low-transaction-cost method of inducing people to “do the right thing” with the earth’s surface, the vernacular for avoiding deadweight losses. Compared to group ownership, not to mention an open-access regime, private property tends best to equate the personal product of an individual’s small actions with the social product of those actions.³⁶

Suppose, for example, that the small event pictured by the innermost circle in Figures 1 and 2 was to be the cultivation of a garden of tomato plants.³⁷ Under the group ownership regime portrayed in Figure 1, the 25 co-owners would be forced to use their internal governance mechanisms to prevent deadweight losses in the growing and harvesting of the tomatoes. They might succeed in doing this, but only by incurring the transaction costs of monitoring potential shirkers and grabbers within the group’s membership.

For three basic reasons, monitoring tends to be cheaper under the individual ownership regime illustrated in Figure 2. First, self-control by one person (in this instance, owner *M*) by means of his own central nervous system is much simpler than the multiperson coordination entailed in intragroup monitoring.³⁸ When land uses have no spillover effects, individual ownership directly and precisely punishes land misuse and rewards productive labor.

Second, individual ownership not only greatly reduces the number of instances in which people have to be watched, but it also makes that task simpler when it must be performed. Demsetz incautiously implied that an individual landowner is entirely free of the burden of monitoring others’ behavior within the borders of his parcel.³⁹ Not so. A landowner must still be on the lookout for wasteful grabbing by trespassers who enter land without authorization. *A key advantage of individual land ownership is that detecting the presence of a trespasser is much less demanding than evaluating the conduct of a person who is privileged to be where he is.* Monitoring boundary crossings is easier than monitoring the behavior of persons situated inside

35. See Demsetz, *supra* note 17, at 354-56.

36. NORTH & THOMAS, *supra* note 3, at 1.

37. The example involves agriculture, a central human activity throughout recorded history. An unrepentant urbanite is free to imagine that the small event is the maintenance of a bathroom.

38. Sociologists have long argued that self-discipline is the cheapest method of social control. See Georg Simmel, *The Number of Members as Determining the Sociological Form of the Group*, I, 8 AM. J. SOCIOLOGY 19 n.1 (1902). A group is likely to place special tethers on those who are not effective at self-control. See *infra* text accompanying notes 292-295.

39. Demsetz, *supra* note 17, at 356.

boundaries.⁴⁰ For this reason, managers are paid more than night watchmen. To illustrate, suppose that the 25 owners in Figure 1 wanted to deter a deviant member from stealing tomatoes from one of their common gardens. Because each member would have the privilege of entering all gardens, the group might have to assign overseers to scrutinize the minute-to-minute behavior of all persons present in cropgrowing areas to guard against pilferage.⁴¹ If the tomato garden were individually owned, by contrast, the sole owner would merely need to watch for an unauthorized entry. Upon seeing a trespasser cross a physically marked boundary, the owner in the usual case could expel him without having to marshal evidence of misconduct beyond the unauthorized entry itself.⁴²

Third, Demsetz has recently pointed out that an individual landowner is much more highly motivated than a group member to police boundaries or to carry out any other sort of monitoring function.⁴³ A sole owner bears the entirety of any loss stemming from his slack oversight, whereas a group member bears only a fraction. The institution of private land ownership thus not only simplifies monitoring tasks, but also tends to ensure that those tasks are in the hands of conscientious agents.

2. *Technologies for Marking, Defending, and Proving Boundaries*

Because private property in land necessitates the policing of boundaries, advances in surveying and fencing techniques may enhance the comparative efficiency of the institution. Preliterate societies developed many simple technologies that a landowner could use to detect and deter trespassers. During Hammurabi's reign around 1750 B.C., pegs were used to mark borders.⁴⁴ Cairns, dikes, and stone walls are even more graphic and immovable.⁴⁵ In social environments in which neighbors are inclined to cooperate, physically marked boundaries, if uncontroversially placed, are largely self-enforcing.⁴⁶ A four-year old can understand the convention that one does not cross a

40. This also holds for the monitoring of animals. It is easier to fence a hound out of a chicken coop than to watch how it behaves there.

41. The hypothetical is realistic. The stealing of sheaves of grain from fields was a common problem in open-field villages. See WARREN O. AULT, *OPEN-FIELD FARMING IN MEDIEVAL ENGLAND: A STUDY OF VILLAGE BY-LAWS* 34-38 (1972).

42. In practice, exceptions to a private landowner's right to exclude may complicate the task of monitoring against unauthorized entry. See *infra* text accompanying notes 347-349.

43. Letter from Harold Demsetz to the author 2 (Sept. 29, 1992) [hereinafter Demsetz Letter] (on file with author).

44. JOHN P. POWELSON, *THE STORY OF LAND: A WORLD HISTORY OF LAND TENURE AND AGRARIAN REFORM* 8 (1988). On the emergence and functionality of boundary symbols, see RALPH B. TAYLOR, *HUMAN TERRITORIAL FUNCTIONING* 62-73 (1988).

45. See D.A. Spratt, *Recent British Research on Prehistoric Territorial Boundaries*, 5 J. WORLD PREHISTORY 439 (1991).

46. On the related issue of human territoriality, see *infra* note 184.

marked boundary. By contrast, the internal work rules that govern behavior within group-owned land are not nearly as plain to observers.

For millennia, absentee owners have employed simple technologies such as hedges, moats, and impregnable fencing to keep out persons and animals that do not respect boundaries. In addition, domesticated dogs, especially ones that instinctively bark at or attack strangers, are superb boundary defenders. By contrast, dogs are quite useless in enforcing a group's internal rules of conduct. Can a dog be trained to bark when a familiar person has shirked or pilfered? A modern-day landowner intent on detecting boundary violations can resort, in lieu of a dog, to an inexpensive electronic motion detector. "Shirking detectors"—devices that would sound an alarm when a worker was simply going through the motions—have yet to be invented.

In sum, a shift from group to individual ownership of land substitutes the relatively cheap systems of self-control and boundary monitoring for the relatively costly system of pervasive intragroup monitoring. In contexts where the satisfaction of basic human needs entails the coordination of many small events—such as the planting and harvesting of crops, caring for children and animals, and maintaining dwellings and other structures—the parcelization of land is a major institutional achievement.

Individual ownership does, however, generate some new transaction costs, mainly those arising from the proliferation of boundaries and ownership entities.⁴⁷ The boundaries in the parcelized regime in Figure 2 are three times the length of the boundaries in the group-ownership regime in Figure 1. Disputes may arise over both the location of these boundaries and the identities of parcel owners. Because land boundaries are human artifacts, a group must develop rules concerning adequate means of delineating parcels and proving ownership.⁴⁸ Partly to reduce outlays for erecting indestructible boundary monuments, ancient groups that had developed written languages strove to establish authoritative off-site records of boundaries and owners. Some of the earliest surviving human texts, the Mesopotamian kudurrus dating from c. 2500 B.C., record private land transfers on stone stelae about two feet high; these stones eventually came to be kept in temples.⁴⁹ A Sumerian proverb refers to a "Registrar of Deeds."⁵⁰ In Egypt, the vizier was keeping comprehensive land records by 2350 B.C.,⁵¹ and by 650 B.C. an Egyptian staff of "land-

47. Cf. William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 266-68 (1987) (identifying various costs of operating private-property systems).

48. On the history of surveying, beginning in ancient times, see WALTER G. ROBILLARD & LANE J. BOUMAN, *A TREATISE ON THE LAW OF SURVEYING AND BOUNDARIES* 1-12 (5th ed., 1987).

49. IGNACE J. GELB ET AL., *EARLIEST LAND TENURE SYSTEMS OF THE NEAR EAST: ANCIENT KUDURRUS* 1-2 (1991); ARTHUR B. KNAPP, *THE HISTORY AND CULTURE OF ANCIENT WESTERN ASIA AND EGYPT* 157 (1988).

50. EDMUND I. GORDON, *SUMERIAN PROVERBS* 74 (1959).

51. POWELSON, *supra* note 44, at 17. Although the details are sketchy, at least some land was privately owned in the Old Kingdom of Egypt. B.G. TRIGGER ET AL., *ANCIENT EGYPT: A SOCIAL HISTORY* 81-82 (1983). Family tenant farming in Egypt dates back to at least c.1150 B.C. *Id.* at 227.

measurers" was working under an "overseer of farmlands."⁵² Four thousand years after the Mesopotamian experience, the Puritans, with land becoming scarce in Massachusetts, began a major effort to improve the quality of land registries.⁵³

The efficiency thesis predicts that innovations in technologies for marking, defending, and proving boundaries lead to more parcelization because they reduce the transaction costs of private property regimes. According to this view, for example, Glidden's invention of barbed wire in 1874 should have stimulated more subdivision of rangeland in the American West. And this indeed appears to have occurred.⁵⁴ In Shasta County, California, innovations in fencing and irrigation enhanced the cost-effectiveness of fenced pasture and spurred the parcelization of unfenced ranges on which cattlemen had previously run herds at-large.⁵⁵ Conversely, the viability of group ownership might be enhanced by the advent of inexpensive video cameras or other technologies for monitoring behavior within a group setting.

C. *Medium Events: A Simple Way to Promote Cooperative Relations*

Demsetz' second major argument for private property in land rested on the social dynamics of medium events. Suppose, as Demsetz himself did, that the intermediate circle in Figures 1 and 2 were to demarcate the expected territorial effects of the proposed construction of a small dam. The parcelization of group land, Demsetz pointed out, would greatly reduce the number of persons concerned with this event. In the democratic group-ownership situation portrayed in Figure 1, all 25 co-owners would have to become knowledgeable about the proposed dam in order to help decide whether it was a cost-justified project. In the parcelized regime of Figure 2, by contrast, only the two substantially affected landowners, *M* and *N*, would have to be involved in the externality adjustment process. Embracing the consensus position that transaction costs tend to increase with the number of individuals involved, Demsetz saw land parcelization as having the virtue of increasing small-number situations.⁵⁶ Picking up on this assertion, Michelman rightly stated

52. TRIGGER, *supra* note 51, at 332-33.

53. David T. Konig, *Community Custom and the Common Law: Social Change and the Development of Land Law in Seventeenth-Century Massachusetts*, 18 AM. J. LEGAL HIST. 137, 148, 163 (1974) (describing events in Essex County). See generally George L. Haskins, *The Beginning of the Recording System in Massachusetts*, 21 B.U. L. REV. 281 (1941) (discussing earliest colonial recording systems).

54. See Terry L. Anderson & P.J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163, 172 (1975).

55. ELLICKSON, ORDER WITHOUT LAW, *supra* note 15, at 20, 26 n.30, 27 n.34.

56. Adjoining landowners are bilateral monopolists. If either or both act strategically, net gains from trade may be reduced or eliminated on account of increased transaction costs. See Robert Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 1, 17-20 (1982). In practice, however, adjoining landowners are likely to be bound by norms that dictate cooperative behavior in routine interactions. See, e.g., ELLICKSON, ORDER WITHOUT LAW, *supra* note 15, at 65-81 (empirical study of how rural landowners share costs of boundary fences).

that practitioners of transaction-cost economics stress avoidance of “excessive dependence of coordination on large-number transactions.”⁵⁷

When medium events are at issue, parcelization has two additional advantages that Demsetz did not mention. First, besides reducing the number of persons who must coordinate, parcelization is a low-transaction-cost device for knitting these individuals closely together, thereby inclining them toward cooperative behavior. In most societies, land ownership changes slowly. Two adjoining landowners therefore usually enjoy a continuing multiplex relationship—the sort that is most likely to engender cooperation.⁵⁸ To be sure, a democratic commune of twenty-five members might be so close-knit that the average twosome of its members, chosen at random, would be even more intimate than two adjoining individual landowners. To achieve that degree of close-knittedness, however, the group might have to convene regular evening meetings of the entire membership.⁵⁹ By contrast, two abutting landowners in a parcelized regime may be able to maintain amicable relations with only an occasional exchange of pleasantries across their common fence. The *sum* of transaction costs and deadweight losses arising out of medium events is therefore likely to be lower when land is individually owned.

Parcelization also relegates the settlement of disputes arising out of medium events to those persons most likely to be informed about the matter in controversy. A sole owner of a land parcel is apt to have better knowledge of its immediate environment than virtually anyone else does. For example, if a dam were proposed for a site on parcel M in Figure 2, M and N, the owners of the only two parcels substantially affected, probably could appraise the total costs and benefits of the dam better than could a random pair of members in the A . . . Y group.

In short, for activities that result in mostly small and medium events, individual ownership is better than both open-access and group ownership for minimizing the sum of deadweight losses and transaction costs. According to the efficiency thesis, this insight explains why family farming is ubiquitous, why collectivized agriculture almost always fails,⁶⁰ and why virtually no

57. Michelman, *supra* note 9, at 20.

58. ELLICKSON, ORDER WITHOUT LAW, *supra* note 15, at 55, 65-66. The notion of a *multiplex relationship* was introduced in MAX GLUCKMAN, THE JUDICIAL PROCESS AMONG THE BAROTSE OF NORTHERN RHODESIA 19 (1955) [hereinafter GLUCKMAN, JUDICIAL PROCESS].

59. As Hutterite colonies do. See *infra* text following note 141.

60. The abundant evidence that household farms generally outperform collectivized agriculture is marshalled in PROSTERMAN & RIEDINGER, *supra* note 8, at 40-71; and PRYOR, RED AND GREEN, *supra* note 7, at 232-61. Despite the Soviet Union's ideological commitment to state and collective farms, prior to its demise it relied heavily on household agriculture to meet the nation's food needs. Although these family plots constituted less than 5% of total farmland, they accounted for one-fifth to one-third of total agricultural production. *Id.* at 242; see also STEFAN HEDLUND, PRIVATE AGRICULTURE IN THE SOVIET UNION 28, 32 (1989) (in mid-1980's, 46.6 million Soviet households had small private farm plots, on which they produced 60% of the nation's potatoes, 29% of the vegetables, and 28% of the meat). After Mao's death, China's leaders ordered that collective farms be subdivided into household plots (a prerevolutionary tradition in China), and entitled a farm household to keep whatever it produced beyond a basic quota.

dwelling units are shared by groups as large as 25. Indeed, the historical record supports the following private-property thesis: *a close-knit group virtually always entitles its members to own, as private property, lands used for dwellings, crops, and other intensive activities.*⁶¹

II. THE ADVANTAGES OF GROUP OWNERSHIP OF LAND

The discussion up to this point has given short shrift to the merits of group (and other forms of public) ownership of land. Staying entirely within Demsetz's general framework, one can enrich his analysis by explicitly incorporating the possibilities of increasing returns to scale and the desirability of spreading risks. The histories of some famous pioneer settlements, presented in the middle of this Part, will illustrate these aspects of land institutions.

A. *When Returns Increase with Parcel Size*

Bigger land parcels are sometimes better. As tracts increase in area, the costs of fencing and other forms of perimeter monitoring drop per acre enclosed.⁶² This mathematical relationship has prompted many traditional societies to graze livestock on expansive group-owned pastures.⁶³ A large territory also permits a landowner to use more specialized equipment and workers and to marshal gangs of workers for projects for which returns to scale exist.

1. *Efficient Boundaries*

Decisions on where to set land boundaries are fiendishly complex because most tracts of land are suited to multiple uses for which scale efficiencies vary. For example, suppose that the optimal territorial scale of the Coase College campus, given its educational purposes, is 200 acres. But the optimal scale for exploitation of the oil pool beneath Coase is 7777 acres. And when Coase rents living space to a sophomore, an optimal space is a one-half undivided

Jonathan Unger, *Decollectivization in the Chinese Countryside: A Survey of Twenty-Eight Villages*, 58 PAC. AFFAIRS 585 (1985). The post-Mao reforms sharply increased agricultural productivity. See, e.g., Lin, *supra* note 6, at 1244-48; John McMillan et al., *The Impact of China's Economic Reforms on Agricultural Productivity Growth*, 97 J. POL. ECON. 781 (1989).

61. Close-knit groups universally allow for private ownership of dwellings. For recognition of some of the rare instances in which such groups voluntarily collectivize agricultural operations, see *infra* text accompanying notes 137-156 & note 420.

62. The boundaries of a square section of land (640 acres) are equal in length to the boundaries of two square quarter-sections (320 acres).

63. See, e.g., Michael J. Trebilcock, *Communal Property Rights: The Papua New Guinea Experience*, 34 U. TORONTO L.J. 377, 383 (1984); *infra* text accompanying notes 371-382 (medieval open fields). Similarly, a preliterate group is apt to share hunting rights throughout the territory it controls, in part because this approach eliminates the burden of bounding interior hunting districts. Martin J. Bailey, *Approximate Optimality of Aboriginal Property Rights*, 35 J.L. & ECON. 183, 188 (1992).

interest in a 150-square-foot dormitory room. Clearly, a single set of all-purpose horizontal boundary lines cannot be optimally scaled for all purposes.

This sort of conundrum is familiar to organization theorists. A business firm has an organizational perimeter beyond which it shifts from internal hierarchy to external contract.⁶⁴ Oliver Williamson refers to the challenge of locating a firm's perimeters as the problem of "efficient boundaries."⁶⁵ The identical issue arises, and far more tangibly, when land resources are divided up among the "firms" (landowners) of the "land industry."⁶⁶

In societies that commodify land, the boundaries of private parcels are determined largely by forces of supply and demand. Land rules permitting, landowners can subdivide existing parcels and assemble separate ones together. Of course, governments may constrain this contracting process, for better or worse, with measures such as zoning regulations that set minimum sizes for parcels.⁶⁷ Loosely speaking, unconstrained markets can be expected to generate parcels of "middling" size—that is, territorial chunks that are overly large for some activities, too small for others, but not bad on average in light of the range and relative importance of valued land activities.

Because boundary locations are compromises, landowners can be expected to develop internal institutions for coordinating more fine-grained activities as well as external institutions for coordinating matters better handled on a larger territorial scale. Illustrative internal institutions are a household's system for allocating private bedrooms and an employer's system for assigning spaces in its employee parking lot. External institutions designed to deter negative spillover effects of land activities include, for example, norms of neighborliness, common-law nuisance rules, and government land-use regulations.⁶⁸

64. Land is a special context in which to apply the theory of the firm. A society's options in how to permit its members to occupy and use land is closely related to its options in apportioning its work force among organizations. In *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937), Ronald H. Coase puzzled over the question of why an economy's work force is clustered in organizations of various sizes rather than being either entirely atomistic or entirely managed within one firm. Inspired by Coase, transaction-cost economists have examined the relative efficiency of monitoring within a hierarchy, as opposed to external coordination by contract and norm. Questions of land tenure pose the same sorts of issues, but with the addition of a spatial dimension, a point discerned in Demsetz, *supra* note 17, at 358 n.8.

65. OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 96-98 (1985) [hereinafter, WILLIAMSON, *ECONOMIC INSTITUTIONS*]. Interestingly, *land* is not an entry in Williamson's index.

66. In a market economy, owners generally pair themselves with parcels. In a hierarchical economy, bureaucrats generally make these pairings.

67. Large-lot zoning is criticized, among other reasons, for encouraging sprawl. See ROBERT C. ELLICKSON & A. DAN TARLOCK, *LAND-USE CONTROLS* 801 (1981) [hereinafter ELLICKSON & TARLOCK, *LAND-USE CONTROLS*]; ROBERT G. HEALY & JAMES L. SHORT, *THE MARKET FOR RURAL LAND* 196 (1981).

68. Besides employing these standard institutions, neighbors can craft their own land-use controls by contract. See *infra* text accompanying notes 283 & 361-363. The comparative advantages of all these mechanisms are explored in Robert C. Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*, 40 *U. CHI. L. REV.* 681 (1973). Other institutions may evolve to induce landowners to carry out affirmative activities that aid neighbors. For example, an informal norm in rural Washington requires each orchard owner to provide bees for pollination in proportion to his number of orchard trees. Steven N. S. Cheung, *The Fable of the Bees: An Economic Investigation*, 16 *J.L. & ECON.* 11, 30 (1973). On the general topic, see Stewart E. Sterk, *Neighbors in American Land Law*, 87 *COLUM.*

In addition, neighboring landowners may join together by custom or contract to carry out activities that require territories larger than their parcels.⁶⁹ Farmers jointly pastured their livestock on medieval open fields.⁷⁰ A century ago, Midwestern farm families joined together in “threshing rings” when their grain was ripe.⁷¹

The term *boundary* usually refers to a horizontal line beyond which a landowner generally switches from internal management to inter-neighbor coordination. *General-purpose boundaries*, the ones described in deeds when land is conveyed, define the territory from which owners typically attempt to exclude unconsented entrants. Other boundaries, while less significant, are also worthy of attention. When a landowner carves out a sub-area within his parcel for special use, internal *special-purpose boundaries* mark its limits; they define the edges of, for example, dormitory rooms, assigned library carrels, and road easements. When neighboring landowners are joined in a property owners’ association or a municipality, the territorial limits of these organizations are external special-purpose boundaries.

A landowner who shifts a general-purpose boundary outward increases his burdens of internal management but decreases his burdens of external coordination. Locating boundaries requires sensitivity both to efficiencies of territorial scale and to the transaction costs inherent in a cluster of internal and external institutions.

2. *Large Events*

When Demsetz posed an example that involved a large event, he rightly qualified his enthusiasm for land parcelization.⁷² For example, if the large event pictured in Figure 2 were to be a smoky fire on parcel M, the transaction costs of large-number coordinations might prevent the many affected parcel owners from cooperating to resolve the dispute through some external institution. By contrast, if the governing body of the group portrayed in Figure 1 already had controls in place to monitor internal small and medium events, it might be able to respond to this large event much more expeditiously than the diffuse group of individual neighbors could. When a group’s system of internal social control is itself characterized by increasing returns to scale, the identity of the land regime that best minimizes costs depends in part on what

L. REV. 55 (1987).

69. Formal contracts govern, for example, the common recreation areas of homeowner associations and the parking lots that merchants in shopping centers manage under reciprocal easement agreements.

70. See *infra* text accompanying notes 371-382.

71. See THOMAS D. ISERN, *BULL THRESHERS AND BINDLESTIFFS* 74-75 (1990); J. SANFORD RIKOON, *THRESHING IN THE MIDWEST, 1820-1940*, at 84-96 (1988).

72. Demsetz, *supra* note 17, at 357.

sorts of events—small, medium, or large—carry the highest stakes for group welfare.

The case for private ownership of farms and homesteads rests on the plausible assumption that vital agricultural, construction, homemaking, and child-rearing activities entail mostly small and medium events.⁷³ For the reasons just suggested, however, industrial activities that cause local air pollution might be better placed on large tracts which, because of the investment required, are likely to be group-owned. Group ownership does not necessarily imply government ownership, of course. The sorry environmental records of federal land agencies⁷⁴ and Communist regimes⁷⁵ are a sharp reminder that governments are often particularly inept managers of large tracts.⁷⁶ Large events are inherently difficult to regulate. Identifying the institutions that govern them best—or, more bluntly, least badly—should be an exercise in experience, not logic. This points up the value of history. Under what circumstances, if any, have pioneers establishing land regimes from scratch chosen to own land collectively?

B. *Three Pioneer Settlements*

Three of the most famous remote habitations in U.S. history were the Jamestown settlement of 1607, the Plymouth settlement of 1620, and the Mormon settlement at Salt Lake in 1847.⁷⁷ Each of these pioneer groups

73. Marx and Engels tragically exaggerated the efficiencies of scale that are present in agriculture. See PRYOR, RED AND GREEN, *supra* note 7, at 34-35, 372-73; see also *supra* notes 5-7, 60. In 1987 in Cuba, an extreme case, the average state farm employed 1448 workers on 14,084 hectares (roughly 35,000 acres). PRYOR, RED AND GREEN, *supra* note 7, at 144 (table showing sizes of collective and state farms in Marxist regimes). By contrast, family farms still dominate American agriculture. In 1987, non-family-held corporations with eleven or more shareholders accounted for only 1.8% of the value of farm products sold in the United States. See BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE UNITED STATES 647 (1991) [hereinafter 1991 STATISTICAL ABSTRACT].

74. For example, federal lands are overgrazed, in part because Congress, responding to lobbying by stockmen, sets grazing fees too low. George C. Coggins, *Livestock Grazing on the Public Lands*, 20 GONZ. L. REV. 749 *passim* (1984/85); Gary D. Libecap, *Bureaucratic Issues and Environmental Concerns: A Review of the History of Federal Land Ownership and Management*, 15 HARV. J.L. & PUB. POL'Y 467, 483-87 (1992).

75. See MURRAY FESHBACH & ALFRED FRIENDLY, JR., *ECOCIDE IN THE USSR* (1992).

76. For the polar positions on the merits of government land ownership, compare S.V. Ciriacy-Wantrup & Richard C. Bishop, "Common Property" as a Concept in Natural Resources Policy, 15 NAT. RESOURCES J. 713 (1975) (presenting optimistic view of possibilities of collective governance) with TERRY L. ANDERSON & DONALD R. LEAL, *FREE MARKET ENVIRONMENTALISM* (1991) (contending that if government were to specify property rights well, private lawsuits and market transactions would be the best means of coordinating land uses). For critiques of both positions, see James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL'Y 325 (1992); Peter S. Menell, *Institutional Fantasylands: From Scientific Management to Free Market Environmentalism*, 15 HARV. J.L. & PUB. POL'Y 489 (1992). On the issue of whether landowners can be counted on to apply the optimal discount rate, see *infra* note 268.

77. There has been little systematic research into the evolution of property regimes in land and labor in frontier American communities. Because historians of particular settlements seldom treat property rights as an organizing theme, a reader must piece the puzzle together from scraps of evidence scattered throughout a longer narrative. Moreover, American historians rarely attempt to compare how pioneer

journeyed to the frontier laden with cultural predispositions and an ongoing hierarchical structure that had enabled group movement in the first instance. The members of these groups nevertheless possessed a relatively high degree of freedom in deciding how to allocate property rights in the lands they were seizing from the indigenous tribes.⁷⁸ In each case, the settlers initially opted for group ownership, but after a few years switched to private ownership of intensively used lands.

1. *Jamestown*

The Jamestown colony, a star-crossed business venture of the London-based Virginia Company, was the first permanent English settlement in North America.⁷⁹ Partly because the Company's investors envisioned that group living would aid in defense against enemies, the settlers' first major undertakings after landing in 1607 were a fort and palisade.⁸⁰ During Jamestown's early years, the colonists suffered horrendously from starvation, tribal raids, and diseases such as dysentery, typhoid, and malaria. Sixty-five percent of the 108 members of the initial party died within the first year.⁸¹ The Company's efforts to replenish the population were repeatedly frustrated. During the winter of 1609, the most severe period of starvation, the colony's population dropped from 500 to 60.⁸² An Indian raid in 1622 killed 347, a minor fraction of the 3,000 deaths at Jamestown in 1619-1622.⁸³

Jamestown was managed quite hierarchically during its early years, as its investors had intended.⁸⁴ Land was held as a collective asset. Although many settlers were bound to the Company by indentures, each was guaranteed an equal share of the common output regardless of the amount of work personally contributed.⁸⁵ John Smith, the Colony's most effective leader, organized the

communities of different eras resolved property issues. Two exceptions are CHARLES M. ANDREWS, *THE COLONIAL PERIOD OF AMERICAN HISTORY* (4 vols., 1934); WILLIAM B. SCOTT, *IN PURSUIT OF HAPPINESS: AMERICAN CONCEPTIONS OF PROPERTY FROM THE SEVENTEENTH TO THE TWENTIETH CENTURY* (1977).

78. All three settlements met the criteria of close-knittedness. Although Jamestown and Salt Lake were quite hierarchical, their leaders had little choice but to be responsive to the residents. Mutiny is relatively easy on the frontier. *See also infra* note 93.

79. On the evolution of land tenure in Jamestown, see 1 ANDREWS, *supra* note 77, at 98-213; LYMAN CARRIER, *AGRICULTURE IN VIRGINIA, 1607-1699*, at 8-11 (1957); Lynda L. Butler, *The Commons Concept: An Historical Concept with Modern Relevance*, 23 WM. & MARY L. REV. 835, 868-75 (1982).

80. 2 THE COMPLETE WORKS OF CAPTAIN JOHN SMITH 138-39 (Philip L. Barbour ed., 1986) [hereinafter JOHN SMITH].

81. Karen Ordahl Kupperman, *Apathy and Death in Early Jamestown*, 66 J. AM. HIST. 24, 24 (1979).

82. *Id.*

83. *Id.* at 24, 35.

84. *See generally* WESLEY FRANK CRAVEN, *THE SOUTHERN COLONIES IN THE SEVENTEENTH CENTURY, 1607-1689*, at 60-137 (1949) [hereinafter CRAVEN, *SOUTHERN COLONIES*] (on investors' efforts to control the course of Jamestown in 1607-19).

85. 1 JOHN SMITH, *supra* note 80, at 264. *But cf. id.* at 265 (in 1608-09, Smith threatened to banish able-bodied shirkers). *See also* Edmund S. Morgan, *The Labor Problem at Jamestown, 1607-18*, 76 AM. HIST. REV. 595, 597 (1971) [hereinafter Morgan, *Labor Problem*].

settlers into work teams of a dozen or more to erect buildings and palisades, dig a well, and plant 100 acres of corn.⁸⁶ When Smith was not in charge, however, the hallmark of the Jamestown colony was idleness. To the puzzlement of historians, the starving settlers shirked from catching fish and growing food.⁸⁷ The most enduring image of Jamestown dates from May 1611, when Sir Thomas Dale found the inhabitants at "their daily and usuall workes, bowling in the streetes."⁸⁸

The first settlers at Jamestown anticipated that land would eventually be parcelled out to households, and this outcome was indeed gradually achieved over a period of a dozen years.⁸⁹ Small gardens appeared within the first year or two.⁹⁰ Then, in 1614, Governor Dale began assigning three-acre plots to settlers.⁹¹ According to Captain John Smith, this improved productivity at least sevenfold:

When our people were fed out of the common store, and laboured jointly together, glad was he could slip from his labour, or slumber over his taske he cared not how, nay, the most honest among them would hardly take so much true paines in a weeke, as now for themselves they will doe in a day, neither cared they for the increase, presuming that howsoever the harvest prospered, the generall store must maintaine them, so that wee reaped not so much Corne from the labours of thirtie, as now three or foure doe provide for themselves. To prevent which, Sir Thomas Dale hath allotted every man three Acres of cleare ground. . . .⁹²

The "Great Charter of 1619" capped Jamestown's march toward decentralized agriculture.⁹³ Although the Great Charter kept some lands in common owner-

86. Kupperman, *supra* note 81, at 27; Morgan, *Labor Problem*, *supra* note 85, at 596.

87. See Morgan, *Labor Problem*, *supra* note 85, at 595-96; see also CARRIER, *supra* note 79, at 8-9 (common fields yielded no crop in 1607 and 1608).

88. RALPH HAMOR, A TRUE DISCOURSE OF THE PRESENT STATE OF VIRGINIA 26 (Richmond 1957) (1615).

89. CHARLES E. HATCH, JR., THE FIRST SEVENTEEN YEARS: VIRGINIA, 1607-1624, at 21-23 (1957). The Virginia Company's original plan envisioned that the settlers would manage land collectively for at least the first seven years. *Id.* at 21.

90. CARRIER, *supra* note 79, at 9 (one report of gardens as early as 1607); EDMUND S. MORGAN, AMERICAN SLAVERY, AMERICAN FREEDOM: THE ORDEAL OF COLONIAL VIRGINIA 82 (1975) [hereinafter MORGAN, AMERICAN SLAVERY] (private gardens appear in 1609).

91. Morgan, *Labor Problem*, *supra* note 85, at 607.

92. 2 JOHN SMITH, *supra* note 80, at 247.

93. See Butler, *supra* note 79, at 871-72. When the London Company (the successor to the Virginia Company) drafted the Great Charter, it had to accommodate the settlers' preferences. The Company could not easily control events from afar, and it had an interest in both sustaining the colony's population and attracting new recruits. The investors' relative powerlessness is demonstrated by events in Bermuda, where Virginia Company personnel established land regimes quite unlike the contemporaneous systems at Jamestown. See *infra* text at notes 124-128.

ship, its greatness lay in its broad distribution of entitlements to establish private farms.⁹⁴

Agricultural productivity unquestionably improved at Jamestown as lands were privatized.⁹⁵ By around 1620, farmers were energetically growing tobacco, a profitable export crop. Jamestown continued to be severely plagued by disease and Indian troubles, but no longer by laziness. In the 370 years since Jamestown residents first embraced the private farm, they have never reverted to collective crop-growing.

2. Plymouth

The land story of the colony at Plymouth, Massachusetts parallels the history at Jamestown, except that events unfolded more briskly.⁹⁶ To finance their voyage, the Pilgrims formed a joint stock company with London investors. At the investors' insistence, the settlers agreed to pool output, lands, capital, and profits during their first seven years abroad. From this "common stock," residents of the colony were to receive food and other necessities, and, at the end of the seven-year period, the land and other assets were to be "equally divided betwixt" the investors and settlers.⁹⁷ The colonists initially complied with the spirit of this contract. Although they planted household gardens almost from the start, they collectivized initial field and livestock operations.⁹⁸ The settlers had some agricultural successes, but they were unable to grow corn in their common field.⁹⁹ Within six months of reaching Plymouth, almost one-half of the population had perished from disease.¹⁰⁰

In 1624 the Plymouth colonists deviated from the investors' plan and assigned each family from one to ten acres, depending on the number of family members.¹⁰¹ This greatly increased productivity.¹⁰²

94. The Charter made land available to any farmer who was willing to remit one-quarter of his profits to the Company during his first three years of operations. Butler, *supra* note 79, at 872.

95. 1 ANDREWS, *supra* note 77, at 123-26; HATCH, *supra* note 89, at 23. Because hardships continued at Jamestown even after the switch to private property, Edmund S. Morgan has discounted John Smith's and other resident observers' emphasis on the arrangement of property rights. See MORGAN, AMERICAN SLAVERY, *supra* note 90, at 81-83. Morgan does not dispute, however, that a work ethic emerged in Jamestown between 1611 and 1618, the period during which land privatization was gathering steam. Morgan, *Labor Problem*, *supra* note 85, at 595.

96. See generally 1 ANDREWS, *supra* note 77, at 249-99.

97. 1 WILLIAM BRADFORD, HISTORY OF PLYMOUTH PLANTATION, 1620-1647, at 105-06 (Mass. Hist. Soc'y 1912).

98. DARRETT B. RUTMAN, HUSBANDMEN OF PLYMOUTH: FARMS AND VILLAGES IN THE OLD COLONY, 1620-1692, at 5-6 (1967).

99. Julius Goebel, Jr., *King's Law and Local Custom in Seventeenth Century New England*, 31 COLUM. L. REV. 416, 444 (1931).

100. JOHN DEMOS, A LITTLE COMMONWEALTH: FAMILY LIFE IN PLYMOUTH COLONY 5 (1970).

101. 1 ANDREWS, *supra* note 77, at 284; Goebel, *supra* note 99, at 444.

102. RUTMAN, *supra* note 98, at 12-13; WILLIAM B. SCOTT, *supra* note 77, at 12.

[Parcelization] had very good success; for it made all hands very industrious, so as much more corne was planted then other wise The women now wente willingly into the field, and tooke their litle-ones with them to set corne, which before would aledg weaknes and inability; whom to have compelled would have bene thought great tiranie and oppression.¹⁰³

In 1627 Plymouth's inhabitants, at last able to liquidate the joint-stock company, followed up by parcelling out a freehold of twenty acres per member to each family.¹⁰⁴ Even Plymouth's common meadows had been privatized by the early 1630's.¹⁰⁵

Other towns in colonial Massachusetts also tended to parcelize their lands as time passed.¹⁰⁶ Settlers usually started by replicating the forms of land tenure they had known in their home villages in England.¹⁰⁷ In many towns, every household received a number of scattered plots, each of several acres. In some instances, these plots were laid out as strips in open fields, following the familiar medieval practice.¹⁰⁸ After a generation or two of land sales, consolidated family farmsteads typically began to supplant the scattered-plot systems.¹⁰⁹ Nevertheless, New Englanders hardly exhibited an unrelenting drive to privatize land. Many towns set aside common greens, pastures, and woodlots.¹¹⁰ For the first generation or two, towns typically restricted use of these lands to the original settlers and their descendants; later, access was granted to all town householders.¹¹¹

3. *Salt Lake City*

In July of 1847—two centuries after these colonial episodes and well into the industrial age—some 1700 Mormons arrived at the Great Salt Lake Valley under the leadership of Brigham Young. Especially during the Mormons' first few years at Salt Lake, the theocracy assigned teams to a wide variety of public works projects, including a fort, irrigation canals, roads, and places of worship. During the first planting season or two, the Mormons appear to have

103. 1 BRADFORD, *supra* note 97, at 300-01.

104. 2 BRADFORD, *supra* note 97, at 9. On the liquidation of 1627, see generally GEORGE D. LANGDON, JR., *PILGRIM COLONY: A HISTORY OF NEW PLYMOUTH, 1620-1691*, at 29-34 (1966).

105. RUTMAN, *supra* note 98, at 12.

106. Barry C. Field, *The Evolution of Property Rights*, 42 *KYKLOS* 319, 333-34 (1989).

107. This is the central thesis of DAVID GRAYSON ALLEN, *IN ENGLISH WAYS* (1981).

108. The Massachusetts towns of Rowley and Hingham, for example, both originally scattered a household's plots, but Rowley employed the open-field strip system while Hingham did not. *Id.* at 30-38, 61-66. This strip system is described *infra* text accompanying notes 371-382.

109. JAMES A. HENRETTA, *THE ORIGINS OF AMERICAN CAPITALISM* 21-22 (1991) (describing events in Plymouth, Dedham, and Andover).

110. See, e.g., Barry C. Field, *supra* note 106, at 338 (on governance of a large common pasture that residents of Salem, Massachusetts, maintained until 1906).

111. RONALD LEE FLEMING & LAURI A. HALDERMAN, *ON COMMON GROUND: CARING FOR SHARED LAND FROM TOWN COMMON TO URBAN PARK* 14 (1982); LANGDON, *supra* note 104, at 46-57.

undertaken agriculture as a collective endeavor.¹¹² Partly because crickets and foraging animals damaged the first crops, the settlers were pinched for food in 1847-49.¹¹³

Immediately upon arrival, the Mormon leaders began planning the layout of city streets and public squares. Roughly a year later, in September 1848, they distributed city lots large enough to serve both as homesteads and as gardens for foodstuffs, and entitled each family to five to eighty acres for farming.¹¹⁴ Many of the newly surveyed farms were clumped together in a "Big Field" with a common perimeter fence, a portion of which each Big Field farmer was obliged to maintain.¹¹⁵ After the land parcels had been distributed, agricultural production in the Great Salt Lake Valley boomed.¹¹⁶

Late in life, Brigham Young attempted to establish more collectivized forms of settlement in the Great Basin. The Mormon Prophet Joseph Smith had proclaimed principles for a United Order, under which wealth would be far more equally distributed than it was at Salt Lake. The most longlasting of Young's United Order experiments proved to be Orderville, begun in 1875 in southwestern Utah. Orderville initially featured uniform dress, communal dining, and collective enterprise. In 1880 the settlement shut down its communal dining hall and three years later introduced wage differentials. In 1885, ten years after its founding, Orderville's residents, whose leaders were

112. Work teams planted the first crop or two in fields outside of the settlers' stockade. LEONARD J. ARRINGTON, *GREAT BASIN KINGDOM* 45-47 (1958); JOEL EDWARD RICKS, *FORMS AND METHODS OF EARLY MORMON SETTLEMENT IN UTAH AND THE SURROUNDING REGION, 1847 TO 1877*, at 14-15 (1964). It is unclear whether the crops harvested from these fields were treated as the property of the entire settlement or only of the team or household that had cultivated a particular patch. Some families apparently started separate farmsteads prior to the September 1848 allotments of croplands. See EDWIN BROWN FIRMAGE & RICHARD COLLIN MANGRUM, *ZION IN THE COURTS* 298-300 (1988) (describing two early land title disputes at Salt Lake).

113. ARRINGTON, *supra* note 112, at 48-50; LEONARD J. ARRINGTON & DAVIS BITTON, *THE MORMON EXPERIENCE* 103-05 (1979).

114. ARRINGTON, *supra* note 112, at 45-52; RICKS, *supra* note 112, at 15-18. Brigham Young had announced the principle, "if a man would not till his land, it should be taken from him." FIRMAGE & MANGRUM, *supra* note 112, at 295-96 (citation omitted). There seem to be no reports, however, of a settler actually losing land for failing to use it. It is sometimes said that the Mormons rejected the concept of outright private ownership of land, i.e., the fee simple, because they saw God as the permanent owner of land. Jeanne Kay & Craig J. Brown, *Mormon Beliefs about Land and Natural Resources, 1847-1877*, 11 J. HIST. GEOGRAPHY 253, 259 (1985). Nevertheless, the settlers at Salt Lake were empowered to sell land and devise it at death. In practice, the concept of divine ownership of property functioned primarily to legitimize the Mormon tradition of tithing. *Id.* ("Church leaders explained that because the earth is the Lord's, humans were obligated to return to Him through the Church at least 10% of what was rightfully His.").

115. FIRMAGE & MANGRUM, *supra* note 112, at 297.

116. RICKS, *supra* note 112, at 18, 116-17 ("not only sufficient food for their needs but also a surplus"). Ricks emphasizes the role of cooperative irrigation projects. Like Ricks, Leonard J. Arrington, a leading historian of the Mormon settlements in Utah, has consistently stressed collective aspects of the Salt Lake economy. For example, in a jointly authored work he asserted that, after an 1848 division of the settlement into wards, the bishop for each ward "supervised the planting of common fields and the management of collective herds of cattle." ARRINGTON & BITTON, *supra* note 113, at 114. One might instead emphasize the noncollective aspects of life at Salt Lake, particularly the settlers' early allotment of household farms and homesites.

by then in hiding to avoid prosecution for polygamy, voted to dissolve the collective.¹¹⁷

* * * * *

Although these three pioneer settlements differed, their land histories are remarkably similar.¹¹⁸ In each case the settlers started with group ownership of land, but after a period began parcelling out plots to individuals and households, a move that improved agricultural productivity. These events support the private-property thesis, but are unlikely to surprise anyone familiar with the history of collectivized agriculture. It is more intriguing to ask why the settlers declined to establish private property in croplands from the start. The prior section suggested one possibility. The pioneers at the three settlements may have started off with group-owned land in order to exploit returns to territorial scale presented by initial public works such as defensive palisades and, at Salt Lake, irrigation facilities. There is evidence, however, that high risks, not scale economies, were the main impetus for the initial collectivization of land at these outposts.

C. *Group Ownership as a Risk-Spreading Device*

A sole landowner bears the entire risk that his land will be damaged, devalued, or unproductive. Group ownership, by contrast, pools risk. Because most individuals are risk-averse, the risk-spreading feature of group property is advantageous—even decisive in certain situations.¹¹⁹

117. This account of Orderville is taken from JAMES B. ALLEN & GLEN M. LEONARD, *THE STORY OF THE LATTER-DAY SAINTS* 364-65 (1976); THOMAS F. O'DEA, *THE MORMONS* 207-10 (1957); RICKS, *supra* note 112, at 105-114. St. Joseph, the longest-lived United Order community in the Little Colorado River Basin, lasted from 1876 to 1882. William S. Abruzzi, *Ecology, Resource Redistribution, and Mormon Settlement in Northeastern Arizona*, 91 *AM. ANTHROPOLOGIST* 642, 653-54 n.1 (1989).

118. The histories of these settlements appear to be representative. In the mining districts of the California Gold Rush, there was a similar evolution from group to individual ownership of property in land. According to John Umbeck, a leading scholar of Gold Rush property rights, the early gold miners relied on express contracts to demarcate mining claims along the river beds where gold was most readily found. During 1848 and 1849, the first two years of the Gold Rush, miners typically entered into a "sharing contract," a collective arrangement under which each member of the contracting group agreed to work on and defend the entire territory the group had claimed, and also to divide all discovered gold among the group's membership. Umbeck concluded that this arrangement tended to founder once group size exceeded 16 members.

After 1849, newly-arrived gold miners no longer used the sharing contract but instead tended to organize themselves according to a more individualistic "land allotment contract." The latter arrangement granted each member an exclusive right to work a particular subparcel located within the group's claim and to keep whatever gold he found on that subparcel. John Umbeck, *A Theory of Contract Choice and the California Gold Rush*, 20 *J.L. & ECON.* 421, 422-25, 432-37 (1977). Umbeck theorizes that the six-shooter, which most miners carried, lived up to its name as an "equalizer" when miners subdivided group lands into individual parcels. John Umbeck, *Might Makes Rights: A Theory of the Formation and Initial Distribution of Property Rights*, 19 *ECON. INQUIRY* 38 (1981). For his most expansive discussion of the gold fields, see JOHN UMBECK, *A THEORY OF PROPERTY RIGHTS WITH APPLICATION TO THE CALIFORNIA GOLD RUSH* (1981).

119. Those on the edge of subsistence are thought to be particularly risk-averse. See JAMES C. SCOTT, *THE MORAL ECONOMY OF THE PEASANT* 4-7 (1976) ("safety-first" principle underlies many features of precapitalist agrarian societies); Richard A. Posner, *A Theory of Primitive Society, With Special Reference*

As alternatives to group ownership of property, a group may employ numerous other risk-spreading mechanisms, including reciprocal altruism within a family or social group, insurance markets, and government welfare programs.¹²⁰ In comparison, group ownership of land is in most contexts a mediocre method of spreading losses. It concentrates group investments in a single, highly undiversified, asset. Moreover, for reasons presented in Part I, intensive uses are usually less efficiently conducted on group land than on private land, a fact that makes group land ownership a comparatively costly insurance vehicle.

The efficiency thesis predicts that group land ownership will be more prevalent in situations in which risks are high and a group cannot employ a superior insurance mechanism. The settlers of the three pioneer communities initially faced conditions of precisely this sort. That the risks were acute cannot be doubted. All three pioneer settlements were remote outposts, located weeks or months away from civilization. The first parties of settlers faced lethal dangers, including raids by Indians, infections from exotic diseases, and difficulties in learning how to farm in their strange environments. Remoteness precluded risk-spreading through multigenerational kinship networks, insurance markets, or government welfare programs. The settlers could spread risks only among themselves, and one option was to have a collective economy that guaranteed each member some share of total group output.

Risk analysis also suggests why the pioneers would begin to parcelize their lands after a period of time. Settlers would lower their probability estimates of disaster and be less attentive to risk-spreading as they gradually learned how to prevent tribal raids, avoid disease, and grow crops. Moreover, as the months passed, the settlers could develop more efficient social-insurance mechanisms, such as informal mutual-aid relationships, tithe-supported churches, and tax-supported governments. In sum, after a few years, the risk-spreading benefits of group land ownership would no longer outweigh its familiar shortcomings, such as the shirking that notably afflicted Jamestown and Plymouth.¹²¹ At that point, the settlers understandably would switch to private land tenure, the

to Law, 23 J.L. & ECON. 1, 10-19 (1980) (on risk-spreading institutions in preliterate societies); cf. MAX GLUCKMAN, POLITICS, LAW AND RITUAL IN TRIBAL SOCIETY 43-44 (1965) [hereinafter GLUCKMAN, TRIBAL SOCIETY] (describing forced sharing of chattels among kin); D. Bruce Johnsen, *The Formation and Protection of Property Rights Among the Southern Kwakiutl Indians*, 15 J. LEGAL STUD. 41 (1986) (viewing potlatch primarily as social insurance against risks of poor salmon harvests and as payment system to prevent encroachments on exclusive fishing territories).

120. Alternative insurance mechanisms are concisely analyzed in MICHAEL HECHTER, PRINCIPLES OF GROUP SOLIDARITY 173-74 (1987). Michelman creatively imagines a *forced sharing for needs* regime under which a needy person would be entitled to take property from anyone not in that predicament. Michelman, *supra* note 9, at 6. The Penobscot tribe followed this practice. Bailey, *supra* note 63, at 193. *But cf.* 4 WILLIAM BLACKSTONE, COMMENTARIES *31-32 (in England, persons in extreme want are not privileged to steal, although this privilege might possibly be justifiable in a less charitable and merciful nation).

121. In essence, the settlers had to decide which risks to bear: those in the natural environment, or those arising from a collectivized local economy. Demsetz Letter, *supra* note 43, at 2.

system that most cheaply induces individuals to accomplish small and medium events that are socially useful.

Jamestown's history provides particular support for the proposition that high levels of risk promote group ownership. Fatalities from disease, famine, and Indian raids were higher at Jamestown than at the other three settlements. Historians have engaged in a spirited debate about why the Jamestown settlers bowled in the streets as they starved. As noted, seventeenth-century observers tended to stress the system of property rights in early Jamestown. At first, most land was held collectively, and each resident was fed no matter how much he worked.¹²² Later, when the colony began systematically to parcelize its lands, the reports of idleness ceased. Edmund S. Morgan, an eminent colonial historian, nevertheless has been reluctant to attribute much of Jamestown's work problem to its collectivized economy. Instead, Morgan has argued that the Jamestown settlers were handicapped by a culture of idleness that afflicted Englishmen of their background.¹²³

By historical fluke, there is convincing evidence that the settlers' ideas and attitudes about work were not the problem at Jamestown. In 1609, the flagship of a Virginia Company fleet heading for Jamestown encountered rough weather and landed in Bermuda instead.¹²⁴ Bermuda proved to be a much safer place. The island was uninhabited, and disease was far less prevalent than at Jamestown. Bermuda's first settlers had early success in growing corn. In 1612, the Virginia Company sent another 50 colonists to make the settlement permanent. In 1615, the Bermuda settlers began a process of meting out twenty-five acre plots to each member;¹²⁵ by comparison, the Jamestown colony had endured for seven years before it officially doled out three-acre plots.¹²⁶ Contrary to what Morgan's thesis would predict, idleness was not a problem on Bermuda, where settlers were building substantial houses at a time when the Virginians were still dwelling in "little better than shanties."¹²⁷

Risk analysis provides a simple explanation of why events unfolded differently at Jamestown and Bermuda. In the high-risk environment at Jamestown, settlers persevered with a collectivist economy that included group

122. See *supra* text accompanying note 85.

123. Morgan, *Labor Problem*, *supra* note 85, at 611. Morgan's thesis that Jamestown's residents had a bad attitude toward work has been criticized on the grounds that John Smith at times succeeded in mobilizing the settlement, and that by the 1620's the colonists at Jamestown were industrious tobacco producers. Kupperman, *supra* note 81, at 26. Kupperman herself attributes Jamestown's problems mostly to illness and psychological distress.

124. The following account is derived from Virginia Bernhard, *Bermuda and Virginia in the Seventeenth Century: A Comparative View*, 19 J. SOC. HIST. 57 (1985); see also 1 ANDREWS, *supra* note 77, at 214-48.

125. Actual allotments may have been delayed until 1617. CRAVEN, *SOUTHERN COLONIES*, *supra* note 84, at 119.

126. See *supra* text accompanying note 91.

127. Bernhard, *supra* note 124, at 60.

land ownership partly because that institution served to spread an individual's risk of becoming incapacitated. In Bermuda, a low-risk environment, the settlers moved more promptly to the risk-concentrating regime of individual land ownership, which generated pronounced productivity gains (as a similar move eventually did at Jamestown). In short, the unusually deadly environment at Jamestown not only decimated the labor force, but also helped perpetuate institutions that spread risks but put less food on the table.¹²⁸

III. PARCELING LAND AMONG OWNERS: LIBERTY, PRIVACY, EQUALITY, AND COMMUNITY

To most observers, land policy involves much more than the seemingly bloodless considerations of cost-minimization and risk-spreading.¹²⁹ The analysis so far misses, or at least submerges, why land tenure is an issue that sends people off to the barricades and into utopian experiments. Land rules literally set the physical platform for social and political institutions. Economists themselves agree that the evaluation of a land regime must go beyond its possible contributions to material well-being.¹³⁰

Commentators who unite in urging a broader inquiry are likely to disagree, however, on the identity of the other normative criteria to be considered. Classical liberals, for example, regard private property in land as an essential instrument for promoting political freedom, privacy, and self-determination. On the other hand, communitarians doubt if humans can flourish in atomized social environments.¹³¹ Communitarians value multi-stranded and enduring social relationships, something that group ownership of land can plausibly be

128. A similar pattern was evident in Mormon settlements in Utah. There, the settlers in most locales first erected a fort for defense against Indians, and waited a year or two before parcelizing land. At St. George, however, where the Indian threat was unusually weak, Mormon pioneers established city lots and farmsteads within a month or two of arrival. RICKS, *supra* note 112, at 37-38, 71.

129. Michelman, in the course of his attack on the presumptive efficiency of private property, appropriately encouraged law-and-economics analysts to consider two normative criteria besides efficiency, namely distributive justice and concern for extra-economic individual rights. Michelman, *supra* note 9, at 6-7.

130. Economists routinely incorporate nonmaterial considerations into utilitarian analysis. *See, e.g.*, WILLIAMSON, *ECONOMIC INSTITUTIONS*, *supra* note 65, at 268-71 (considering workers' concerns for job satisfaction and dignity); Henry Hansmann, *When Does Worker Ownership Work?*, 99 *YALE L.J.* 1749, 1769-70 (1990) [hereinafter Hansmann, *Worker Ownership*] (subsuming process benefits of worker participation into overarching cost-benefit analysis of management systems). In his canonical article, Demsetz was more oblique, but he did anticipate that the members of a group, when assessing the merits of alternative land systems, would vary in their "preferences for private ownership." Demsetz, *supra* note 17, at 350. This presumably refers to nonmaterial aspects of property regimes.

131. It has been provocatively suggested that human communal inclinations may stem in part from evolutionary dynamics during prehistoric times. Because reciprocal altruism among hunters would have been mutually advantageous, and because a hunter-gatherer band could have readily detected and punished shirkers among its members, natural selection in our species' formative era may have favored survival of persons who were instinctively altruistic toward close associates. Paul H. Rubin, *Evolved Ethics and Efficient Ethics*, 3 *J. ECON. BEHAV. & ORGANIZATION* 161, 165-66 (1982).

thought to foster. Most communitarians are also egalitarians.¹³² Group ownership promises to help reduce differences in individuals' wealth and possibly in their status and power as well. An egalitarian may view individual land ownership not only as a cause of material inequality, but also as a system that enables haves to build mansions that flaunt their successes to the have-nots. In practice, a human group must make trade-offs between individual liberty and privacy on the one hand and community and equality on the other. Land tenure is a major battleground on which this conflict is resolved.

An overview of some notable communes will provide context for discussion of these aspects of land regimes. A *commune* is a residential settlement that is not kinship based and includes at least a dozen adults.¹³³ Although a commune may allocate dwelling units to its members for their exclusive use, it carries out agricultural, industrial, and construction activities on group land that it governs through participatory processes.¹³⁴ For a settlement to deserve the label, a commune's members must espouse an ideological commitment to community and equality,¹³⁵ and, consistent with that ideology, distribute group largesse among themselves according to an egalitarian formula.¹³⁶

Ideology is a fuzzy term. Most individuals have an ideology—derived from experience, philosophy, religion, or whatever—that identifies important desiderata in the organization of social life. An individual is likely to derive satisfaction (or to avoid cognitive dissonance) by living in a social environment that is consistent with his ideology. To be conceptually useful to a rational-actor theorist, the satisfactions of ideological rectitude must be distinguished

132. See, e.g., ROBERT A. NISBET, *THE SOCIOLOGICAL TRADITION* 106 (1966) ("Equality is the essence of community. . .").

133. One commentator has defined a *commune* generally as five or more adults, not all of whom are kin, who are seeking to maintain a long-lived community as an ideological objective. BENJAMIN ZABLOCKI, *ALIENATION AND CHARISMA: A STUDY OF CONTEMPORARY AMERICAN COMMUNES* 7 (1980).

134. Lands in communes have been owned under a number of guises. The most prevalent legal forms have been: (1) a trust, of which all members are the beneficiaries and a few are trustees; (2) a corporation, in which members own either stock or other beneficial interests; and (3) personal ownership, in the name of one or more members. Many communitarian theorists regard the trust as the ideologically correct form of ownership. See, e.g., DAVID FRENCH & ELENA FRENCH, *WORKING COMMUNALLY: PATTERNS AND POSSIBILITIES* 215-18 (1975). Nevertheless, a survey of Woodstock Era communes found that ownership by one or a few members—the form least consistent with egalitarianism—was four times more common than the trust. ZABLOCKI, *supra* note 133, at 64-65. Hutterites are reported to hold their land in corporate form. KARL A. PETER, *THE DYNAMICS OF HUTTERITE SOCIETY* 178 (1987).

135. One ideology that would qualify is set out in William H. Simon, *Social-Republican Property*, 38 *UCLA L. REV.* 1335 (1991).

136. Therefore, by definition a commune cannot closely correlate an individual's share of the common pot with the value of his work product. In Oliver Williamson's taxonomy, a commune is a "peer group" form of collective ownership, not an "every man for himself" form. WILLIAMSON, *ECONOMIC INSTITUTIONS*, *supra* note 65, at 217-18. Some communities that were collective in other dimensions failed to satisfy this criterion because they relied heavily on material incentives to induce labor. For example, with the exception of Kampuchea under Pol Pot, Marxist regimes relied almost completely on material, not moral, incentives to induce labor on collective farms. PRYOR, *RED AND GREEN*, *supra* note 7, at 180-90. This policy was consistent with the formula of "to each according to his work," which Marx saw as appropriate for the socialist stage of economic life. Karl Marx, *Critique of the Gotha Programme* (1875), in KARL MARX: *SELECTED WRITINGS* 564, 568-69 (David McLellan ed., 1977).

from one's *personal* consumption of the freedoms, social ties, material benefits, or other attributes of a particular social environment. Ideological satisfaction arises solely from the belief that one is associated with a group that is structured in a normatively correct way. Under this conception, a land regime's attributes of freedom, privacy, community, and equality enter into an individual's utility functions twice: first as direct arguments, and second as conditions that affect the person's sense of ideological rectitude.

A. *Some Intentional Communes*

To give the promise of collective living a fair shake, one should examine voluntary communes, not ones created by state diktats.¹³⁷ The two most enduring and robust communal systems in the last 500 years of Western history have been the little-known Hutterite colonies of the Great Plains and the familiar kibbutzim of Israel.¹³⁸

1. *Hutterite Colonies*

The Hutterites are a sect of Anabaptist Protestants. First organized in central Europe in the early 1500's, they moved to the Russian steppes in the 1700's. In a quest for religious freedom in the mid-1800's, several hundred Hutterites migrated to the northern Great Plains of the United States and Canada. Since their arrival, the Hutterites have prospered. Their current total population of some 28,000 is divided among several hundred scattered agricultural settlements, each on a spread of several thousand acres.¹³⁹

The Hutterites interpret the Bible as requiring the strict sharing of land and almost all products of labor.¹⁴⁰ A Hutterite family has traditionally been allotted, however, some basic furniture, a bedroom, and a share of a sitting room.¹⁴¹ Hutterites eat meals in communal dining halls and hold church services every evening. By maintaining a Tyrolean-German dialect as their principal language, and by generally forbidding the use of radios and television

137. Marxist regimes have experimented with many forms of agricultural organization. In the Soviet Union, state farms gradually came to predominate over collective and cooperative farms. They were not "communes," however, because they were managed hierarchically by state agencies, and a worker received wages rather than a share of his farm's production. See PRYOR, RED AND GREEN, *supra* note 7, at 9-17.

138. Pierre L. van den Berghe & Karl A. Peter, *Hutterites and Kibbutzniks: A Tale of Nepotistic Communism*, 23 MAN 522 (1988). A succinct review of the literature on communities devoted to egalitarian distribution can be found in MICHAEL TAYLOR, COMMUNITY, ANARCHY AND LIBERTY 104-29 (1982).

139. PETER, *supra* note 134, at 10, 62, 187.

140. *Id.* at 27-31. Despite this creed, for two lengthy periods the Hutterites did not organize themselves communally. See *infra* note 230 and accompanying text.

141. PETER, *supra* note 134, at 178, 202-03. A Hutterite is also allowed to own a small amount of personal property and can make some items for personal use. JOHN W. BENNETT, HUTTERIAN BRETHREN 170 (1967).

sets, the Hutterites have substantially insulated themselves from outside influences.¹⁴²

As a Hutterite colony grows toward 120 members (including children), the group bifurcates. Members sign up, seniors first, to join either of two subgroups; lots are then drawn to determine which subgroup is to remain and which is required to leave to found a new colony.¹⁴³ The Hutterites' population cap, forged out of centuries of experience, helps to keep their communities closely knit.

Hutterite communities are strongly hierarchical. Women cannot vote in assemblies, and leadership positions are allocated among males largely according to seniority. Six elders are at the apex of authority.¹⁴⁴ In new colonies, the resident population may include no more than a dozen adult males, a majority of whom are serving as elders.¹⁴⁵

2. *Israeli Kibbutzim*

Kibbutzim, although much more widely known, are comparative upstarts dating only from 1909. With 400-500 members on average, kibbutzim are several times more populous than Hutterite colonies. Although almost all kibbutzim are involved in agriculture, many undertake industrial activities as well. The total kibbutz population in Israel doubled between 1951 and 1992, from 65,000 to 130,000.¹⁴⁶ Nevertheless, the percentage of Israel's Jewish population living in these communities had declined by 1986 to 3.6%,¹⁴⁷ well below the 1948 peak of 7.9%.¹⁴⁸

Kibbutzim were founded on a secular socialist ideology that still undergirds the movement; in some communities, however, religion has replaced socialism as the unifying creed.¹⁴⁹ Kibbutzim vary significantly in their degree of commitment to sharing.¹⁵⁰ The most ideological of the kibbutzim—those described below—are strongly committed to equal distribution of material wealth, a policy they pursue primarily through in-kind transfers.

142. PETER, *supra* note 134, at 51, 66.

143. *Id.* at 142-43.

144. BENNETT, *supra* note 141, at 151; PETER, *supra* note 134, at 61, 81.

145. PETER, *supra* note 134, at 140.

146. Amir Helman, *The Israeli Kibbutz as a Socialist Model*, 148 J. INSTITUTIONAL & THEORETICAL ECON. 168, 169 (1992).

147. ELIEZAR BEN-RAFAEL, STATUS, POWER AND CONFLICT IN THE KIBBUTZ 2 (1988).

148. ELIYAHU KANOVSKY, THE ECONOMY OF THE ISRAELI KIBBUTZ 19-21 (1966).

149. About 7% of kibbutzniks live in religious settlements. Van den Berghe & Peter, *supra* note 138, at 525.

150. The kibbutz is to be distinguished from the *moshav*, an Israeli settlement in which families own separate houses and farmsteads but manage other aspects of their agricultural enterprise collectively. Richard Schwartz compares the two forms in *Social Factors in the Development of Legal Control: A Case Study of Two Israeli Settlements*, 63 YALE L.J. 471 (1954). Amish settlements in the United States are structured somewhat like *moshavim*.

The State of Israel, which is formally inhospitable to private land ownership, leases land to a kibbutz for a long renewable term at low rent.¹⁵¹ A kibbutz in turn typically allocates a separate dwelling unit of perhaps two or three bedrooms to each family, while operating a common dining hall and managing collectively the balance of its land.¹⁵² Social controls within a kibbutz support norms of work and cooperation.¹⁵³ Agricultural productivity has often been higher on kibbutzim than on private farms in Israel.¹⁵⁴

All adult members of a kibbutz serve on its governing body, the general assembly, which meets roughly once a week. In sharp contrast to the Hutterites, kibbutzniks espouse equality between the sexes (although they fail to achieve it in practice).¹⁵⁵ Resident nonmembers, such as youthful volunteer workers from abroad, are excluded from governance and kept on the social periphery.¹⁵⁶

B. *Systems of Governance of Group Land Activities*

These two communal systems have had far more staying power than other intentional communities that have dotted the sweep of American history.¹⁵⁷ An overview of methods of group governance can help reveal why the Hutterites and kibbutzniks have been relatively successful at perpetuating their institutions.

1. *Hierarchy or Democracy?*

When many people use the same piece of land, tragedies of shirking and grabbing lurk. A group may of course be able to devise internal institutions for coping with these problems, but, at least according to the analysis in this Article up to this point, these mechanisms are likely to be far more costly than the simple monitoring systems associated with individual land ownership. From a transaction-cost perspective, a commune faces a choice between the Scylla

151. See *supra* note 4 and accompanying text.

152. The most egalitarian of the kibbutzim, those of the Artzi federation, favor distribution "to each according to his needs." Menachem Rosner & Arnold S. Tannenbaum, *Organizational Efficiency and Egalitarian Democracy in an Intentional Communal Society: The Kibbutz*, 38 BRIT. J. SOC. 521, 528-530 (1987). About 33% of all kibbutzniks reside in Artzi communities. BEN-RAFAEL, *supra* note 147, at 2.

153. See KANOVSKY, *supra* note 148, at 37-38; Schwartz, *supra* note 150, at 486. See also *infra* note 166.

154. KANOVSKY, *supra* note 148, at 74-86.

155. See SEXUAL EQUALITY: THE ISRAELI KIBBUTZ TESTS THE THEORIES (Michael Palgi et al. eds., 1983) (offering competing explanations for why practice has fallen short of professed ideals).

156. See DAVID MITTELBERG, STRANGERS IN PARADISE: THE ISRAELI KIBBUTZ EXPERIENCE 97-100 (1988) (among other distinctions, volunteers generally eat apart from kibbutzniks). In 1976, 21% of factory workers on kibbutzim were nonmembers; they are also denied participation in governance. Rosner & Tannenbaum, *supra* note 152, at 531.

157. The history of utopian communities in the United States is taken up *infra* text accompanying notes 215-223.

of endless evening meetings and the Charybdis of an ever-increasing pile of unwashed dishes in the sink.¹⁵⁸

There are many mechanisms for governing behavior within the boundaries of group land. A commune by definition chooses the mechanism of participatory governance. At the opposite pole lies hierarchical governance by an autonomous chief executive. Henry Hansmann has fruitfully compared these two governance systems in the land-related arenas of business enterprise¹⁵⁹ and multifamily housing.¹⁶⁰ Hansmann concludes that participatory governance is most competitive with hierarchical governance when members of a group have completely homogeneous interests (as corporate shareholders generally do). When members have heterogeneous interests, they are more likely to delegate power to a manager who is able to act expeditiously and resist lobbying by members with selfish interests. A member may be especially amenable to relinquishing control to a hierarchy in a context where the threat of members' exits helps to keep managers responsive.

Historically, many huge tracts of land have been managed by an owner who hierarchically supervises a multitude of land users. Instances include plantations (such as Mount Vernon and Monticello), latifundia, agribusinesses, landlord-owned multifamily buildings, and corporate manufacturing plants. The survival of these arrangements indicates that, when returns to scale are available, an owner (or homogenous set of owners) can profitably engage managers to monitor a maelstrom of potentially conflicting land activities. To be sure, these hierarchical forms of land governance have sometimes been oppressive, as slave plantations certainly were.¹⁶¹ Hansmann and other organization theorists nevertheless persuasively argue that, in many contexts, land users recognize that they themselves gain from having a principal to monitor them.¹⁶²

On the other hand, a homogeneous group of concurrent landowners may well succeed at participatory governance, a process that it may adopt partly to enhance self-respect, equality, and other communitarian values. When the number of participant-owners can be counted on one hand, their decision-making is likely to be highly informal. Although Anglo-American law provides

158. This is the familiar tradeoff between transaction costs and deadweight losses. Unwashed dishes were the paradigmatic problem for Woodstock Era communes, which typically had difficulty organizing work tasks. See ZABLOCKI, *supra* note 133, at 122-25, 311.

159. Hansmann, *Worker Ownership*, *supra* note 130, at 1779-83.

160. Henry Hansmann, *Condominium and Cooperative Housing: Transactional Efficiency, Tax Subsidies, and Tenure Choice*, 20 J. LEGAL STUD. 25, 34-36 (1991) [hereinafter Hansmann, *Condominium Housing*].

161. Slave plantations violated one of the foundational principles on which the analysis in this Article rests. See *supra* note 34.

162. See, e.g., sources cited *supra* notes 159-160; Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972). An instructive comparison of methods of organizing work is WILLIAMSON, *ECONOMIC INSTITUTIONS*, *supra* note 65, at 215-23. See also *infra* note 291.

standard-form governance vehicles for small groups of landowners, these forms are of little practical importance until the ownership group dissolves.¹⁶³ A larger number of participating owners may formally organize themselves as, say, a partnership, corporation, cooperative, or municipality. Even when participant-owners are many, they may govern themselves more by an unwritten "custom of the manor" than by a written constitution.

2. *Governance of Communes*

This background helps highlight the organizational difficulties that communards face. To be true to their egalitarian ideals, they must be willing to forego hierarchical governance and to bear the transaction costs of participatory democracy.¹⁶⁴ As noted, the Hutterites hold plenary meetings on a daily basis, and most kibbutzim meet weekly. Both groups prefer to reach decisions by consensus, a time-consuming process.¹⁶⁵ Because their meetings are frequent, the members can readily circulate information about individuals' prosocial and antisocial conduct, and summarily administer organizational sanctions such as negative gossip, ostracism, and expulsion.¹⁶⁶

The survival of the Hutterites and kibbutzim indicates that a voluntarily organized group may indeed succeed in cooperatively conducting agricultural, industrial and construction activities on common land. Rather than being beset with shirking, the settlements of both groups are generally beehives of activity.¹⁶⁷

Has this been the triumph of a self-enforcing ideology? Utopians may dream of inculcating communitarian norms ever more deeply so that communards eventually cooperate in the absence of third-party monitoring and sanctioning. This appears indeed to be a dream. In the kibbutzim, the second

163. The most important forms—the tenancy in common, the joint tenancy, and community property—are described in JESSE DUKEMINIER & JAMES E. KRIER, *PROPERTY* 279-373 (2d ed. 1988). On the usual irrelevance of these forms as long as owners' relations remain close-knit, see ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 273-75.

164. See generally HECHTER, *supra* note 120, at 146-67 (review of how intentional communities strive to economize on monitoring and sanctioning costs). On the analogous phenomenon in the business context, see generally WILLIAMSON, *ECONOMIC INSTITUTIONS*, *supra* note 65.

165. Van den Berghe & Peter, *supra* note 138, at 529-30. Most Woodstock-Era communes also preferred this decision rule. ZABLOCKI, *supra* note 133, at 250-58. A group that is not ideologically communitarian is more likely to tolerate majoritarian procedures. The co-owners of common pastures in the Swiss Alps, for example, have well-developed voting systems, some of which give weight to differences in ownership shares. STEVENSON, *supra* note 23, at 131-40.

166. On kibbutzniks' social controls, see MELFORD E. SPIRO, *KIBBUTZ: VENTURE IN UTOPIA* 83-85, 101-03 (1970); see also MICHAEL TAYLOR, *supra* note 138, at 123-29 (how egalitarian communes use material and social sanctions to control opportunism). Hutterites employ excommunication, a profound social isolation. PETER, *supra* note 134, at 88-89. The analogous Amish practice of shunning is analyzed in John A. Hostetler, *The Amish and the Law: A Religious Minority and its Legal Encounters*, 41 WASH. & LEE L. REV. 33, 36-40 (1984). On expulsion, see ZABLOCKI, *supra* note 133, at 138-40, 288 (44% of Woodstock-Era communes had threatened or carried out an expulsion), and *infra* text accompanying notes 175-176.

167. See van den Berghe & Peter, *supra* note 138, at 531-33.

generation has proved to be less ideologically committed than the founding generation.¹⁶⁸ After hundreds of years of socialization, the Hutterites have not been able to dispense with their intrusive methods of social control.¹⁶⁹

Hansmann's analysis suggests that, to compete with other land-tenure regimes to which its members might exit, a commune would strive to reduce member heterogeneity, and thereby reduce the transaction costs of internal governance.¹⁷⁰ The Hutterites and kibbutzniks both employ a number of devices to this end.¹⁷¹ Both generally distribute consumer goods on an all-or-nothing basis; either all households get an item, or none do.¹⁷² Efforts are made to keep housing of uniform quality. Tedious tasks are likely to be rotated among members¹⁷³ (or, in kibbutzim, assigned to nonmembers such as Arabs or youthful volunteers from abroad). Using seniority or rotation rules to allocate leadership positions sidesteps political battles (although it may also lead to less competent management).¹⁷⁴ These strongly egalitarian policies increase homogeneity, but at a price. The absence of material incentives increases the need for pervasive controls against shirking, and may prompt the most skillful workers to consider pursuing greater rewards outside the commune.

To stem exodus, longlasting communes require a member who departs, voluntarily or as a result of expulsion, to forfeit all, or almost all, of his claim to the group's joint assets—the social-insurance policy to which he may have

168. Helman, *supra* note 146, at 173-74.

169. See *supra* text accompanying notes 140-142; *infra* text accompanying notes 185-186. HECHTER, *supra* note 120, at 164-67, argues that communes have not proven to have a comparative advantage in inculcating norms, exploiting ideological commitments, and otherwise nurturing first-party systems of social control. He instead attributes the success of enduring communes to their sophisticated use of third-party social-control devices such as ostracism and the threat of expulsion. *Accord* van den Berghe & Peter, *supra* note 138, at 524. For a taxonomy of these and other methods of social control, see ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 126-32.

170. Some law partners share profits according to a lockstep seniority system. To stay competitive, firms using this system must select self-motivated partners and provide nonmaterial incentives for productivity. The partners' lock-step system can hardly be attributed to an egalitarian ideology because associates and staff receive much less. Some scholars have interpreted lock-step compensation within a law firm as a method of diversifying risks. See, e.g., Ronald J. Gilson & Robert H. Mnookin, *Sharing Among the Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Partners Split Profits*, 37 *STAN. L. REV.* 313 (1985). Hansmann sees it as a way of increasing homogeneity and thereby reducing decisionmaking costs. Hansmann, *Worker Ownership*, *supra* note 130, at 1785-86. Publius saw Hansmann's point: "The most common and durable source of factions has been the various [sic] and unequal distribution of property." *THE FEDERALIST* No. 10, at 79 (James Madison) (Clinton Rossiter ed., 1961).

171. Members of both groups are also drawn from homogeneous ethnic backgrounds, an attribute that has been found to contribute to a commune's longevity. HECHTER, *supra* note 120, at 164.

172. See van den Berghe & Peter, *supra* note 138, at 534.

173. Both Hutterites and kibbutzniks rotate some tasks. See van den Berghe & Peter, *supra* note 138, at 532-33.

174. Turning to particularly qualified leaders may be irresistible in some contexts, however. When co-owners of a commons are not ideologically committed to egalitarianism, they are more likely to use specialists as monitors. Medieval villagers, for example, designated wardens to police medieval open fields, AULT, *supra* note 41, at 60, and owners of common pastures in Switzerland select alp overseers STEVENSON, *supra* note 23, at 129-30.

contributed for years.¹⁷⁵ By deterring exit, this forfeiture policy encourages members to make more conscientious use of voice in shaping community policy. Locking members together also materially motivates members to monitor each other. When group output is shared, the ground for a culture of watchfulness has been sown.¹⁷⁶

C. *Liberal Values versus Communitarian Values*

The social environment of a commune differs significantly from that of a parcelized land regime.¹⁷⁷ A commune that succeeds in promoting equality and thick social ties simultaneously impinges upon the classical-liberal values of individual liberty, privacy, and self-determination. Anyone who prizes *both* community and individuality has to be perplexed by this tradeoff.

1. *The Classical-Liberal Case for Individual Ownership of Land*

Commentators as diverse as Thomas Jefferson, Walter Lippmann, Milton Friedman, and Charles Reich have identified private property as a primary, indeed often as *the* primary, foundation for individual freedom.¹⁷⁸ Whatever the resource in question, private property, by insulating owners from expropriations by neighbors and state officials, provides an economic security that may embolden owners to risk thumbing their noses at the rest of the world.¹⁷⁹ The private ownership of any valuable resource—not just land, but also a bank account, a pension, or a professional license—can confer the economic independence that permits genuine political and social choice.¹⁸⁰

175. Although some kibbutzim give small start-up grants to those who leave, Hutterite colonies rarely provide anything to departing members. Van den Berghe & Peter, *supra* note 138, at 534.

176. Cf. Hansmann, *Worker Ownership*, *supra* note 130, at 1761-63 (advent of worker-ownership induces workers to monitor each other more closely).

177. Significantly, but not completely. See *infra* text accompanying notes 201-207.

178. On Jefferson's position, see Gia L. Cincone, *Land Reform and Corporate Redistribution: The Republican Legacy*, 39 STAN. L. REV. 1229, 1231-35 (1987), and Stanley N. Katz, *Thomas Jefferson and the Right to Property in Revolutionary America*, 19 J.L. & ECON. 467 (1976). For the others' views, see WALTER LIPPMANN, *THE METHOD OF FREEDOM* 100-02 (1934) ("[T]he only dependable foundation of personal liberty is the personal economic security of private property."); MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* 7-21 (1962); *id.* at 10 ("[C]apitalism is a necessary condition for political freedom."); Charles A. Reich, *The New Property*, 73 YALE L.J. 733, 771 (1964) ("[P]roperty performs the function of maintaining independence, dignity and pluralism in society by creating zones within which the majority has to yield to the owner. . . . Civil liberties must have a basis in property, or bills of rights will not preserve them.").

179. For a sample of what can happen when property is expropriable, see Stephen Kinzer, *Sandanistas Seize Land of a Critic*, N.Y. TIMES, June 18, 1985, at A6. A commune's power to send a member penniless into the world may similarly chill speech.

180. This is a major theme in Reich, *supra* note 178. Commentators who agree that some minimum of private property is essential for individual freedom may disagree about the necessity of protecting the assets of the wealthy. Jefferson himself was conflicted. See Marc F. Plattner, *American Democracy and the Acquisitive Spirit*, in HOW CAPITALIST IS THE CONSTITUTION? 1, 16 (Robert A. Goldwin & William A. Schambra eds., 1982). Those in the Lippmann-Reich tradition are primarily concerned with the broad distribution of basic economic protections to all citizens. Those in the Friedman tradition argue that

Compared to other resources, land remains a particularly potent safeguard of individual liberty. Like no other resource, land can provide a physical haven to which a beleaguered individual can retreat. A land sanctuary directly serves a variety of so-called "negative" liberties. First, when a society confers self-ownership of labor, as most do, private land ownership helps to ensure economic independence. In the United States, more than seventy-five percent of wealth takes the form of human capital—entitlements either to work for oneself or to sell one's labor.¹⁸¹ Whenever a landowner can credibly threaten to withdraw into self-employment on his own land, private property in land helps protect a worker from overreaching by employers or state officials. This reality may have underlain Jefferson's wish for a polity of farmers.¹⁸² Today, back-to-nature agriculturists, cottage artisans, and hermits are among those who use land as a refuge.

Second, some social scientists assert that human beings have an innate desire to control their own environment,¹⁸³ and may even be innately territorial.¹⁸⁴ To the extent that these traits exist—an issue that is highly contested—private property in land best serves them.

Third and finally, an individual landowner's right to exclude directly enhances rights of privacy. Bowing to members' desires for separate sanctuaries, even the Hutterites and kibbutzniks allocate exclusive dwelling spaces. The trade-off between community and privacy is most sharply etched on Hutterite colonies. The lack of privacy in those communities is almost unimaginable. One young Hutterite woman writes, "I must be careful, because

protection of corporate and dynastic property also importantly serves the cause of freedom. *See* FRIEDMAN, *supra* note 178, at 15-21 (concentrations of economic power serve to counterbalance state power). *Contra* CHARLES E. LINDBLOM, *POLITICS AND MARKETS* 170-88 (1977) (concentrations of private wealth and power lead to plutocracy).

181. *See* 1991 STATISTICAL ABSTRACT, *supra* note 73, at 445 (reporting that, in 1989, compensation of employees constituted 72.9% of national income and incomes of proprietors represented another 9.0%).

182. "[T]he proportion which the aggregate of the other classes of citizens bears in any State to that of its husbandmen, is the proportion of its unsound to its healthy parts . . ." THOMAS JEFFERSON, *NOTES ON THE STATE OF VIRGINIA*, reprinted in *THE LIFE AND SELECTED WRITINGS OF THOMAS JEFFERSON* 187, 280 (Adrienne Koch & William Peden eds., 1944); *see also* Katz, *supra* note 178, at 473 ("I want to stress, however, that it was not only property rights in the abstract, but *land* which Jefferson thought critical for the development of this country. 'Property,' to Jefferson, meant 'land.'").

183. *See* ROBERT E. LANE, *THE MARKET EXPERIENCE* 157-80, 567-68 (1991). Lane himself concludes that private property is not the only means for satisfying this psychological disposition. *Id.* at 569-70.

184. *See, e.g.,* TORSTEN MALMBERG, *HUMAN TERRITORIALITY* (1980) (overview of theory and data); Jack Hirshleifer, *Privacy: Its Origin, Function, and Future*, 9 *J. LEGAL STUD.* 649, 657-58 (1980) (suggesting that because possessors tend to know land better than dispossessors do, and tend to be on land that is well matched to their tastes, territoriality might be adaptive). Even the scholars who contend that human territoriality is not innate nonetheless agree that it tends to be an adaptive strategy and that it may be perpetuated through cultural transmission. *See* RALPH B. TAYLOR, *supra* note 44, at xxiii-iv, 62-74; Michael J. Casimir, *The Dimensions of Territoriality: An Introduction*, in *MOBILITY AND TERRITORIALITY: SOCIAL AND SPATIAL BOUNDARIES AMONG FORAGERS, FISHERS, PASTORALISTS AND PERIPATETICS* 1 (Michael J. Casimir & Aparna Rao eds., 1992). Innate and deeply acculturated human tendencies toward territoriality truncate a society's options in making land policy.

there are so many who watch me.”¹⁸⁵ Hendrik Infield, a strong proponent of communalism, cautions:

One disadvantage, it must be pointed out, is characteristic of all the cooperative communities: lack of privacy for the individual. Among the Hutterites, this, of course, is considered a religious virtue, as implied in their maxim: ‘To be a good Hutterite a man’s will must be broken. . . .’ Thus, he takes it as a matter of course that people should visit his apartment at any hour of the day or night, without knocking, and that all his time is subject to their pleasure. . . .¹⁸⁶

2. *The Communitarian Case for Group Ownership of Land*

The Hutterites may lack privacy, but they have solidarity in spades.¹⁸⁷ Social life on a commune is dramatically different from that associated with private land tenure. In the commune, gatherings of groups larger than the household are much more common, group identity tends to be keener, and relations are multiplex. In a word, there is community.¹⁸⁸ With its group-managed fields, a commune is even more solidary than a pre-literate tribe or traditional agrarian village, in which, despite other collective features, households manage the cultivation of crops.¹⁸⁹

Long-lived communes also have substantial success in their pursuit of material equality. As noted above, the Hutterites and kibbutzniks both employ egalitarian formulas when dividing goods among members,¹⁹⁰ perhaps because homogeneity simplifies governance. This approach confers a type of social insurance and, to those ideologically committed to egalitarianism, delivers ideological rectitude.

185. PETER, *supra* note 134, at 120-21. As Peter writes of the Hutterites, “To the outsider it is not a very attractive lifestyle owing to its restrictions on individual freedom, the required high degree of conformity, and the communal presence in the private affairs of individuals.” *Id.* at xxiii.

186. HENDRIK F. INFELD, *COOPERATIVE COMMUNITIES AT WORK* 35 (1945).

187. Michael Hechter has provided an objective measure of solidarity: “The greater the average proportion of each member’s private resources contributed to collective ends, the greater the solidarity of the group.” HECHTER, *supra* note 120, at 18. If one can assume that Hechter would regard labor as a “private resource,” communes are highly solidary by his yardstick.

188. ROBERT A. NISBET, *THE SOCIOLOGICAL TRADITION* 147-48 (1966), sees *community* as encompassing:

. . . all forms of relationships which are characterized by a high degree of personal intimacy, emotional depth, moral commitment, social cohesion, and continuity in time. Community is founded on man conceived in his wholeness rather than in one or another of the roles, taken separately, that he may hold in a social order. . . . Fundamental to the strength of the bond of community is the real or imagined antithesis formed in the same social setting by the non-communal relations of competition or conflict, utility or contractual assent. These, by their relative impersonality and anonymity, highlight the close personal ties of community.

189. See *infra* text accompanying notes 375-376 & 420-421.

190. The Hutterites distribute benefits according to needs—physical, emotional, and spiritual. PETER, *supra* note 134, at 176.

Group life among highly interdependent equals has always held enormous appeal to social theorists. An enduring communitarian perspective, perhaps most influentially articulated by Karl Polanyi in *The Great Transformation*, deplors the rise of the institutions of the market economy on the ground that they laid ruin to the more organic social life that existed in the pre-industrial age.¹⁹¹ Although Polanyi emphasized the evils of labor markets, he believed that land markets also sapped community.¹⁹²

The debate over the relative merits of the social atmospheres of the commune and private household is one of the oldest in political theory. The ancient Greeks dwelt in family households on private lands.¹⁹³ In the *Republic*, Plato envisioned an ideal state in which the class of guardians would merge both their households and property into a commune.¹⁹⁴ In the *Politics*, Aristotle criticized Plato's scheme in language that foreshadowed the debates between the law-and-economics and Critical Legal Studies camps:

The hearer receives [Plato's ideas] gladly, thinking that everybody will feel towards everybody else some marvellous [sic] sense of fraternity—all the more as the evils now existing under ordinary forms of government (lawsuits about contracts, convictions for perjury, and obsequious flatteries of the rich) are denounced as due to the absence of a system of common property. None of these evils, however, is due to the absence of communism. They all arise from the wickedness of human nature. Indeed it is a fact of observation that those who own common property, and share in its management, are far more often at variance with one another than those who have property in severalty. . . .¹⁹⁵

To Aristotle, Plato's assertions of the atmospheric advantages of communal living are utopian. A commune may turn out to be a snakepit, not a love-fest.

191. KARL POLANYI, *THE GREAT TRANSFORMATION* 33, 44, 163-77 (1944) [hereinafter POLANYI, *GREAT TRANSFORMATION*]. The best overview of Polanyi's thought is PRIMITIVE, ARCHAIC AND MODERN ECONOMIES: ESSAYS OF KARL POLANYI (George Dalton ed., 1968) [hereinafter POLANYI, *ESSAYS*]. An influential work in the Polanyi tradition is JAMES C. SCOTT, *supra* note 119. *See id.* at 6-7 (highlighting risk-spreading features of pre-capitalist peasant economies and praising them as "moral"); *see also infra* note 322 (identifying critics of market transferability). *But cf.* LANE, *supra* note 183, at 207-19 (marshalling evidence that casts doubt on proposition that market exchange debases human relationships).

192. "To isolate [land] and form a market out of it was perhaps the weirdest of all undertakings of our ancestors." POLANYI, *GREAT TRANSFORMATION*, *supra* note 191, at 178.

193. The Greeks subdivided both urban and rural land into rectangular private plots. Thomas D. Boyd & Michael H. Jameson, *Urban and Rural Land Division in Ancient Greece*, 50 *HESPERIA* 327 (1981). In most Greek city-states, these lands came to be generally alienable. *See infra* note 316.

194. PLATO, *THE REPUBLIC* 115 (Richard W. Sterling & William C. Scott trans., 1985).

195. ARISTOTLE, *POLITICS* 50-51 (Ernest Barker trans., 1946). Aristotle was also aware of the risk of shirking when land is held in common: "If they do not share equally in work and recompense, those who do more work and get less recompense will be bound to raise complaints against those who get a large recompense and do little work." *Id.* at 49. Aristotle did, however, favor the sharing of property among friends and the public financing of common meals so that even the poorest persons would have a means of subsistence. *Id.* at 49, 79, 305.

There is evidence on the issue. In practice, communes are not as egalitarian and vibrant as the devotees of participatory democracy might wish them to be.¹⁹⁶ While some communes achieve economic equality, social equality eludes them all.¹⁹⁷ As many scholars have observed, long-lived communes tend to be notably hierarchical.¹⁹⁸ The Hutterites are run by male gerontocracies. The kibbutzniks marginalize many, including their idealistic volunteers.¹⁹⁹ Benjamin Zablocki found a status hierarchy in every Woodstock Era commune he studied.²⁰⁰

Evaluation of the comparative advantages of the communal form is further complicated by the reality that land can be doled out to private owners with an eye to values of equality and community. Private property in land has commonly and understandably been associated with material inequalities. But, like communal regimes, private property regimes vary greatly in this regard. Nothing prevents a group from allotting private plots on an egalitarian basis. Indeed, the settlers at Jamestown, Bermuda, Plymouth, and Salt Lake all established egalitarian formulas for initial land distributions.²⁰¹ The Homestead Acts of the nineteenth century also had an egalitarian thrust.²⁰² In a market economy, inequalities of land distribution inevitably develop because

196. In *Beyond Adversary Democracy*, Jane Mansbridge thoughtfully explores the possibilities of "unitary democracy." This political system is operative when a group of equals reaches decisions by consensus, a process Mansbridge (much like Hansmann) sees as possible only when members' interests are homogeneous. JANE J. MANSBRIDGE, *BEYOND ADVERSARY DEMOCRACY* 4-5 (1980). While Mansbridge describes two relatively successful groups (neither of them living on group-owned land), she notes that the participatory groups to which she herself had belonged had been riven with "internal struggles over equality and elitism." *Id.* at vii.

197. Many also fail on the material-equality front. In New Llano (1917-1939), a prominent commune founded on egalitarian principles, leaders ended up with far more wealth and power than did members of the rank-and-file, some of whom complained of "dictatorship." INFIELD, *supra* note 186, at 37-52.

198. Van den Berghe & Peter, *supra* note 138, at 529 (both Hutterites and kibbutzniks "maintain visible status distinctions based principally on gender, age and personal attributes and abilities"); *see also* BEN-RAFAEL, *supra* note 147 (study of social stratification within a kibbutz); HECHTER, *supra* note 120, at 158-59 (enduring intentional communities are typically "strongly hierarchical"). *But cf.* MITTELBERG, *supra* note 156, at 88 (although kibbutzim generate social hierarchies, they are generally more egalitarian than other societies). A statistical analysis has identified hierarchy as a positive correlate of a commune's survivorship. HECHTER, *supra* note 120, at 164. Although Marxist collectivizations of agriculture were carried out in the name of equality and self-determination, the fragmentary evidence available suggests that they actually widened the social gulf between farm officials and farm workers. PRYOR, RED AND GREEN, *supra* note 7, at 260-61.

199. *See supra* note 156 and accompanying text.

200. ZABLOCKI, *supra* note 133, at 153 (communes usually break up over power relationships); *id.* at 290-320 ("the problem of inequality").

201. *See supra* text accompanying notes 91-94, 101-104, 114, 125. There were doubtless deviations from these formulas in practice. The settlers might originally have decided on relatively equal distribution of lands for a number of reasons. They may have regarded equal shares as morally correct. Alternatively, by choosing homogeneous distribution, they may have been trying to reduce decisionmaking costs (a Hansmann-like argument). Perhaps most plausibly, the leaders may have been realistic about the muscle power of the rank-and-file, and believed that they had to appease them. Like six-shooters, muscles can serve as equalizers. *See supra* note 118.

202. *See especially* An Act to Secure Homesteads to Actual Settlers on the Public Domain, 12 Stat. 392 (1862).

people vary in skill, motivation, luck, power, and guile.²⁰³ According to a 1973-74 survey, 10% of Whites and 40% of Blacks and Latinos in the United States had not owned real estate by age fifty-five.²⁰⁴ To help equalize wealth, land can be periodically reassembled, repartitioned, and reallocated, although this policy is usually inferior to cash redistributions effected through tax and welfare programs.²⁰⁵

Land can also be parceled out in a manner that promotes solidarity among neighbors. Adjoining private landowners often develop close-knit relationships. Some highly solidary groups, such as the Amish and residents of the *Moshavim* in Israel, seek to combine the benefits of private land parcels with multi-stranded personal relationships.²⁰⁶ Whether by spontaneous coordination or intentional site plan, private households may cluster their dwellings together in nucleated villages or string them along roads in line villages. Compared, say, to scattered farmsteads and homesteads, these layouts foster neighboring.²⁰⁷ Sinclair Lewis' *Main Street* is a reminder that a private land regime may even lead to a level of socializing that some find oppressive.

D. Inferences from Survivorship and Migration

A nonparticipant must hesitate before evaluating abstractly the normative merits of a social arrangement as complex as a land regime. The most reliable evidence on this front consists of patterns of migration between different land regimes and of evolutionary changes within them. These patterns reveal how individuals and households actually make the tortured trade-offs between cost-minimization, risk-spreading, liberty, privacy, equality, and community.²⁰⁸ An

203. Particularly in colonial Virginia, land holdings soon became distinctly unequal. See DAVID HACKETT FISCHER, *ALBION'S SEED* 374-76 (1989) (in 1680-1760, 60%-70% of Virginia's male population owed no land at all); Turk McCleskey, *Rich Land, Poor Prospects: Real Estate and the Formation of a Social Elite in Augusta County, Virginia, 1738-1770*, 98 VA. MAG. OF HIST. & BIOGRAPHY 449, 465, 468 (1990) (prior to 1770, a few dozen large freeholders dominated real estate market in Shenandoah Valley county, while majority of men owned no land). *But cf.* John Demos, *Notes on Life in Plymouth Colony*, 22 WM. & MARY Q. 264, 269 (3d series 1965) (in Plymouth, land ownership was widespread even a few generations after the founding).

204. BARBARA A. CURRAN, *THE LEGAL NEEDS OF THE PUBLIC* 106 (1977).

205. See A. MITCHELL POLINSKY, *AN INTRODUCTION TO LAW AND ECONOMICS* 119-27, 144 (2d ed. 1989) (identifying relative disadvantages of employing inefficiently assigned property rights to achieve redistributive goals); see also *infra* text accompanying notes 392-402.

206. See *supra* note 150.

207. Early New Englanders and Utah Mormons tended to cluster their houses, perhaps more for reasons of defense than on account of any extraordinary communitarian impulse. See LOWRY NELSON, *THE MORMON VILLAGE* 3-22 (1952). Nelson himself attributes the relative compactness of Mormon villages to the residents' belief in the desirability of preparing a place for the Savior at his Second Coming. *Id.* at 28.

208. Marxist theorists generally regard ordinary people as prisoners of false consciousness and therefore would not draw lessons from voluntary migration. See PRYOR, RED AND GREEN, *supra* note 7, at 114-15, 122 (Marxists believe false consciousness has been the source of peasant opposition to forced collectivizations). Helman objects to letting people vote with their feet because this dynamic enables more talented people to secure above-average compensation. Helman, *supra* note 146, at 172. In essence, this is an argument that competitive pressures force groups to "race to the bottom." Those who embrace this line of analysis should discuss, as Helman does not, how they would prevent emigration and how else they

analyst appreciative of this evidence would not be so quick as Polanyi was to second-guess the agrarian peasants who embraced a market economy that made them more prosperous.²⁰⁹

In practice, a group's choice among land systems is constrained by the risk that disgruntled members will exit the group for "greener" pastures.²¹⁰ In the Dakotas, where Hutterian communes, family farms, and agribusinesses compete in growing wheat, the relative efficiency of these different forms of land governance influences the relative welfare of the respective workforces. The amount of pressure on a group to provide efficient land institutions increases with the number of competitors supplying land institutions, the availability of information about these alternatives, and the ease of members' exit.²¹¹ In the short run, inertia relieves some competitive pressures. Many households are rooted, and both cultural traditions and transition costs rigidify land regimes.²¹² In a free society in the long run, however, the market for land institutions is highly competitive.²¹³ To start a Woodstock-Era commune, for example, a group required no more than a farm. Because the migration of young adults and others looking for a fresh start is extremely difficult to control, the threat of exit places excruciating pressure on a group to remain competitive. The efficiency thesis presumes that efficient land regimes and institutions are the ones that survive.²¹⁴

When measured by survivorship criteria, communal regimes have generally fared poorly. Most migrants seem to regard the shortcomings of communes—perhaps too many meetings, or lack of privacy and personal

would induce people to develop human capital.

209. See SAMUEL L. POPKIN, *THE RATIONAL PEASANT* 1-82 (1979) (criticizing Polanyi along these lines).

210. The obligatory citation is ALBERT O. HIRSCHMAN, *EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES* (1970).

211. On the dynamics and normative desirability of competition among local groups, see HECHTER, *supra* note 120, at 43-49, and Charles Tiebout, *A Pure Theory of Public Expenditures*, 64 J. POL. ECON. 416 (1956).

212. A group might retain an existing property system partly to reduce wasteful rent-seeking, which may occur whenever a redistribution of property rights is in the offing. The prospect of the parcelization of open-access or group-owned land may trigger wasteful positioning, as it did when Oklahoma was about to be opened for settlement and would-be Sooners camped ahead of time at the Kansas line. Conversely, the prospective collectivization of private land may also provoke inefficient rent-seeking. If revolutionaries were to announce that the estates of former plutocrats were soon to be put up for grabs among cooperatives of workers, would-be grabbers might spend time plotting their strategies, and the property might be damaged during the competition to seize it. See generally Terry L. Anderson & Peter J. Hill, *The Race for Property Rights*, 33 J.L. & ECON. 177 (1990); David D. Haddock, *First Possession Versus Optimal Timing: Limiting the Dissipation of Economic Value*, 64 WASH. U. L.Q. 775 (1986); see also *infra* note 245 and accompanying text.

213. While Marxist states have usually collectivized all private lands forcibly, capitalist states have tolerated communal colonies such as those of the Hutterites.

214. Cf. Hansmann, *Worker Ownership*, *supra* note 130, at 1755-56 (using survivorship as measure of relative efficiency of forms of management of business firms). It is tautological to use survivorship itself as evidence to support the efficiency thesis. Evidence that is probative is identified *infra* note 414. An institution that is efficient for the members of a close-knit group may not be efficient from the standpoint of the members of a larger society. See *infra* text accompanying note 424. Survivorship, or lack thereof, therefore does not invariably have conclusive normative significance.

autonomy—as outweighing the advantages of risk-spreading, solidarity, and ideological rectitude.

1. *Survivorship Rates*

Like meteors, utopian communes in the United States have generally appeared in showers.²¹⁵ The period from 1825 to 1855 was particularly eventful, giving rise to some of best-known attempts at collectivist living.²¹⁶ The Woodstock Era, from roughly 1965 to 1975, generated another round of communal experiments.²¹⁷ A few communes have lasted for generations. The Oneida community of New York maintained its communal structure from 1847 until 1880,²¹⁸ and the Amana community of Iowa survived from the 1850's until 1932.²¹⁹ More recently, the Bruderhof, who moved to the United States from Germany in 1954, have shown staying power.²²⁰

But in all eras, most communes have fizzled out within a few years. New Harmony, Indiana, dissolved only three years after Robert Owen's arrival in 1825. The Mormon United Order communities in Utah were ephemeral.²²¹ A majority of the 120 Woodstock-Era communes in Zablocki's sample had lives of four years or less (although attrition rates fell with longevity).²²² The end may come with a bang (dissolution and the final distribution of assets) or a whimper (what one journalist has called "creeping capitalism").²²³ As time passes, most communards return, either by individual exit or corporate reorganization, to a regime of private land tenure—a central attribute of "the system" they had intentionally sought to escape.

215. Useful historical overviews include ARTHUR BESTOR, *BACKWOODS UTOPIAS* 277-84 (2d enlarged ed. 1970) (richly detailed appendix listing 130 communitarian experiments begun between 1663 and 1860); ROSABETH M. KANTER, *COMMITMENT AND COMMUNITY* (1972) (survey of both nineteenth-century and contemporary communes); CAROL WEISBROD, *THE BOUNDARIES OF UTOPIA* (1980) (focusing on contracts and lawsuits of nineteenth-century communes). Attempts to form intentional communities date back to the early Roman Empire. See ZABLOCKI, *supra* note 133, at 26. The idea of communal living is even older. See *supra* text at note 194 (Plato).

216. The ideological strands of these nineteenth-century movements are examined in MICHAEL FELLMAN, *THE UNBOUNDED FRAME* (1973), and in EDMUND WILSON, *TO THE FINLAND STATION* (1972).

217. For valuable overviews, see generally MARGUERITE BOURAND, *THE INTENTIONAL COMMUNITY MOVEMENT* (1975); ZABLOCKI, *supra* note 133 (empirical study of 120 communes).

218. See CONSTANCE N. ROBERTSON, *ONEIDA COMMUNITY* (1970). The collapse occurred shortly after the departure of John Noyes in 1879. *Id.* at 26.

219. See DIANE L. BARTHEL, *AMANA* (1984). This German inspirationist group first immigrated to New York in 1843. *Id.* at 21. In 1932, Amana privatized its housing and transferred its other assets to a corporation in which members were given shares. John F. Stehle, *How Some Communists Became Capitalists Overnight*, *WALL ST. J.*, Nov. 29, 1989, at A14.

220. See FRENCH & FRENCH, *supra* note 134, at 172-77. The Bruderhof literally construe *Acts* 4:32, which describes early followers of Christ as having "all things common."

221. See *supra* text accompanying note 117.

222. ZABLOCKI, *supra* note 133, at 76-77, 148-51.

223. David Stipp, *Communes Still Exist in the U.S., But Many Aren't So Communal*, *WALL ST. J.*, Mar. 10, 1986, at A1.

The short half-life of the voluntary commune contrasts sharply with the usual longevity of a farm community or small town voluntarily organized around private land. Whatever drawbacks Sinclair Lewis found in his hometown of Sauk Centre, Minnesota could not have included the transitoriness of its land regime. It is most unlikely—indeed, possibly unprecedented—for a handful of unrelated households on contiguous private parcels to make the Platonic move of voluntarily merging their lands and households to form an intentional commune.²²⁴

2. *Migration In and Out of Communes*

The degree to which communards generally, and the Hutterites and kibbutzniks particularly, have succeeded in retaining members and attracting new ones is also probative. Zablocki found that only 32% of members present in a Woodstock-Era urban commune at a given time could be expected to remain there two years later.²²⁵ The rural Hutterite colonies have been much more stable. Because the Hutterites reject all forms of birth control, their women have traditionally borne an average of nine children.²²⁶ These high rates of fertility have generated enough internal population growth to more than offset the small net outmigration that Hutterite communities have experienced.²²⁷ The Hutterites have had remarkably little success in attracting outsiders, however, and do little or no missionary work.²²⁸ Current drifts toward greater specialization of labor, differentiated dress, and private household property are undermining the Hutterites' homogeneity.²²⁹ The Hutterite communal tradition has already been punctuated with two long gaps in which the group abandoned its communal ways.²³⁰ Although this most successful

224. New Deal agencies did draw a few farmers into experiments in cooperative cropgrowing. In 1934-37, the Federal Emergency Relief Administration and the Resettlement Administration sponsored twenty-seven cooperative farms, each averaging 2400 acres. These cooperative programs tended to be short-lived, however:

The Ethan Allen community in northern Minnesota, for example, was designed so that each family should have a small plot of two acres on which to build its home, while the remainder of the tract should be operated as a single farm. It lasted about two years, after which the land was subdivided and sold to individual buyers.

NELSON, *supra* note 207, at 18. Beginning in 1937, the Farm Security Administration created and sustained some additional cooperative farms, whose memberships ranged from five to sixty. These were phased out in 1943. See INFIELD, *supra* note 186, at 63-84.

225. ZABLOCKI, *supra* note 133, at 127.

226. See BENNETT, *supra* note 141, at 127. Birth rates began to drop a bit in the latter part of the twentieth century as more Hutterite women married later and engaged in birth control. PETER, *supra* note 134, at 153, 168-70.

227. BENNETT, *supra* note 141, at 110 n.3, 129, 253-54 (emigrants typically leave at some point in their late teens and often return); PETER, *supra* note 134, at 45 n.1 (in five-year period around 1980, religious defections averaged 60 per year out of base of at least 21,800 members).

228. See JOHN A. HOSTETLER, *HUTTERITE SOCIETY* 296 (1974) (fewer than one adult recruit per year during past century); PETER, *supra* note 134, at 53-54.

229. See PETER, *supra* note 134, at 49, 177-83.

230. The gaps occurred in approximately 1685-1765 and 1818-1860. PETER, *supra* note 134, at 10-20,

of extant communal organizations will have to struggle to avoid another reversion to a private-land regime, it does not appear threatened with imminent collapse.

The word from Israel is less auspicious. The most collectivist of the kibbutzim have become distinctly less communal. Many have begun to tolerate more extensive holdings of personal property and greater parental involvement in child-rearing.²³¹ Unlike the Hutterites, the kibbutzniks have had success at recruiting new members, but most suffer heavy attrition. By around 1990, more than half of the kibbutz-born were abandoning the movement,²³² and many settlements were burdened with staggering levels of debt.²³³ Loyalists of the kibbutz movement had even begun speaking of "crisis."²³⁴

These case studies demonstrate the difficulty of maintaining an intentional egalitarian community. A commune appears unlikely to endure unless it starts with no more than a few hundred members with homogeneous backgrounds and ideologies. Once begun, a commune must maintain homogeneity of interests, establish systematic internal social controls, and stem exodus by controlling information about the outside world and penalizing those who leave.²³⁵ Even with these measures in place, a commune must struggle mightily to sustain its solidary social environment.

Nevertheless, a nation is wise to allow itself to be used as a vast laboratory for experiments in group living. Because the United States has been unusually tolerant of utopian communities, it has served as the site of countless home-grown collectives as well as the destination of choice for migratory groups such as the Amana, Bruderhof, and Hutterite sects. These alternative communities have continually tested the soundness of the land regimes prev-

32-33.

231. See David K. Shipler, *Israel's Kibbutzim Turn from Communal Ideals to Needs of the Individual*, N.Y. TIMES, June 27, 1984, at A4; see also Geraldine Brooks, *The Israeli Kibbutz Takes a Capitalist Tack to Keep Socialist Ideals*, WALL ST. J., Sept. 21, 1989, at A1, A18 (experiment in which kibbutz's skilled workers are entitled to bill their labor in order to secure higher status, but not material wealth).

232. One relatively precise source on emigration shows that the dropout rate among second-generation kibbutzniks in 1974 was 30% in the Artzi federation and 41% in the less collectivist Ichud federation. MENACHEM ROSNER ET AL., *THE SECOND GENERATION: CONTINUITY AND CHANGE IN THE KIBBUTZ* 413 (1990). By all accounts, exit rates have increased sharply since 1974. Joel Brinkley, *Kibbutzim, Israel's Utopias, Develop a Flaw: Debt*, N.Y. TIMES, Mar. 5, 1989, at A14 (nationwide, "almost two-thirds of kibbutz youth move away").

Israel's program of compulsory military service pulls young adults off the kibbutzim, and many are hard to keep down on the farm thereafter. (In the United States, a program of compulsory national service might similarly puncture the Hutterites' cocoons.) Plausible causes of recent outflows from kibbutzim include the collapse of the socialist ideals in the late 1980's and the increasing safety of Israeli life, which, as at Jamestown, may lead to a decline in the appeal of group ownership. Some kibbutz leaders attribute the outflow partly to the materialistic influences of foreign volunteer workers and have ceased accepting these visitors. See *Kibbutz Bans Foreigners*, S.F. CHRON., Mar. 25, 1986, at A18.

233. See Brinkley, *supra* note 232; Brooks, *supra* note 231.

234. See MITTELBERG, *supra* note 156, at 178; Helman, *supra* note 146, at 168.

235. For further analysis of the attributes of enduring communes, see, e.g., HECHTER, *supra* note 120, at 146-67; Robert Wade, *The Management of Common Property Resources: Collective Action as an Alternative to Privatization or State Regulation*, 11 CAMBRIDGE J. ECON. 95, 104-05 (1987).

alent in the U.S. Even an intentional community that fails, as most do, serves to illuminate the possibilities of social life.

To say that a commune is difficult to sustain is not to denigrate the impulses that have spawned communal movements. Humans are social animals. Who can warm to the anomic vision of individuals living in social isolation on atomized land plots? Up to this point, however, this Article has paid scant attention to another, more fundamental, multimember institution—the household, a pint-sized community with proven staying power. Close consideration of the household is postponed until Part VIII,²³⁶ however, to allow for examination of fundamental questions regarding the packaging of land rights. These investigations themselves help to demonstrate the critical place of the household in human history.

IV. STANDARD BUNDLES OF LAND RIGHTS: OF FEES AND USUFRUCTS

Decisions about other features of land regimes are as momentous as the choice between private and group entities as owners. A group that is willing to recognize private property in land must decide what standard bundle of rights to confer on a meritorious occupier of a part of its territory. By recognizing a standard land bundle, a group can simplify its members' interactions and transactions. This Part considers candidates for this basic package of entitlements; Part V turns to the issue of the extent to which a landowner should be empowered to modify a standard bundle, by contract or other means, to tailor it to local conditions; and Part VI delves into the transferability of land interests. The evolution of land institutions since the hunter-gatherer era has largely involved innovations along these interrelated dimensions. These three Parts therefore include some shards of ancient history.

A. A "Blackstonian" Bundle of Land Entitlements

Because land entitlements are highly variegated, it is essential to start with concepts whose simplicity strikes the imagination. Because the epigraph from Blackstone invites it,²³⁷ *Blackstonian* can serve as a shorthand to denote a pristine package of private entitlements in land that involves:

- ownership by a single individual ("that sole and despotic dominion which one man claims . . .")
- in perpetuity

236. See *infra* text accompanying notes 403-411.

237. This is most uncharitable to Blackstone, who would have admitted that his sentence quoted in the epigraph was hyperbolic. His treatise explicitly discussed, for example, a variety of legal privileges to enter private land without the owner's consent. 3 WILLIAM BLACKSTONE, COMMENTARIES, at *212-14.

- of a territory demarcated horizontally by boundaries drawn upon the land, and extending from there vertically downward to the depths of the earth and upward to the heavens
- with absolute rights to exclude would-be entrants
- with absolute privileges to use and abuse the land, and
- with absolute powers to transfer the whole (or any part carved out by use, space, or time) by sale, gift, devise, descent, or otherwise.

Some parts of this Blackstonian package are far too draconian to function even as initial default rules that landowners could be empowered to modify. In practice, Anglo-American custom and law have generated the *fee simple*, a standard bundle of private land rights that is far more nuanced than the pure Blackstonian package. Some of the *fee simple*'s differences have been adverted to above, such as the norms of neighborliness and nuisance rules that diminish a landowner's use privileges.²³⁸ Others are treated below, for example, in Part VII's discussion of the ways in which common law doctrines selectively limit a private landowner's right to exclude.²³⁹ This Part takes up the surprisingly complex issues of how a group might decide to locate the vertical and temporal boundaries of its standard private land interests.

B. *Vertical Boundaries*

As mentioned, a Blackstonian bundle confers upon a landowner entitlements that extend, from a parcel's horizontal boundaries, ever upward to the heavens and ever downward to the depths.²⁴⁰ This simple default rule was satisfactory until aircraft opened access to the skies, and mechanized drilling and mining equipment, to the subsurface. These innovations pose an efficient-boundary problem in the vertical dimension.²⁴¹ Aviation and mining activities are generally most efficiently undertaken over an area whose horizontal scope is much larger than that optimal for agriculture, housing, and other basic land-surface operations. Groups have responded by imposing vertical limits on the standard rights and privileges conferred on surface landowners.²⁴² For example, landowners everywhere are now subject to aviation easements, and, in most nations (but not the United States), to the sovereign's ownership of deep minerals. Dividing space into layers facilitates exploitation of the varying

238. See *supra* note 68 and accompanying text.

239. See *infra* text accompanying notes 347-349.

240. 2 WILLIAM BLACKSTONE, COMMENTARIES, *18-19.

241. Cf. *supra* text accompanying notes 62-71 (on efficient horizontal boundaries).

242. Aircraft operators cannot feasibly acquire easements of overflight from the numerous landowners below. To avoid nightmarish levels of transaction costs, governments therefore have established aviation easements by fiat. Given the reciprocity of advantages flowing from these arrangements, it is efficient and just that a government not have to go through the administrative hassle of paying just compensation when it adjusts, by means of a measure of this nature, the bundle of entitlements that *all* landowners have. *But cf.* *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982) (authorization of permanent physical invasion of private property is per se taking in violation of Fifth Amendment).

returns to horizontal scale that are available in different layers. Default parcels are of middling size on the ground, but are large, perhaps even unbounded, in the air and under the surface. The creation of a new vertical boundary is administratively burdensome and invites conflicts between owners of adjoining layers.²⁴³ A group is predicted to be willing to bear these costs only in circumstances in which the creation of another layer of ownership interests promises to generate benefits of greater magnitude.

C. *Time Spans of Standard Land Interests*

Both the fee simple and the Blackstonian bundle confer upon a mortal person ownership rights that last in perpetuity. Hewing to a commitment to adjectival sophistication, let us call the fee an example of a *long* standard time span. Historically, the usufruct has been the most important standard land bundle of *medium* temporal length. Some preliterate groups have bestowed this time-limited interest on a member household growing a crop on group lands. A usufruct basically entitles its owner to continue his current land use as long as he can. Other aspects of usufructuary packages may vary. To simplify discussion, a *classic usufruct* can be defined as an immutable package of land-use rights that are not transferrable and that terminate when the usufruct's owner dies or ceases the use, at which time the land is again up for grabs among group members. Finally, *short* standard bundles of land rights which last no more than a few hours are also usufructs, typically carved out of public lands such as parks and streets. A blanket spread on the sand of a state beach creates an interest of this sort.²⁴⁴

Temporal transitions in land ownership invariably entail either transaction costs or deadweight losses. Ownership in fee simple, for example, increases the costs of administering the estates of deceased landowners. Classic usufructs eliminate this particular administrative burden and also the transaction costs of land sales, but may stimulate wasteful rent-seeking as would-be successors jockey for position in a usufruct's late stages.²⁴⁵ The relative magnitudes of

243. On disputes between vertical neighbors, see FOWLER V. HARPER ET AL., THE LAW OF TORTS § 1.5 (2d ed. 1986).

244. See 2 WILLIAM BLACKSTONE, COMMENTARIES, *3 (justice and law of nature require recognition of temporary occupancy rights). Short property rights in land are discussed more fully *infra* text accompanying notes 364-369, in connection with public lands.

Some groups have recognized intermittent rights. Open field farmers had rights to arable strips only during the growing season. See *infra* text accompanying notes 372-378; see also Bailey, *supra* note 63, at 189-90 (some aboriginal bands honor exclusive family hunting and gathering territories only in seasons in which food is scarce).

245. "[I]nnumerable tumults must have arisen, and the good order of the world been continually broken and disturbed, while a variety of persons were striving who should get the first occupation of the same thing, or disputing which of them had actually gained it." 2 WILLIAM BLACKSTONE, COMMENTARIES *4. See also *supra* note 212. Rent-seeking may also occur when land is held in fee simple. When owners have the power to designate the devisees of fee interests, the young may fawn for favorable testamentary treatment from the elderly. See James M. Buchanan, *Rent Seeking, Noncompensated Transfers, and Laws*

these sorts of administrative costs are predicted to influence a group's standard bundling of land rights.

1. *Land Rights at the Dawn of History*

Anthropological evidence suggests that during the first 300,000 years of the evolution of our species (*homo sapiens*), people lived in hunter-gatherer bands that moved nomadically as local food sources became exhausted. Then, about 10,000 years ago, prehistoric civilization achieved a great breakthrough. In the Fertile Crescent of the Near East, human groups, which had shortly before begun operating out of permanent settlements, mastered the skills of cultivating crops and domesticating animals.²⁴⁶ This breakthrough required innovations not only in husbandry, but also in property rights.²⁴⁷ A prehistoric community had to develop a set of land rules that provided incentives for its members to engage in the small events involved in raising crops and animals. The Promethean invention was likely the classic usufruct.²⁴⁸

James Krier and Carol Rose have accurately characterized a property system as a public good, and asked how one might come into being.²⁴⁹ Robert Axelrod's game-theoretic work on the evolution of cooperation helps inspire a bottom-up scenario for the origin of usufructs in cropland.²⁵⁰ The scenario's starting points are the biological realities that each person naturally possesses strength to participate in forceful self-defense, and also innately feels altruism toward kin.²⁵¹ As a result of these two traits, each individual

of *Succession*, 26 J.L. & ECON. 71 (1983) (pointing out that binding succession rules lessen these maneuverings).

246. DANIEL ZOHARY & MARIA HOPF, *DOMESTICATION OF PLANTS IN THE OLD WORLD* 13, 207 (1988) (first crops were wheat and barley; first domesticated animals were sheep and goats, with cattle and pigs soon thereafter). See generally JOHN E. PFEIFFER, *THE EMERGENCE OF SOCIETY: A PREHISTORY OF THE ESTABLISHMENT* 65-81, 128-29 (1977).

247. On the noninstitutional conditions for the development of agriculture, see RICHARD S. MACNEISH, *THE ORIGINS OF AGRICULTURE AND SETTLED LIFE* (1991); see also *ORIGINS OF AGRICULTURE* (Charles A. Reed ed., 1977).

248. Rousseau, who did not adequately appreciate that property is not a zero-sum game, regarded this event as calamitous:

The first person who, having fenced off a plot of ground, took it into his head to say *this is mine* and found people simple enough to believe him, was the true founder of civil society. What crimes, wars, murders, what miseries and horrors would the human race have been spared by someone who, uprooting the stakes or filling in the ditch, had shouted to his fellow-men: Beware of listening to this impostor: you are lost if you forget that the fruits belong to all and the earth to no one!

Jean Jacques Rousseau, *Discourse on the Origins and Foundations of Inequality Among Men* (1755), in *THE FIRST AND SECOND DISCOURSES* 141-42 (Roger D. Masters ed., 1964).

249. Krier, *supra* note 76, at 338-39 n.44; Carol M. Rose, *Property as Storytelling*, 2 YALE J.L. & HUMAN. 37, 51-52 (1990) [hereinafter Rose, *Property as Storytelling*]; see also Michelman, *supra* note 9, at 30-31.

250. See ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* (1984), and sources cited in ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 156 n.1; cf. *id.* at 174-75 n.23, 179 n.42 (discussing necessary and sufficient conditions for spontaneous order).

251. On kinship altruism, see generally RICHARD DAWKINS, *THE SELFISH GENE* (1976); JOHN MAYNARD SMITH, *EVOLUTION AND THE THEORY OF GAMES* (1982).

belongs to a family unit that shares its wherewithal and is capable of coordinating to administer forceful self-help sanctions on those who have wronged it. Imagine that several dozen unallied family units live in a fertile valley. Survival instincts motivate the members of each of these households to exercise self-help to defend the dwellings, crops, and other necessities in its possession. In light of the costs and risks of emigrating, each household anticipates continuing relationships with the other valley households—a key social prerequisite for the evolution of cooperation. In these circumstances, the valley residents discern that it is mutually advantageous for all of them to honor a primary norm that entitles each family to keep the crops it has grown, and also a secondary norm that obligates all valley families to punish internal deviants and external marauders who fail to respect private property in crops.²⁵² Out of this primordial soup emerges the private usufruct on intensively used land.²⁵³

There is abundant evidence that a close-knit group need not make a conscious collective decision to establish private property rights in land.²⁵⁴ People who repeatedly interact can generate institutions through communication, monitoring, and sanctioning.²⁵⁵ Through processes as yet dimly understood, usufructuary land rights arise spontaneously on basketball courts,²⁵⁶ in stateless societies,²⁵⁷ and even among animals.²⁵⁸ Contrary to Hobbes and Locke, a property system can get going without an initial conclave.

252. On the distinction between primary and secondary rules, see ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 128.

253. The classic usufructs of New England tribes are described in WILLIAM CRONON, *CHANGES IN THE LAND* 62-65 (1983). See generally MELVILLE J. HERSKOVITS, *ECONOMIC ANTHROPOLOGY* 350-70 (1952) (cropgrowers in preliterate societies are entitled at least to classic usufructs, and often to more).

254. Custom can so strongly undergird private claims to perpetual land rights that the legal ratification of these informal entitlements does little or nothing to increase the propensity of owners to make improvements. See Shem Migot-Adholla et al., *Indigenous Land Rights Systems in Sub-Saharan Africa: A Constraint on Productivity?*, 5 *WORLD BANK ECON. REV.* 164-69 (1991) (legal confirmation of customary land titles did not enhance agricultural productivity in Ghana, Kenya, and Rwanda). *But cf.* GERSHON FEDER ET AL., *LAND POLICIES AND FARM PRODUCTIVITY IN THAILAND* 109-32 (1988) (in Thailand, legally titled farmers had better access to credit, improved their lands more, and produced more per unit of land area than did farmers squatting on government lands). See generally *id.* at 137-47 (on costs and benefits of enhancing legal security in land); OMAR MUNIF RAZZAZ, *LAW, URBAN LAND TENURE, AND PROPERTY DISPUTES IN CONTESTED SETTLEMENTS: THE CASE OF JORDAN* 62-75 (1991) (reviewing scholarship on legal and nonlegal sources of security of land tenure). Razzaz regards an owner's investment in land and subjective feeling of security of possession as mutually reinforcing, as one would expect them to be if an improver were to anticipate that both official and informal enforcers would not dare ignore investments in land improvements.

255. See Elinor Ostrom et al., *Covenants with and Without a Sword: Self-Governance is Possible*, 86 *AM. POL. SCI. REV.* 404 (1992) (account of ingenious laboratory experiments).

256. See *infra* text accompanying notes 368-369.

257. See *supra* notes 253-254; *infra* notes 419-421 and accompanying text; see also Terry R. Anderson & P.J. Hill, *An American Experiment in Anarcho-Capitalism: The Not So Wild, Wild West*, 3 *J. LIBERTARIAN STUD.* 9 (1979) (settlers of American West were able to create property rights without government assistance when custom or natural law provided focal points); Vernon L. Smith, *Economic Principles in the Emergence of Humankind*, 30 *ECON. INQUIRY* 1, 8 (1992) (reciprocal-exchange relationships can generate land rights prior to the emergence of a state).

258. See EDWARD O. WILSON, *SOCIOBIOLOGY* 156-78 (abr. ed. 1980).

2. *The Usufruct: Some Advantages of Standard Bundles of Medium Length*

In a post-literate society, perpetual private land rights are generally superior to usufructs for governing intensive activities such as cropgrowing.²⁵⁹ Owners of usufructs tend to be more short-sighted than owners of fees. A farmer with mere usufructuary rights in a field is unlikely to clear stones from it, and may exhaust its soils too quickly. Empirical studies confirm that usufructs tempt temporary owners to underinvest and to overexploit.²⁶⁰

Nevertheless, in certain narrow circumstances, including those that likely prevailed in prehistoric times, intensive activities may be more efficiently conducted on a classic usufruct than on a fee. Three situational variables are particularly pertinent. First, some lands are more susceptible than others to long-term improvement or damage. The more immutable a parcel of land is, the less reason to provide its owner with an infinite planning horizon. A preliterate society, because it has less capacity than an industrialized society to make permanent alterations in land, is more likely to employ the usufruct as its standard time span of ownership. Similarly, whether international organizations should recognize perpetual land rights on the Moon or Antarctica's icepack should turn in part on the extent to which these lands are developable and destructible.²⁶¹

Second and relatedly, usufructs for cropgrowing are problematic only when arable land is scarce. When land is plentiful, a group need not be troubled by short-sighted land practices and uncertainties about succession to usufructuary rights.

Third, illiteracy breeds usufructs. A group that recognizes perpetual land interests must develop authoritative systems for proving title to lands whose owners are not currently in possession.²⁶² A preliterate group may have trouble tracking titles and may prefer the usufructuary system under which, apart from trespassing, what you see is what is had.

Consistent with the efficiency thesis, as land becomes scarcer, technology advances, and literacy improves, a group tends to move away from the classic

259. See *infra* text accompanying notes 266-278.

260. Evidence on the inefficiencies of usufructuary arrangements is gathered in Louis de Alessi, *The Economics of Property Rights: A Review of the Evidence*, 2 RES. L. & ECON. 1, 9-12 (Richard O. Zerbe, Jr. ed., 1980); see also *supra* note 254.

261. In these two examples, the conferral of perpetual property rights would encourage owners to obtain more information about potential land uses. The dilemma is that a decision on whether or not to create perpetual property rights in an unexplored resource may have to be made without knowledge of what an owner's explorations would ultimately reveal.

262. On systems of land records, see *supra* text accompanying notes 48-53. During the early phases of the open-field system in England, cultivators' strips were sometimes laid out afresh each year. Michael P. Mazur, *The Dispersion of Holdings in the Open Fields: An Interpretation in Terms of Property Rights*, 6 J. EUR. ECON. HIST. 461, 465-66 (1977). This practice economized on the costs of maintaining permanent land monuments but lessened farmers' attentiveness to long-term soil conditions.

usufruct and toward the fee. A classic usufruct leads to short-sighted land use not because it limits the owner's time-span of possession, but because it fails to identify the successor owner (or owners) until the current possessor has abandoned his use. When a successor owner exists, that person is motivated to induce the current occupant to consider the long-term value of the parcel. When a tenant farmer cultivates crops, for example, the lessor holding the reversion has contractual and other means of prompting the farmer to take into account the effects of farming activities on the value of the lessor's future interest.²⁶³ The evolutionary way-stations along the path from the classic usufruct to the fee therefore typically involve reforms that serve to identify the owner to follow the current one. Many preliterate groups, for example, permit a usufruct to descend to kin when the current user dies.²⁶⁴ By creating potentially infinite rights, say in a matrimonial line, this reform cures the classic usufruct's failure to designate an agent motivated to act in behalf of future generations. A group can also extend usufructuary owners' time horizons by making usufructs alienable.²⁶⁵ Finally, a group capable of acting as a corporate body can designate itself as the successor owner in the event of a usufruct's abandonment. This reform has the effect both of introducing the possibility of bargaining between the group and the current user to prevent waste, and also of reducing the likelihood that would-be successors will battle when a usufruct terminates.

3. *The Fee Simple: The Advantages of Perpetual Land Ownership*

As they modernize, however, most close-knit groups move beyond these intermediate reforms all the way to an institution rather like the fee simple. Although economic historians have only recently begun to give the fee its due, Blackstone was able to articulate many of its benefits two centuries ago.²⁶⁶ Perpetual ownership rights greatly simplify land-security transactions.²⁶⁷ But the preeminent advantage of an infinite land interest is that it is a low-transaction cost device for inducing a mortal landowner to conserve natural resources for future generations.

263. The legal doctrine of "waste" is designed to curb temporal unneighborliness. See DUKEMINIER & KRIER, *supra* note 163, at 179-81.

264. For examples, see *infra* note 271.

265. See *infra* text accompanying notes 304-308.

266. 2 WILLIAM BLACKSTONE, COMMENTARIES *1-15.

267. With a fee (or long-term lease) as security, a lender need not take steps to guard against a borrower's death or flight. These risks daunt secured lenders when a borrower's land interest is merely a life estate or a usufruct. See FEDER ET AL., *supra* note 254, at 109-32 (empirical evidence that landowners with fees are better able to secure credit than those with usufructs). Rudimentary land-security transactions date back at least to Ancient Greece and Rome. See J.K. DAVIES, ATHENIAN PROPRIETED FAMILIES: 600-300 B.C. 335 (1971) (in 399 B.C., Plato offered his Iphistiadaí estate as security for bail for Socrates); A.R.W. HARRISON, THE LAW OF ATHENS 252-303 (1968); FRITZ SCHULZ, CLASSICAL ROMAN LAW 400-05 (1951).

Although the assertion may seem counterintuitive, the key to land conservation is to bestow upon living persons property rights that extend perpetually into the future. The current market value of a fee in Blackacre is the discounted present value of the eternal stream of rights and duties that attach to Blackacre.²⁶⁸ A rational and self-interested fee owner therefore adopts an infinite planning horizon when considering how to use his parcel, and is spurred to install cost-justified permanent improvements and to avoid premature exploitation of resources. The fee simple in land cleverly harnesses human selfishness to the cause of altruism toward the unborn, a group not noted for its political clout or bargaining power.²⁶⁹

An illustration may help convince the skeptical. Suppose that Mae, a selfish 80-year old without a bequest motive, owns a house in the Hollywood Hills in fee simple. Mae is considering installing a screening room that would last, with luck, for centuries. In making her decision, would Mae consider the room's benefits that would accrue after her death? If private property rights are transferable—as Part VI shows they usually are—Mae could sell her house at any time and use the proceeds during her dotage. Although she does not expect to live much longer, Mae has a fee simple and can convey perpetual rights. She might well be able to find a younger buyer, such as Rock, who could enjoy the screening room for several decades. When considering the purchase, Rock would recognize that this room would be a sales asset when it came time for *him* to unload the house, say to Demi (someone still younger). By installing the room, Mae would therefore elicit a higher bid from Rock not only because he could enjoy the facility himself, but also because it would add to the house's resale value. So far, the screening room's benefits to Mae, Rock, and Demi have been capitalized into the house's market value; it is easy to see that the same calculations continue in infinite regress, with Rock imagining Demi taking into account resale value to persons currently unborn, and on and on. In short, benefits and costs from here to eternity are capitalized into Rock's bid. If the screening room were to be cost-justified over the long haul, Mae would have an incentive to build it, because she could reap the capitalized value of its remaining net benefits when she sold the house.

Throughout history, many close-knit agricultural groups have recognized that perpetual private ownership makes for better land stewardship.²⁷⁰ As

268. See Demsetz, *supra* note 17, at 355; Richard A. Epstein, *Past and Future: The Temporal Dimension in the Law of Property*, 64 WASH. U. L.Q. 667, 694-99 (1986). Critics of private property sometimes assert that private landowners are apt to apply a discount rate that is too high. The standard rebuttal is that politicians have even less reason to give the future its due. See Stephen F. Williams, *Running Out: The Problem of Exhaustible Resources*, 7 J. LEGAL STUD. 165, 180 (1978).

269. Innate kinship altruism may help prompt groups to create institutions that serve the interests of the unborn. See *supra* sources cited in note 251.

270. The more general institution of inheritance is universal. See PIERRE L. VAN DEN BERGHE, *HUMAN FAMILY SYSTEMS* 89 (1979) (all preindustrial societies provide for descent of property to kin, although they diverge on issue of which kin have priority). In 1918, the Russian Bolsheviks, implementing the program of Marx and Engels depicted in the epigraph, abolished inheritance but then reversed themselves within

land in a preliterate society becomes scarcer and its economic development advances, it is increasingly likely to confer potentially infinite entitlements in croplands and homesites upon kinship lines.²⁷¹ Especially until a group masters literacy, it may honor a variety of non-Blackstonian rules, such as that private parcels are descendible only to kin, inalienable to outsiders, and forfeitable for nonuse.²⁷² But once it develops a written language, a group will almost invariably recognize unending private rights in some of its lands. For example, the ancients in Egypt and Greece, two cradles of Western civilization, conferred perpetual land entitlements on private owners.²⁷³ In medieval England, farmers' copyholds were inheritable.²⁷⁴ And when private plots were parceled out at Jamestown and Plymouth, settlers received infinitely long interests.²⁷⁵ Perpetual private land rights are most emphatically not a uniquely Western institution, however. Land interests of potentially infinite duration evolved separately among the Japanese,²⁷⁶ the Ibo of Nigeria,²⁷⁷ and the Navajo of the American Southwest.²⁷⁸ In sum, the inherent effi-

four years. See JESSE DUKEMINIER & STANLEY M. JOHANSON, *WILLS, TRUSTS, AND ESTATES* 21-22 (3d ed. 1984).

271. See FREDERIC L. PRYOR, *THE ORIGINS OF THE ECONOMY* 117 (1977) [hereinafter PRYOR, *ORIGINS*]. For particular instances, see, e.g., GLUCKMAN, *TRIBAL SOCIETY*, *supra* note 119, at 36-43 (in Sub-Saharan Africa, tribes generally entitle each man to an arable plot that is inheritable by kin; this land is forfeited if the man offends elders or moves away); E. ADAMSON HOEBEL, *THE LAW OF PRIMITIVE MAN* (1964) (providing numerous examples of land ownership by family lines); FLORENCE CONNOLLY SHIPEK, *PUSHED INTO THE ROCKS: SOUTHERN CALIFORNIA INDIAN LAND TENURE 1769-1986*, at 13-18 (1987) (families or individuals who developed and maintained food gathering areas could pass them on to patrilineal descendants); Robert D. Cooter, *Inventing Market Property: The Land Courts of Papua New Guinea*, 25 *LAW & SOC'Y REV.* 759, 767-69 (1991) [hereinafter Cooter, *Inventing*] (in Papua New Guinea, a family line using an arable field, garden, or dwelling has perpetual rights against balance of the clan); Shem Migot-Adholla et al., *supra* note 254, at 155, 158 (in Ghana, Kenya, and Rwanda, a household or individual can gain perpetual private rights in group land by clearing and using it). English entails similarly kept land within families by controlling its descent.

272. See HERSKOVITS, *supra* note 253, at 350-70 (offering examples).

273. See DAVIES, *supra* note 267 *passim* (ancient Greeks recognized individual land ownership, and parcels typically descended within kinship lines); POWELSON, *supra* note 44, at 15-17 (in Ancient Egypt, although pharaoh was titular owner, in reality private parties owned land absolutely).

274. See CHARLES MONTGOMERY GRAY, *COPYHOLD, EQUITY, AND THE COMMON LAW* 13-14 (1963). For context, see *infra* text accompanying notes 372-382.

275. See 1 ANDREWS, *supra* note 77, at 124 (Jamestown settlers took lands in fee simple); 1 BRADFORD, *supra* note 97, at 300 n.2 (after 1627, private Plymouth lands were inheritable); WESLEY FRANK CRAVEN, *THE COLONIES IN TRANSITION* 22-23 (1968) [hereinafter CRAVEN, *TRANSITION*] (chief encumbrance burdening Jamestown landowners was a quitrent of 2s. per 100 acres). Remnants of the feudal practices of primogeniture and entail persisted in Colonial Virginia, but were abolished at the time of the Revolution. In 1776, Thomas Jefferson successfully sponsored legislation that converted a fee tail to a fee simple; and in 1785, the Virginia legislature abandoned primogeniture as the rule of distribution in instances of intestacy. See C. Ray Keim, *Primogeniture and Entail in Colonial Virginia*, 25 *WM. & MARY Q.* 545, 548-50 (3d Series 1969).

276. See J. Mark Ramseyer, *Water Law in Imperial Japan: Public Goods, Private Claims, and Legal Convergence*, 18 *J. LEGAL STUD.* 51, 53-56 (1989) (ownership form "close to fee simple" evolved in 1300-1700 period); see also YUJIRO HAYAMI & VERNON W. RUTTAN, *AGRICULTURAL DEVELOPMENT* 98 (1985) (interests similar to fee simple had emerged in both Japan and Thailand prior to end of 19th Century).

277. See HERSKOVITS, *supra* note 253, at 353-54.

278. *Id.* at 362; VAN DEN BERGHE, *supra* note 270, at 150-51 (1979).

ciencies of perpetual private land rights have led to their spontaneous appearance on every continent.

V. TAILORING LAND INTERESTS BY CONTRACT AND PRACTICE

Any standard bundle of land rights is inherently crude; people on the ground are likely to want to be able to configure their own packages. The classic usufruct was *immutable* because its owner lacked the power to transfer any of its components. The fee simple, by contrast, is a *default* bundle of rights, which its owner by and large is free to modify by contract, gift, will, or otherwise.²⁷⁹ It is impossible to exaggerate how frequently private owners of fee interests do divide—along dimensions of space, function, and time—the packages of land rights with which they start. Many of these same modifications can be viewed, from another perspective, as efforts to aggregate neighboring parcels for special purposes. The group rules that govern owners' customization of land bundles are those that confer powers to alienate partial interests and those that constrain owners from excessive decomposition and aggregation. This Article's efficiency thesis predicts that, within a close-knit group, utilitarian considerations ultimately determine the content of these rules.

Groups authorize private owners to traffic in partial land interests in order to allow diverse combinations and sequences of activities on the same parcel of land. No standard package of entitlements, no single set of physical boundary lines, and no standard time period of ownership can be efficiently scaled for all land uses and users. The more an owner of a fee simple carves out and transfers sticks from his initial bundle of land rights, the more he begins to function as a land manager as opposed to a land user.²⁸⁰ His management task is to monitor subowners whose activities and interests are potentially in conflict. Because much of real property law addresses relations between owners of partial land interests, it is important to identify the basic dimensions along which owners voluntarily splinter land entitlements.

A. Customized Allocations of Use-Privileges: Of Easements

Someone not interested in purchasing all of Blackacre may be willing to bid enough to induce its owner to sell a particular stick in the Blackacre bundle. For example, a neighbor may covet a right-of-way across Blackacre. Also certain land uses may require specialized skills that a general-purpose

279. This distinction between *immutable* and *default* rules is gleaned from Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989). It should be noted that some partial land interests, such as prescriptive easements, are nonconsensually created.

280. Compare the functions of the manager of a firm, who, in return for keeping residual earnings, assumes the task of monitoring a workforce. See sources cited *supra* note 162.

owner is unlikely to possess: an historical society may be best able to conduct periodic tours of a landmark building, or a wildcatter, to drill a well on the back forty. In these sorts of situations, a fee owner may carve out a particular use-privilege from the default bundle and transfer it as an easement or *profit a prendre*.²⁸¹

B. *Customized Allocations of Territories: Of Library Carrels*

Parcels whose general-purpose boundaries perfectly compromise competing demands on horizontal sizing are invariably still too large for some purposes and too small for others.²⁸² This leads to the creation of special-purpose boundaries. If there are functions for which a particular parcel is too large, an owner may wisely create internal subdivisions, formal or informal. Examples include individual bedrooms within a home, assigned offices and parking spaces at a place of employment, student lockers, library carrels, and a retailer's leasehold in a shopping mall.

Conversely, a group is apt to impose some default land-use controls to govern large events for which parcels tend to be suboptimally sized.²⁸³ Neighboring landowners need not rest with these, but can also interlink adjoining lands in a tailor-made fashion. To control negative spillovers from land uses, they may agree to negative covenants. To encourage activities that create positive spillovers, they may be bound by affirmative covenants that impose duties, say, to maintain landscaping or contribute dues to a homeowners' association.

C. *Customized Allocations of Time Blocks: Of Leases*

A pre-industrial group tends to recognize land leases even before it allows land sales.²⁸⁴ A fee owner of land who executes a lease has carved out and transferred a time-limited interest from his default bundle of temporal rights.²⁸⁵ When a tenant values occupancy during a particular time period more than the landlord does, a lease enables both parties to gain from trade. The scores of millions of leaseholds in the United States demonstrate the ubiquity of these opportunities for mutual gain.

But why would a tenant rent, instead of buying the same premises?²⁸⁶

281. Similarly, a hunter-gatherer band may grant a member household an exclusive food-gathering territory over which all members of the band continue to retain hunting privileges. *See* Bailey, *supra* note 63, at 186.

282. *See supra* text accompanying notes 62-71.

283. *See supra* text accompanying notes 68-71.

284. *See* PRYOR, ORIGINS, *supra* note 271, at 143 (compiling anthropological evidence).

285. Leases are representative of a larger class of time-limited property rights that includes, among others, life estates and time-share interests.

286. This discussion owes much to Hansmann, *Condominium Housing*, *supra* note 160, at 30-39 and

First, the landlord may insist on retaining the reversion. For example, a professor taking a year's sabbatical at a distant university will seek merely to rent out his permanent dwelling, not to sell it.

Transaction-cost considerations may also make a tenant prefer renting to purchasing. Leaseholds are much simpler transactions to complete than sales.²⁸⁷ Because the interest at issue is less valuable, renting enables a tenant to economize on search costs, to avoid the burdens of arranging for a mortgage or other purchase financing, and to conclude negotiations merely by shaking hands or signing a simple form.²⁸⁸ A tenant can also bargain for an arrangement that permits rapid exit, such as a month-to-month tenancy (terminable on a month's notice) or a short term-of-years lease. A landowner, by contrast, cannot exit as easily because a land sale typically requires the services of a broker and takes months to conclude. To transient households and firms, easy entry and exit is a boon. When a lease proves to be too short, renewal negotiations may be strategically tricky, but reputational concerns and ongoing relationships often civilize renewal discussions.²⁸⁹

Another impulse for renting is to avoid sinking one's capital into real estate, an illiquid and undiversified asset. Economic theory predicts that those who become landlords are comparatively less concerned about the drawbacks of ownership, and relatively more skilled at monitoring the activities of lessees.²⁹⁰ Of course, tax laws, rent controls, subsidy programs, and other government policies may also strongly influence land tenure choices.²⁹¹

J.V. Henderson & Y.M. Ioannides, *A Model of Housing Tenure Choice*, 73 AM. ECON. REV. 98 (1983).

287. Hotel stays, which tend to be shorter than leaseholds, are even simpler to arrange.

288. On informality in landlord-tenant relations, see, e.g. ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 275-79 (on dynamics of residential tenancies); Douglas W. Allen & Dean Lueck, *The "Back Forty" on a Handshake: Specific Assets, Reputation, and the Structure of Farmland Contracts*, 8 J.L. ECON. & ORG. 366, 367-69 (1992) (finding that 57% of sample of Nebraska and South Dakota farm leases were oral; written leases were rudimentary because assets were not transaction-specific and parties were concerned about their reputations).

289. *Cf.* Allen & Lueck, *supra* note 288, at 368 (most farm leases in sample were renewed).

290. Hansmann contends that hierarchical governance of a multiunit apartment building by a landlord is more efficient than participatory tenant democracy. Hansmann, *Condominium Housing*, *supra* note 160, at 33-36. *See also supra* text accompanying notes 158-163.

291. Alternative landowner/occupant arrangements have been most extensively explored in the context of agricultural leases. Absentee farm landlords appear to date back to the beginning of recorded history. *See* KNAPP, *supra* note 49, at 86; J.N. POSTGATE, *EARLY MESOPOTAMIA: SOCIETY AND ECONOMY AT THE DAWN OF HISTORY* 184-86 (1992). In a seminal work, Steven N. S. Cheung observed that the risk of crop failures may be (1) borne entirely by tenants (which occurs when flat rents are charged); (2) split between landlord and tenant (which occurs in a sharecropping arrangement, under which the tenant pays no cash rent but owes the landlord, say, one-third or one-half of the crop); or (3) borne entirely by the landlord (which occurs when a farm owner pays workers cash wages and keeps the entire crop). *See* STEVEN N. S. CHEUNG, *THE THEORY OF SHARE TENANCY* 72-87 (1969) (identifying risk allocation and transaction costs as main determinants of terms of agricultural arrangements). The post-Cheung literature is reviewed in Keijiro Otsuka et al., *Land and Labor Contracts in Agrarian Economies: Theories and Facts*, 30 J. ECON. LIT. 1965 (1992). Some crops inherently present landlords with more difficult monitoring problems than others do. Thus, wage arrangements are more likely for sugar cane than for raspberries.

D. *Constraints on Excessive Decomposition*

Those who create institutions of private property typically presume that each individual is a competent land manager. When, however, a group collectively concludes that one of its landowning members is incapable of managing a part of its scarce territory, it may empower itself to install another manager. In a preliterate society, for example, an incompetent's land may revert to the group.²⁹² A modern legal system usually has procedures for appointing a conservator to supervise an incompetent's affairs,²⁹³ and tends to ignore capricious testamentary commands.²⁹⁴ These practices suggest that it is more accurate to conceive of a private landowner as an authorized manager of a bit of a group's section of the globe, rather than as an omnipotent lord of a Blackstonian manor.²⁹⁵

A landowner can reveal incapacity not just by swinging an axe at an antique armoire but also by splintering rights in a fee simple bundle into bits that are far less valuable than the pre-splintered whole. When transferees of partial land interests are numerous and unascertainable, they will find it difficult if not impossible efficiently to manage their myriad interests. To deter destructive decompositions of property interests,²⁹⁶ the Anglo-American legal system has developed a complex set of paternalistic rules, most notably the Rule Against Perpetuities.²⁹⁷ Rules that govern the interpretation and termination of sub-fee interests also tilt against creation and continuation of interests "repugnant to the fee." One example is the doctrine that terminates land-use covenants when neighborhood conditions have changed.²⁹⁸ Another is the venerable statutory power of a co-owner to partition a concurrently owned parcel; because the general-purpose boundaries of parcels tend already to be efficiently scaled and located,²⁹⁹ the efficient approach at the time of partition is likely to be an auction of the undivided tract, with the sale proceeds apportioned among the prior co-owners.³⁰⁰ This procedure—as well as this entire discussion of the creation of partial interests by use, space, and

292. Cf. *supra* text accompanying note 272.

293. Cf. 2 WILLIAM BLACKSTONE, COMMENTARIES *290-92 (discussing when a landowner lacks capacity to sell). These paternalistic interventions of course must be tightly circumscribed, or else private property in land cannot serve as a bulwark of individual liberty. See *supra* text accompanying notes 178-186.

294. See, e.g., *Eyerman v. Mercantile Trust Co.*, 524 S.W.2d 210 (Mo. App. 1975) (countermanding, on grounds of public policy, testatrix's instruction that her home be razed).

295. This theme is developed in Robert C. Ellickson, *Adverse Possession and Perpetuities Law: Two Dents in the Libertarian Model of Property Rights*, 64 WASH. U. L.Q. 723 (1986).

296. The term *decomposition* is taken from Michelman, *supra* note 9, at 8-21 (articulating the issue and providing numerous examples).

297. See DUKEMINIER & KRIER, *supra* note 163, at 250-77.

298. See *id.* at 943-53.

299. See *supra* text at note 67.

300. See DUKEMINIER & KRIER, *supra* note 163, at 304-12.

time—presupposes that a private landowner has the power of transfer. It is time to confront directly the issue of commerce in land.

VI. ALIENABILITY OF LAND INTERESTS

The seemingly technical question of whether land can be bought and sold lies at the core of social organization. The prior discussion has assumed that an owner possesses an unfettered power to alienate an interest in land by sale, gift, or mortgage while alive, and by will or descent at death. In many societies the reality is more complex.

A. *The Debate over Putting Land into Commerce: Of Karl Polanyi*

Blackstone concisely stated the basic rationale for consensual alienability of land: “[I]t was found that what became inconvenient or useless to one man was highly convenient and useful to another Thus mutual convenience introduced commercial traffic, and the reciprocal transfer of property by sale”³⁰¹ Alienability has significant advantages beyond engendering gains from trade. As the example involving Mae illustrated, even a fee owner who lacks a bequest motive will adopt an infinite planning horizon if she has the power to sell.³⁰² The power to mortgage, which is essentially a conditional promise to transfer, may enable an individual with little capital to acquire land and help a current landowner to obtain credit on favorable terms.³⁰³

Despite the advantages of alienability, many societies, especially preliterate ones, have greatly restricted land transfers. A blanket prohibition on the alienation of land, which characterized the classic usufruct, is increasingly rare. Instead, groups tend to impose partial restrictions, along one or more of three dimensions. First, the owner of a land interest may be empowered to transfer it only to a limited set of persons, typically those in a portion of the transferor’s kinship line.³⁰⁴ Second, only certain modes of transfer may be permitted. In a traditional society, a landowner may be entitled to give away acreage, but not to sell it (a policy that decreases chances that transferees will be non-kin).³⁰⁵ The United States may empower a Native American who has

301. 2 WILLIAM BLACKSTONE, COMMENTARIES *9. Blackstone’s contemporary, Adam Smith, opposed entails and other feudal remnants that restrained alienation. See ADAM SMITH, LECTURES ON JURISPRUDENCE 69-71 (R.L. Meek et al. eds., 1978) (“The interest of the state requires that lands should be as much in commerce as any other goods.”).

302. See *supra* text accompanying notes 266-278.

303. See *supra* note 267.

304. Clans in Papua New Guinea still generally adhere to restrictions of this sort. See Cooter, *Inventing*, *supra* note 271, at 759-60; cf. *supra* note 271 (examples of land ownership by family lines).

305. Cf. GLUCKMAN, TRIBAL SOCIETY, *supra* note 119, at 41-43 (tribal peoples in much of Africa prohibit land sales but allow gifts of land provided that superiors approve).

been allotted reservation land to lease it, but not to convey it.³⁰⁶ Third, some proposed transfers, especially those to persons outside the group, may require the approval of a lord, a village meeting, or some other designated authority.³⁰⁷ Before and just after the Norman Conquest, English land was encumbered with a raft of partial restrictions of these sorts. The conventional Property course in an North American law school briefly traces the attrition of these restraints on alienability, especially between 1066 and 1540 (the year of the Statute of Wills).³⁰⁸

Although alienability generally enhances efficiency of land use, group-imposed restraints on alienation are defensible when they bar a transfer that would harm others more than it benefits the parties to the transaction.³⁰⁹ For example, a preliterate group with abundant land might understandably restrict transfer of village land. Because of internal kinship ties, most of a village's current residents would have in effect offered up their relatives as "hostages," a fact that would help ensure that the residents would cooperate, say, in defending the village against enemies.³¹⁰ An outsider who acquired land in a village, by contrast, would be less likely to have kin there and therefore would not be as reliably loyal. By prohibiting or regulating land sales to strangers, a village can help ensure its future close-knittedness.

Modernity, however, fosters alienability. As literacy and engineering advance, human groups can organize state criminal-justice systems and develop other social controls of broad territorial reach. These innovations make villagers less fearful of raids, and better able to screen newcomers and sanction them after they have proven to be uncooperative fly-by-nights. Additionally, land becomes more valuable as population rises, and this scarcity increases the

306. For a concise history of some federal laws governing Indian lands, see *Hodel v. Irving*, 481 U.S. 704, 706-09 (1987).

307. In the early English feudal period, a vassal could not transfer land without prior consent of both the lord and the vassal's heir apparent. 2 WILLIAM BLACKSTONE, COMMENTARIES *287. Some towns in Colonial New England insisted on screening land purchasers. CRAVEN, TRANSITION, *supra* note 275, at 22 n.66.

308. See *DUKEMINIER & KRIER*, *supra* note 163, at 145-58, 225-30; see also 2 WILLIAM BLACKSTONE, COMMENTARIES *288-90; GRAY, *supra* note 274, at 14-15 (on alienability of copyholds). The key legal event was enactment of the Statute Quia Emptores in 1290. *DUKEMINIER & KRIER*, *supra* note 163, at 152-53.

309. For fuller analyses of this issue, see Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849 (1987) (analyzing why sales may be prohibited, when other forms of transfer are not); Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931 (1985) (evaluating rich set of rationales for inalienability rules); ELLICKSON, ORDER WITHOUT LAW, *supra* note 15, at 234-36 (discussing why a group may prefer in-kind exchanges to cash transactions).

Some restraints on alienation are individually crafted, rather than group-imposed. A transferor may desire to restrain the power of his transferees to reconvey land. For example, a transferor who retains adjoining land (or holds a reversion in the land conveyed) may understandably be concerned about the identity of his future neighbors in space (or time). Partly to prevent incompetents from clogging real estate markets (see *supra* text accompanying notes 292-295), common law judges have developed doctrines that prohibit unreasonable contractual and testamentary restraints on alienation. See *DUKEMINIER & KRIER*, *supra* note 163, at 173-75.

310. See Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519 (1983).

opportunity costs of barring transfers to abler land managers. As groups modernize, they therefore tend not only to lengthen their standard time-spans of land ownership, but also to relax traditional restrictions on transfer.³¹¹

Karl Polanyi, a leading critic of the market economy, deplored this trend. He argued that the commodification of land degrades human relationships and associated land sales with the rise of capitalism.³¹² Recent scholarship suggests that land was commodified at least 4,000 years earlier than Polanyi asserted. While literacy and scarcity appear to be necessary conditions for land sales, industrial capitalism assuredly is not.³¹³ Land transactions are recorded in the earliest human writings. Mesopotamian boundary stones indicate land sales as early as 2500 B.C., typically from a handful of kin to a single unrelated buyer.³¹⁴ According to the Old Testament, Israelites (but not Levites) were empowered to sell perpetual interests in a dwelling house in a walled town.³¹⁵ Plato bought a farm.³¹⁶ Cicero sold his house.³¹⁷ Yeomen farmers in medieval English villages dealt in real estate.³¹⁸ The pioneers at

311. *See, e.g.*, Migot-Adholla et al., *supra* note 254, at 161-64 (in Ghana, Kenya, and Rwanda, as population increased and land became scarcer, groups relaxed many restraints on alienation).

312. Polanyi dated the "commercialization of the soil" with the liquidation of feudalism in Europe. *See* POLANYI, GREAT TRANSFORMATION, *supra* note 191, at 179. He contended that early societies empowered a landowner only to transfer "use" rights, because a family line invariably held a reversion. *See* POLANYI, ESSAYS, *supra* note 191, at 91-93. As the text demonstrates, this is historically inaccurate. Polanyi deeply influenced M.I. Finley, a younger associate. *See* Brent D. Shaw & Richard P. Saller, *Introduction to M.I. FINLEY, ECONOMY AND SOCIETY IN ANCIENT GREECE* xix (Brent D. Shaw & Richard P. Saller eds., 1982) [hereinafter FINLEY, ANCIENT GREECE]. Finley became the most conspicuous proponent of the now largely discredited view that land was not a commodity in either ancient Athens or Rome. *See* FINLEY, ANCIENT GREECE, *supra*, at 71-73; *see also* M.I. FINLEY, THE ANCIENT ECONOMY 117-22 (2d ed. 1985). For evidence to the contrary, *see, e.g., id.* at 121 (discussing Roman speculators in urban buildings); *infra* notes 316-317.

313. *See generally* PRYOR, ORIGINS, *supra* note 271, at 136-43 (discussing scarcity, level of economic development, and other determinants of emergence of land markets in agricultural economies).

314. GELB, *supra* note 49, at 15-20 (noting that in some instances the family or state might have to approve the sale). During the Third Dynasty of Ur (about 2117-2008 B.C.), land sales appear to have been formally prohibited. *Id.* at 26. On Mesopotamian real estate practices, *see also* POSTGATE, *supra* note 291, at 183-84.

315. *Leviticus* 25:29-34.

316. DAVIES, *supra* note 267, at 335 (detailing Plato's land purchases). Although Finley and other have asserted that the ancient Greeks did not place their lands into commerce, *see supra* note 312, classicists now generally take the view that, except in Sparta and a few other colonies, even family plots (*kleroi*) eventually came to be alienable to nonfamily members. JOHN V.A. FINE, THE ANCIENT GREEKS 39-40, 529-30 (1983) (evolution from descendible usufructs in family lands to, by the fourth century B.C., land in commerce); *id.* at 528 (on a fourth-century B.C. land speculator); CHESTER G. STARR, THE ECONOMIC AND SOCIAL GROWTH OF EARLY GREECE, 800-500 B.C. 150-51 (1977); CHESTER G. STARR, INDIVIDUAL AND COMMUNITY 28 (1986); *see also supra* note 267 (on secured land transactions in ancient Athens). While Spartans also divided up arable land into private plots, they restricted land alienation and sought to equalize land holdings among members (royalty and helots excepted). *See* PAVEL OLIVA, THE BIRTH OF GREEK CIVILIZATION 66-67 (1981).

317. *See* Elizabeth Rawson, *The Ciceronian Aristocracy and its Properties*, in *STUDIES IN ROMAN PROPERTY* 85, 87 (M.I. Finley ed., 1976). Contrary to Finley's view, *see supra* note 312, it is now widely thought that wealthy Romans treated land as an item that could be placed into commerce. *See* Rawson, *supra*, at 85-89; Raymond Westbrook, *Restrictions on Alienation of Property in Early Roman Law*, in *NEW PERSPECTIVES IN THE ROMAN LAW OF PROPERTY* 207, 208-09 (Peter Birks ed., 1989) (ceremony of *mancipatio* was designed to prove that land buyer had paid full value).

318. *See, e.g.*, ROBERT C. ALLEN, ENCLOSURE AND THE YEOMAN 60-61, 68 (1992) (by thirteenth

Plymouth promptly placed land into commerce.³¹⁹ Henry Maine succinctly captured the trend in his renowned observation that “the movement of the progressive societies has hitherto been a movement *from Status to Contract*.”³²⁰ The gradual movement Maine detected began in ancient times, however, not—as Polanyi would argue—with the collapse of feudalism.

Nevertheless, Polanyi was unquestionably right on another score: active real estate markets do lessen the close-knittedness of residential settlements. When feudalism tied vassals to lords, relationships were more permanent than afterward. Recognizing the dynamic consequences of easy exit, the Hutterites and kibbutzniks require a member who departs to forfeit his investment.³²¹ Relatedly, contemporary communitarian theorists have striven to devise ways of keeping people in place through various restraints on alienation and migration.³²² A case study of the Mexican *ejido* program, a 75-year-old effort to reinstitute the inalienability rules characteristic of preliterate times, can illuminate how proposals of this sort might work in practice.

B. *The Ejido of Mexico*

Prior to the Revolution of 1910, ownership of land in rural Mexico was highly concentrated. This helped spark the Revolution, one of whose leaders, Emiliano Zapata, came to personify the cause of distributing haciendo lands to peasants.³²³ In the Revolution’s first land distributions, expropriated lands were transferred directly to rural households. After a few years, however, in a pattern that perfectly foreshadowed the later aftermaths of the Russian and Chinese Revolutions,³²⁴ Mexico’s revolutionary leadership shifted its

century, free tenants could alienate lands without lord’s consent and by fifteenth century, copyholders could); CARL J. DAHLMAN, *THE OPEN-FIELD SYSTEM AND BEYOND: A PROPERTY RIGHTS ANALYSIS OF AN ECONOMIC INSTITUTION* 22-26 (1980) (copyholders increasingly obtained power to alienate their lands without prior approval of lord or village assembly); J. AMBROSE RAFTIS, *TENURE AND MOBILITY: STUDIES IN THE SOCIAL HISTORY OF THE MEDIAEVAL ENGLISH VILLAGE* 63-67 (1964) (owners of customary land rights could alienate them, including to non-kin, by following manorial procedures).

319. See 2 BRADFORD, *supra* note 97, at 11 n.2 (first recorded sale of land in Plymouth occurred in 1628).

320. HENRY S. MAINE, *ANCIENT LAW* 170 (10th ed. 1905).

321. See *supra* note 175 and accompanying text.

322. Some of the most concrete proposals that have been put forward by Critical Legal Scholars involve restraints on the alienation of land. See Simon, *supra* note 135, at 1341-44, 1361-63 (proposing limited-equity housing cooperatives, from which on departure a member might retrieve only the sums personally invested, plus interest); Duncan Kennedy, *The Effect of the Warranty of Habitability on Low Income Housing: “Milking” and Class Violence*, 15 FLA. ST. U. L. REV. 485, 516-17 (1987) (endorsing limited-equity housing cooperatives); see also MARK KELMAN, *A GUIDE TO CRITICAL LEGAL STUDIES* 159-61 (1987) (questioning desirability of freedom of alienation); cf. Margaret J. Radin, *Residential Rent Control*, 15 PHIL. & PUB. AFF. 350, 368-71 (1986) (arguing that rent control may be justifiable when it helps cement “spiritual communities” of tenants in place). These proposals all elevate community over liberty, a trade-off discussed *supra* text accompanying notes 177-207.

323. This historical account is drawn largely from EYLER N. SIMPSON, *THE EJIDO: MEXICO’S WAY OUT* (1937).

324. The Russian Revolution of October 1917 and the Chinese Revolution of 1949 both initially led to direct peasant expropriations of land from landlords. The heads of these revolutionary governments,

emphasis to collectivized agriculture. The *ejido* system begun in 1917³²⁵ emerged from a mix of socialist theory, perceptions of Mexico's pre-Conquest traditions, and fears of reconcentration of land ownership.³²⁶ The *ejido* quickly became the central agrarian symbol in Mexican politics, and since 1917 has been pursued in fits, starts, and stops.³²⁷

With an average of 100 member households, an *ejido* is a corporate body that receives a governmental allotment of rural land. In 1988, 3.1 million Mexican households lived in *ejido* settlements. These lands, together with lands held in a related program for indigenous peoples, constitute one-half of Mexico's territory and two-thirds of its cropland.³²⁸ About 3% of *ejidos* are operated as collective farms. On the remaining 97%, the *ejido* leaders parcel out an arable tract to each member household, which is then entitled to keep whatever it produces on its allotment.³²⁹ In all *ejido* villages, however, pastures and woodlands are set aside as commonses for use by all members.

A *ejidatario* holds his farm parcel in usufruct, but not a classic one, in that at his death it descends to his kin.³³⁰ In theory, an owner forfeits his plot to the group when he is absent from the village, or fails to cultivate the land, for an undue period.³³¹ Finally, and most pertinently to this Part, Mexican law forbids the owner of an *ejido* parcel from selling, leasing, or mortgaging his land.³³²

The 3% of *ejidos* operated as collective farms are relatively corrupt and mismanaged,³³³ and productivity on *ejido* pasture and woodland commonses is very low.³³⁴ On the other hand, productivity on the household farm plots in *ejidos* is roughly equal to that on comparable private farms in Mexico.³³⁵

however, opposed letting farm households own the fields they were tilling. The *Communist Manifesto* had called for "industrial armies, especially for agriculture." See *supra* text accompanying note 2. After consolidating power, Russian and Chinese party leaders began to collectivize peasant holdings in 1927 and 1953 respectively. See PROSTERMAN & RIEDINGER, *supra* note 8, at 16-23; PRYOR, RED AND GREEN, *supra* note 7, at 15, 123. The calamitous consequences are reported *supra* notes 5-6.

325. See MEX. CONST. tit. I, ch. I, art. 27, reprinted in ALBERT P. BLAUSTEIN & GIBERT H. FLANZ, CONSTITUTIONS OF THE COUNTRIES OF THE WORLD 23-32 (Apr. 1988 Supp.) (*ejido* lands vest in villagers as a whole).

326. See SIMPSON, *supra* note 323, *passim*; Rodolfo Stavenhagen, *Collective Agriculture and Capitalism in Mexico: A Way Out or a Dead End?*, 2 LATIN AM. PERSP. (no. 2) 146 (1975). Whether Mexico's land traditions are in fact more collectivist than most countries' is doubtful. Simpson, himself a devotee of the *ejido*, noted that Mexican land-tenure was becoming increasingly private even before the Conquest, and that this trend accelerated thereafter. SIMPSON, *supra* note 323, at 484-86.

327. The tension between family farms and collectivized agriculture has been a recurring theme in Mexican politics. In 1925-1935, for example, the *Veterano* camp favored nurturing family farms, while the *Agarista* camp favored collectivist ownership and management. See SIMPSON, *supra* note 323, at 440-51.

328. John Richard Heath, *Evaluating the Impact of Mexico's Land Reform on Agricultural Productivity*, 20 WORLD DEV. 695 (1992).

329. *Id.* at 696.

330. *Id.*; SIMPSON, *supra* note 323, at 328.

331. See SIMPSON, *supra* note 323, at 327-28.

332. Heath, *supra* note 328, at 696, 705.

333. See *id.* at 705 (also identifying some dissenters from this view).

334. *Id.* at 704-05.

335. *Id.* at 700-05 (careful review of the evidence). For a more pessimistic appraisal, see Marilyn

On its face, this result is inconsistent with economic theory, which predicts that restraints of alienation will diminish productivity by barring transfers to more efficient users and depriving owners of access to secured credit.

John Richard Heath has offered an interpretation of the *ejido* that reconciles theory and experience. Heath contends that many Mexican farmers, working from below, have evaded the restraints of alienation that the state has attempted to impose from above. In violation of the legal prohibitions on transfer, on many *ejidos* half or more of the arable acreage is in fact leased.³³⁶ In addition, although *ejido* farmers are unable to mortgage their lands, they are able to borrow as much as private Mexican farmers because the state has blessed them with specialized banks to which they apply for loans under the name of the *ejido*, not as individuals.³³⁷

In any event, in Mexico the dream of legal reimposition of preliterate land systems seems to be dying. In November 1991, President Carlos Salinas de Gortari proposed a constitutional amendment that would grant each *ejidatario* freehold ownership of his farmland, and greatly liberalize the alienability of all portions of *ejido* territories.³³⁸ Salinas proposed to retain, however, one type of restraint on alienation that is backed by millennia of precedent and readily recognizable by members of a Manhattan housing co-op: sales to outsiders would be permitted only with prior authorization from the *ejido* governing body.³³⁹ Increasing the alienability of *ejido* lands promises to speed the parcelization of pasture and woodlands and accelerate the break-up of the few collectivized farms. Although Heath himself supports measures to legalize commerce in *ejido* lands, he has also predicted that legal reforms will make little difference in the use of arable lands in villages where *ejidatarios* already engage in informal transfers.³⁴⁰ There, the forces of modernity have already gutted the legal prohibitions.³⁴¹ This history suggests that communitarian theorists may underestimate how doggedly members of a post-literate society are likely to resist imposition of restraints on alienation. Partly to ensure that an assertion of this sort is not misconstrued, the Article now returns to the choice between private and public property in land, this time with an eye to the virtues of a public land sector.

Gates, *Codifying Marginality: The Evolution of Mexican Agricultural Policy and its Impact on the Peasantry*, 20 J. LATIN AM. STUD. 277 (1988) (*ejido* sector is economically stagnant and has become dependent on government agencies that marginalize the *ejidatarios*).

336. See Heath, *supra* note 328, at 705 (citing instances).

337. *Id.* at 699-700, 706.

338. President Salinas' proposal would amend Mex. Const. tit. I, ch. I, art. 27, cited *supra* note 325. For discussion, see Editorial, *Rights to the Land*, CHRISTIAN SCI. MONITOR, Dec. 26, 1991, at 20.

339. See Edward Cody, *Mexico to Revise Concept of Agrarian Ownership; Smallholders Could Sell or Rent Plots*, WASH. POST, Nov. 8, 1991, at A27.

340. Heath, *supra* note 328, at 705-07.

341. See also *supra* note 254 (discussing how custom may override land law).

VII. THE INEVITABILITY OF A NETWORK OF PUBLIC LANDS

Even nations steadfastly committed to private property allocate a significant fraction of their territory to streets, sidewalks, parks, and other sites that are broadly accessible.³⁴² As this Part shows, the economic case for group creation of a network of public lands is overwhelming. *Public*, it must be stressed, is not used here to connote government ownership, but rather to describe situations in which privileges of access are widely shared. All analysts now agree that it is important to distinguish, as Hardin did not, between open-access territories that anyone may enter³⁴³ and tracts that are accessible only to the members of a limited populace and their licensees.³⁴⁴ Examples of the latter include: group-owned lands, such as Hutterites' fields, village commonses for grazing, and a homeowner association's private streets; and horde-owned lands, such as a town beach to which only the town's residents are admitted.³⁴⁵

A. *Alternative Methods of Supplying Transportation Networks*

Although land placed in a public grid will be ripe for Hardinesque tragedies, private lands are next to useless without access corridors. Parcelization is a two-edged sword. When a group entitles an individual to carve a private tract out of group lands, it *creates* in that owner new rights to exclude trespassers. The same event, however, *destroys* the privileges of entering the tract that were previously held by the rest of the collectivity. Parcelization is not cost-justified when the exclusion rights created are less valuable than the entry privileges destroyed. In many contexts, parcelization is indeed inefficient, a tendency that leads to a public-property thesis: *a human group invariably opens a significant portion of its territory to public use.*

How much land should a group place within its public network? The calculus of cost-minimization suggests that a proposed marginal addition to the network should be judged according to its benefits (taking into consideration its likely misuse on account of its being public), and also the opportunity costs the group would incur from taking a parcel out of cultivation or other uses to which a private owner might devote it. This cost-benefit perspective provides

342. Large cities in the United States devote on the order of 25% of their developed land to highway and street rights-of-way, and, in addition, close to 10% to public parks. See ELLICKSON & TARLOCK, *LAND USE CONTROLS*, *supra* note 67, at 17-18, and sources cited therein.

343. "Public trust" doctrines or other customary rules may shackle managers of some open-access lands, say by denying them the power to alienate. Carol Rose calls such lands "inherently public property." See Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 720 (1986) [hereinafter Rose, *Comedy*].

344. See *supra* text accompanying notes 21-26; *infra* text accompanying notes 361-363.

345. Recall that horde-ownership exits when access is limited, but to a group that is too large to be close-knit. See Table 1, *supra* p. 1323. On customary group rights in land, see generally Rose, *Comedy*, *supra* note 343, at 739-49.

a parsimonious positive theory of the layout of the tribal camp, medieval village, and pioneer settlement (but, because it is not close-knit, not necessarily the urban metropolis).

1. *Private Licenses and Easements*

Figure 2, on page 1325, reveals why a group must have a public circulation system. In that Figure, a group parceled out every square inch of its territory to individual owners, thereby landlocking each of them. To make a trip, a traveller would have to bargain for a license of passage upon arrival at each private boundary. This long sequence of two-party transactions would entail grotesque transaction costs, impairing mobility.³⁴⁶ To be sure, instead of engaging in trip-by-trip negotiations, a regular commuter could conceivably contract with landowners for a permanent private right-of-way. Private easements are indeed often cost-effective governance mechanisms for driveways and other deadend routes that only a handful of individuals use regularly. Users of general-circulation routes, however, are far more numerous, and the high transaction costs of large-number coordination prevent those users from organizing spontaneously to acquire and manage private easements.

2. *Privileges to Cross Private Land Without its Owner's Consent*

If decentralized negotiations between Blackstonian neighbors cannot be counted on to generate an efficient transportation network, why shouldn't a group simply confer on its members reciprocal and routine privileges to transport themselves across all private land? The reason is manifest: entrants may damage crops, commit thefts, and do other mischief. Reciprocal rights of passage would undermine the basic virtue of parcelization, namely, the relative ease with which a person can monitor boundary crossings, as opposed to the quality of an entrant's behavior. If privileges of passage were routine, guard dogs and motion detectors would lose most of their usefulness.

In practice, societies with private property in land do make some exceptions to a private owner's general right to exclude, but only in carefully cabined situations. The efficiency thesis predicts that a trespasser would be granted a privilege to enter private land without consent only in circumstances in which the privilege would reduce the sum of deadweight losses and transaction costs. These situations would be those in which: (1) the would-be entrant would objectively value entry far more than the landowner would objectively suffer from the entry; (2) the creation of a limited privilege to

346. Michelman envisioned that a proponent of private property would aspire to arrange entitlements so as to minimize the number of transactions involving large numbers of people. *See supra* text accompanying note 57. The example in the text demonstrates that the proponent would also want to avoid putting actors through a long gauntlet of two-party transactions.

trespass would not significantly increase a landowner's general burdens of monitoring boundaries; and (3) conditions such as emergency or physical distance would make it unusually difficult for the landowner and would-be entrant to negotiate a license or easement of entry.

Anglo-American customs and laws comport well with these criteria.³⁴⁷ The less vulnerable a tract is to damage, the more likely nonowners are deemed privileged to enter it. Blackstone grudgingly admitted that the poor were privileged to go onto fields after a harvest to glean crop remnants.³⁴⁸ Today, both law and custom generally entitle hunters and fishermen to enter private lands, but only onto parcels that are not enclosed, cultivated, or posted with "No Trespassing" signs.³⁴⁹ A landowner defending a building, by contrast, has truly Blackstonian entitlements, and can deploy packs of German Shepherds.

Besides being attuned to the magnitude of landowners' interests, the rules governing privileges of entry are also sensitive to both transaction costs and entrants' stakes. The harder it would be for an entrant to secure the owner's permission in advance, the more likely a privilege to enter will be recognized. For instance, the common law entitles a trespasser to enter another's corn field to escape a charging bull or to retrieve a straying child. In both these cases, emergency obviates negotiation and the privilege to enter is objectively much more valuable than the possible damage to the land. To preserve the core advantage of parcelization, a group must narrowly circumscribe these exceptions and cannot create its general circulation system by means of these privileges.

3. *Private Toll Roads*

Toll road entrepreneurs could conceivably serve as intermediaries. They might buy up rights-of-way from landowners, build roads, and then retail passage rights to masses of travelers. Private toll roads were in fact familiar features of the early Nineteenth Century American landscape.³⁵⁰ To profit-

347. Privileges to enter private lands are surveyed in HARPER ET AL., *supra* note 243, at §§ 1.11-1.22.

348. 3 WILLIAM BLACKSTONE, COMMENTARIES *212-13.

349. "[There is a] common understanding with regard to the large expanses of unenclosed and uncultivated land in many parts at least of this country. Over these it is customary to wander, shoot and fish at will until the owner sees fit to prohibit it. A license may be implied from the habits of the country." *McKee v. Gratz*, 260 U.S. 127, 136 (1922) (Holmes, J.); *see, e.g., Buras v. Salinovich*, 97 So. 748 (La. 1923) (barring hunters from exercising customary rights against landowner who had posted his land); CAL. PENAL CODE § 602(k) (West Supp. 1992) (criminal trespass defined as unconsented entry onto lands cultivated, enclosed, or posted). *See generally* THOMAS A. LUND, AMERICAN WILDLIFE LAW 20-25, 71 (1980).

350. Americans borrowed this institution from Britain, which by 1800 had more than 20,000 miles of roads under the supervision of turnpike trusts. *See* GEOFFREY HINDLEY, A HISTORY OF ROADS 61 (1971). States or municipalities granted franchises to American toll-road operators, and typically regulated the rates they charged. The first U.S. turnpike (a term derived from a popular type of tollgate) was the Little River Turnpike built in Virginia in 1785. *See* FREDERIC J. WOOD, THE TURNPIKES OF NEW ENGLAND 7-8 (1919).

ably provide toll roads across previously subdivided lands, a private firm would almost certainly need the power of eminent domain;³⁵¹ to succeed in charging users, it would require a relatively cheap method for monitoring the entry of vehicles and people onto its right-of-way. Libertarian theorists, who assume that private firms are far more efficient than public agencies, currently are actively pushing to foster private supply of limited-access highways, the routes on which user fees are most cost-justified.³⁵²

Given the present state of technology, however, relegation of the provision of roads to self-supporting private suppliers is inefficient in most contexts. This is true for two reasons. Public-finance theorists argue that, once a right-of-way has been provided, the marginal costs of accommodating an additional traveler on it are close to zero (at least until the road becomes congested). When this is so, it is socially optimal not to levy tolls. In addition, especially on little traveled ways, the administrative costs of collecting tolls from trip-takers are usually prohibitive.³⁵³

The upshot is that a road entrepreneur who prices tolls in a socially optimal way is unlikely to remain in business without a public subsidy. Realistically, other than major toll roads, the unsubsidized entrepreneurial supply of roads is limited to minor streets within new subdivisions, where the benefits of streets are largely capitalized into lot prices. Subdivision developers that provide internal public networks often set up property owners' associations to maintain these public areas with revenues derived from dues charged members. These subdivision networks may either be open-access, or "private streets" restricted to group members. Malibu Colonists and others who are not eager to have the world at their doorsteps may prefer the latter.³⁵⁴

Some franchisees built roads from scratch, while others were given authority to manage formerly public roads that had fallen into poor repair. *See id.* at 33-34 (describing New England practice). By 1850, partly because of the invention of the steam locomotive, most American toll roads had proven to be financially inviable, and had been converted into toll-free public ways. *Id.* at 35.

351. An entrepreneur attempting to assemble a straight path for a private road would likely encounter landowners strategically holding out for a premium price.

352. *See, e.g.*, ROBERT POOLE, *THE LOCAL PRIVATIZATION REVOLUTION* 2-3 (Heritage Found. Lecture No. 258, 1990). Some experiments with private limited-access highways are in the offing. *See, e.g.*, CAL. STS. & HIGH. CODE § 143 (West Supp. 1992) (authorizing four privately managed toll roads).

353. *See* RICHARD A. MUSGRAVE & PEGGY B. MUSGRAVE, *PUBLIC FINANCE IN THEORY AND PRACTICE* 43-44 (5th ed. 1989) (discussing nonrival consumption and nonexcludability). For a more extended discussion of highway finance, see WAYLAND D. GARDNER, *GOVERNMENT FINANCE: NATIONAL, STATE, AND LOCAL* 337-50 (1978). Toll-road companies, like airlines, might attempt to engage in price discrimination, but variable tolls would be even more costly to administer than flat tolls. Technological innovations may conceivably enable private entrepreneurs to supply more streets. If each vehicle were to carry a simple transmitter whose signals could be detected by roadside meters, a toll-road company could bill users periodically. If such companies were to possess monopoly power, they might warrant regulation as public utilities. For precedent, see *supra* note 350.

354. St. Louis is the U.S. city with the strongest tradition of private streets, some of which were created in established neighborhoods by means of special-assessment districts. *See* David T. Beito & Bruce Smith, *The Formation of Urban Infrastructure Through Nongovernmental Planning: The Private Places of St. Louis, 1869-1920*, 16 J. URB. HIST. 263 (1990).

4. *Government Roads*

Given the shortcomings of these more decentralized methods, governments, despite their inherent drawbacks, are often comparatively best at providing roadways. Governments alone have broad powers of taxation, and thus are the natural providers of things that are costly to produce but best given out for free. Government can also use or delegate eminent domain powers to coordinate the opening of regional arteries. Indeed, if a private street in the Malibu Colony were to impair regional transportation flows without sufficient justification, a government might justifiably convert it into an open-access route in order to achieve "network externalities."³⁵⁵

As Carol Rose has described, customary usage may propel a right-of-way into the permanent public road network.³⁵⁶ In the oldest cities, contemporary streets follow ancient cartpaths. This bottom-up design process is also in action when a private landowner carves out a portion of his holdings and donates it to the public network (and the local governing body agrees to accept the dedication). Spontaneously generated street patterns are quirky and quaint, an attribute that attracts tourists but is a nightmare at rush-hour. The laying out of a major road is a quintessential "large" event that private landowners and travelers cannot well coordinate on their own.³⁵⁷ In recent centuries, government authorities have increasingly become more involved in designing surface networks. Although the first road networks at Jamestown and Plymouth evolved largely through customary usage, two centuries later, Brigham Young laid out Salt Lake City from the start.

B. *Other Public Lands*

Public lands serve many functions other than transportation. Again because of the administrative costs of collecting tolls, governments tend to provide sites that people use for brief recreational breaks and spontaneous gatherings: parks, beaches, town squares. Freedom of assembly is promoted when there is a free place to assemble. Rose plausibly argues that a group may want to ensure the availability of meeting places in order to foster "comedies of the commons," gatherings that socialize all comers to prevailing community norms.³⁵⁸

When there are not enough publicly owned sites for gatherings, land regimes may conscript private sites for vital civic functions. A century ago, for example, a judge honored a customary group's claim to a traditional privilege

355. See Michael L. Katz & Carl C. Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985) (focusing on benefits of common industrial standards).

356. See Rose, *Comedy*, *supra* note 343, at 723-27, 730-35, 750-53, 762-64.

357. See *supra* text accompanying notes 72-76.

358. See Rose, *Comedy*, *supra* note 343, at 766-71, 774-81. This is an argument, although not necessarily a decisive one, for municipal subsidization of stadiums for professional sports teams.

of using a private site for a maypole dance.³⁵⁹ In the United States, privately owned suburban shopping malls have begun to supplant the downtown areas of central cities as the mixing bowls of urban regions. Recognizing the socializing functions that places of assembly play, courts are now struggling to make these malls forums for vigorous social interchange, without sacrificing the basic advantages of private land management.³⁶⁰

C. *Avoiding Tragedies on Public Lands*

When land is open-access, horde-owned, or group-owned, "rules of the road" are needed to prevent the many potential users from encountering the usual Hardinesque tragedies. On open-access lands and horde-owned lands, specialized bureaucrats often make and enforce these rules. City police officers, for example, spend much time on traffic and park patrol. Close-knit groups, by contrast, may be able to govern their lands by contract, norm, and other less bureaucratic means.³⁶¹ Medieval villagers generated customs and bylaws to regulate their common lands.³⁶² Residents of a homeowners' association apply covenants and other mechanisms to control their "common areas."³⁶³

Even on open-access lands, private property may evolve as a result of informal social dynamics. These property interests frequently take the form of short usufructs that entitle a current user to keep a spot.³⁶⁴ Especially when a user can readily resort to self-help violence to defend his "space," total strangers are likely to honor short usufructs. Who would move a blanket on Jones Beach until it had been empty for hours? Like classic usufructs, short usufructs customarily are not transferable and terminate on cessation of use.

When users of public lands are repeat players concerned about their long-term reputations, the rules governing short usufructs may be highly sophisticated. Surfers generally honor the rights of the rider first up on a wave and, in case of a tie, closest to the break.³⁶⁵ These rules prevent squabbles, reward skillful preliminary maneuvering, and allocate waves to those in the best posi-

359. See *Hall v. Nottingham*, 33 L.T.R. 697 (Ex. D. 1876) (plaintiff could not defeat group's customary right to conduct maypole dances and other recreational activities on his lands). This splendid example is drawn from Rose, *Comedy*, *supra* note 343, at 767 n.275.

360. See, e.g., *PruneYard Shopping Center v. Robins*, 447 U.S. 74 (1980) (state constitutional provision that prevents owner of private shopping center from excluding petition-gatherers does not violate owner's property and free speech rights guaranteed by federal constitution). See generally Curtis J. Berger, *PruneYard Revisited: Political Activity on Private Lands*, 66 N.Y.U. L. REV. 633 (1991).

361. See sources cited *infra* note 381.

362. See *infra* note 380.

363. See ROBERT G. NATELSON, *LAW OF PROPERTY OWNERS ASSOCIATIONS* (1989) *passim*.

364. Social-scientific studies of these interests are synthesized in RALPH B. TAYLOR, *supra* note 44, at 21-75.

365. See MARK JURY, *SURFING IN SOUTHERN AFRICA* 116 (1989). I thank my colleague Anthony Kronman, a Southern California native, for decoding Jury's surfer-speak.

tion to enjoy a ride.³⁶⁶ When the ocean is congested and waves easily ridden, surfers may shift to a rough rotation system.³⁶⁷

The norms that playground basketball players have generated to prevent the tragic congestion of scarce court space are even more complex.³⁶⁸ The fundamental rule is that a winning team is entitled to stay on the court to play the next game.³⁶⁹ When too many potential challengers are waiting, the fresh opponents are usually those who have waited longest, sometimes provided that they had called out "nexts." In some contexts, a brief free-throw contest is held among those waiting. Like surfing norms, playground basketball norms create exclusive, time-limited rights in the optimal number of participants. The norms are consistent with the efficiency thesis because they are sensitive both to transaction costs (they turn courts over rapidly), and to deadweight losses (they reward skillful play). Scholars who regard social cultures as highly variable should search the globe for a basketball norm that tolerates court congestion, rewards losing rather than winning, or defines winning ambiguously (such as, "demonstrating superior skill").

VIII. THE ECLECTIC REALITY OF LAND REGIMES

It should now be evident that actual land systems are far more nuanced than one would anticipate from reading armchair philosophies of property.³⁷⁰ As Part VII just demonstrated, even in societies nominally committed to private property in land, significant territories are set aside for streets, parks, playgrounds, and other public uses. And then new forms of temporary private property emerge on these public lands. Human groups not only opportunistically mix public and private ownership together, but also vary initial bundles of rights and transfer rules. The efficiency thesis asserts that a common maximization principle underlies these highly diverse arrangements.

366. Surfers' norms are enforced, when necessary, through mild self-help violence. See Judith Cummings, *Surf Wars*, S.F. EXAMINER SUNDAY PUNCH, July 4, 1982, at 3.

367. See William Finnegan, *The Sporting Scene (Surfing—Part II)*, THE NEW YORKER, Aug. 31, 1992, at 39, 41.

368. For analysis of the content of sports rules, including those of basketball, see Donald Wittman, *Efficient Rules in Highway Safety and Sports Activity*, 72 AM. ECON. REV. 78, 82-88 (1982).

369. For instances of the rule in action, see PETE AXHELM, THE CITY GAME 126 (1970); RICK TELANDER, HEAVEN IS A PLAYGROUND 39 (1976).

370. Political and legal philosophers who write about property seldom focus on the issues this Article addresses. Illustrative of contemporary works are STEPHEN R. MUNZER, A THEORY OF PROPERTY (1990); JENNIFER NEDELSKY, PRIVATE PROPERTY AND THE LIMITS OF AMERICAN CONSTITUTIONALISM (1990); JEREMY WALDRON, THE RIGHT TO PRIVATE PROPERTY (1988). Philosophers of course have paid some attention to the land question as such, although usually at a level too general to be helpful to those who must decide the details of land systems. See Ursula Vogel, *When Earth Belonged to All: the Land Question in Eighteenth-Century Justifications of Private Property*, 36 POL. STUD. 102 (1988) (discussing views of Immanuel Kant and Adam Smith, and reception of their analyses a century later by Herbert Spencer, John Stuart Mill, and Henry George); see also Richard J. Arneson, *Lockean Self-Ownership: Towards a Demolition*, 39 POL. STUD. 36 (1991) (ahistorical inquiry into possible justifications for private land ownership).

Descriptions of two of the most significant land institutions in history—the medieval open field and the multi-person household—can underscore the eclecticism of land regimes.

A. *The Medieval Open Field*

For roughly the millennium between 800 and 1800 A.D., in a band north of the Alps and stretching from England to the Urals, much of agriculture was carried out under an open-field system.³⁷¹ Although details of the institution varied from place to place and time to time, some stylized facts can capture its principal features. (Figure 3 depicts a particular English village.)

1. *Property Rights in Open-Field Villages*

The key unit of social organization in the open-field system was the rural village, usually under the sway of a lord of the manor. A typical village had several hundred residents who dwelt in households on clustered homesteads, each of which might be adjacent to a small private croft on which the household raised poultry and vegetables.³⁷² The bulk of the villagers' arable land, however, was divided into two or three large open fields enclosed by hedging or fencing. These fields were the hallmark of the system.

Each open field was a marble cake of group and individual property rights. The villagers decided collectively, and perhaps even moderately democratically,³⁷³ which fields to plant and which to leave fallow, what crop to grow in each furlong (field subsection), when to plant, and when to harvest. Teams of workers, perhaps including hired laborers, carried out some plowing and harvesting operations.³⁷⁴

371. In large areas of Europe, open fields never appeared. The origins of the system are contested. Kerridge sees the institution as beginning in England no later than about 700 A.D.. ERIC KERRIDGE, *THE COMMON FIELDS OF ENGLAND* 17 (1992). The more traditional view is that open fields appeared earlier and were of Germanic origin. In either case, a more individualistic agriculture preceded the rise of the institution. See Barry C. Field, *supra* note 106, at 319-20.

372. See PETER LASLETT, *THE WORLD WE HAVE LOST* 54-55 (3d ed. 1983) (seventeenth-century English villages had average population of 300 or so).

373. See KERRIDGE, *supra* note 371, at 87-88.

374. See AULT, *supra* note 41, at 27-34 (on harvesting practices generally); DAHLMAN, *supra* note 318, at 27-28 (1980) (team plowing and harvesting); LASLETT, *supra* note 372, at 69-70 (collective harvesting). But see MARC BLOCH, *FRENCH RURAL HISTORY* 46 n.32 (Janet Sondheimer trans., 1966) (1931) (no evidence of team plowing on French open fields); KERRIDGE, *supra* note 371, at 27-29, 112 (disputing standard historical understanding that English farmers plowed fields in large teams).

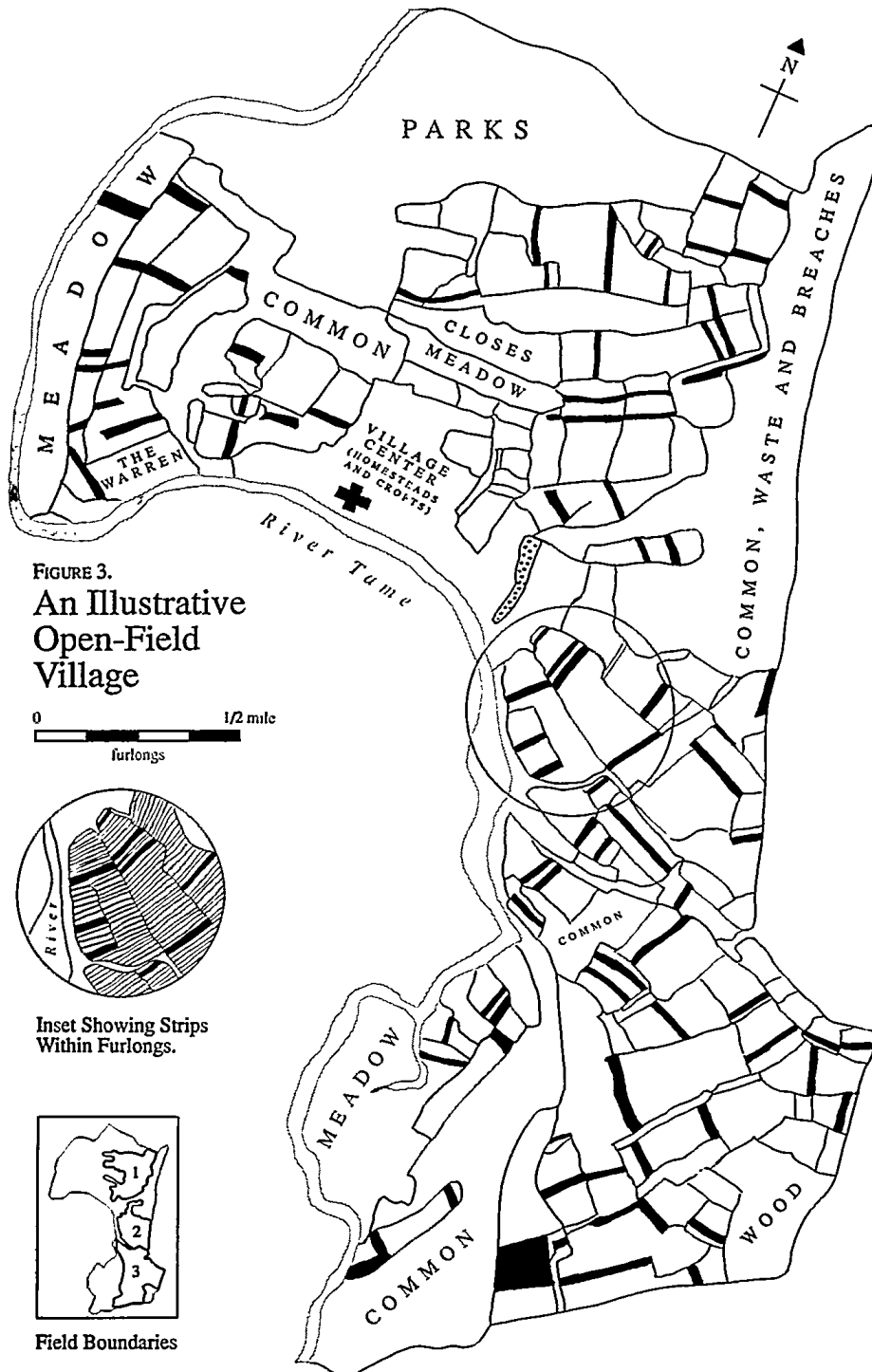
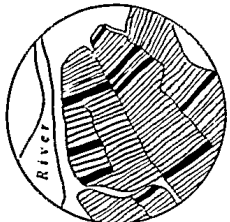


FIGURE 3.
An Illustrative
Open-Field
Village

0 1/2 mile
furlongs



Inset Showing Strips
Within Furlongs.



Field Boundaries

Note: Based on maps dated 1719 of Elford, Staffordshire, appearing in GEORGE C. HOMANS, ENGLISH VILLAGERS OF THE THIRTEENTH CENTURY 88-89 (Harvard Univ. Press 1941). Adapted from the original maps by permission of the William Salt Memorial Library, Staffordshire, England, Michael Greenslade, Director. The strips of one farmer, T. Darlaston, are solid black, and his homestead and croft in the village center are stippled. The circular inset indicates the layout of all strips in certain furlongs.

Other features of the open-field system, by contrast, were distinctly private. Most husbandmen had, in perpetuity, exclusive cropping rights to a number of narrow strips of arable land in each of the village's fields.³⁷⁵ A farmer's handful of strips in a particular field were not contiguous, but rather scattered within it.³⁷⁶ Each owner individually managed sowing and weeding on his strips. The crop grown on a particular strip belonged to the cultivator of that strip (subject perhaps to a lord's claims for fees and services). Thus, if a village's north field were to have been sown in barley, a village farmer had a powerful material incentive to attend to the barley growing on his strips in that field.

A husbandman's private rights in the strips were only seasonal, however. During the months between a harvest and the following planting season, an open field was transformed into a commons on which all village farmers were privileged to pasture livestock in proportion to their land holdings. This practice of communal grazing underlay the villagers' efforts to fence the open fields and to coordinate harvesting and planting dates.

Economic historians have interpreted the open-field system as an institution that functioned to spread risks and exploit efficiencies of scale.³⁷⁷ The division of a household's land into scattered strips is thought to have successfully diversified risks of localized crop destruction, say by pests, blight, or hail. The opening of fields for common grazing facilitated the exploitation of efficiencies of scale in fencing (an expensive item at the time), and in tending herds. The scattering of strips may have prevented a shepherd from maneuvering a flock so that it would drop its manure on the lands of a favored farmer.³⁷⁸

Garrett Hardin, who chose a common pasture as his central metaphor in *The Tragedy of the Commons*, reasoned that a medieval open field would invariably be overgrazed during the pasturing season.³⁷⁹ The evidence suggests otherwise. Hardin failed to consider that a lord and close-knit villagers could develop, and did develop, internal social controls to encourage cooperative use of common pastures.³⁸⁰

375. The strips had to be long because the mould-board plow, the key technology of ridge-and-furrow cultivation, was onerous to turn.

376. In England it was not uncommon for a yeoman to have a total of 40 or more strips. Mazur, *supra* note 262, at 471. Farmers' holdings were not equal, however. See DAHLMAN, *supra* note 318, at 34.

377. McCloskey has emphasized risk-spreading. See Donald N. McCloskey, *The Persistence of English Common Fields*, in EUROPEAN PEASANTS AND THEIR MARKETS 73 (William N. Parker & Eric L. Jones eds., 1975); Donald N. McCloskey, *English Open Fields as Behavior Towards Risk*, in 1 RESEARCH IN ECONOMIC HISTORY 124 (1976). Efficiencies of scale are stressed in DAHLMAN, *supra* note 318, at 111-14.

378. Kerridge, who features this rationale, describes how English shepherds used movable folds to control where sheep grazed. See KERRIDGE, *supra* note 371, at 30-31, 34, 74-75.

379. See Hardin, *supra* note 16, at 1244.

380. See, e.g., DAHLMAN, *supra* note 318, at 120-21 (discussing villagers' techniques for preventing overstocking of common pastures). The social controls that governed the medieval open field probably began as some combination of a lord's fiat imposed from above and informal norms generated from below. Eventually, the customs of some villages were codified into written bylaws and enforced through manorial

Most economic historians regard the open-field system as an efficient institution during its prime in the high Middle Ages. Medieval farmers, recognizing that efficient boundary locations varied, devised a clever way to change land boundaries on a seasonal basis. The agricultural activities for which there were efficiencies of scale—harvesting, fencing, shepherding—were performed jointly on commonly accessible land according to explicit bylaw or implicit contract (“the custom of the manor”).³⁸¹ The small agricultural events that lacked returns to scale—planting, weeding, thinning—were stimulated through the direct material incentives of private land ownership.³⁸²

2. *The Enclosure Movement*

The open-field system of agriculture eventually became obsolete, primarily because of innovations in husbandry techniques and shifts in demand for labor and farm products.³⁸³ When outdated, the diffusely held common privileges to use pastures and waste lands posed a major transaction-costs barrier to consensual modernization.³⁸⁴ The upshot was the enclosure movement, which in England took place in waves during the period 1450-1849. The earliest enclosures were carried out unilaterally by manorial lords; the later ones, by act of Parliament.³⁸⁵ In essence, an enclosure erased some or all of the preexisting rights in common lands in a specific village, laid out new roadways, and repartitioned the affected territory into private parcels that were larger and more compact than open-field strips, but smaller than the open fields themselves.

courts. A magnificent discussion of English by-laws and the open-field system in general is AULT, *supra* note 41. On the analogous Danish village agreements (*vider*), see Karen J. Friedmann, *Fencing, Herding, and Tethering in Denmark, from Open-Field Agriculture to Enclosure*, 58 AGRIC. HIST. 584, 586-87 (1984).

381. For evidence of cooperative management of more contemporary commonses, see, e.g. FLEMING & HALDERMAN, *supra* note 111, at 14-16 (New England towns); ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990); *THE QUESTION OF THE COMMONS* (Bonnie J. McCay & James M. Acheson eds., 1987); STEVENSON, *supra* note 23, at 88-92, 101-14 (Swiss pastures).

382. See DAHLMAN, *supra* note 318, at 121-27.

383. See, e.g., NORTH & THOMAS, *supra* note 3, at 9-24; Donald N. McCloskey, *The Economics of Enclosure: A Market Analysis*, in *EUROPEAN PEASANTS AND THEIR MARKETS* 123 (William N. Parker & Eric L. Jones eds., 1975).

384. The history of the open fields may thus stand as an exception to this Article's general injunction that the state leave close-knit groups alone. See *infra* text accompanying notes 422-424. As mentioned earlier, Binger & Hoffman, *supra* note 15, invoke the persistence of obsolete open fields as evidence that institutions do not invariably evolve efficiently.

385. See generally ROBERT C. ALLEN, *supra* note 318, at 37-39. Parliament passed its first enclosure act in 1545, 280 more acts in 1700-1760, and 4000 in 1760-1840. See Frank A. Sharman, *An Introduction to the Enclosure Acts*, 10 J. LEGAL HIST. 45, 47-48 (1989) (succinct review of process). Analogous events took place elsewhere in Europe. In France, for example, the 1793 Revolutionist legislature invited ruralites to break up their commonses. See Kathryn Norberg, *Dividing Up the Commons: Institutional Change in Rural France, 1789-1799*, 16 POL. & SOC'Y 265, 271 (1988) (of communities with commonses, 72% voted to partition them, with mainly the wealthy opposed).

The vexed events of the centuries-long enclosure movement resist generalization. English historians generally give it mixed marks. Their main criticism has been that some enclosures were unfair to poor villagers: particularly during the fifteenth century, English aristocrats ousted small husbandmen from traditional lands without adequate compensation.³⁸⁶ This process led historian E.P. Thompson to refer to an enclosure as "a plain enough case of class robbery."³⁸⁷ It is now widely agreed, however, that, at least after 1700, enclosures in England were usually scrupulously fair to smallholders, who received new lands in rough proportion to the value of their prior rights.³⁸⁸ The losers from the last century or two of enclosures were the laborers ("cottagers") who lost common rights but received no recompense because they had owned no land in severalty.³⁸⁹ Most villagers appear to have regarded the last waves of enclosures as welcome reprieves from archaic land tenure arrangements, and rarely protested the change. Indeed, most historians have concluded that enclosures greatly improved agricultural productivity, partly because they freed up former commonses and wastes for cropgrowing.³⁹⁰

The history of the open-field village offers several lessons. First, it demonstrates how land regimes evolve in pragmatic fashion to exploit scale efficiencies and spread risks. Second, it shows the capacity of a close-knit group to develop and enforce rules-of-the-road to govern behavior on common lands. Third, the events of enclosure movement illustrate how land rights may become "excessively decomposed."³⁹¹ When a group is stymied by large-number coordination problems, it is possible that a state or other higher authority may usefully intervene to facilitate modernization.

386. See ROBERT C. ALLEN, *supra* note 318, at 14, 37-41; E.B. Fryde & Natalie Fryde, *Peasant Rebellion and Peasant Discontent*, in 3 THE AGRARIAN HISTORY OF ENGLAND AND WALES: 1348-1500, at 744, 810-13 (Edward Miller ed., Joan Thirsk gen. ed., 1991).

387. See E.P. THOMPSON, *THE MAKING OF THE ENGLISH WORKING CLASS* 218 (1963); see also ROBERT C. ALLEN, *supra* note 318, at 283-302; POLANYI, *GREAT TRANSFORMATION*, *supra* note 191, at 35-36.

388. See Sharman, *supra* note 385, at 46.

389. See W.A. Armstrong, *Labour I: Rural Population Growth, Systems of Employment, and Incomes*, in 6 THE AGRARIAN HISTORY OF ENGLAND AND WALES 1750-1850, at 641, 721-28 (G.E. Mingay ed., Joan Thirsk gen. ed., 1989) (noting that most enclosures during this period were uncontested).

390. See Karen Friedman, *supra* note 380, at 596; Donald N. McCloskey, *The Prudent Peasant: New Findings on Open Fields*, 51 J. ECON. HIST. 343 (1991) [hereinafter McCloskey, *Prudent Peasant*]; Michael Turner, *English Open Fields and Enclosures: Retardation or Productivity Improvements*, 46 J. ECON. HIST. 669 (1986). *But cf.* ROBERT C. ALLEN, *supra* note 318, at 17, 130-70 (enclosures gave rise to only small improvements in agricultural productivity).

391. See *supra* text accompanying notes 296-300.

3. *The Singular Reputation of the Russian Repartitional Village*

The Russian *mir* has long been thought to have been a special type of open-field village.³⁹² The *miri* began to take form around 1500, and many survived until Stalin's collectivizations. According to the traditional scholarly conception, every twenty years or so a *mir's* leaders repossessed its peasants' arable strips and reallocated those lands in proportion to each household's share of the village's adult workforce.³⁹³ Because this system of repartitioning guaranteed each household a periodic fresh start, scholars have regarded the *mir* as the quintessential "redistributive commune." Russian peasants certainly had more reasons than other European peasants to seek to develop reliable risk-spreading mechanisms.³⁹⁴ Russia's climate is harsh and capricious, and its peasantry was unusually poor and illiterate.³⁹⁵ Moreover, most Russian villagers were heavily saddled with debt—especially after the Emancipation of 1861, which made ex-serfs liable for onerous redemption payments.³⁹⁶

"Moral economists" have praised the notion of a redistributive commune on account of its egalitarian ethos, communitarian spirit, and risk-spreading tendencies.³⁹⁷ Critics of the conception might point out that periodic in-kind land redistributions dull incentives to improve and conserve land,³⁹⁸ and that the villagers should have been able to devise more efficient insurance mechanisms.³⁹⁹ Indeed, the *mir*, as traditionally conceived, cannot be reconciled with the efficiency thesis advanced in this Article.

Recent scholarship indicates, however, that *mir* residents were fully cognizant of the need to encourage land improvements and conducted their land redistributions with that concern at the forefront. According to one empirical study, a household did not actually lose arable land in a repartitioning until all

392. This account is drawn largely from DOROTHY ATKINSON, *THE END OF THE RUSSIAN LAND COMMUNE 1905-1930* (1983), and *PEASANT ECONOMY, CULTURE, AND POLITICS OF EUROPEAN RUSSIA, 1800-1921* (Esther Kingston-Mann & Timothy Mixer eds., 1991) [hereinafter *PEASANT ECONOMY*].

393. See, e.g., ATKINSON, *supra* note 392, at 3-4, 11-12.

394. Russia can be regarded as the Jamestown of nations. See *supra* text at notes 79-95.

395. In the 1880's, no more than 8 to 9% of Russian peasants were literate. Boris Mironov, *The Russian Peasant Commune After the Reforms of the 1860s*, 44 *SLAVIC REV.* 438, 446-47 (1985).

396. See generally Esther Kingston-Mann, *Peasant Communities and Economic Innovation: A Preliminary Inquiry*, in *PEASANT ECONOMY*, *supra* note 392, at 23 (lucid description stressing risk-spreading attributes of the *mir*).

397. See, e.g., JAMES C. SCOTT, *supra* note 119, at 2-11. The redistributive commune has largely disappeared. But see PRYOR, RED AND GREEN, *supra* note 7, at 89-92 (in Ethiopia in 1975, Marxist regime attempted to impose this institution by force).

398. See *supra* text accompanying notes 259-260 & 266-278.

399. See *supra* note 205 and accompanying text; Robert H. Bates & Amy Farmer Curry, *Community versus Market: A Note on Corporate Villages*, 86 *AM. POL. SCI. REV.* 457, 459-60 (1992) (discussing mechanisms for ensuring group subsistence). Both Czarists and Marxists were highly critical of the *mir*. The Stolypin reforms of 1905-15 empowered a peasant household to withdraw from a *mir*, taking with it a share of the land in perpetual ownership. Marxists also tended to regard the institution as backward, see, e.g., Kingston-Mann, *supra* note 396, at 34, and Stalin eventually eradicated the system.

of its members were incapable of work.⁴⁰⁰ Most significantly, it appears that a peasant who had improved land was assured of some form of compensation in the ensuing repartitioning.⁴⁰¹ These new findings suggest the scholarly image of the strongly egalitarian *mir* is built on a largely fanciful construct of the Russian intelligentsia. In practice, the close-knit residents of Russian villages were closely attuned to both risks and costs.⁴⁰² Nonetheless, skeptics of the propositions presented in this Article would be wise to look first to the *miri* and other traditional agrarian villages for refuting evidence.

B. *Multimember Households*

Despite the national exaltation of private property, most land in the United States is neither owned nor occupied by single individuals. When pioneers at Jamestown, Plymouth, and the Salt Lake Valley abandoned communal agriculture after a few years, they did not establish *individual* land tenure, but for the most part shifted tenure from the full group to other, far smaller, collectivities—households.

In 1989, 91% of the United States population lived in multiperson households.⁴⁰³ Of the adults in these households, 95% were cohabiting with a spouse or other relatives.⁴⁰⁴ Because kinship ties are instinctively strong and enduring, kin can maintain close-knittedness more cheaply than non-kin

400. See Elvira M. Wilbur, *Peasant Poverty in Theory and Practice: A View from Russia's "Impoverished Center" at the End of the Nineteenth Century*, in PEASANT ECONOMY, *supra* note 392, at 101, 121-22 (land was secured for working households "by taking land from households that did not have a labor force, rather than by leveling-down large work units."). Between 1861 and 1900 about one-fourth of the Russian communes did not engage in any large-scale repartitioning. TEODOR SHANIN, *THE AWKWARD CLASS* 36 (1972).

401. Kingston-Mann, *supra* note 396, at 45.

402. The *mir's* practice of redistributing land, instead of cash or goods, remains puzzling. The approach described in the text created the hazard that a household about to lose all its workers would cease being a responsible steward of the land in its possession. It may be relevant that land is relatively plentiful in Russia. The quality of land stewardship is of major concern only where land is scarce.

403. 1991 STATISTICAL ABSTRACT, *supra* note 73, at 48. This percentage, and most others cited from this source, apply to the 98% of the population that lives in households, as opposed to, say, military barracks and institutions.

404. *Id.* at 49. The precise statistics from the same source are listed in Table 2:

TABLE 2. *Living Arrangements of Persons 15 Years Old and Older, United States, 1989*

<i>Living</i>	<i>Percent</i>
Alone	11.9%
With spouse	55.7%
With other relatives	28.5%
With non-relatives	3.9%
	100.0%

can.⁴⁰⁵ Households of two or more unrelated persons, when they do exist, tend to be composed of a few relatively homogeneous individuals, a makeup that reduces decisionmaking costs. A multimember household, irrespective of whether it dwells in a leasehold or freehold,⁴⁰⁶ is a limited-access commons in which children and other nonowners may have routine privileges of occupancy. In a typical family home, the living room, kitchen, and yard are used mainly as common areas, while special-purpose boundaries carve out bedrooms and other spaces for individual household members.⁴⁰⁷ The wee commons known as the family home is as American as Chicago pizza.⁴⁰⁸

Reinvoking the hypothetical situation presented in Part I, Figure 4 presents a sketch of how 25 adults (A . . . Y) and their children (+ + +) might actually live. In Figure 4 one observes individual property and household property embedded in a network of public lands.

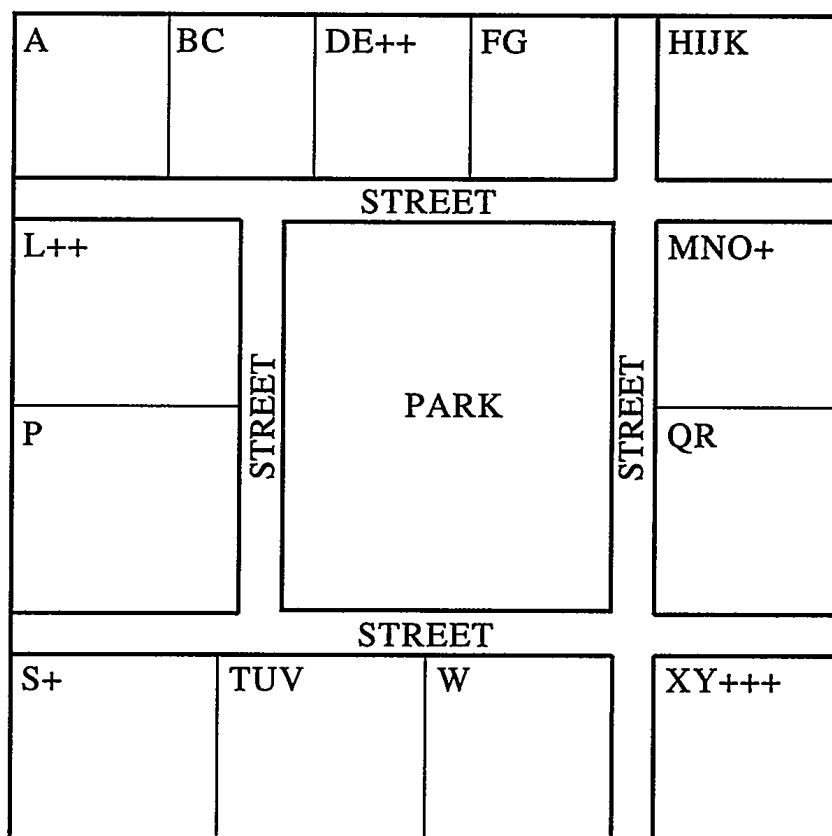
The advantages of living in a multimember household are many. For those who value companionship, life is less lonely. By helping to knit kin together, family households cement mutual-aid relationships. Efficiencies of scale—in shopping, cooking, childrearing, and so forth—may be present. Specialization of labor is possible. The sharing of accommodations also tends to enlarge the dwelling space one is privileged to enter; a student who shares a triple in a dormitory has more room to roam than does a student in a single.

405. Preliterate groups commonly bestow land rights on family lines, not individuals. *See supra* notes 271 & 304.

406. In 1987, 64% of households in the United States owned their dwellings in freehold. 1991 STATISTICAL ABSTRACT, *supra* note 73, at 726. Many of these dwellings were owned concurrently by two or more of their occupants. *See, e.g.,* Yale B. Griffith, *Community Property in Joint Tenancy Form*, 14 STAN. L. REV. 87, 88 n.4 (1961) (approximately 60% of sample of grantees of deeds recorded in 1959-60 in five urban California counties were married couples taking as joint tenants). On basic forms of concurrent ownership, *see supra* note 163. Purchasers of commercial real estate similarly often consist of two or more joint venturers who have organized themselves as a partnership, close corporation, or tenancy in common.

407. *See* RALPH B. TAYLOR, *supra* note 44, at 136-65 and sources cited therein.

408. The family household has survived numerous intentional efforts to undermine it. Both Hutterites and kibbutzniks were anti-family in the early stages of their movements, but, bowing to the inevitable, came to encourage marriage and greater family involvement in child-rearing. *See* van den Berghe & Peter, *supra* note 138, at 524, 528-29. Marxist regimes strove with little success to replace family solidarity with working-class solidarity. *See* NISBET, *supra* note 132, at 66-70.

FIGURE 4. *Households in an Illustrative Neighborhood*

Nevertheless, as with any other type of commons, the creation of a multimember household impinges on privacy and creates risks of shirking and excess grabbing.⁴⁰⁹ Households often apply informal social controls to deal with these problems. Much of ordinary childrearing is devoted to the inculcation of norms against being a nuisance and shirking on chores. When non kin such as graduate students live together, they have to regulate excessive use of the telephone, assure a supply of soft drinks in the refrigerator, coordinate dishwashing, and overcome the other familiar challenges of collective living. As always, this struggle to curb deadweight losses gives rise to transaction costs.

The observed size of the average household is predicted to vary systematically with the magnitudes of costs and benefits of the sorts just mentioned. Technological innovations such as automatic dishwashers, microwave ovens, and cheap basic telephone service are reducing the returns to scale in house-

409. Perhaps for this reason, Anglo-American law favors sole ownership. This preference appears most overtly in statutes that confer on each co-owner of land a unilateral (and perhaps unwaivable) right of partition. *See supra* text accompanying notes 299-300.

holds. Partly as a result, in the United States, more individuals are beginning to live alone.⁴¹⁰ To investigate trends in residential life, scholars would benefit from a "Theory of Household." That Aristotle made this exact topic the subject of the first part of his *Politics* is a sign that the issue is both weighty and enduring.⁴¹¹

CONCLUSION

Too often, the notion of private property in land has prompted a monolithic reaction. Some observers, like Blackstone, have been overly boosterish. Others, like Marx, have been unapardonably hostile.⁴¹² Most contemporary scholars appear to be more pragmatic and should concur with many of the central themes developed here.⁴¹³

The central positive thesis of this Article is that a close-knit group tends to create, through custom and law, a cost-minimizing land regime that adaptively responds to changes in risk, technology, demand, and other economic conditions.⁴¹⁴ In so doing, the group opportunistically mixes

410. There is ample evidence that increasing national prosperity is leading more young adults and elderly people to live alone instead of with relatives. See VICTOR R. FUCHS, HOW WE LIVE 141-42, 200-01 (1983). "Americans of all ages have always put a high value on autonomy; therefore, the rising income of recent decades and the particularly rapid rise in the income of the elderly have made it possible for an ever higher percentage of them to maintain their own households, health permitting." *Id.* at 201; see also Robert T. Michael et al., *Changes in the Propensity to Live Alone: 1950-1976*, 17 DEMOGRAPHY 39 (1980). It is true that the percentage of total persons aged 18-34 living with their parents rose between 1970 and 1990. But this occurred entirely because individuals in this age group began to marry later. The percentage of unmarried persons aged 18-34 living with their parents actually fell sharply during 1970-1990. See 1991 STATISTICAL ABSTRACT, *supra* note 73, at 50.

For longer perspectives on trends in family sizes, see GARY S. BECKER, A TREATISE ON THE FAMILY 237-44 (1981) (asserting that traditional societies, which offer fewer alternative forms of insurance, tend to have larger family households); Richard Wall, *The Household: Demographic and Economic Change in England, 1650-1970*, in FAMILY FORMS IN HISTORIC EUROPE 493, 496-97 (Richard Wall et al. ed., 1983) (in English samples, the average household fell in size from 4.4 members in c.1700 to 2.9 members in 1970).

411. Theoretical work on the household is closely linked to theoretical work on the family. On the latter, see, e.g., BECKER, *supra* note 410, at 32-37 (discussing determinants of sizes of family households). The optimal sizing of landowner entities is thoughtfully explored in Barry C. Field, *supra* note 106, at 322-29.

412. Blackstone at least was cognizant of the functions of both group and open-access lands. See, e.g., 2 WILLIAM BLACKSTONE, COMMENTARIES *32-35 (discussing "right of common"); 1 *id.* at *135 (noting that legislature has power to open new road provided it compensates owners of lands taken). By contrast, I have found no passage in which Marx recognized any virtue in private ownership of land.

413. Interestingly, both law-and-economics and CLS sympathizers have come to share the view that land regimes inevitably will (and implicitly should) mix private and public elements. See, e.g., Demsetz, *supra* note 17, at 351-52 (private property may not be worth its transaction costs); Duncan Kennedy & Frank Michelman, *Are Property and Contract Efficient?*, 8 HOFSTRA L. REV. 711, 748-70 (1980) (noting that eclectic regimes best serve the goals groups are likely to want to pursue).

414. See *supra* notes 14-20 and accompanying text. Although total costs and benefits are rarely plain, various sorts of longitudinal and cross-sectional evidence could serve to disprove the efficiency thesis. The proposition is falsifiable because it predicts the direction of group responses to shifts in demand, factor prices, and risk. On behalf of the efficiency thesis, this Article has marshalled numerous historical and anthropological sources to supplement Demsetz's single empirical example from Labrador (see *supra* note 17 and accompanying text). Other evidence that has been presented supports the corollary prediction that,

private, group, and open-access lands. According to the private-property thesis, a close-knit group virtually invariably entitles its individual members, households, or narrow family lines to obtain exclusive rights to sites suitable for dwellings, agriculture, and other intensive uses. The key utilitarian advantage of private land tenure, in comparison to collective ownership, is that it is far simpler to monitor boundary crossings than to appraise the behavior of individuals who are privileged to be where they are. The Hutterites, kibbutzniks, and others who have succeeded in collectively governing intensive land activities have endured only by developing internal social controls far more pervasive and intrusive than those required where land is parcelized.

As a group becomes literate and its lands become more scarce, its standard bundle of private land rights tends to evolve from the time-limited and inalienable usufruct to something like the perpetual and alienable fee simple. Contrary to the writings of Karl Polanyi, who associated commerce in land with the rise of industrial capitalism, even the most ancient texts document land sales.

But a private-property regime is not always best. To exploit scale economies, and perhaps to spread risks, a group may gravitate toward governing some territories, such as a pasture in a medieval village or a recreation area in a homeowners' association, as limited-access commonses. Finally, the public-property thesis asserts that a group invariably embeds its private parcels in an open-access network of public lands that is dedicated to general circulation and social interaction.

The case studies in this Article demonstrate that anthropology and history can enrich legal analysis of property rights in land. Commentators on property issues have too often adopted an ahistorical perspective. Consider the spirited exchange between Richard Posner and Frank Michelman on the issue of whether granting a farmer private property rights in crops increases agricultural production. As Blackstone had before him, Posner asserted that, if crops were open-access resources that any passerby could snatch away, a farmer would grow less than he would if he were to own the crops.⁴¹⁵ Michelman countered that this assertion is "false" because Posner had underspecified his premises.⁴¹⁶ Michelman reasoned that if crops were up for grabs, a farmer, rather than spending more time on leisure or defensive efforts, might conceivably grow even more crops to help ensure having something to reap

when a state or other powerful entity has imposed a new land regime over the protest of a close-knit group, such "reforms" will decrease land productivity and not endure. The universal failures of the Marxist agricultural collectivizations are powerfully probative of this corollary. The narrower theses developed in various parts of the Article—that close-knit groups create both public and private property in land, and, with modernity, recognize perpetual and alienable private land interests—are directly testable.

415. See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 32 (4th ed. 1992) [hereinafter POSNER, *ECONOMIC ANALYSIS*] (citing 2 WILLIAM BLACKSTONE, *COMMENTARIES* *4, *7).

416. Michelman, *supra* note 9, at 25-27. Instead of *false*, perhaps Michelman should have chosen *invalid*, an adjective that better denotes improper deduction.

after snatchers were done with their predations.⁴¹⁷ In rejoinder, Posner reiterated his prediction that insecurity would reduce crop output by inducing thievery and encouraging farmers to substitute away from cultivation.⁴¹⁸ Like Michelman, however, Posner adduced no evidence of actual property systems in agricultural societies to support his argument.

The anthropological record does not allow a direct resolution of the Posner-Michelman debate because, as far as one can determine, no group in human history has ever treated cultivated crops as an open-access resource that any passerby could harvest.⁴¹⁹ A human group is as likely to use its hands for walking as it is to put its members' farm products up for grabs. Anyone who doubts the fancifulness of Michelman's hypothetical institution should travel, say, to Papua New Guinea, and try to walk off with tubers being grown by tribesmen engaged in slash-and-burn agriculture. A tiny fraction of human groups, including the Hutterites as well as the Natchez and Penobscot tribes of the eastern United States, have recognized *group* ownership of crops to the extent that they mete out their collective harvests to all members according to a formula.⁴²⁰ But these groups are so exceptional that Martin Bailey, a scholar of preliterate societies, is willing to posit a "universally applicable" cultural rule that a crop is the private property of the individual, household, or narrow kinship line that has cultivated it.⁴²¹ Others may choose to strive to identify the premises about human nature that lead to the practically ubiquitous institution of private property in crops. One can be sure, however, that the people on the ground who established this property rule did not do so deductively, but rather through trial and error over many millennia.

This leads to a principal normative conclusion. Both Blackstonian colonialists and Marxist revolutionaries have designed land institutions from afar and forcibly imposed them upon indigenous groups.⁴²² This is folly. As Robert Cooter rightly concludes in his study of land rights in Papua New Guinea,

417. *Id.*; see also Kennedy & Michelman, *supra* note 413, at 719-20.

418. See POSNER, *ECONOMIC ANALYSIS*, *supra* note 415, at 32 n.1. For the development of a model that supports Posner's prediction that a farmer without property rights in crops would spend wasteful amounts of effort on defense, see Stergios Skaperdas, *Cooperation, Conflict, and Power in the Absence of Property Rights*, 82 AM. ECON. REV. 720 (1992).

419. See Bailey, *supra* note 63, at 185 (all preliterate groups assert exclusive rights to home territories).

420. The Natchez tribe cultivated crops as a group effort. The Penobscot tribe entitled a needy member to take crops from other households' fields. See Bailey, *supra* note 63, at 193. One can hypothesize that, like the Hutterites and kibbutzniks, these tribes had established unusually powerful systems of internal social control.

421. See *id.* at 191-92 (reporting on sample of fifty preliterate groups); see also HERSKOVITS, *supra* note 253, at 350-70 (finding that groups grant cropgrowers classic usufructs, or more).

422. Leaders of Marxist regimes, acting upon the belief that "false consciousness" befogs ordinary people but not themselves, have sowed the most misery. See *supra* notes 208 & 324 and text accompanying notes 5-7.

policy analysts should start with a strong presumption that it is inadvisable to compel a close-knit group to change its land institutions.⁴²³

That a particular land regime is efficient for a group is not, of course, conclusive evidence that it is normatively desirable from a larger standpoint. The efficiency thesis, even if sound, merely predicts that a close-knit group will be sensitive to *its members'* costs and benefits. A land regime that is efficient for a small group might conceivably cause significant extraterritorial spillover effects that harm outsiders so much that the regime is undesirable from a broader social perspective. This suggests that in some instances a government might usefully act to overcome the selfish practices of subgroups within its control.⁴²⁴ Employing this logic, critics of markets often assert that commodification *pervasively* corrupts human personalities. This century's tragic collectivizations have stemmed largely from this idea. In light of the horrific record of these interventions, those who wish to disturb indigenous land tenure systems should be required to surmount a heavy burden of proof. A land institution that has evolved over time is far more subtle than the mind of any single individual.

423. See Cooter, *Inventing*, *supra* note 271, at 760, 792-95 (favoring customary evolution of land rights in Papua New Guinea under common law, and disapproving of legal imposition of *either* the fee simple (Blackstone) or producer cooperatives (third-way socialism)). "People will work out for themselves the forms of entrepreneurial organization best suited for their needs and preferences." *Id.* at 792. Countless others who have closely examined the evolution of land rules have come away impressed by the cleverness of indigenous institutions. See, e.g., DAHLMAN, *supra* note 318, at 28, 95, 99; McCloskey, *Prudent Peasant*, *supra* note 390, at 343; Migot-Adholla et al., *supra* note 254, at 157.

424. See ELLICKSON, *ORDER WITHOUT LAW*, *supra* note 15, at 249-50. It may also be constructive for government reformers to provide groups with information about alternative land regimes. On the issue of whether a government may usefully intervene to overcome a large-number coordination problem, see *supra* notes 383-391 and accompanying text (discussing enclosure movement).