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Evolution and Chaos in Property Rights Systems: The Third World Tragedy of Contested Access

ABSTRACT. According to conventional law-and-economics theory, private property rights tend to evolve as resource values rise. This optimistic assessment fails to explain the development of open access in many Third World property systems. Indeed, while the evolution of property has been studied extensively, scholars have paid relatively little attention to the evolution of open access itself. This Essay presents a theoretical analysis of open access that focuses on contested institutional interactions between laws, norms, and agreements. It argues that rising resource values are more likely to lead to open access than private property when the institutional environment is characterized by competing legal and norm-based systems. The Essay concludes that to understand property failures in contemporary Third World circumstances, we must move beyond conventional evolutionary analysis to taxonomic formulations based on the nature and interaction of property enforcement arrangements.

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INTRODUCTION

Law-and-economics orthodoxy suggests that the emergence of property rights is a story of evolutionary success.¹ In Harold Demsetz's classic formulation, rising resource values lead to the creation of private property rights when the benefits of private ownership outweigh its costs.² While this formulation has been modified and elaborated over time, particularly in relation to common property regimes, its proponents continue to apply a basic cost-benefit analysis to predict the evolution of property systems toward efficiency and net social welfare. In these terms, property is simply another legal institution that evolves toward efficiency under the influence of competitive conditions.³

While most of the examples supporting Demsetz's thesis have been taken from North America and England,⁴ the prognosis for the rest of the world should also be relatively optimistic.⁵ Because rising populations and trade opportunities increase resource values, and thus increase the benefits of authorized ownership and use, a general transition should take place from open

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1. See Saul Levmore, *Property's Uneasy Path and Expanding Future*, 70 U. CHI. L. REV. 181, 182 (2003).
 2. Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (PAPERS & PROC.) 347 (1967).
 3. See Thomas W. Merrill, *Introduction: The Demsetz Thesis and the Evolution of Property Rights*, 31 J. LEGAL STUD. S331, S331 (2002) ("The Demsetz thesis can be seen as an anticipation of the idea that the common law evolves toward efficient rules."). This conception is closely associated with the general economic theory of induced institutional innovation. See Vernon W. Ruttan & Yujiro Hayami, *Toward a Theory of Induced Institutional Innovation*, 20 J. DEV. STUD. 203 (1984).
 4. See, e.g., Demsetz, *supra* note 2, at 351-52 (discussing the Montagne Indians of North America); see also Armen A. Alchian & Harold Demsetz, *The Property Right Paradigm*, 33 J. ECON. HIST. 16, 25 (1973) (discussing the enclosure movement in twelfth- and thirteenth-century England); Terry L. Anderson & P. J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163 (1975); D. Bruce Johnsen, *The Formation and Protection of Property Rights Among the Southern Kwakiutl Indians*, 15 J. LEGAL STUD. 41, 60-66 (1986); John Umbeck, *The California Gold Rush: A Study of Emerging Property Rights*, 14 EXPLORATIONS ECON. HIST. 197 (1977).
 5. For studies of the evolutionary theory of property rights in non-Western societies, see LEE J. ALSTON ET AL., *TITLES, CONFLICT, AND LAND USE: THE DEVELOPMENT OF PROPERTY RIGHTS AND LAND REFORM ON THE BRAZILIAN AMAZON FRONTIER 81-152* (1999); ESTER BOSERUP, *THE CONDITIONS OF AGRICULTURAL GROWTH: THE ECONOMICS OF AGRARIAN CHANGE UNDER POPULATION PRESSURE* (1965); YUJIRO HAYAMI & MASAO KIKUCHI, *ASIAN VILLAGE ECONOMY AT THE CROSSROADS: AN ECONOMIC APPROACH TO INSTITUTIONAL CHANGE* (1981); and J. Mark Ramseyer, *Water Law in Imperial Japan: Public Goods, Private Claims, and Legal Convergence*, 18 J. LEGAL STUD. 51 (1989).

access to legal or norm-based regimes with clear property rights and rules. These regimes may have private or common property elements, but the result should be the same: a move from wasteful resource consumption and competition to a system of investment, sustainable resource consumption, and internalization of unwanted spillover effects. Moreover, once such a beneficial regime is established, the likelihood of reversion to open or contested access will be relatively low because the benefits of property are continuous, and other institutions emerge to protect its existence.⁶

Outside of more developed economies, this optimistic picture does not appear to be matched by reality. Despite rapidly increasing populations and resource values, many Third World property systems remain plagued by widespread legal uncertainty, resource conflicts, and environmental degradation. These phenomena may be seen in Sub-Saharan cycles of famine and war, in the vast, informal settlements in Asian and Latin American megacities, and in the alarming rates of deforestation and illegal logging in tropical regions. Indeed, in many contexts, relatively viable resource-governance regimes have reverted to open access notwithstanding conditions favorable to the creation of property rights. In short, a number of contemporary cases challenge Demsetzian optimism about the emergence and maintenance of property rights.⁷

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6. See, e.g., Merrill, *supra* note 3, at S337 (summarizing the conclusions of a conference on the evolution of property rights held at Northwestern University School of Law, April 21-22, 2001, with the observation that “[a] possible generalization . . . is that property rights are sticky in the sense that large up-front costs make it hard to create them, but once created, there is often little reason to get rid of them even if the benefits decline to the point where they would not be created de novo”). Even Stuart Banner, a Demsetz skeptic and proponent of public choice explanations for property transitions, has stated: “Over the long run, transitions between property regimes do generally seem to have run in the direction of efficiency. . . . [It is] quite hard to think of examples of . . . increase[s] in a resource’s value coinciding with the abandonment of exclusive rights” Stuart Banner, *Transitions Between Property Regimes*, 31 J. LEGAL STUD. S359, S361 (2002).
 7. See, e.g., KLAUS DEININGER, WORLD BANK, LAND POLICIES FOR GROWTH AND POVERTY REDUCTION 9 (2003) (“[T]here are many cases where the virtuous cycle of increased scarcity of land leading to more precise definition of property rights has not materialized, but instead conflict has arisen.”); Jean-Marie Baland & Jean-Philippe Platteau, *Division of the Commons: A Partial Assessment of the New Institutional Economics of Land Rights*, 80 AM. J. AGRIC. ECON. 644, 647 (1998) (“[T]he range of evolutionary patterns considered remains too narrow. In particular, the possibility of degeneration into an open-access regime owing to lack of adaptability of the society concerned is overlooked. In this manner, the theory makes itself unable to properly account for the oft-observed cases of chronic resource degradation.”).

Contrary to Demsetzian formulations, property rights do not necessarily emerge where their gains outweigh their costs,⁸ or as a natural consequence of constrained cost-minimization decisions by resource participants.⁹ In many cases, these forms of cost-benefit analysis only speak to the demand for property rights. If self-help measures are unable to meet that demand, and additional assistance is required to either enforce an exclusionary claim or legitimize it for the purposes of bargaining, different incentives will intrude according to the nature of the assistance needed.¹⁰ When claimants seek assistance through private, second-party measures—e.g., the establishment of an informal norm-based order or a coalition of interests—the supply of enforceable property institutions will be greatly affected by cooperation and transaction costs, exclusionary capacity, and the degree of state support. Conversely, when claimants seek assistance from third-party actors—usually the state—the successful supply of property institutions will be affected by state legitimacy, coercive capacity, and interest group capture. Further complexity arises when claimants resort to competing state and nonstate norm-based orders, leading to conflict between these different sources of enforcement capacity.

Complex interactions within and between property rights systems are well documented in colonial and postcolonial contexts.¹¹ Where resource values are rising, these interactions can result in a regime of open access rather than a system with clear property rights and rules. Generally speaking, this type of open access regime arises because those holding state property rights rely on the coercive authority of state agencies, but the weakness or illegitimacy of these agencies makes them unable to exclude local claimants.¹² For their part, local claimants often disregard the rules and institutions of formal law, relying instead on their own normative order or coalition of interests, particularly when the state is weak or oppressive. Yet these enforcement mechanisms may also be incapable of excluding others or controlling resource use by authorized

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8. Demsetz, *supra* note 2, at 350 (setting out the cost-benefit foundations of his evolutionary thesis).
 9. See Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. S453, S463 (2002).
 10. A related emphasis on supply-side issues in the analysis of rights generally, and property rights in particular, may be found in NEIL K. KOMESAR, *LAW'S LIMITS: THE RULE OF LAW AND THE SUPPLY AND DEMAND OF RIGHTS* (2001). Komesar argues that all institutions for enforcing rights are constrained as the number of participants and the complexity of issues increase.
 11. See *infra* Parts III-IV.
 12. Additionally, in some cases the state itself is fragmented by competition between agencies and officials. See *infra* Section IV.B.

users, most often because of interactions with outsiders, including the state itself. In short, the non-emergence of property rights and the evolution of open access are often closely connected. In Third World systems, both phenomena fundamentally result from polynormative, multilayered, and incomplete assertions of exclusionary property rights.

Conventional property rights theory defines open access as a situation in which multiple privileges of use exist in relation to a resource, but in which no one person or group has a right to exclude others or make authoritative decisions concerning resource use.¹³ Endemic land conflicts and chronic resource degradation in parts of the Third World illustrate the failure of Demsetzian predictions and highlight the need for a closer look at the taxonomic category of open access. While the evolution of different property regimes from open access has been studied extensively, scholars have paid relatively little attention to the evolution of open access itself. Generally speaking, it is either treated as the “initial state of the world”¹⁴ – the primordial soup from which property rights arise – or applied as a catch-all description for a variety of situations in which property rights are insecure, ill-defined, or unasserted. Indeed, most studies focus on the consequences of open access – the tragedy of the commons¹⁵ – rather than its causes.¹⁶

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13. See Thráinn Eggertsson, *Open Access Versus Common Property*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW 73, 74 (Terry L. Anderson & Fred S. McChesney eds., 2003).
 14. Louis De Alessi, *Gains from Private Property: The Empirical Evidence*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW, *supra* note 13, at 90, 91.
 15. A tragedy of the commons arises when insufficient incentives exist for resource conservation and investment in productive capacity, because no user bears all the costs and consequences of his resource use. The result is overexploitation, premature exploitation, and underinvestment in the long-term value of the resource. The paradigmatic reference here is Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968). See also RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 32-34 (6th ed. 2003) (discussing the tragedy of the commons thesis). For a more contemporary overview, see Eggertsson, *supra* note 13, at 77-79.
 16. Most studies of open access have focused on resources that are highly mobile (e.g., fish, bison, small birds, and beavers) or dispersed (e.g., oyster beds). Most studies have also involved either an ex post explanation of species that are extinct or near extinction, or an analysis of the property regime best suited to encourage exit from open access. A useful summary and overview of these studies is provided in De Alessi, *supra* note 14, at 91-94. The only study uncovered by De Alessi relating to fixed assets (i.e., land) concerns open access in Libya. *Id.* at 92 (discussing Anthony Bottomley, *The Effect of the Common Ownership of Land upon Resource Allocation in Tripolitania*, 39 LAND ECON. 91 (1963)). The Bottomley study, however, focuses on consequences of open access, such as low productivity, rather than the causes and specific nature of this particular type of open access regime. A similar focus on the consequences of open access rather than its various types and manifestations may be found in Eggertsson, *supra* note 13, at 76-81. See also P. S. DASGUPTA & G. M. HEAL,

To understand property rights failures in contemporary Third World circumstances, we must move beyond Demsetzian cost-benefit analysis to taxonomic categories based on the availability and effectiveness of enforcement mechanisms. Where exclusionary attempts are made because anticipated benefits exceed anticipated costs, some claimants will succeed and be described as owners. Others will fail in a variety of ways and for a variety of reasons. The claimants may fail in whole or in part. They may engage in incomplete acts of exclusion because the costs of complete exclusion are prohibitive. They may experience deadlocked exclusion because another party has equivalent exclusionary capacity. They may fail due to deficiencies in the enforcement measures themselves. All of these possibilities raise different issues of institutional supply and demand. All lead to different consequences in terms of overconsumption or underinvestment. All involve a significant degree of social contestation. This Essay argues that a focus on enforcement mechanisms captures these consequences of exclusion more effectively, and thus better explains Third World property rights failures than Demsetzian analysis.

Part I begins by outlining the basic economic theories of property rights, particularly as asserted by Harold Demsetz and Ronald Coase. Coasean models assume that state agencies can and will allocate property rights in an authoritative manner.¹⁷ Demsetzian models assume that rising resource values will induce property rights, either through private ordering or with the assistance of the state. In both cases, property rights are primarily a mechanism for internalizing externalities, a perfect-world solution to problems of conflict, pollution, and resource-dissipation. Yet the flaw in this analysis, at least as applied to Third World circumstances, is that the greater the divergence between state law and local norms, the more likely it is that attempts to enforce exclusionary claims will lead to open access rather than an authoritative property rights regime.

Some versions of the Demsetzian thesis recognize that rising resource values can result in increased enforcement costs, including the need to offset an increased risk of incursion. Open access may result when increased enforcement costs outweigh the marginal benefits of exclusion. Understanding this process, however, requires more than simple cost-benefit analysis. The availability of different exclusionary mechanisms such as laws, agreements, or social norms can be just as influential as resource values and enforcement costs in producing open access. Part II argues that different types of open access

ECONOMIC THEORY AND EXHAUSTIBLE RESOURCES 39-94 (1979); H. Scott Gordon, *The Economic Theory of a Common Property Resource: The Fishery*, 17 J. POL. ECON. 124 (1954); Hardin, *supra* note 15.

17. See *infra* Section I.A.

regimes will evolve in response to the failure, partial failure, or fragmentation of these exclusionary mechanisms. In other words, while a resource user may assert an exclusionary claim when anticipated benefits exceed anticipated costs, conditions of open access will continue if the laws, norms, and agreements that enforce such claims become ineffective or begin to interact in an incompatible fashion.

Part III further develops this supply-side analysis of laws, agreements, and norms, and the way in which their interaction may create conditions of open access. In particular, it identifies the processes by which norm-based common property arrangements may break down under pressure from rising resource values. This degradation may arise in two respects. A common property system may lose its capacity to exclude outsiders, creating the potential for intercommunal conflict. Endemic forms of farmer-herder conflict in Sub-Saharan Africa illustrate this tragic possibility. Additionally, the social norms underpinning a common property system may degrade as community members enter into dealings with outsiders. This degradation process is discussed with reference to the development of informal land markets in postcolonial societies.

Part IV considers the role of third-party property enforcement mechanisms in property rights failures. It argues that intervention by sociopolitical authority, typically the state, can create open access by proliferating competing legal or norm-based systems. Legal and normative pluralism is a particularly common phenomenon in the Third World. It is often accompanied by institutional pluralism—a fragmentation of the state into competing agencies and levels of government. Resource claimants tend to cluster around these diverse sources of state power, intertwining private property claims with public forms of authority. The resulting patterns of interaction among enforcement agencies are far removed from the clear property rights predicted by Demsetzian analysis. Part V concludes with a call for greater recognition of contestation and enforcement in classifying different types of open access.

I. LAW, NORMS, AND ECONOMIC THEORIES OF PROPERTY RIGHTS

The Demsetzian conception of evolving property rights begins with this question: When a resource is plentiful, what is the need for property rights? In relation to land, for example, abundance allows a cultivator to use a plot until its fertility is exhausted and then move to another plot for further cultivation. Because all other cultivators may similarly move from plot to plot without creating significant negative effects on fellow users, the resulting regime of open access is relatively efficient and free of social contestation. Not only is there no need to assert ownership of any particular plot, there is also no

unsustainable depletion of resources or wasteful competition to secure the resource in question. Any negative effect one cultivator's actions may have on other cultivators is so small that the benefits of forcing that cultivator to bear these social costs are not sufficient to justify the effort.¹⁸

According to Demsetz's 1967 article, *Toward a Theory of Property Rights*, property rights emerge in response to changes in this cost-benefit analysis. Rising resource values increase the benefits of capturing resource rents through property rights to the point that they outweigh the costs of establishing and enforcing a private property interest.¹⁹ In these circumstances, a self-interested resource claimant will assert an exclusionary right, either through physical or technological measures, or as a result of bargaining with other claimants. Alternatively, the claimant may assert exclusionary rights when the cost of demarcation and enforcement falls to a sufficient degree as a result of technological or institutional innovations.²⁰ Examples of such innovations include the development of barbed wire,²¹ the invention of the axe,²² and the introduction of state-sponsored land titling and administration.²³ In either case, the direct and proportional result is the emergence of private property rights.

Demsetz's example involved a transition from "tribal-based collective ownership" to "family-based private ownership" among the Montagne Indians who inhabited large regions of modern-day Québec. Prior to the arrival of Europeans, a system of collective ownership allowed any tribal member to hunt beaver within tribal territory. Because the demand for beaver fur was relatively low and internal to the tribe itself, the system did not lead to over-hunting. However, as the French began to buy furs from the Montagne, the rising value of beaver furs eventually led to over-hunting by tribal members and a reduction in net fur-trading income for the tribe as a whole.²⁴ In Demsetz's

18. See BOSERUP, *supra* note 5, at 79-81; DEININGER, *supra* note 7, at 9-10, 86; Eggertsson, *supra* note 13, at 80-81 (discussing efficient forms of open access regimes).

19. Demsetz, *supra* note 2, at 350.

20. The importance of cost reduction as an impetus for property rights formation was first emphasized in 1975 in Anderson & Hill, *supra* note 4, at 164-68.

21. *Id.* at 172. In this article, Anderson and Hill also discussed how innovations in water law led to positive changes in the market for water rights in the American West. *Id.* at 176-78.

22. Peter S. Menell & John P. Dwyer, *Reunifying Property*, 46 ST. LOUIS U. L.J. 599, 605 (2002).

23. See, e.g., Lee J. Alston et al., *Property Rights and the Preconditions for Markets: The Case of the Amazon Frontier*, 151 J. INST. & THEORETICAL ECON. 89 (1995); David Feeny, *The Development of Property Rights in Land: A Comparative Study*, in TOWARD A POLITICAL ECONOMY OF DEVELOPMENT 272, 286-90, 294 (Robert H. Bates ed., 1988).

24. Demsetz, *supra* note 2, at 351-53.

words, “[p]rivate rights to land provided a practical way to ameliorate this problem.”²⁵ Private property rights were especially appropriate because beaver tend not to stray from their home territory and as such are well suited to exploitation through private land ownership.²⁶

A. Externalities and the Evolution of Property

It is clear enough that a resource user will assert a private property right when the benefits of capturing resource rents outweigh the costs both of use and the establishment of the right. What requires some explanation is Demsetz’s further formulation of this proposition: “[P]roperty rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization.”²⁷ Why would a self-interested user ever be content to bear the costs that her resource use imposes on others? Would she not strive to avoid these extra costs? It is undoubtedly a good thing that property owners be required to bear the full costs of their resource use, particularly as this provides incentives for resource conservation. Yet the way in which mechanisms and incentives for internalizing externalities interact with the nature and evolution of property rights needs to be precisely stated, if only because it illustrates certain economic assumptions relating to the institution of property.

Demsetz based his analysis on three forms of externalities arising from the use of resources: (1) the positive externality of resource rents; (2) the negative externality of wasteful competition and resource consumption in an open access environment; and (3) the negative externality of damaging spillover effects, such as flooding, noise, or pollution. Property rights lead to the internalization of each of these externalities. First, a resource claimant will have an incentive to capture rents when the benefits of the rents exceed the costs both of using the resource and establishing the private property right. Second, as a natural consequence of establishing this exclusionary right, the resource claimant bears the costs of monitoring resource use and excluding outsiders. In this way, the claimant internalizes externalities relating to wasteful resource

25. This statement is made in Demsetz’s 2002 commentary on his 1967 article. Harold Demsetz, *Toward a Theory of Property Rights II: The Competition Between Private and Collective Ownership*, 31 J. LEGAL STUD. S653, S656 (2002).

26. In contrast, private land ownership did not develop in the Southwest and Great Plains regions of North America, because the income-producing animals there, primarily buffalo, tended to graze over large distances. See Terry L. Anderson & Peter J. Hill, *Cowboys and Contracts*, 31 J. LEGAL STUD. S489, S499 (2002).

27. Demsetz, *supra* note 2, at 350.

consumption and competition. Third, as a legal consequence of establishing exclusionary rights, the claimant may also bear the costs of liability for damaging spillover effects, particularly those that infringe upon the property rights of neighboring resource users.²⁸ This last result assumes a legal system able to impose liability, or a market environment capable of facilitating resource use agreements between neighboring users.

This much of Demsetz's approach was influenced by Ronald Coase's famous 1960 article, *The Problem of Social Cost*.²⁹ Coase also argued that property rights were important to understanding and resolving the problem of externalities. Responding to Arthur Pigou's thesis that social costs should best be managed by government taxation aimed at forcing a resource user to bear the full cost of his resource use, Coase pointed out that in a world without transaction costs, those affected by externalities would bargain with the offending resource user so as to receive compensation or induce a change in the resource use.³⁰ If the affected parties could be identified, the costs of the external effects on each such party measured, and all other obstacles removed, the bargaining process would leave the resource in the hands of the party who valued it the most. By definition, this party would be the one most willing to monitor resource use, exclude unauthorized users, and bear liability for negative spillover effects—in short, to internalize the externalities of resource use.

These considerations led Coase to posit that, when transaction costs were sufficiently low, it would not matter which resource user was allocated a property entitlement or assignment of liability. So long as the allocation was authoritative and enforceable, market bargaining would produce the most efficient result.³¹ In this perfect world, the pursuit of self-interest also would tend to enhance net social welfare. Market bargaining, plus effective property and liability rules, produces efficient and welfare-enhancing results by creating incentives for sustainable resource use and minimization of unwanted spillover effects.³²

28. *Id.* at 347-48; see also Merrill, *supra* note 3, at S332 (elaborating further on liability for spillover effects).

29. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). As to Demsetz's reliance on Coase's work, see Demsetz, *supra* note 2, at 349 & n.1.

30. See Coase, *supra* note 29, at 4-7, 12-23. See generally ARTHUR CECIL PIGOU, *THE ECONOMICS OF WELFARE* (Transaction Publishers 2002) (1920) (presenting the case for government taxation as the best response to the social costs of resource use).

31. See Coase, *supra* note 29, at 4-7, 12-23.

32. On this point, see UGO MATTEI, *COMPARATIVE LAW AND ECONOMICS* 54-58 (1997).

Because both Coase and Demsetz were concerned with the problem of externalities, it is unsurprising that they viewed property law, along with contract and tort law, as primarily a mechanism for harmonizing differences between private and social costs.³³ Coase himself was very much concerned with the question of institutional choice—that is, how transaction costs could determine whether government regulation, the creation of firms, or simple forms of market contracting was the most efficient response to an economic problem. For example, he hypothesized that market participants would choose to operate through a firm rather than bilateral contracts when that was a more efficient response to the risks of long-term contracting.³⁴ He further suggested that government regulation would be a more efficient response to externalities when the number of resource users and the complexity of resource use made effective bilateral contracting impossible.³⁵

It was thus a short step for Demsetz to assume, shortly after the publication of Coase's seminal social cost analysis, that private property rights would simply evolve in response to changed cost-benefit conditions. Just as market participants choose to organize within a firm to minimize the costs of long-term contracting, so too would they choose an exclusionary private property right as the most efficient response to new economic circumstances.³⁶ To the extent that the state was involved in this process—a subject that Demsetz did not directly address—the normative implication was that it should act as a facilitator. This has led later proponents of the Demsetzian thesis to recommend that the state provide a menu of institutional options from which market participants can choose, thereby reducing the transaction costs that may prevent effective choices through agreement.³⁷ More interventionist state

33. See Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 *YALE L.J.* 357, 367-70 (2001).

34. Coase, *supra* note 29, at 16-17; see also R.H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

35. Coase, *supra* note 29, at 17.

36. Demsetz himself prefaced his discussion of property rights in terms of market transactions. See Demsetz, *supra* note 2, at 347.

37. Of course, this menu of options is usually fixed (the *numerus clausus* principle), most likely to avoid high information and coordination costs. See Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 *YALE L.J.* 1 (2000); Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 *COLUM. L. REV.* 773 (2001) [hereinafter Merrill & Smith, *Interface*]. But see Abraham Bell & Gideon Parchomovsky, *Of Property and Federalism*, 115 *YALE L.J.* 72, 75-76 (2005) (arguing that, in a federal system, “the *numerus clausus* description of property law as limited to [a] short menu is only partly accurate, because menus differ from state to state”). For another useful discussion of the role of government and legal regulation in defining property rights for the purposes of private contracting, see Gary D. Libecap, *Contracting for Property Rights*,

mechanisms—including government regulation, court decisions, or administrative rulings—are only appropriate when transaction costs are so high as to preclude effective bargaining altogether.³⁸

B. The In Rem Nature of Property: A Challenge to Economic Models

Demsetzian models assume that rising resource values will induce property rights, either through rational private ordering or with the assistance of the state. Coasean models assume that state agencies have the capacity and willingness to allocate property rights in an authoritative manner, either to allow market bargaining or as a substitute for bargaining that fails due to high transaction costs.³⁹ These assumptions of autonomous evolution and authoritative allocation overlook the inherently contested nature of formation and change in property rights systems. Economic models tend to ignore what anthropologists have long asserted: that property rights are both a result and a cause of resource conflicts. As such, they are not so much authoritative entitlements chosen by market participants and guaranteed by the state as they are processes and products of constant negotiation, contestation, and compromise.⁴⁰ Anthropologists who study property relations tend to focus on

in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW, *supra* note 13, at 142, 155-56. For a discussion of the importance of regulatory flexibility in allowing individual and group-based titles, see DEININGER, *supra* note 7, at 51-52.

38. This issue of collectively imposed solutions has produced a voluminous literature. For a famous example, see Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972). For a useful overview, see Merrill & Smith, *supra* note 33, at 375-83.
39. That is not to say that Coase failed to consider the choice between these institutional supply options, particularly in terms of the respective roles of the market and government regulation. It is simply that this choice was assessed in terms of the appropriateness of each institutional supply option, given the transaction cost context, rather than the capacity to provide authoritative property rights allocations in the institutional circumstances. For a discussion, see Merrill & Smith, *supra* note 33, at 367-85. See also MATTEI, *supra* note 32, at 53-58. For Coase's own discussion of government regulation, see Coase, *supra* note 29, at 17-19.
40. The possibility of endemic conflict and resource degradation through polynormative or incomplete expressions of exclusionary rights has received little attention in the law-and-economics literature on property rights. An exception is Louis Hotte, *Conflicts over Property Rights and Natural-Resource Exploitation at the Frontier*, 66 J. DEV. ECON. 1 (2001), which argues that, in some cases, when living at intermediate distances from markets and administrative centers, instead of investing more in acts of exclusion, a rational resource user in circumstances of contestation may engage in more intensive forms of exploitation in order to reduce the returns on encroachment, or to obtain as much benefit as possible before conflict potentially brings exploitation activities to an end.

the social embeddedness of rights to property and the key role played by interactions among laws, norms, and institutions.⁴¹ They argue that these complex social phenomena cannot be overlooked by models purporting to predict outcomes or generate recommendations for policy reform.⁴²

Put in more economic terms, because Demsetz and Coase focus on property rights as a mechanism for internalizing externalities, they overlook the possibility that the allocation process will create its own externalities in the form of social conflict. This has two important implications for economic models of property rights. First, in circumstances of legal, normative, and institutional pluralism, property rights will not necessarily emerge when resource users calculate that the gains from internalization outweigh the costs. In dynamic social environments, the costs of conflict may be exacerbated rather than internalized by the distributional consequences of emergent property rights. Second, the normative implication that Third World states should establish secure property rights is impractical when the process of establishing and securing those rights itself creates new forms of uncertainty and conflict. In this case, instead of simplistic exhortations to establish secure property rights, Third World states need detailed proposals for property rights reform that address the issues of law and norms identified in this Essay.

Why would Demsetzian and Coasean models overlook what seems so obvious—that the formation and allocation of property rights may create conflict rather than legal certainty and net maximization of social welfare? Both Coase and Demsetz were centrally concerned with rebutting neo-classical

41. See NEGOTIATING PROPERTY IN AFRICA (Kristine Juul & Christian Lund eds., 2002); see also Camilla Toulmin et al., *Introduction* to THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA 1, 10 (Camilla Toulmin et al. eds., 2002) (“[A]llocation of rights is not a matter of applying a series of specific rules, but of negotiation on the basis of general principles, and following a socially recognised procedure. . . . Key strategies include negotiation, challenge, maneuvering and manipulation to defend or improve the position of a given stakeholder and obtain or maintain a set of rights.”). For an analysis of property rights and negotiation strategies in Africa, see SARA BERRY, NO CONDITION IS PERMANENT: THE SOCIAL DYNAMICS OF AGRARIAN CHANGE IN SUB-SAHARAN AFRICA (1993). For a canonical discussion of the social embeddedness of rights to property, see LEOPOLD POSPIŠIL, ANTHROPOLOGY OF LAW: A COMPARATIVE THEORY (1971).

42. The most cogent criticism of law-and-economics models of property rights from an anthropological perspective may be found in Franz von Benda-Beckmann, *Anthropological Approaches to Property Law and Economics*, 2 EUR. J.L. & ECON. 309 (1995). Another important study is Sally Falk Moore’s taxonomic description of semi-autonomous social fields, which argues that legal change tends not to have a direct relationship to social change because of the overlapping and mediating effects of semi-autonomous legal and norm-based relationships. See Sally Falk Moore, *Law and Social Change: The Semi-Autonomous Social Field as an Appropriate Subject of Study*, 7 LAW & SOC’Y REV. 719 (1973). A similar point is made *infra* in Parts III-IV.

economic assumptions that property rights were exogenous to market relationships. Their work has led subsequent economists to view property rights, along with contract and tort, as market-based mechanisms for narrowing differences between private and social costs. Modern economists thus define property in terms of authorized rights to use a resource, rights that act as a necessary foundation for market bargaining. Economists do not define property in classical legal terms, as rights that attach to a thing and are good against the world.⁴³ Merrill and Smith speculate that this distinctive, in rem characteristic of property “is an idea that looms largest at a relatively early stage in social and economic development, when a society has not yet solved the problem of order.”⁴⁴ As a result, much of the law-and-economics literature has overlooked the significance of exclusion—of enforcing rights against the world—in analyzing the nature and function of property rights.⁴⁵

This point is particularly relevant in the context of change in Third World property systems. Of all forms of property, rights to land are most affected by a basic in rem imperative. Land may be invaded; it must often be defended. When it is sold, it does not move. Secondary rights-holders retain their rights unless they consent to sale, and may assert them against other claimants through occupation or use. These acts of contestation are all the more likely where the transfer or transformation of a right to land has contravened local concepts of social identity and place. In short, the problem of establishing and enforcing property rights is closely connected to the problem of social order. Unless social order is established, most commonly through legitimate and capable government, the process of allocating and enforcing property rights will tend to cause conflict because different claimants will resort to competing legal, normative, and coalitional enforcement mechanisms.

43. See, e.g., Merrill & Smith, *supra* note 33, at 358-59.

44. *Id.* at 398. This Essay builds on Merrill and Smith’s important point, particularly by analyzing the importance of exclusion and enforcement in the evolution of property rights. However, the Essay tends to depart from their analysis in at least one sense. Merrill and Smith concluded that “the tried-and-true method of handling potential conflicts over resources among large numbers of claimants is to create in rem property rights—rights that give one person (the owner) the ability to exclude all other claimants to the resource.” *Id.* at 374. While this may be the case when authoritative allocation of property rights is possible, further analysis of property rights and resource conflicts also needs to account for the possibility that the process of establishing in rem rights can at times be both a cause of and an aggravating factor in certain types of chronic conflict.

45. See Merrill & Smith, *Interface*, *supra* note 37. Michael Heller similarly has commented that economic notions of entitlements lose sight of the distinct boundaries and characteristics of property. See Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1193-94 (1999).

C. Law and Norms in Third World Property Systems

At least in terms of Third World policymaking, the fact that the process of developing, allocating, and enforcing property rights may create externalities in the form of social conflict creates a paradox. In economic terms, an effective system of property rights is a public good.⁴⁶ Not only does it encourage investment by property-holders, it also acts as a central element of effective markets for capital and credit. When property information is standardized, the system allows for effective planning that incorporates demographics, land use, and environmental impact assessments.⁴⁷ Because the benefits are so broadly dispersed and the costs of providing a standardized property system are so high, some form of state intervention is typically necessary to establish national systems of land administration.⁴⁸ The state provides the standard options that market participants use to capture gains from trade. The state also establishes the public information systems necessary to value rights and collect consents from secondary rights-holders, and stands as the implicit guarantor and enforcer of property rights and property contracting.⁴⁹

In most Third World societies, nonstate resource governance mechanisms have evolved separately from, and often in contradiction to, state institutions. These mechanisms commonly take the form of close-knit kinship networks that predate the creation of the modern nation-state. Because these close-knit communities tend to create norms that maximize net social welfare within the community, their resource governance rules and cooperative processes often provide relatively efficient means to internalize externalities.⁵⁰ This is true in three important respects. First, as is now well established, a common property system based on a close-knit normative order can effectively regulate resource use by insiders, particularly by preventing unsustainable resource depletion.⁵¹

46. See Banner, *supra* note 6, at S362.

47. See DEININGER, *supra* note 7, at 24-25, 31-32.

48. *Id.* at 23 (“[T]he benefits of well-defined and secure property rights and the advantages of public provision of such rights have, over history, led virtually all economically and politically advanced societies to establish state-managed systems for regulating land ownership and land transfers.”).

49. See Benito Arruñada, *Property Enforcement as Organized Consent*, 19 J.L. ECON. & ORG. 401 (2003) (analyzing the role of different land administration systems in obtaining consent and enforcing in rem property rights).

50. The iconic reference is ROBERT C. ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* (1991).

51. For the classic studies on this point, see JAMES M. ACHESON, *THE LOBSTER GANGS OF MAINE* 142-44 (1988); ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF*

Second, by definition, a close-knit community will be better able to act cooperatively to resist encroachment by outsiders, particularly compared to an individual "owner" who lacks access to third-party enforcement institutions. Finally, in terms of both governance and exclusion, effective nonstate systems can provide these internalization functions at relatively low cost compared to state law and legal institutions.⁵²

A series of policy paradoxes follows. How does the state recognize these decentralized mechanisms for resource governance while also providing the authoritative and standardized menu of property rights that economic models require for efficient resource allocation and comprehensive internalization of externalities? How does the state allow for change within nonstate property systems without destroying the norm-based order that underlies them? How should the state regulate the often inevitable development of conflicts between outsiders and nonstate property systems? When should it intervene in matters internal to nonstate systems, especially in relation to conflict resolution and abuses of power? In short, what is the proper relationship between law and norms in Third World property systems? While the economic answer is straightforward—law should support property norms when they are efficient—the reality is greatly complicated by the degradation of norm-based property systems and the complex interactions among legal, normative, and institutional arrangements.

The unfortunate experience of many Third World countries in both colonial and postcolonial times is that state law has either overridden nonstate governance mechanisms or failed to facilitate adaptation to new circumstances of urbanization, migration, and commodification of rights to land. In the former case, numerous attempts to replace nonstate systems with unitary state law have succeeded only in creating a polynormative system of official law, semi-legal practice, and widespread illegality. This is a natural consequence of the fact that many nonstate systems in Third World societies are kinship-based, resistant to replacement by formal state property regimes, and quite efficient on their own terms.⁵³ Despite this resilience, new economic and demographic circumstances have challenged these systems, particularly where they also face state opposition. The result in some cases has been the worst-case scenario: the partial disintegration of a viable resource governance mechanism without the provision of effective substitutes by the state.⁵⁴

INSTITUTIONS FOR COLLECTIVE ACTION (1990); and Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986).

52. See DEININGER, *supra* note 7, at 52-53.

53. *Id.*

54. See *infra* Section III.B.

D. The Interaction Between Law and Norms: Land Titling

Numerous accounts of failures in Third World land-titling programs support the conclusion that state programs can interact with social norms to produce open access rather than secure property rights. Land-titling programs commonly involve formalization and registration of rights to land through systematic adjudication, surveying and (if necessary) consolidation of boundaries. While these titling programs are useful in certain contexts—particularly in urban and peri-urban areas—they often fail to increase certainty and reduce conflict.⁵⁵ In some cases, these program failures have resulted from the distributional consequences of land titling itself. Long-term conflict has resulted because poor or otherwise vulnerable land occupiers have been dispossessed by wealthier and more powerful groups; yet the new titleholders and state enforcement mechanisms have been unable to prevent encroachment by the former occupiers.⁵⁶ This state of grievance and incomplete exclusion

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55. See, e.g., DEININGER, *supra* note 7, at 39 (“Note that many studies indicate that in Africa formal land title had little or no impact on either investment or farm income, something that is often mirrored by similar findings for urban areas.” (citations omitted)); Arruñada, *supra* note 49, at 401-02 (“[I]nternational aid organizations have been promoting land administration projects in most developing and former Socialist countries. The results have been disappointing, however, and the net benefits of such projects are being questioned.”); see also HERNANDO DE SOTO, *THE MYSTERY OF CAPITAL* 204 (2000) (“Technically driven titling projects tend to degenerate into identification systems for physical stock, outdated Domesday Books, or historical relics.”). De Soto recommended titling programs based on extralegal (or existing norm-based) arrangements and documentation, rather than top-down formal requirements that pay little heed to existing social arrangements. For a further discussion of flaws in land-titling programs in circumstances of conflict between law and norms, see Jack Knetsch & Michael Trebilcock, *Land Policy and Economic Development in Papua New Guinea* 32-33 (Inst. of Nat’l Affairs, Discussion Paper No. 6, 1984). There is a strong empirical link between increased tenure security and increased investment. At times formal titling is the best means to increase security of tenure. The point here is simply that imposing inconsistent formal land titles on existing norm-based structures can markedly increase levels of conflict and uncertainty. For a further discussion of this issue in Africa, see Kathryn Firmin-Sellers & Patrick Sellers, *Expected Failures and Unexpected Successes of Land Titling in Africa*, 27 *WORLD DEV.* 1115 (1999).
56. See Jean-Philippe Platteau, *Land Reform and Structural Adjustment in Sub-Saharan Africa: Controversies and Guidelines* 232-42 (Food & Agric. Org. of the U.N., Econ. & Soc. Dev. Paper 107, 1992); Susana Lastarria-Cornhiel, *Impact of Privatization on Gender and Property Rights in Africa*, 2 *WORLD DEV.* 1317 (1997) (discussing conflicts caused by the detrimental impact of land-titling programs on women’s access to land); Camilla Toulmin & Julian Quan, *Registering Customary Rights*, in *EVOLVING LAND RIGHTS, POLICY AND TENURE IN AFRICA* 207, 218-20 (Camilla Toulmin & Julian Quan eds., 2000) (discussing causes of failures in programs to register customary rights in Africa). For a discussion of institutional pluralism and differential access see DEININGER, *supra* note 7, at 72-73. For a discussion of “unlawful” occupancy in Indonesia, see Daniel Fitzpatrick, *Disputes and Pluralism in Modern Indonesian*

then tends to become cyclical in environments of political instability. When a regime changes in circumstances of historical grievance, old claims often reassert themselves through acts of violence, land invasion, or state-sanctioned evictions.⁵⁷ This phenomenon challenges the economic conception that once property rights are established there is relatively little likelihood of reversion to open access.⁵⁸

In other cases, titling programs provoke long-term conflict due to the fluid nature of nonstate systems of land tenure. In these systems, multiple overlapping rights often coexist in an uneasy balance, and programs to define and regularize these rights have caused dormant internal disputes to emerge in the form of open conflict.⁵⁹ This is an important issue that relates to the nature of traditional norm-based orders themselves. Economic models tend to characterize these orders as common property systems—as systems of resource governance based on rules of authorized use and mutual agreement to exclude outsiders. Yet customary landholding systems in the Third World are often characterized by a series of complex layered relationships involving families, sub-clans, clans, villages, and tribes. Each entity may have an interest in the land, either as its manager, occupier, occasional user, defender, or as the entity responsible for ritual and cosmological relations. Anthropological studies indicate that such interests arise not so much from agreed rules and clear distinctions between insiders and outsiders, but from fluid social relations that continually adapt to underlying issues of power, myth, and legitimacy.⁶⁰ In these circumstances, it is often difficult to define the “landholding group.” Moreover, the inherent potential for conflict in customary land relations can crystallize when “once and for all” title registration programs apply simplistic

Land Law, 22 YALE J. INT'L L. 171 (1997) (noting that “unlawful” occupancy covers seventy to eighty percent of the land mass according to state law, but was overlooked by the first phase of a World Bank-funded land-titling project).

57. For an excellent example and discussion see Christian Lund, *Negotiating Property Institutions: On the Symbiosis of Property and Authority in Africa*, in NEGOTIATING PROPERTY IN AFRICA, *supra* note 41, at 11, 25-27.
58. See, e.g., Merrill, *supra* note 3, at S337; see also Banner, *supra* note 6, at S359, S361.
59. See, e.g., Fitzpatrick, *supra* note 56, at 189 (discussing Indonesia); Knetsch & Trebilcock, *supra* note 55, at 40 (discussing Papua New Guinea).
60. For examples from the South Pacific, see Ron Crocombe, *Overview: The Pattern of Change in Pacific Land Tenures*, in LAND TENURE IN THE PACIFIC 1, 7 (Ron Crocombe ed., 1971); and R. Gerard Ward, *Changing Forms of Communal Tenure*, in THE GOVERNANCE OF COMMON PROPERTY IN THE PACIFIC REGION 19, 29-30 (Peter Lamour ed., 1997). For a discussion in relation to West Africa, see Philippe Lavigne Delville, *Harmonising Formal Law and Customary Land Rights in French-Speaking West Africa*, in EVOLVING LAND RIGHTS, POLICY AND TENURE IN AFRICA, *supra* note 56, at 97, 110-11.

legal categories of “owner” and “user” to complex and fluctuating interrelationships.⁶¹

A final important cause of failure in attempts to formalize customary land tenures is the layering of formal institutions on informal arrangements, which has allowed disputants to engage in legal institution shopping, disabling the process for authoritative settlement.⁶² Another cause may be the perennial problem of titleholders failing to record subsequent transactions in the official register.⁶³ This derivative registration problem commonly results from continued adherence to customary norms of inheritance or land transfer, even after the titling system is in place.⁶⁴ This is illustrated by the paradigmatic case of Kenya, where, although individualized titling programs initially appeared to yield productivity benefits, the titles register gradually lost value as an accurate record of land relations due to high formal and informal registration costs and inconsistency between state law and local inheritance and transfer practices.⁶⁵

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61. For a discussion in relation to Africa, see Delville, *supra* note 60, at 111-12; and Toulmin & Quan, *supra* note 56, at 218-19.
 62. This issue of legal and normative pluralism is discussed at some length in Parts II and III below. For a general discussion, see DEININGER, *supra* note 7, at 35; John W. Bruce, *Learning from Comparative Experience with Agrarian Reform*, in PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON LAND TENURE IN THE DEVELOPING WORLD 81 (1998); and Toulmin et al., *supra* note 41, at 13.
 63. This classic symptom of legal and normative pluralism quickly robs the land-title register of any value as an accurate record of land holdings at the local level. See DEININGER, *supra* note 7, at 29.
 64. For discussions and examples, see PLATTEAU, *supra* note 56, at 48; Richard Barrows & Michael Roth, *Land Tenure and Investment in African Agriculture: Theory and Evidence*, 28 J. MOD. AFR. STUD. 265, 277-78, 289-90 (1990); and Hwo Okoth-Ogendo, *Legislative Approaches to Customary Tenure and Tenure Reform in East Africa*, in EVOLVING LAND RIGHTS, POLICY AND TENURE IN AFRICA, *supra* note 56, at 123, 128.
 65. Angeliqve Haugerud, *Land Tenure and Agrarian Change in Kenya*, 59 AFRICA 61, 61 (1989) (“Nowhere has the Kenyan state had the capacity to keep the land registers up to date since the reform, and informal channels of access to land never ceased to be important.”). Haugerud wrote: “Several studies have shown a wide gap between the land register and actual patterns of land use and access. . . . Access to land is defined less by title deeds than by relations of descent, affinity, patronage and friendship.” *Id.* at 66 (citation omitted). Thomas C. Pinckney & Peter K. Kimuyu, *Land Tenure Reform in East Africa: Good, Bad or Unimportant?*, 3 J. AFR. ECON. 1, 22-24 (1994) (“Formal changes of title are lengthy and expensive Title holding therefore does not necessarily imply ownership, and a significant number of titles are held by persons not owning the land. . . . Thus land titling in Kenya has in many ways caused more problems than it resolved. One response of local communities to these problems has been to ignore the titles, and revert to the indigenous system of land tenure.” (citations omitted)). For similar conclusions, see Simon Coldham, *The Effect of Registration of Title upon Customary Land Rights in Kenya*, 22 J. AFR. L. 91 (1978).

As a result, it appears that any economic benefits attributable to land titling were not sustained over time.⁶⁶

II. THE COSTS OF PROPERTY IN COMPLEX SOCIAL ENVIRONMENTS

Failures in Third World land-titling programs underscore the basic point that, in circumstances of rising resource values, the interaction between state institutions and local norms fundamentally affects the nature of Third World property transitions. This Part explores whether this interaction between state institutions and local norms may be captured by Demsetzian analyses that expand on the costs of enforcing and establishing property rights. Can Demsetzian explanations be maintained in the face of property failures in the Third World, through an expanded cost-focused approach, or is there a need for further analysis based on the interaction of different mechanisms for enforcing rights in complex social environments? This Part concludes that a cost-focused approach can help to explain why property rights may not emerge despite favorable conditions, but cannot adequately explain the range of circumstances in which open or contested access may develop.

A. Cost-Based Explanations for Failures in Property Rights Transitions

In circumstances of relative resource abundance there is little need for property rights. When resources are abundant, an influx of newcomers does not reduce the income or benefit levels of existing users. No gains can be made from transfer to more productive users, as these users can simply find their own area for exploitation.

As land becomes scarce, however, population pressure in an open access regime tends to cause overuse of fertile soils. Users lack incentives to either limit their take or expend efforts to improve fertility. These users also tend to engage in unproductive competition over resources, particularly by diverting

See also DEININGER, *supra* note 7, at 33 (citing sources); Okoth-Ogendo, *supra* note 64, at 125.

66. Pinckney & Kimuyu, *supra* note 65, at 2 (“Recent surveys and cross-sectional studies from Africa . . . have found little or no impact of titling on investment.”). Pinckney and Kimuyu found that there is no significant difference in terms of credit, investment, or productivity between Kenya and Tanzania, a country that continued to recognize many forms of customary tenure. *Id.* at 25-26. A further study found that the greatest gains in cash crop income after individualized land title commenced in Kenya occurred in the district that had made the least progress in land titling and consolidation. See William J. Barber, *Land Reform and Economic Change Among African Farmers in Kenya*, 19 *ECON. DEV. & CULTURAL CHANGE* 6, 17-18 (1970).

resources from productive investment to the defense of particular plots.⁶⁷ Further population growth exacerbates these problems and reduces the income and benefit levels of existing users. This latter trend is critical because it provides existing users with an incentive to band together and exclude newcomers.⁶⁸ For these reasons, the shared desire to exclude, in combination with rising resource values, becomes a significant factor in initial attempts to fashion property rights in open access regimes.

Rising resource values in circumstances of scarcity and open access generate demand for property rights, particularly as a means of excluding outsiders and minimizing their impact on resource and income levels. Despite this increased demand, property rights will not emerge in some cases because the costs of establishing and enforcing those rights remain prohibitive. These prohibitive costs may arise from the nature of the resource itself. For example, in cases of high mobility resources, such as fish or bison, the practical difficulties of excluding outsiders may make exclusionary strategies not worth the effort.⁶⁹ Alternatively, the nature, number, and heterogeneity of resource claimants may make it unproductive or infeasible to agree on use rights and exclusionary responsibilities.⁷⁰ In these circumstances, property rights will not necessarily evolve from exclusionary efforts or cost-minimizing agreements among resource participants. In economic terms, the only mechanism for establishing property rights that remains is regulatory intervention.⁷¹

In all cases, high startup costs may cause property rights failure. These startup costs include the cost of measuring, demarcating, and valuing initial rights; the cost of allocating rights in a way that does not provoke counterproductive social conflict; and the cost of resolving any such conflict through effective dispute resolution mechanisms.⁷² Overcoming these costs

67. See DEININGER, *supra* note 7, at 34, 48; see also *infra* Section II.D. On premature, nonoptimal innovations induced by resource competition, see Yoram Barzel, *Optimal Timing of Innovations*, 50 REV. ECON. & STAT. 348, 352-54 (1968).

68. See Anderson & Hill, *supra* note 4, at 167, 172, 175, 177-78.

69. For an empirical study relating to bison, see Dean Lueck, *The Extermination and Conservation of the American Bison*, 31 J. LEGAL STUD. S609 (2002). On whales, see De Alessi, *supra* note 14, at 92-93.

70. See Libecap, *supra* note 37, at 146-50.

71. For a discussion of the circumstances that call for regulatory intervention, see *id.* For a discussion of the use of force, see David D. Haddock, *Force, Threat, Negotiation: The Private Enforcement of Rights*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW, *supra* note 13, at 168.

72. As such, startup costs involve a combination of capital expenditures and political constraints. For a discussion of capital startup costs relating to property, see David D. Haddock & Lynne Kiesling, *The Black Death and Property Rights*, 31 J. LEGAL STUD. S545,

tends to require the involvement of collective mechanisms or sociopolitical authority, with the latter being favored once property rights are administered and transacted beyond the bounds of a close-knit community. Clear boundaries, accurate land records, and capable legal and enforcement institutions are high-cost public goods that normally would not be developed by self-interested private parties. Should collective mechanisms or institutional infrastructure be incapable of bearing these startup costs, the natural consequence is that property rights may not emerge, despite the presence of rising resource values. In these circumstances, it is the cost-bearing capacity of the institutional environment, rather than the presence of high costs in themselves, that will be the proximate cause of a property rights failure.

B. Rising Resource Values and the Increased Risk of Incursion

Costs that arise from the initial establishment of rights or the nature of the resource and its users may prevent the emergence of property rights. That much is consistent with Demsetzian analysis. Another potentially relevant cost is the increased risk of incursion that may accompany rising resource values. Unlike other cost-based explanations for property rights failures, incursion-risk analysis does challenge the Demsetzian thesis because rising resource values always appear to increase the risk of encroachment.⁷³ More people are likely to covet a resource as its value increases, which means that property rights will not necessarily emerge because the costs of exclusion will have increased in proportion to increases in value.⁷⁴ Put another way, if the benefits and the costs of exclusion have increased in equal measure, then the cost-benefit calculus may remain the same despite the presence of rising resource values.⁷⁵

Henry Smith has argued that this analysis fails to take into account the possibility that, because increased resource values increase the benefits of exclusion, a purported property rights holder will either (1) expend more resources on defense; (2) transfer the resource to someone more capable of a

S561-62 (2002). For a discussion of political constraints, see PLATTEAU, *supra* note 56, at 233-42; Libecap, *supra* note 37, at 146-50.

73. See Smith, *supra* note 9, at S466-67, S478-83; see also Barry C. Field, *The Evolution of Property Rights*, 42 KYKLOS 319, 321-29 (1989); Umbeck, *supra* note 4, at 200-01.

74. Most Demsetzian studies assume that the costs of establishing property rights are disassociated from changes in the benefits. That is, the costs remain linear notwithstanding increases in resource values. See YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* 94 (2d ed. 1997); Douglas W. Allen, *The Rhino's Horn: Incomplete Property Rights and the Optimal Value of an Asset*, 31 J. LEGAL STUD. S339, S340 (2002).

75. See Field, *supra* note 73.

successful defense; (3) hire someone with sufficient “talent for violence” to defend the resource; or (4) break the resource up into smaller, more defensible parcels.⁷⁶ This assumes that rising resource values will not encourage a potential encroacher to make corresponding efforts. In other words, when the increased value of a resource is equivalent both for property claimant and potential thief, arguments based on the increased benefits of defense tend to support only maintenance of the status quo, rather than inexorable evolution toward more exclusionary or better-defined forms of property rights. It is only when the marginal costs of defense do not rise in proportion to marginal increases in incursion risk that the cost-benefit calculus will favor the emergence of more developed property rights.

This conclusion highlights the importance of the institutional mechanisms that determine the marginal cost of defense. Self-help defensive mechanisms tend to lead to dissipation of resources. While violent struggles over resources are the obvious example, even nonviolent processes of demarcating and defending property, such as planting trees and building fences, involve resources that could have been put to more efficient use if they were applied as investments in the resource itself.⁷⁷ The imperatives of cost-minimization encourage property claimants to seek assistance from coalitions of supporters, or intervention by sociopolitical authority (usually the state).⁷⁸ Whether a resource can be defended in the face of increased incursion risks will depend on the nature and availability of coalition support and sociopolitical authority. Where these institutional mechanisms for enforcing property rights are either not available, or interact in an incompatible fashion, the marginal costs of defense may outweigh the marginal benefits of increased protection against incursion.

C. *The Costs of Exclusion: Open Access in Tropical Forests*

A focus on the enforcement context also illustrates the circumstances in which increased incursion risks may not only lead to maintenance of the status quo, but also facilitate the reversion to open access. Resource conflicts in tropical forests illustrate this point. These forests have dramatically increased in value as a result of increased demand for wood products and the

76. Smith, *supra* note 9, at S478.

77. See *infra* Section II.D.

78. See DEININGER, *supra* note 7, at 23 (“[T]he benefits of well-defined and secure property rights and the advantages of public provision of such rights have, over history, led virtually all economically and politically advanced societies to establish state-managed systems for regulating land ownership and land transfers.” (citation omitted)).

development of mass logging techniques. In response, many Third World states in tropical regions have granted logging licenses to commercial entities without a great deal of consent or participation by local communities. Yet these license-holders are often unable to exclude local community members because the concession area is simply too large, rugged, or densely forested to allow complete forms of exclusion,⁷⁹ and it is not commercially viable to split the concession into smaller, more defensible parcels.⁸⁰

For their part, forest-dependent communities may wish to exclude the license-holder on the basis of their own normative conceptions of property, and because logging has imposed significant social costs on them. They may also value the resource so highly as to expend considerable resources on exclusionary efforts. Nevertheless, they may (1) be unable to exclude the license-holder because state enforcement agencies support the license-holder and their own resources are insufficient to resist the state; or (2) hire someone with sufficient talent for violence to provide that resistance. Because these communities are socially and economically dependent on the forest, and because they often lack legitimate property rights in the eyes of the state, they are unlikely to transfer the resource to someone with sufficient exclusionary capabilities. In these circumstances, the result of this conflict between legal and norm-based systems is likely to be community resentment and acts of sabotage or encroachment in the concession zone—in short, a regime of open access based on incomplete or deadlocked acts of exclusion by resource users.

79. In this case, the nature of the resource affects the marginal costs and benefits of increased defense. See Haddock & Kiesling, *supra* note 72, at S550-51, S563-64. Douglas Allen broadly focused on the nature of the resource in analyzing the consequences of incursion risks. Allen, *supra* note 74, at S344-45 (drawing distinctions between the effects of increased incursion risk on low- and high-value assets).

80. For general references to forest conflicts involving local groups and state agencies, see Peter Dorner & William C. Thiesenhusen, *Land Tenure and Deforestation: Interactions and Environmental Implications* (U.N. Research Inst. for Soc. Dev., Discussion Paper No. 34, 1992); Robert Mendelsohn, *Property Rights and Tropical Deforestation*, 46 OXFORD ECON. PAPERS 750 (1994); and Robert Repetto, *Deforestation in the Tropics*, SCI. AM., Apr. 1990, at 36. For more specific regional studies, see AFRICA'S VALUABLE ASSETS: A READER IN NATURAL RESOURCE MANAGEMENT (Peter Veit ed., 1998); CONFLICT OVER NATURAL RESOURCES IN SOUTH-EAST ASIA AND THE PACIFIC (Lim Teck Ghee & Mark J. Valencia eds., 1990); OWEN J. LYNCH & KIRK TALBOTT, BALANCING ACTS: COMMUNITY-BASED FOREST MANAGEMENT AND NATIONAL LAW IN ASIA AND THE PACIFIC (1995); MUNICIPAL FOREST MANAGEMENT IN LATIN AMERICA (Lyès Ferroukhi ed., 2003); and VANDANA SHIVA, ECOLOGY AND THE POLITICS OF SURVIVAL: CONFLICTS OVER NATURAL RESOURCES IN INDIA 74-102 (1991).

It is also significant that forests have high social and economic value for forest-dependent communities.⁸¹ Where forest areas are fundamental sources of ritual, livelihood, and social insurance for local groups, excluding those groups through coercive means—either self-help or third-party in nature—may provoke such conflict and attract such criticism that rational decisions will be made not to attempt complete exclusion. In this case, parties asserting formal titles may only engage in incomplete exclusionary efforts because other claimants place such a high value on the resource that complete exclusion will generate prohibitive costs. The resulting risk is unsustainable deforestation because no single party internalizes the externalities of its resource use. This risk is heightened when the license-holder senses a threat to his long-term rights as a result of community resentment and weak or illegitimate state intervention. The license-holder will then engage in rapid depletion of resources to capture rents before social conflict prevents further operations.⁸² In short, state-sanctioned incursions provoked by rising resource values, and counter-responses by traditional occupiers, cause relatively viable common property regimes in many of the world's forests to degenerate over a long period of time into an arena for chronic conflict and rapid deforestation.⁸³

D. The Importance of Institutional Supply: First-, Second-, and Third-Party Mechanisms for Enforcing Property Rights

This Part has analyzed a range of costs that may prevent the emergence of property rights notwithstanding the presence of rising resource values. This includes costs caused by an increased risk of incursion. Cost-focused approaches may explain rational decisions to abandon exclusionary efforts or engage solely in acts of incomplete exclusion, but they do not explain rational decisions to assert exclusionary rights when that assertion fails due to weaknesses or multiplicity in the enforcement environment. Cost-focused analyses also fail to fully explain reversion to open access in circumstances in

81. This point is significant in the case of differential valuations of multi-attribute resources. An encroacher may value a particular attribute of the asset higher than the owner, and therefore be more willing to expend more money and effort on capturing that attribute than the owner is willing to expend to protect it. See Allen, *supra* note 74, at S345-46. Allen illustrated this point with reference to the African rhinoceros. He convincingly demonstrated how “dehorning” has led to a sharp reduction in poaching activity, while the value to governments—e.g., tourism, biodiversity—has remained broadly the same. *Id.* at S349-50.

82. This issue of system legitimacy supplements Hotte's point that, instead of investing more money in acts of exclusion, a rational user may engage in more rapid rates of resource depletion in order to reduce the returns on encroachment. Hotte, *supra* note 40.

83. For examples of case studies on this point, see *supra* note 80.

which multiple claimants resort to different enforcement mechanisms to assert their claims. In all cases, the institutional mechanisms for enforcing property rights, and in particular their cost-bearing capacity, must be analyzed in order to fully understand the circumstances in which property rights may fail to emerge or may deteriorate into open access.

The following Parts consider these supply-side issues in greater detail. They apply supply-side analysis to the different types, causes, and consequences of property rights failures. In doing so, they adopt Robert Ellickson's tripartite classification of social control mechanisms as first, second, or third party in nature.⁸⁴ First-party mechanisms are self-help measures involving individual acts of exclusion, either through force or agreement with other users. Second-party measures involve the formation of coalitions to exclude others, and, usually, the development of internal rules for resource governance by coalition members. In this Essay, second-party measures are assumed to arise either through agreement or the development of social norms. Third-party measures involve intervention by external forms of sociopolitical authority, typically the state.

This Essay primarily considers second- and third-party mechanisms for enforcing property rights, and in particular second-party mechanisms in the form of norm-based common property systems, because degradation in these systems is an important cause of Third World property failures. For reasons briefly discussed below, far less attention is paid to self-help or first-party measures. In essence, this is because the instability of first-party property enforcement mechanisms in multiple-user environments invariably leads to second- or third-party forms of intervention.

A cost-benefit calculus may lead a rational resource user to assert an exclusionary right through self-help measures. In making this calculation, the user will take into account the opportunity cost of diverting resources from productive investment to exclusionary efforts. She will also measure the costs of encroachment: The higher the marginal cost of encroachment, the more likely it is that resources will be diverted from production to defense. Once these costs are measured, the rational user will then choose among a number of exclusionary options. These will range from simple signposting or fencing efforts, to attempts at moral suasion or agreement with other participants, to acts of violence and invasion. Because exclusionary options such as signposting, moral suasion, or basic fencing are relatively inexpensive, it would

84. ELLICKSON, *supra* note 50, at 127. This classification system is also applied in Anderson & Hill, *supra* note 26, at S495-96. For a further discussion of self-help measures for enforcing property rights, see Haddock, *supra* note 71.

be rare for a resource user in circumstances of scarcity not to engage in any exclusionary attempts.

It follows that the resource user may rationally engage solely in acts of incomplete exclusion. A certain amount of encroachment is tolerated because the marginal costs of preventing that encroachment are greater than the marginal benefits of diverting resources to extra defense.⁸⁵ Over time this may lead to tragedy of the commons effects that change the cost-benefit calculus for individual resource users. Until this occurs, a type of open access may develop in which no user completely excludes others or reaches agreements on authorized use, because all users rationally engage solely in acts of incomplete exclusion. Multiple-user environments may thus be characterized by multiple exclusionary efforts.

The possibility of multiple acts of exclusion is inherent in self-help models of property rights enforcement. All else being equal, rising resource values in a multiple-user environment may lead a number of users to calculate that the benefits of increased exclusion outweigh the opportunity costs of diverting resources from productive use. A vicious cycle may result in which more and more resources are devoted to attack and defense in order to meet escalating threats of encroachment. In the absence of (second-party) agreement between users or (third-party) intervention by sociopolitical authorities, self-help property enforcement mechanisms in multiple-user contexts are prone to conflict and unsustainable dissipation of resources in resource competition.⁸⁶ Thus, there is a natural tendency for resource claimants to turn to second- or third-party mechanisms to enforce their resource claims. The following Part considers second-party mechanisms and their relationship to property rights failures in Third World contexts.

85. See ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 83 (4th ed. 2004); Eggertsson, *supra* note 13, at 81-85.

86. Haddock shows how equilibrium may be reached in a stylized model of resource conflict between two parties. He acknowledges, however, that endemic conflict will result if multiple uncontrolled alliances develop. Haddock, *supra* note 71, at 182-84. For examples of economic accounts that focus on the issue of conflict and dissipation of resources in resource competition, see Haddock & Kiesling, *supra* note 72, at S562, which states: “[W]ith privatization a costly struggle over ownership can easily emerge, and the entire potential rent of the property (in some cases even more!) might be dissipated through competition over title.” See also Anderson & Hill, *supra* note 26, at S490, querying: “How can rights ever be created without the rents that they convey being competed away in the property rights production process?” The authors have answered this question by arguing that, in many cases, entrepreneurs will emerge to encourage property rights that prevent or minimize this resource dissipation. See Terry L. Anderson & Peter J. Hill, *The Evolution of Property Rights*, in *PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW*, *supra* note 13, at 118.

III. ENFORCEMENT OF PROPERTY THROUGH SECOND-PARTY MEANS: AGREEMENTS, NORMS, AND COMMON PROPERTY ARRANGEMENTS

Harold Demsetz did not specify the mechanism for transition in his cost-benefit model of evolving property rights. His case study of the Montagne Indians simply provided “before and after snapshots” of transition.⁸⁷ At one stage of their history, the Montagne Indians had a common property system. At a later stage, once demand for fur had increased, they appear to have moved to family-based private ownership of land. Whether this process was conflicted or consensual, the extent to which groups in Montagne society drove the transition is absent from Demsetz’s analysis.⁸⁸ He implied that Montagne society chose to adopt private land ownership as a practical response to the externality of resource depletion, but disclaimed any position as to whether this involved a conscious endeavor.⁸⁹

Subsequent Demsetzian analyses have focused on contracts between resource users as the primary mechanism for property system change.⁹⁰ When transaction costs are sufficiently low, resource users will allocate property rights through bargaining in order to maximize gains from trade and avoid dissipation of resources through wasteful competition. The result will be allocative efficiency: In most cases the aggregate gains from resource exploitation through property rights will be greater than exploitation through open access.⁹¹ Entrepreneurs will also drive property rights transitions by identifying distributional benefits from the process of contracting. Consensual change will be achieved when entrepreneurs contract with resource users, or

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87. Richard A. Epstein, *The Allocation of the Commons: Parking on Public Roads*, 31 J. LEGAL STUD. S515, S516, S519 (2002). A number of other scholars have also made this point. See Banner, *supra* note 6, at S360-61; James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL’Y 325, 337-39 (1992); Merrill, *supra* note 3, at S333, S336; see also Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 678 (1998) (“The puzzling question, then, is by what mechanism resources shift from commons or anticommons form into private property. This question is underdeveloped in the literature on the economics of property rights, except for a vague evolutionary story.”). For a critical discussion of orthodox economic narratives relating to property transitions, see Carol M. Rose, *Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory*, 2 YALE J.L. & HUMAN. 37, 37-40, 50-53 (1990).
88. Epstein, *supra* note 87, at S519.
89. Demsetz, *supra* note 2, at 350.
90. Libecap, *supra* note 37, at 147-50.
91. The primary exception will be in cases of highly mobile or dispersed resources. See *supra* Section II.A.

forms of sociopolitical authority, in order to gain anticipated benefits from the allocation of property rights.⁹²

In some cases, contracting for property rights will fail, either due to distributional effects such as strategic holdouts by resource users, or due to standard transaction costs in the form of high numbers, complexity, and heterogeneity.⁹³ Bargaining failure in these circumstances provides another Demsetzian explanation for the failure of property rights to emerge despite rising resource values. This leads to the question: Can strategic holdouts and high transaction costs fully explain property rights failures in the context of second-party enforcement mechanisms? The following Sections analyze this question with reference to norm-based common property systems in the Third World. Norm-based common property systems are the typical form of second-party property regulation in Third World systems. The analysis will conclude that failure in holdout or high-cost circumstances cannot fully explain two particular causes of property rights failure in Third World circumstances: the inability of a common property system to exclude outsiders, and the degradation of the social norms that underpin a common property system.

A. *The Creation of Common Property Regimes*

When does contracting for property rights lead to common property instead of private property? This question is important because of the historical prevalence of common property systems in many rural Third World societies. It is also important because it illuminates the way that common property systems can deteriorate into open access.

In a perfect world of zero transaction costs, private and common property regimes would be equally efficient responses to the externalities created by rising resource values. Both allow the right and ability to capture the positive externality of resource rents, thereby encouraging authorized users to invest in the resource. Both provide mechanisms to exclude outsiders, thereby maintaining income levels and preventing dissipation of resources through competition and overconsumption. Both identify users who will bear liability for spillover effects, thereby providing disincentives for activities such as pollution. Above all, no social conflict arises from the allocation of property rights to particular claimants in either regime because the process of measurement, delineation, and enforcement is frictionless.⁹⁴

92. Anderson & Hill, *supra* note 86, at 119-29.

93. Libecap, *supra* note 37, at 147-50.

94. See Baland & Platteau, *supra* note 7, at 644-45; Smith, *supra* note 9, at S468.

Once transaction costs are introduced into the analysis, private property appears to be a more efficient option because common property is burdened by additional governance costs.⁹⁵ Whereas in a private property regime owners possess direct knowledge and control over the impact of their resource use, common property regimes require mechanisms for collective agreement, monitoring, and enforcement. These agreements establish the rules and norms of resource use, and the nature and use of defensive mechanisms to exclude outsiders. The costs of negotiating, monitoring, and enforcing these agreements will rise with the increased size, heterogeneity, and wealth inequality within the actual or potential group of common property holders.⁹⁶ These costs will also rise with increased resource values, particularly when driven by population growth, because increased values tend to increase externalities related to resource competition and overconsumption.⁹⁷

Given the comparatively high transaction costs required by a common property regime, why would an open access system ever evolve into one of common property? Such are the governance costs of common property, and their rate of increase in response to rising resource values, that private property would always appear to be the preferable option. In many cases, however, a common property system emerges because the nature of the resource, its exploitation techniques, and the need to insure against environmental risks renders common property more efficient under the circumstances.⁹⁸ For example, as discussed above, highly mobile or dispersed resources tend not to be exploited through separate parcels of private property because of the high costs of measurement, allocation, and exclusion.⁹⁹ But they may be susceptible

95. Private property is favored by commentators such as Demsetz because it reduces the number of people involved in resource use decisions. One party—the owner—is delegated the task of monitoring resource use in return for the right to capture rents. Ellickson has also suggested that a reduction in the number of parties involved in a private property regime also facilitates cooperation. See ELLICKSON, *supra* note 50, at 284-85; Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1330-31 (1993). As noted above, however, this analysis also needs to incorporate the significance of exclusion, in particular the fact that the process of allocating and delegating private property ownership may be highly prone to conflict and, as a result, may markedly increase the cost of cooperation and enforcing property rights. See KOMESAR, *supra* note 10, at 127-31.

96. See Libecap, *supra* note 37, at 146-50.

97. See Eggertsson, *supra* note 13, at 79; Libecap, *supra* note 37, at 146-56. As resource values rise, so too do the costs of coordinating investment efforts. Over time, this also leads to efficiency losses. See Baland & Platteau, *supra* note 7, at 645.

98. There is now an abundance of literature on this point. See, e.g., Eggertsson, *supra* note 13, at 84-85; Ellickson, *supra* note 95, at 1332-44; Smith, *supra* note 9, at S468-71.

99. Baland & Platteau, *supra* note 7, at 645-46. In this case, there are also economies of scale in allowing the resource to move over a large area without the parcelization of territory. See,

to less fine-grained forms of demarcation and enforcement, as when a group member is granted temporary use rights to a particular area or resource. In this situation, short-term usufructuary rights may be all that is required to allow resource users to capture rents in response to rising resource values, while the common property regime provides low-cost governance-based proxies for delineating and enforcing these usufructuary rights.¹⁰⁰

In some cases, the prevalent type of resource exploitation technique may encourage collective forms of resource governance. Shifting cultivation, nomadic herding, and wet-rice farming are production techniques suited to communal control of a particular area, and the development of rules and norms for resource use by community members. Under these production techniques, no further parcelization of areas or allocation of exclusionary rights is necessary because the production technique either requires a high degree of cooperative activity, entails some shifting of areas for resource exploitation, or is optimal under circumstances of large parcelization alone. In all these situations, economies of scale exist in exploiting the resource through collective governance mechanisms that internalize externalities created by community members.¹⁰¹

Additionally, the ability to allocate resources to members as needed through common property mechanisms provides a form of social insurance when no other insurance mechanism is present.¹⁰² In relation to land, this insurance can act as a safety net in the event of crop failure or the loss of off-land employment, while mitigating the risk of loss of land when land is the only productive asset.¹⁰³ For these reasons, common property systems often prevail in circumstances of high social or environmental hazard and relative absence of alternative insurance arrangements.¹⁰⁴ These systems will tend to

e.g., Martin J. Bailey, *Approximate Optimality of Aboriginal Property Rights*, 35 J.L. & ECON. 183 (1992); Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131 (2000).

100. See Smith, *supra* note 9, at S468-71.

101. See DEININGER, *supra* note 7, at 29.

102. See Baland & Platteau, *supra* note 7, at 646; Johnsen, *supra* note 4, at 62-66 (discussing the social insurance function of the potlatch system among the Southern Kwakiutl Indians); Jeffrey B. Nugent & Nicolas Sanchez, *Common Property Rights as an Endogenous Response to Risk*, 80 AM. J. AGRIC. ECON. 651 (1998); Richard A. Posner, *A Theory of Primitive Society, with Special Reference to Law*, 23 J.L. & ECON. 1, 10-19 (1980).

103. See, e.g., Ellickson, *supra* note 95, at 1336-44 (providing relevant case studies).

104. *Id.* at 1341-44; see also DEININGER, *supra* note 7, at 29.

retain their insurance function in the face of rising resource values, at least until superior alternative insurance mechanisms become available.¹⁰⁵

These explanations aside, it also seems plausible that—historically, at least—common property regimes developed primarily as “first pass” attempts at excluding outsiders.¹⁰⁶ In the absence of an external sociopolitical authority that could assist with the enforcement of property rights, a resource claimant will tend to seek coalitions with compatible users to assist in the exclusion of outsiders. In other words, where third-party assistance is either unavailable or is the subject of sufficient distrust, resource claimants tend to turn to second-party assistance in the form of agreements between compatible users.¹⁰⁷ These agreements act as an insurance mechanism against enemy attack or invasion. It is only later, when internal population growth puts further pressure on resources, that governance mechanisms—rules and norms relating to authorized resource use—are required.¹⁰⁸ This is significant because the existence of an exclusionary coalition means that some institutional infrastructure is already in place for collective decisionmaking arrangements, in which case it is more likely that common property rather than private property will evolve from open access arrangements.

In the case of land, the presence of intertwined family groups reinforces this tendency toward common property.¹⁰⁹ Communal land management systems are rarely based on contracts between strangers. In Third World circumstances at least, they often develop around preexisting kinship relations that add a degree of cohesion absent in contractual arrangements.¹¹⁰ When land, kin, and ritual combine, the resulting norm-based order usually has

105. For discussions in relation to Papua New Guinea, see DEININGER, *supra* note 7, at 29-31; and Robert D. Cooter, *Issues in Customary Land Law* (Inst. Nat'l Aff., Discussion Paper No. 39, 1989).

106. See Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 136-43 (1998); Smith, *supra* note 9, at S484-85.

107. See Umbeck, *supra* note 4, at 198-202, 218 (discussing property rights in the California gold rush in the absence of government control or regulation).

108. Baland & Platteau, *supra* note 7, at 644.

109. See Ellickson, *supra* note 95, at 1365-66. In addition to the nature of the resource and its predominant exploitation techniques, more indeterminate issues of knowledge, history, and culture also appear to play an important part in the development of resource governance systems. See, e.g., Menell & Dwyer, *supra* note 22, at 604-05 (discussing the quite different American Indian and early European settler resource governance institutions in New England).

110. For an overview, see MAX GLUCKMAN, *POLITICS, LAW AND RITUAL IN TRIBAL SOCIETY* 36-80 (1965). Deininger also reports that in Africa and Asia, “poor people in marginal areas often derive 30 to 40 percent of their consumption from common property resources.” DEININGER, *supra* note 7, at 66.

powerful and highly internalized mechanisms for social ordering. Multigenerational family groups have a natural hierarchy that facilitates the development of more precise rules and sanctions for resource use or exclusion. Finally, biological imperatives for out-breeding also encourage one option for minimizing externalities created by the presence of newcomers: bringing the outsider in through ritualized marriage mechanisms.¹¹¹

By their nature, these types of norm-based common property systems are resilient in the face of rising resource values. In other words, while a purely contractual coalition for resource governance and exclusion may tend toward instability as the gains from defection increase, a norm-based system supported by kinship structures is more likely to respond to rising resource values by tightening its governance mechanisms or enhancing exclusionary rights through a process of collective consensus. This explains why some Third World land-titling programs have failed where rising resource values would have justified the development of private property. The internal strength of some community property regimes—reinforced by repeat interactions, social insurance mechanisms, and internalization processes—ensures that external imposition of a property rights order only generates uncertain circumstances of legal and normative pluralism.

Even resilient traditional property systems have been challenged by dramatic changes in Third World economics, politics, and demographics. As we saw above, these changes have sometimes led to the partial disintegration of viable nonstate resource governance mechanisms without the provision of effective substitutes by state law or legal institutions. The following Section explains the conditions under which this disintegration will occur by distinguishing between exclusion and governance.¹¹² Part IV then considers why this degradation in norm-based common property systems may not lead to a transition to private property rights. These issues are considered at some length because they are the primary causes of property rights failures in Third World circumstances.

111. Institutions such as bride price and dowry obligations appear to be significant in terms of creating cooperative relations and obligations with neighboring groups. Another common practice involves the payment of rents or dues by outsiders to origin groups. For a theoretical anthropological discussion, see James J. Fox, *Installing the 'Outsider' Inside: An Exploration of an Austronesian Cultural Theme and its Social Significance* (1997) (unpublished manuscript, on file with author).

112. In doing so, I adopt the theoretical account of exclusion and governance set out in Smith, *supra* note 9, at S467-78.

B. The Degradation of Norm-Based Orders

Most law-and-economics studies have told a positive story of the interaction between state law and local norms. From eighteenth-century whaling communities, to the lobster gangs of Maine, to the cattle ranchers of Shasta County, California, the strength of local norms has been explained and analyzed in terms of efficient substitution for state law and legal institutions.¹¹³ In Robert Ellickson's well-known formulation, close-knit communities generally prefer their own norms to the rules of formal law because they tend to be collectively cost-minimizing and welfare-maximizing.¹¹⁴ Ellickson has further suggested that close-knit communities may mix and match between local norms and state law in sophisticated ways.¹¹⁵ In particular, constitutional norms within the group may allow recourse to formal law (1) when it provides efficiencies of scale; (2) when it allows for the externalization of administrative costs; or (3) when the dispute involves high stakes and significant social distance between the parties. Individuals who appeal to law outside these circumstances, and without the consent of constitutional norms, would be sanctioned through gossip, ostracism, and moderate acts of violence.¹¹⁶

These propositions may hold true for close-knit communities that regulate property entitlements in relatively static conditions of member homogeneity, regular interaction, and information availability. In other circumstances, however, local norm-based systems will be greatly threatened either by antagonistic state law and encroachments by state institutions, or as migration and increased interaction with outsiders creates pressures that are not mitigated by those institutions. In either case, the threat will be exacerbated as resource values rise, increasing the risk of incursion by outsiders and strengthening demand for more exclusionary property rights for insiders. Over time, rising values may lead to the degradation of norm-based systems and the creation of conditions for contested access. This degradation, in combination with legal and normative pluralism, is at the heart of most Third World cases

113. For a discussion relating to eighteenth-century whaling norms, including the "remarkable" lack of U.S. litigation relating to whale ownership, see ELLICKSON, *supra* note 50, at 192-204. For a discussion of the lobster gangs of Maine and the way in which local norms and state law "made a mutual accommodation to each other," see ACHESON, *supra* note 51, at 80. For an extensive account of cattle trespass norms in Shasta County, see ELLICKSON, *supra* note 50, at 115-20. For further discussion and examples, see Ellickson, *supra* note 95, at 1336-44.

114. See ELLICKSON, *supra* note 50, at 167, 283. The administrative costs of norm-based arrangements are also likely to be cheaper than those associated with recourse to formal law.

115. *Id.* at 254.

116. *Id.* at 254-58. Ellickson described these constitutional norms as "controller-selecting norms."

of open access.¹¹⁷ The following Subsections analyze the degradation of norms-based common property systems in terms of inability to exclude outsiders and deterioration in internal social norms.

1. *Inability to Exclude*

In terms of exclusion, a collective, norm-based regime may deteriorate because it is unable to prevent encroachments by another group, or to reach agreement with that group as to appropriate modes of resource use. In these circumstances, the result is likely to be unresolved conflict and incomplete or deadlocked acts of exclusion. This may occur when (1) the competing groups are evenly matched, and the state is unable or unwilling to help one group achieve complete exclusion; (2) the economic or social significance of the resource is such that neither party will transfer it to a party that has sufficient exclusionary capacity; and (3) the competing groups' production systems are incompatible, the stakes are high, and the numbers of resource users are sufficiently large to prevent agreement on authorized modes of resource use.

These conditions create the potential for endemic intercommunity conflict. In many parts of the Third World—most notably Sub-Saharan Africa—resource conflicts between different ethnic and territorial groups have increased substantially as a result of overpopulation, environmental degradation, and increased immigration of refugees from conflict or failed states.¹¹⁸ The most tragic illustration is provided by the Rwandan genocide in 1994. Although most studies have focused on its ethnic dimension, this horrific event also had its roots in overpopulation and acute competition for land.¹¹⁹ Over time, these pressures led to environmental degradation, fragmentation of land holdings, increased landlessness and lawlessness, and the erosion of traditional common property mechanisms through, among other factors, the growth of informal

117. See, e.g., PLATTEAU, *supra* note 56, at 121. (“[I]t cannot be denied that nowadays ‘tragedies of the commons’ multiply . . . in many African countries. Moreover, it is a fact that population growth and the increasing commercialization of agriculture, fisheries and forestry have been . . . at the root of this rapid emergence of open access situations. What must be stressed, however, is that the impact of these two factors . . . is being mediated through the erosion of traditional authority systems and the dissolution of old cooperative ties.”)

118. See *id.* at 121-22 (linking increasing populations and environmental degradation to Sub-Saharan resource conflicts).

119. Catherine André & Jean-Philippe Platteau, *Land Relations Under Unbearable Stress: Rwanda Caught in the Malthusian Trap*, 34 J. ECON. BEHAV. & ORG. 1 (1998). Through the use of surveys and interviews, André and Platteau established empirical links between land issues and the genocidal violence, particularly in terms of the overrepresentation of landholders in the enormous numbers killed by extremist Hutus. *Id.* at 39.

land markets. Tragically, these circumstances are not unique to Rwanda. The lesson seems to be that, far from leading to the creation of property rights, rapidly rising resource values in circumstances of ethnic division, institutional degradation, and political opportunism often lead to endemic cycles of tragic intercommunal violence.¹²⁰

Further examples of intercommunal conflict are provided by farmer-herder relations in many parts of Africa. These examples are particularly apt as farmer-herder relations provide iconic case-studies in the law-and-economics literature. Both Coase and Ellickson, in particular, have demonstrated the way that farmers and herders may respond efficiently to the crop losses caused by straying capital, either through agreement (Coase) or the development of social norms (Ellickson).¹²¹ The value of land to a herder usually lies in its proximity to a water point and its suitability for grazing access. A farmer principally values the fertility of land and its suitability for growing particular crops. As a result, there are potential gains from trade and incentives to negotiate mutually beneficial solutions rather than engage in costly conflict. Tidiane Ngaido has identified examples of such beneficial solutions in Morocco and Niger.¹²² In Morocco, herders have entered into access arrangements with farmers as a result of drought-induced degradation of their common pastures. Farmers either allow access to their land for grazing, or provide feed in exchange for money or a share of the herd's production. In Niger, the opposite has occurred: Farmers pay herders to graze on crop residues and fertilize their land with manure. Since the droughts of the 1970s and 1980s in Niger, the price for these herder services has increased markedly in proportion to the need to improve the soil fertility of harvested land.¹²³

In a range of African countries, including Sudan, Ethiopia, Cameroon, Senegal, Kenya, and Tanzania, farmer-herder relations have not been marked by continuous agreement but by cycles of chronic conflict.¹²⁴ The potential for conflict is ever present because population growth, environmental degradation,

120. See THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41 (containing essays offering other examples of resource conflicts in Sub-Saharan Africa); see also NEGOTIATING PROPERTY IN AFRICA, *supra* note 41 (containing further case studies). Most of these conflicts are long-term in nature. Both their temporal scope and their regular escalations suggest that they are not simply temporary mechanisms for property transitions.

121. See ELICKSON, *supra* note 50; Coase, *supra* note 29.

122. Tidiane Ngaido, *Can Pastoral Institutions Perform Without Access Options?*, in PROPERTY RIGHTS, RISK, AND LIVESTOCK DEVELOPMENT IN AFRICA 299, 312-17 (Nancy McCarthy et al. eds., 1999).

123. *Id.*

124. See Karim Hussein et al., *Increasing Violent Conflict Between Herders and Farmers in Africa: Claims and Evidence*, 17 DEV. POL'Y REV. 397, 412 (1999).

and conflict-induced migration have increased competition for key resources such as water-access points. The conflicts that have crystallized are marked by the tendency of farmers to block stock routes or access to water,¹²⁵ and the tendency of herders to cause crop damage through profiteering or feeding their herds out of necessity.¹²⁶ What distinguishes these cases from the farmer-herder agreements identified in Morocco and Niger? First, conflicts often emerge from overlapping, competing, and fragmented tenure systems. State law may favor farmers, as in Sudan, but this only increases conflict in circumstances of state oppression and ethnic division.¹²⁷ Customary processes may lead to periodic harmony, but clear property rights do not emerge because custom itself is inherently negotiated and contested.¹²⁸ Second, there is often a lack of enforcement (norm-based or legal), creating disincentives for authoritative property allocations because agreements and rules can be broken with impunity.¹²⁹

2. Failure of Governance Systems

The exclusionary capacity of norm-based property systems will influence whether acts of exclusion will be complete, incomplete, or deadlocked as resource values rise. The risk of incomplete exclusion, and a regime of contested access, will rise as the exclusionary capacity of a norm-based system degrades under pressure from encroachers or antagonistic state policies. In other situations, group governance mechanisms may degrade in the face of rising resource values. As resource values rise, members of a common property system have a greater incentive to capture resource rents. When the increased value derives from investment, the investors will also demand greater rents to reward their investment. A common property system may respond in a consensual manner by allowing more exclusionary forms of internal property distribution or by tightening its governance mechanisms to resolve or prevent

125. See, e.g., Ben Cousins, *Tenure and Common Property Resources in Africa*, in *EVOLVING LAND RIGHTS, POLICY AND TENURE IN AFRICA*, *supra* note 56, at 150, 153-54, 172-73 (discussing Sudan and Nigeria).

126. For an example of prevalent herder crop damage, see Thomas J. Bassett, *Land Use Conflicts in Pastoral Development in Northern Côte d'Ivoire*, in *LAND IN AFRICAN AGRARIAN SYSTEMS* 131, 147 (Thomas J. Bassett & Donald E. Crummey eds., 1993).

127. See Cousins, *supra* note 125, at 153-54.

128. See, e.g., Bassett, *supra* note 126, at 148-49.

129. See *id.* at 147 (discussing the effects of lack of enforcement in northern Cote D'Ivoire); see also Robert Wade, *The Management of Common Property Resources: Collective Action as an Alternative to Privatisation or State Regulation*, 11 *CAMBRIDGE J. ECON.* 95, 103-04 (1987) (discussing undiscovered rule-breaking as a disincentive to collective agreements).

disputes caused by these inflationary pressures.¹³⁰ Alternatively, it may deteriorate as group members defect in order to capture the gains of asserting increasingly exclusionary rights. As will be discussed below, the degradation of a common property system due to member defection will not necessarily result in a transition to private property, but may create further conflict, uncertainty, and contested forms of resource access.

Common property regimes may provide lower-cost proxies for demarcating and enforcing property rights than alternative private property arrangements, particularly when they have evolved in response to the specific nature of the resource, its production system, or relevant environmental risks. When, in response to rising values, the costs of these proxies and their associated governance mechanisms rise at a slower rate than the costs of alternative arrangements, a common property system may adopt the lower-cost option of tightening governance mechanisms rather than evolving or merging into a system of private property.¹³¹ This process could involve greater monitoring efforts, more hierarchical structures to generate and apply sanctions, more precise delineation of usufructuary boundaries and authorized modes of resource use, the establishment or strengthening of internal systems for dispute resolution, and the division of the commons into smaller, more manageable arrangements.¹³²

A related response is to allow more exclusionary rights through a process of agreement or normative evolution. For example, many studies of customary land systems confirm that strong and often heritable rights develop in response to investment in observable improvements—e.g., building houses, planting trees, and fencing off plots.¹³³ Indeed, there are often distinctions in customary property systems between housing and agricultural land (where the investment of effort means that rights are more likely to be vested in individuals or household heads), and pastoral, woodland, forest, water, and maritime resources (where communal forms of access are more likely to be the dominant

130. See Smith, *supra* note 9, at S480-81.

131. For a theoretical discussion, see *id.* at S464.

132. Some interesting examples from India and Mexico are discussed in Baland & Platteau, *supra* note 7, at 646-47. Division of the commons into small arrangements seems to have taken place in Mexico's *ejido* system, in which communal pastoral management often devolved into small groups once original groups reached an excessive size. See Paul N. Wilson & Gary D. Thompson, *Common Property and Uncertainty: Compensating Coalitions by Mexico's Pastoral Ejidatarios*, 41 *ECON. DEV. & CULTURAL CHANGE* 299, 300 (1993).

133. See Keijiro Otsuka & Frank Place, *Introduction* to *LAND TENURE AND NATURAL RESOURCE MANAGEMENT: A COMPREHENSIVE STUDY OF AGRARIAN COMMUNITIES IN ASIA AND AFRICA* 1, 16-17 (Keijiro Otsuka & Frank Place eds., 2001); see also DEININGER, *supra* note 7, at 47.

property arrangement).¹³⁴ This suggests that customary land tenure systems can develop more exclusionary forms of property distribution without excessive conflict or degradation of norm-based mechanisms.

Demand for more exclusionary rights within a customary property system will also be affected by the distributional consequences of change.¹³⁵ By their nature, more exclusionary rights mean that secondary rights-holders no longer enjoy the same rights of access or reallocation. In relation to land, for example, primary rights-holders may engage in acts of exclusion against other group members and the group as a whole by reclaiming fallow plots, purporting to pass property down to direct descendants, or even pledging or leasing land to other group members. Increased resource values and contact with outsiders will further lead to the commoditization of rights to land and attempts to sell or lease those rights to outside interests. Increased contact with outsiders will also allow other mechanisms for dealing with risk, through off-farm employment, immigration, or improved technical means to diversify crops and sources of income.¹³⁶ In all these circumstances, those who stand to gain from asserting exclusionary rights may well calculate that the benefits of success outweigh the costs of normative defection and conflict with other members of the group.¹³⁷

Whether a common property system can manage these pressures depends on the nature of the group, its resources, and its institutional adaptability. Absent external methods of enforcement, the maintenance of internal cohesion in a common property system generally requires relatively minor stakes and a group that is sufficiently small, homogenous, and egalitarian. This creates reciprocity in power relations and low-cost information flows to encourage cooperation and provide sanctions against defection. Because the maintenance of cohesion also involves issues of social capital, institutionalized trust, and internalized behavioral habits, it is difficult to predict when and where consensual change will occur in common property systems that face rising

134. To clarify this distinction, some commentators have used the expression “collective ownership” to describe the overarching community right of control over traditional lands, under which individual or household rights exist in varying degrees of strength, and “common property regime” to describe joint use and access by community members of a common pool resource, such as forests, maritime resources, or rangelands. See, e.g., Otsuka & Place, *supra* note 133, at 12. To some extent, of course, there will be an overlap between these conceptions.

135. See Banner, *supra* note 6, at S368; see also Libecap, *supra* note 37, at 142-50.

136. DEININGER, *supra* note 7, at 11-14.

137. See ELLICKSON, *supra* note 50, at 207-29; PLATTEAU, *supra* note 56, at 36.

resource values.¹³⁸ At least in relation to common property systems, therefore, claims as to the predictive authority of evolutionary property rights theories should be treated with some caution.

More credible are predictions that some norm-based common property systems will deteriorate as rising values put increasing pressure on internal governance mechanisms. This can occur in a number of ways. First, sanctions like gossip and ostracism will lose efficacy as members calculate that the gains from defection outweigh the costs of such punishment. The use of violence will also be limited by state law and fear of reprisals and feuding.¹³⁹ Second, collective trust will most likely collapse if group leaders opportunistically appropriate benefits that would otherwise accrue to the group as a whole. This has been a common cause of conflict both in relation to the assertion of individual rights to valuable land by traditional leaders,¹⁴⁰ and the failure to distribute economic benefits from outside contact among group members.¹⁴¹ Most importantly, the sale or transfer of rights to outsiders will undermine the kinship, resource use, and behavioral requirements necessary to maintain cooperative arrangements and a system of informal sanctions.¹⁴²

138. For a discussion of the formation and role of social capital issues in common property systems, see OSTROM, *supra* note 51, at 183-84. See also Baland & Platteau, *supra* note 7, at 647 (“[Property rights theorists] tend to ove[r]look the fact that evolution, including long-run institutional equilibria and the corresponding trajectories, is itself dependent on the initial state of prevailing norms and values (on the initial stock of social capital).”).

139. See ELLICKSON, *supra* note 50, at 207-29; see also Epstein, *supra* note 87, at S531-32 (discussing moderate acts of violence in relation to encroachments on cleared snow parking spaces in Chicago).

140. For examples from Uganda, Tanzania, and Kenya, see PLATTEAU, *supra* note 56, at 203-04. For examples from Ghana, see Sulemana Abudulai, *Land Rights, Land-Use Dynamics & Policy in Peri-Urban Tamale, Ghana*, in THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41, at 72, 79. Examples from Benin are found in Romain Martin Houkpodote, *Piloting the Rural Land-Use Plan in Benin*, in THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41, at 131, 134-35.

141. Perhaps the most tragic example of failure by traditional leaders to distribute economic benefits fairly is the conflict on the island of Bougainville in Papua New Guinea, where traditional leaders were given large royalties from a mine in the expectation that the funds would be distributed among and for the benefit of the group. This did not occur, and eventually younger men in the group took up arms against both the mine and their traditional leaders. Various factions formed and the result was civil war and a violent secessionist movement. A peace agreement was signed in 2000, but the mine has not been reopened. See John Connell, *Compensation and Conflict: The Bougainville Copper Mine, Papua New Guinea*, in MINING AND INDIGENOUS PEOPLES IN AUSTRALASIA 55 (John Connell & Richard Howitt eds., 1991).

142. Needless to say, this poses a major challenge to group cohesion, because outsiders will not necessarily possess the kinship, resource use, or behavioral requirements necessary to maintain cooperative arrangements or a system of informal sanctions.

This last issue—the development of land markets—has been a central factor in the degradation of nonstate systems in many Third World societies.¹⁴³ The fact that colonial legal systems generally prohibited, or at least heavily constrained, land markets in “native” areas has only made this process worse. Where they were allowed, transactions in land either had to comply with burdensome formal requirements for immatriculation or recognition, or had to be sufficiently “traditional” to be deemed acceptable in customary “law.”¹⁴⁴ Most land markets in colonial (and then postcolonial) jurisdictions, particularly in rural and peri-urban areas, developed in circumstances of dubious legality. As populations and migratory movements increased rapidly in the twentieth century, these markets expanded dramatically without the benefit of legal or norm-based mechanisms for obtaining consent from secondary rights-holders or verifying titles and boundaries. As a result, many rights-holders in rural and peri-urban areas do not hold documents of title that clearly evidence the historical chain of ownership. All too often, this has left them in a gray area of legal and normative uncertainty. They are unable to access formal systems of land administration because they cannot prove title; yet they also live without the certainties provided by nonstate norm-based systems because these systems have not developed mechanisms to recognize and regulate informal markets in rights to land.¹⁴⁵

Many types of contemporary Third World landholdings do not fall easily into orthodox (and relatively fixed) law-and-economics distinctions between common property and private property, legal and norm-based rights, or traditional and modern systems. The dynamics of postcolonial change, including the often antagonistic interaction between law and norms, has produced a plurality of rules, processes, and institutional structures. Very few

143. See PLATTEAU, *supra* note 56, at 121. For examples of state-sanctioned sales of land to outsiders provoking civil conflict and violence, see *id.* at 211-16 (discussing Mauritania and Senegal). In at least some of these cases, conflict arose as a result of violent reactions to entrepreneur-induced changes. This provides something of a counterpoint to Anderson and Hill’s argument that property rights transitions overcome collective action problems through entrepreneurial mechanisms. In some cases, entrepreneurial attempts will create such a backlash that chronic conflict rather than evolutionary efficiency will result. See *supra* Section III.B. For further examples from North Western Cameroon, see J.A. Mope Simo, *Customary Land Tenure Regimes in North Western Cameroon*, in *THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA*, *supra* note 41, at 37, 44-45.

144. Immatriculation refers to the process by which rights and transactions relating to land in French colonies became subject to the provisions of French municipal law. See PATRICK MCAUSLAN, *BRINGING THE LAW BACK IN: ESSAYS IN LAND, LAW AND DEVELOPMENT* 59-75 (2003); PLATTEAU, *supra* note 56, at 95-109.

145. See DE SOTO, *supra* note 55, at 149-88 (providing a useful overview and discussion of this point).

landholders are untouched by state law and officialdom, and yet very few laws are followed absolutely and unequivocally. In these circumstances, the courts and other juridical institutions are often unable to provide authoritative determinations. Property rights are formulated, defined, and reformulated through constant negotiation and compromise, most often at the instigation of “entrepreneurs” who cluster around centers of state power.¹⁴⁶ While at times this entrepreneurial activity does result in private property rights, at other times it leads to chronic conflict and uncertainty. The following Part explores these issues in more detail, particularly in circumstances of state incapacity and illegitimacy.

IV. ENFORCEMENT OF PROPERTY THROUGH THIRD-PARTY MEANS: THE ROLE OF THE STATE

According to some economists, the process of norm-based common property collapse described above inevitably leads to a system of private property.¹⁴⁷ Over time, a common property system loses control over land use within its territory as individuals assert ever-increasing rights of exclusion, transfer, and alienation. Yet the question remains: By what mechanism will these new rights be enforced? Self-help attempts at exclusion may fail because other group members retain some coalitional strength, or because high transaction costs—including issues of livelihood and ritual significance—prevent agreements between competing parties. Second-party measures may also be ineffective due to the same forces that undermined the original common property system. In most circumstances, therefore, nonconsensual transitions from common to private property will require effective forms of third-party enforcement. In the modern world, this generally entails intervention by the state.

Recognizing these issues, some Demsetzian proponents argue that increased conflict—resulting from degradations in nonstate systems—leads the state to intervene in the form of systems for dispute resolution, demarcation of

146. Toulmin et al., *supra* note 41, at 11 (“[In Africa], tenure has remained embedded in social networks despite the intervention of colonial and post-Independence governments. The desire for state control over land and resources in the ‘public interest’ has not led to the establishment of impartial and benevolent management but, on the contrary, to the upping of the stakes at play in the battle for land. We then see a network of players forming around the state administration, seeking preferential access and treatment, and making the land issue increasingly politicised . . .”).

147. See, e.g., Hans P. Binswanger & John McIntire, *Behavioral and Material Determinants of Production Relations in Land-abundant Tropical Agriculture*, 36 *ECON. DEV. & CULTURAL CHANGE* 73 (1987).

boundaries, and registration of individualized titles.¹⁴⁸ In this approach, the conflict induces transition via an appropriate institutional response, and insecurity motivates individuals to request state assistance with titling or dispute resolution. An oft-cited example is Lee J. Alston, Gary D. Libecap, and Bernardo Mueller's study of land titles in the Amazonian frontier. The study discusses the ways in which early frontier settlers agreed on locally respected informal property arrangements, particularly in relation to boundaries and dispute resolution. These arrangements broke down as new settlers appeared with different expectations and greater heterogeneity of experience, leading to a dissipation of resources in predatory and defensive activities by all resource claimants. This, in turn, created incentives for individual settlers to travel to state land offices in order to obtain formal titles, and those who obtained such titles made greater investments in their land.¹⁴⁹

A. *Legal Pluralism and Third World States*

To extrapolate a general Demsetzian proposition that private property will develop when individuals make cost-benefit-based decisions to approach the state for titling assistance, one needs to assume a certain degree of willingness and capacity on the part of state agencies. Unfortunately, this assumption does not necessarily stand up to analysis or historical experience.¹⁵⁰ In the first instance, state agencies may be unable to resolve land conflicts and enforce local exclusionary claims because they face their own supply-side constraints. Extending land administration and dispute-resolution functions to the village level is notoriously expensive and technically difficult.¹⁵¹ Even when informal institutions do not provide proxies for these functions at a lower cost, a Third World state may be institutionally incapable of providing and maintaining effective land administration and dispute resolution for long periods of time. When informal institutions retain social influence, as they often do in kinship-based regimes, these supply-side constraints get even worse. Those who stand to lose from the assertion of exclusionary rights will turn to remnant norm-based institutions for support. Conversely, those who stand to gain from exclusionary rights will turn to state agencies, including legal institutions, to

148. See, e.g., Feeny, *supra* note 23, at 286-90, 294.

149. See ALSTON ET AL., *supra* note 5, at 98-152. To be fair, Alston, Libecap, and Mueller do recognize the possibility that, for reasons of incapacity or self-interest, political institutions will fail to provide secure land titles in response to demands from landholders. See *id.* at 17-22.

150. See, e.g., PLATTEAU, *supra* note 56, at 152 (providing an overview of Africa).

151. DEININGER, *supra* note 7, at 33.

enforce their claims. When the state lacks the money, moral authority, or coercive capacity to override local institutions, the result will be legal and normative pluralism.¹⁵²

Pluralist relations between law and norms are central to understanding endemic forms of Third World land conflict.¹⁵³ In theory, the presence of this pluralism should not necessarily prevent the emergence of property rights (or more precise property rights). Entrepreneur-induced negotiation and competition between property systems should lead to efficient outcomes.¹⁵⁴ In practice, however, the Third World presents numerous examples of chronic uncertainty, conflict, and environmental degradation arising from overlapping tenurial and arbitral systems. These examples arise in a number of contexts, including failed attempts at privatization, nationalization, and agricultural development. Their common attributes appear to be the presence of relatively high numbers of heterogeneous claimants; high stakes in terms of livelihood security and potential resource revenues; a certain amount of state incapacity or illegitimacy; some degradation in local norm-based systems; and a degree of antagonism and overlap between legal and norm-based property arrangements.

152. See *id.* at 30 (“In many . . . cases, state weakness and limited outreach and administrative capacity of central government institutions will limit the ability of these institutions to effectively enforce property rights. As a consequence, even where they are not sanctioned by formal law, local institutions are bound to have a significant impact on the way in which land rights are actually implemented.”); see also Toulmin et al., *supra* note 41, at 3 (“[In rural Africa] a variety of institutions has been created with differing and often overlapping responsibilities regarding land, while traditional institutions have in many cases retained their own legitimacy and authority.”).

153. See Delville, *supra* note 60, at 97 (“[In West Africa,] legal pluralism, deriving from the colonial era causes a degree of uncertainty about land rights and leads to conflicts for which the many different arbitration bodies (customary, administrative and judicial) are unable to find lasting solutions.”); see also PLATTEAU, *supra* note 56, at 150 (“Conflicts over the control of land tend to be severe and the resulting instability tends to be great when new emerging rights of private ownership clash with, or are being superimposed on, the existing customary land arrangements, thereby creating a deeply heterogeneous reality.”); *id.* at 44 & n.14 (discussing Madagascar, Togo, and Senegal); Samuel Egbe, *Forest Tenure & Access to Forest Resources in Cameroon*, in THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41, at 61, 61-62; Fitzpatrick, *supra* note 56 (discussing Indonesia); Boureima Alpha Gado, *Arbitration & Resolving Tenure Conflict in Boboye, Niger*, in THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41, at 159, 169; Roch L. Mongbo, *Land Availability & the Land Tenure Regime in Rural Benin*, in THE DYNAMICS OF RESOURCE TENURE IN WEST AFRICA, *supra* note 41, at 98, 101. Many of these conflicts are long-term in nature, in most cases because they are embedded in the fundamental problem of legal and normative pluralism.

154. See, e.g., Anderson & Hill, *supra* note 86, at 119-29.

Leaving the issue of capacity to one side, a state may also be unwilling to resolve disputes caused by degradations in common property systems. Even benign states may not support efficient local claims when they are contrary to the interests of political constituencies. This is because state agencies do not engage in direct Demsetzian cost-benefit calculations of the viability of property rights.¹⁵⁵ These agencies are more likely to pursue their own interests by pandering to a constituency, increasing tax revenues, or implementing a rent-seeking development agenda.¹⁵⁶ When a state is captured by minority interest groups, it may prefer insecurity and uncertainty in property rights in order to facilitate rent-seeking. Thus, state agencies may grant rights to cronies without necessarily incurring an obligation to compensate dispossessed occupiers, because those occupiers either lack formal property rights or sufficient access to judicial institutions. In circumstances of judicial weakness, the same agencies may also provide ad hoc coercive assistance to parties willing to bid for that assistance, without concern for legality or infringement upon property rights.¹⁵⁷

Platteau has provided an instructive overview of property rights insecurity arising from state actions in Sub-Saharan Africa:

There are countries—such as Rwanda, Swaziland and the United Republic of Tanzania—where confusion about use and possession of land is almost total because of the “provisional” character of land laws enacted by the state, to frequent legislative changes, to non-implementation of stated policy or legislation, to inconsistent official statements. . . . In numerous countries—such as Nigeria, Uganda, Zaire, Kenya, Zambia and Liberia—long delays are needed until land

155. The best discussion of this issue may be found in Fred S. McChesney, *Government as Definer of Property Rights: Tragedy Exiting the Commons?*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW, *supra* note 13, at 227. McChesney argued that attempts by the government to substitute for private systems of defining rights may create a “tragedy in exiting the commons.” *Id.* at 228. For similar reasons, Anderson and Hill suggested that the formation of second-party coalitions by entrepreneurs is likely to lead to less dissipation of rents than government intervention. See Anderson & Hill, *supra* note 26, at S512.

156. See DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE 22 (1991).

157. See, e.g., PLATTEAU, *supra* note 56, at 236-37 (“[P]ostcolonial African nations are being structured by a sociopolitical order which, in many respects, obeys the logic of a ‘kleptocracy’. Wealth is currently acquired or redistributed through trafficking, racketeering, plundering, looting or favouritism, all practices which are almost always accomplished within the purview of the political power structure . . .”). For an analysis and discussion in relation to Indonesia, see Fitzpatrick, *supra* note 56. See also Daniel Fitzpatrick, *Beyond Dualism: Land Acquisition and Law in Indonesia*, in INDONESIA: LAW AND SOCIETY 74 (Timothy Lindsey ed., 1999).

titles are established, a result which must be attributed to complex procedures of bureaucratic control that tend to breed fraudulent practices. In Liberia, Zambia and Zaire, access to land and land transactions are subject to the approval of numerous layers of the administration and the government before the decision is confirmed or denied by the President himself. In other countries—such as Senegal, Cote D'Ivoire, Lesotho, Cameroon and Zaire again—the main insecurity lies in the power of the state to requisition lands for public purposes, to acquire lands with a view to leasing them to agribusiness firms, or to seize them “in order to fight speculation”. There are numerous countries—such as Malawi, Botswana, Kenya, Zaire, the Sudan, Lesotho, and Burkina Faso—in which powers of land allocation have been formally transferred from customary authorities to the administration, but where earth priests, headmen and other traditional land allocators in fact remain powerful.¹⁵⁸

In some cases, the state itself is fragmented by resource competition between different agencies and levels within government. Different government groups make bids for exclusionary resource control through the passage of regulations or the grant of licences to affiliated entities. In doing so, they often form ad hoc alliances with private resource claimants. The costs of passing regulations or issuing licences are often relatively low compared to the anticipated benefits, and the courts are unable to resolve the resulting inconsistencies due to the nature and power of those involved. Not only do inconsistent regulations and licenses proliferate, but the underlying rules of property creation and transfer become matters of negotiation, contestation, and inherent ambiguity. In these circumstances, the capture of the state by elite groups will not lead to clear property outcomes, through entrepreneurial coalitions, but to endemic uncertainties that favor the negotiation strategies of powerful political groups.¹⁵⁹

B. Incomplete or Deadlocked Exclusion: Open Access in Pluralist Contexts

The fact that states subject to minority interest group capture tend to provoke a majoritarian civil society response may explain certain types of open access and their effects on consumption and investment.¹⁶⁰ Endemic state-

158. PLATTEAU, *supra* note 56, at 152.

159. See Lund, *supra* note 57, at 22-24.

160. For references on minoritarian behavior provoking countervailing majoritarian responses, see KOMESAR, *supra* note 10, at 55-70.

society conflict may create difficulties in enforcing property rights at the local level, both because state agencies lack coercive capacity and because state illegitimacy has led local claimants to form their own nonstate coalitions.¹⁶¹ It also may provoke rapid depletion of resources by state license-holders who fear that social conflict or political change will jeopardize future operations. In this situation, simply establishing secure and long-term property rights will not necessarily create incentives for resource conservation. When the system that allocates a right is unstable or illegitimate, the rights-holder will engage in rapid resource depletion regardless of the formal duration and enforceability of the right in question.¹⁶² In this case, tragedy of the commons effects will arise from the nature of property enforcement institutions rather than from the fact of open access itself.

In Indonesia, for example, the national army has reportedly requested (or required) a number of mining concession-holders to provide informal payments for security assistance against disaffected local communities. As a result, the army has been able to demand greater payments for greater defensive efforts. The army has allegedly fomented local acts of violence and sabotage in order to justify increases in the price of its protection.¹⁶³ According to some reports, the killing of two U.S. civilians and one Papuan near a copper and gold mine owned by the U.S. company Freeport in West Papua—blamed by the army on local rebels—was a consequence of such tactics, used after negotiations stalled over protection payments.¹⁶⁴ While the Freeport mine

161. The World Bank has suggested that land conflict has been a major cause of failed states in Burundi, Côte d'Ivoire, El Salvador, Guatemala, Rwanda, and Zimbabwe. DEININGER, *supra* note 7, at 157-58. Landlessness has also been a key factor in chronic conflict in Colombia, El Salvador, Guatemala, South Africa, and Zimbabwe. *Id.*

162. For further discussion of the relationship between unsustainable deforestation, state illegitimacy, and crony capitalism in Indonesia, see William D. Sunderlin & Ida Aju Pradnja Resosudarmo, *Rates and Causes of Deforestation in Indonesia: Towards a Resolution of the Ambiguities* (Ctr. for Int'l Forestry Research, Occasional Paper No. 9, 1996).

163. See, e.g., INT'L CRISIS GROUP, ASIA REPORT NO. 17, ACEH: WHY MILITARY FORCE WON'T BRING LASTING PEACE 8 & n.35 (2001) [hereinafter ICG, ACEH] (citing report of demands for operators of the ExxonMobil/Pertamina natural gas plant in Aceh to pay \$500,000 per month for informal security assistance); see also INT'L CRISIS GROUP, ASIA REPORT NO. 39, INDONESIA: RESOURCES AND CONFLICT IN PAPUA, at i (2002) [hereinafter ICG, PAPUA] (citing informal protection fees allegedly paid by resource companies). These widely aired allegations tend to be denied by the army and the resource companies in question.

164. See, e.g., Raymond Bonner, *U.S. Links Indonesian Troops to Deaths of Two Americans*, N.Y. TIMES, Jan. 30, 2003, at A3 (quoting a "senior administration official" as stating that, "[t]here is no question there was military involvement," and "[t]here is no question it was premeditated"). For the public U.S. position, which is almost certainly influenced by geopolitical considerations, see Press Release, U.S. Embassy, Jakarta, Indonesia, Investigation of Timika Murders Ongoing: Correction of March 3, 2004 Wire Service

continues to operate, incentives for rapid resource depletion and inadequate environmental remediation will have increased due to fears by the concession-holder that future social conflict—and its associated protection payments—will prevent operations in the near future. In this type of case, the rent-seeking nature of powerful state agencies can create incentives for tragedy of the commons effects.¹⁶⁵

An alternative possibility is that third-party assistance will lead to deadlocked acts of exclusion and conditions of underinvestment. This may be because rent-seeking preferences by particular state agencies foment such local conflict as to prevent certain resource operations altogether. Here, Indonesia provides another example. In the conflict-torn province of Aceh, the Exxonmobil/Pertamina natural gas plant at Lhokseumawe was shut down in 2001 as a result of rebel activity. Aceh (like West Papua) is rich in natural resources, and most rebel grievances stem from unjust distribution of resource revenues. Allegedly, until the recent post-tsunami peace agreement the army had been content to continue the conflict because it allowed *de jure* or *de facto* martial law and, consequently, access to lucrative logging and cannabis-production industries. Maintenance of the conflict also justified an increased official budget for internal security operations. This perverse combination of incentives and practices—rent-seeking by the military, revenue-grabbing by the central government, and insufficient exclusion by rebel forces—temporarily prevented the Lhokseumawe natural gas plant from reopening, despite its enormous revenue potential.¹⁶⁶

These examples illustrate the potential for enforcement analysis to give a different perspective on well-known property rights conceptions of the commons and anticommons. Orthodox economic formulations distinguish

Report (Mar. 4, 2004), available at http://www.usembassyjakarta.org/press_rel/timika1.html, which states that, “[t]he FBI has reached no conclusion regarding any party’s guilt or innocence. The investigation is ongoing and cooperation with the Indonesian authorities is continuing.” More recently, some Papuan independence activists have been arrested by Indonesian authorities in connection with the murders.

165. The International Crisis Group provides an instructive comment, indicative of almost all large-scale resource extraction activity in Indonesia. See ICG, *PAPUA*, *supra* note 163, at i (“Indonesian security forces have a financial interest in resource extraction in Papua, through direct involvement in logging and other activities and protection fees paid by resource companies. Numerous serving and retired officers, senior state officials and others close to government are thought to have logging concessions or other business interests.”). This rent-seeking issue interacts with the possibility that the institutions available to supply third-party enforcement assistance—the courts, the legislature, and the bureaucracy—are unable to do so because of their own supply-side constraints. See KOMESAR, *supra* note 10.
166. See ICG, *ACEH*, *supra* note 163, at 8-9. By definition, in this type of case contested access is a more appropriate description than open access.

between the absence of property rights (open access), which typically leads to overconsumption and a tragedy of the commons, and too many property rights, which leads to chronic underinvestment (a “tragedy of the anticommons”).¹⁶⁷ In reality, a focus on exclusionary mechanisms suggests that these phenomena are more similar than this doctrinal separation indicates. Both involve resource competition in multiple-user environments. Both usually involve exclusionary attempts by different resource participants. The difference is simply that in a tragedy of the commons exclusionary attempts fail because enforcement institutions are ineffective or in conflict, or because users rationally choose to engage in incomplete acts of exclusion. In a tragedy of the anticommons, exclusionary attempts fail because enough parties have the exclusionary capacity to prevent effective resource use by any single party, and there are sufficient barriers to assembly of those rights by any one party. This leads to deadlock and underinvestment in resources. In both cases, therefore, relatively small distinctions involving the capacity to exclude may lead to dramatically different consequences in terms of resource consumption and investment.¹⁶⁸

C. Public Choice and Property Enforcement Analysis

To what extent can public choice theory explain successes and failures in Third World property transitions? To what extent is public choice consistent with this Essay’s taxonomic description of contested access? A number of commentators have highlighted the importance of public choice analysis in explaining collective mechanisms for property system change.¹⁶⁹ Because property transitions appear to involve costs that are too high for one individual to bear – measuring and acquiring old rights, and allocating and enforcing new

167. See James M. Buchanan & Yong J. Yoon, *Symmetric Tragedies: Commons and Anticommons*, 43 J.L. & ECON. 1 (2000); Heller, *supra* note 87.

168. See Lee Anne Fennell, *Common Interest Tragedies*, 98 NW. U. L. REV. 907 (2004) (discussing unexpected overlaps and similarities between economic conceptions of the commons and anticommons).

169. See, e.g., Epstein, *supra* note 87, at S516 (“The public choice dynamic, so dominant in human affairs, plays a far more powerful role in the definition and transformation of property rights systems than Demsetz attributed to it.”); Levmore, *supra* note 1, at 181 (observing that for every efficiency-based explanation “there is an alternative and skeptical view that is interest group, or politically, driven”). For a comprehensive application of public choice theory to property transitions, see Banner, *supra* note 6, at S366-71. Several scholars have tended to explain the mechanism for property transitions in terms of contrasting public choice and normative or Demsetzian theories. See *id.* at S359-61; Levmore, *supra* note 1, at 182-84; Saul Levmore, *Two Stories About the Evolution of Property Rights*, 31 J. LEGAL STUD. S421, S421-31 (2002); Merrill, *supra* note 3, at S338.

ones—some form of collective mechanism seems necessary both to carry these costs and to overcome incentives to free-ride on the organizational efforts of others. Public choice theory identifies this mechanism in coalitions that induce or propel a property transition in order to capture a disproportionate share of its benefits.¹⁷⁰

Public choice analysis can help explain certain types of transition in property rights regimes,¹⁷¹ but it cannot substitute for the institutional supply and enforcement-based analysis presented in this Essay. Ultimately, an analysis based on self-interested coalitions tends to overlook the importance of legal and normative pluralism in the evolution and degradation of property rights systems. It is true that a norm-based system may evolve new forms of property rights through collective decisionmaking. A state-regulated system may also induce transitions through oligarchic capture of the political process. Yet, in many Third World cases, both of these collective processes are supplemented or replaced by complex interactions between overlapping social systems. When these interactions involve degraded norm-based systems and illegitimate or fragmented legal orders, the result is often fluid and highly contested property regimes that owe less to atomized coalitions and more to confluence and conflict between semi-autonomous systems.

CONCLUSION

The basic economic models of property rights presented by Coase and Demsetz fail to incorporate complex issues of institutional supply. Coase assumes authoritative allocation of property rights in order to either facilitate market bargaining, or substitute for it in circumstances of high transaction costs. Demsetz assumes autonomous evolution of property rights under pressure from rising resource values. These models overlook the fact that far more so than rights in contract and tort, property rights are embedded in complex social systems. The enforcement of property rights depends on the nature and strength of social order. Property enforcement is more than a

170. These coalitions usually have an oligarchic character. See Banner, *supra* note 6, at S368.

171. Leading exponents of public choice explanations for property transitions tend—as do their Demsetzian counterparts—to be optimistic. See, e.g., *id.* at S368-69; Levmore, *supra* note 1, at 184 (“There are evolutionary pressures that prevent the interest group story from straying too far from the optimistic, efficiency-oriented one. Long-run survival is inconsistent with unfettered rent seeking and redistribution toward well-positioned interest groups, because in the long run, members of interest groups will be better off if the economy as a whole is more successful.”). For a more skeptical view, see Epstein, *supra* note 87, at S543-44, which states: “Demsetz’s basic efficiency story is tempered with a healthy dose of public choice theory.”

question of law, or institutional choices between agreements, court decisions, and state regulation. Well before the creation of modern nation-states, social norms developed to maintain order in multiple-user environments. The degradation of these norms, often in circumstances of state antagonism and illegitimacy, is at the heart of modern property rights failures in the Third World.

These failures illustrate the doctrinal shortcomings of economic assumptions relating to the formation and evolution of property. The problem of insecure, overlapping, and unenforced property rights is not handled well in law-and-economics models. Most economists categorize these property failures in terms of open access, and neglect to analyze the different types, causes, and consequences of open access regimes. As a result, repeated exhortations for Third World states to establish secure property rights, most commonly through individualized land-titling programs, fail to provide practical policy solutions to well-documented interactions between legal, normative, and coalitional enforcement arrangements. Economic models need far greater doctrinal clarity with regards to open access. Cost-focused models may help to explain rational decisions not to assert property rights or failures to reach agreement relating to property rights, but they do not explain failures on the supply-side that result from polynormative, multilayered, and incomplete assertions of exclusionary rights.

Only one type of open access regime arises in uncontested circumstances. This is when a resource is so abundant, mobile, or dispersed that users rationally decide not to engage in any act of exclusion at all. In all other cases of open access, contestation is so central that these regimes would be accurately classified as contested, rather than open, access. By emphasizing contestation and enforcement in the evolution of property rights systems, this Essay has identified several reasons for the persistence of contested access regimes. First, users assert property rights through self-help measures, but these prove insufficient in practice to exclude other users. Second, users rationally engage in incomplete acts of exclusion alone because the costs of complete exclusion are prohibitive. Third, users engage in deadlocked acts of exclusion because the exclusionary capacity of each claimant is relatively equivalent. Fourth, users attempt to reach agreement as to exclusion and authorized use, but these agreements fail due to the nature of the resource, the presence of high transaction costs, or strategic forms of user behavior. Fifth, users reach agreements or develop norms as to exclusion and governance, but these agreements or norms degrade in circumstances of rising resource values as a result of internal conflict or external encroachment. Finally, users reach agreements or develop norms as to exclusion and governance, but these are overlaid by a state mechanism that is itself incomplete, illegitimate, or partly

effective. Further development of these taxonomic distinctions is needed to shed greater light on property rights theory and its often problematic application to Third World resource conflicts.