WORKING WITH MIXED COMMONS/ANTICOMMONS PROPERTY: MOBILIZING CUSTOMARY LAND IN PAPUA NEW GUINEA THE MELANESIAN WAY

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INTRODUCTION

Widely touted as the last unknown in the field of world exploration, Papua New Guinea ("PNG") is a nation that—although colonized beginning in the late nineteenth century by a parade of European nations (including Germany, Great Britain, and Australia)—has had late and limited contact with the global economy.[1] Indeed, its growth in the global market has occurred only within the last generation: PNG assumed a place on the world stage in the 1970s when it began to exert independence from colonial occupation.[2] Due to this late development, PNG has remained unchanged in many ways since pre-contact times. It has retained an extraordinary diversity of natural resources and traditional cultures that continue to exist in a state of near-timelessness.[3] At the same time, however, a brief flurry of economic activity in the mid-1990s introduced global culture to this pristine environment, where it took root and continues to flourish.[4] Thus, culturally, PNG is an exotic hybrid:

> Satellite dishes import Indonesian and Australian television channels; rugby league is the male national sport. Tee-shirts, jeans, sunglasses and digital watches are prominent in the towns, where university graduates distance themselves from rural folk, and are often perceived as *susokmen* (shoe and sock wearers), unlike barefooted or thong-wearing villagers.[5]

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[1] *See generally* JOHN CONNELL, PAPUA NEW GUINEA: THE STRUGGLE FOR DEVELOPMENT 2–8 (1997).

[2] *Id.* at 1.

[3] *Id.*

[4] *Id.* at 1–2.

[5] *Id.* at 2.

As this depiction suggests, in PNG, "[t]here is juxtaposition of corporate monoliths and plywood shacks, of affluence and poverty, of modernity and tradition."[6]

Although some cultural and environmental changes have spread astoundingly quickly in PNG, economic development has not. While the country experienced an unprecedented sixteen percent growth in gross domestic product in 1993 as a result of intensive mineral development, its economy has since steadily declined due to plummeting mineral and agricultural exports; civil conflict; spikes in population growth and internal migration; global market fluctuations; and depressed investment in the public sector.[7] Despite limited resources and a fragmented administration, the PNG government continues to push for a greater presence in the world market without the infrastructure to accommodate such widespread growth.[8] Government planning and policy-making have been weak and have rarely transitioned smoothly into practice.[9] As a result—although by all accounts PNG has incredible potential for economic growth (in 1976, it was proclaimed that PNG would be "'one of the richest countries in the world'" in the near future)—the attitude even in the late 1990s was that "'it may now be too late.'"[10]

Land undeniably lies at the heart of this development debacle. Evaluations of the economic development process in PNG have largely attributed constraints on development to the complexities of land tenure in that country.[11] Between 95 and 96% of the land in PNG is "customary" land belonging to indigenous tribes under traditional or customary title.[12] As a result, indigenous tribes and their subgroups play a primary role in the use, transfer, and defense of the vast majority of land in that country.[13] Customary land tenure in PNG has primarily impeded development because

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[6] *Id.*

[7] CONNELL, *supra* note 1, at 1–2, 6.

[8] *Id.* at 312–13.

[9] *See id.* at 40–41.

[10] *Id.* at 317 (citations omitted).

[11] *See, e.g.*, AUSTL. AGENCY FOR INT'L DEV., THE ECONOMY OF PAPUA NEW GUINEA: MACROECONOMIC POLICIES: IMPLICATIONS FOR GROWTH AND DEVELOPMENT IN THE INFORMAL SECTOR xiv (2000).

[12] Michael Rynkiewich, *Narratives About Land and Development in PNG*, *in* CULTURE AND PROGRESS: THE MELANESIAN PHILOSOPHY OF LAND AND DEVELOPMENT IN PAPUA NEW GUINEA 38, 43 (Nancy Sullivan ed., 2002). Customary land has formally been defined as land that is "owned or possessed by an automatic citizen or community of automatic citizens by virtue of rights of a proprietary or possessory kind which belong to that citizen or community and arise from and are regulated by custom." JOHN T. MUGAMBWA & HARRISON A. AMANKWAH, LAND LAW AND POLICY IN PAPUA NEW GUINEA 118 (2d ed. 2002). An "automatic citizen" under the PNG Constitution is "a person born in the country before Independence Day who has two grandparents born in the country or an adjacent area" or a person born outside of PNG prior to Independence Day who, among other requirements, has renounced any other citizenship and has been registered as a citizen of PNG. PNG CONST. § 65.

[13] *See* Michael Trebilcock, *Communal Property Rights: The Papua New Guinean Experience*, 34 U. TORONTO L.J. 377, 382–83 (1984).

in the eyes of indigenous landowners, land is not the saleable commodity known as "property."[14] Land is extremely important to the indigenous peoples of PNG: for its native inhabitants, land has social, spiritual, ecological, epistemological, and subsistence value.[15] As native inhabitants John Dove, Theodore Miriung, and Mel Togolo have written, "Land is our life. Land is our physical life—food and sustenance. Land is our social life; it is marriage; it is status; it is security; it is politics, in fact it is our only world . . . . We have little or no experience of social survival detached from the land."[16]

PNG is based largely on a subsistence economy. Thus, for indigenous landowners, as this quote intimates, land is the source of their life-blood.[17] Moreover, land ownership serves as insurance and social security, resources the State is not able to provide.[18] Further, land has recently brought PNG's indigenous peoples into the cash economy through production of crops like coffee and cocoa, providing them with a livelihood that serves more than mere subsistence needs.[19] Because of this deep physical and spiritual connection between the native inhabitants and their lands, customary land in PNG has not traditionally been considered "property" in the sense of being easily commoditized and alienated. For this reason, the State, which formally recognizes the value of traditional ways in its Constitution, has both prohibited customary landowners from selling their land except to the government or to other customary landowning groups and required that all dealings in customary land be subject to State oversight.[20]

Given such prohibitions on the sale of customary land, development policies in PNG have consistently focused instead on the small percentage of land that is not held in customary tenure. So-called "alienated land" is generally customary land that has been removed from customary ownership through title conversion and either sold to the State or transferred into private freehold tenure.[21] As private property, alienated land is read-

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[14] Anthony P. Power, Land Mobilisation Programme in Papua New Guinea (July 2001), http://www.pngbuai.com/300socialsciences/management/land-development/indigenouslandgroupsregistration1.html (last visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[15] *Id.*

[16] Lawrence Kalinoe, *Social Change in Customary Land Tenure in Papua New Guinea*, *in* CULTURE AND PROGRESS: THE MELANESIAN PHILOSOPHY OF LAND AND DEVELOPMENT IN PAPUA NEW GUINEA 124 (Nancy Sullivan ed., 2002) (citing John Dove et al., *Mining Bitterness*, *in* PROBLEM OF CHOICE: LAND IN PAPUA NEW GUINEA'S FUTURE (Peter Sack ed., 1974)) (citations omitted).

[17] Kalinoe, *supra* note 16, at 124.

[18] SONJA KLOPF, NATURAL RES. LAW CTR., PRIVATE LANDS CONSERVATION IN PAPUA NEW GUINEA 18–19 (Sept. 2004).

[19] *See* Kalinoe, *supra* note 16, at 125.

[20] KLOPF, *supra* note 18, at 21.

[21] Robert D. Cooter, *Inventing Market Property: The Land Courts of Papua New Guinea*, 25 LAW & SOC'Y REV. 759, 766 (1991). Customary land and alienated land in PNG are governed by significantly different regulatory regimes. Freehold land is governed by the Land Registration Act, which sets out a Torrens system of conveyance and registra-

ily transferable and available for development. According to some observers, however, government development policies centered on this modern sector of alienated land have attempted to "[avoid] the inevitable, that the village must some day become part of modern Papua New Guinea."[22]

The inevitable is fast approaching: currently, according to the PNG Department of Lands and Physical Planning, the country's alienated land is already fully utilized due to urban expansion.[23] Therefore, in recent years the PNG government has been forced to reconcile its conflicting policies of protecting indigenous interests and facilitating economic development.[24] Facing a flagging national economy, the State has been advised to shift this balance in favor of development by implementing a land mobilization strategy designed to capitalize on customary land as a valuable economic asset.[25] By thus opening customary land up to alienation, the PNG government may be able to create a market for land that, given the quantity and diversity of resources that these lands represent, will drive economic development forward.[26]

Despite the government's concerted efforts to mobilize customary land in PNG for economic development, its successes have been piecemeal at best. Currently, the vast majority of land remains under tribal governance.[27] Scholars have attributed the State's limited success to several factors, including the lack of adequate resources, the challenge of addressing significant non-economic values inherent in customary land, and the problem of widespread ignorance of formal legislation.[28] Meanwhile, PNG's

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tion of title. Land Registration Act of 1981 § 98 (2000) (Papua New Guinea). Under the Torrens system, interests in land are created or transferred by registration of the transaction with the Registrar of Titles. Upon registration, title is guaranteed by the government and becomes indefeasible, meaning that once a person is registered as the proprietor of a piece of land, he or she cannot be divested of title by rival claims. *See id.* at § 11. The National Land Registration Act governs all alienated State land, which is also managed under a Torrens title system. National Land Registration Act of 1977, Preamble (1996) (Papua New Guinea). Although non-citizens may not own land in PNG, they may lease alienated land from the State—indeed, "[m]ost alienated land in Papua New Guinea is held under State lease." MUGAMBWA & AMANKWAH, *supra* note 12, at 359.

[22] Tony Power, *Policy Making in East Sepik Province*, *in* CUSTOMARY LAND TENURE: REGISTRATION AND DECENTRALISATION IN PAPUA NEW GUINEA 101 (Peter Larmour ed., 1991).

[23] ROMILLY L. KILA PAT, PAPUA NEW GUINEA DEP'T OF LANDS & PHYSICAL PLANNING, CUSTOMARY LAND TENURE IN A CHANGING CONTEXT 4 (2003), *available at* http://dlc.dlib.indiana.edu/archive/00001211/00/Kila_pat.pdf (last visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[24] Robert Cooter, *Kin Groups and the Common Law Process*, *in* CUSTOMARY LAND TENURE: REGISTRATION AND DECENTRALISATION IN PAPUA NEW GUINEA, at 33, 39.

[25] *See, e.g.*, Trebilcock, *supra* note 13, at 377, 380 (citing WORLD BANK REPORT ON PAPUA NEW GUINEA (1981) (recommending that PNG's land resources offer the most growth possibilities for the foreseeable future)).

[26] *See id.*

[27] Trebilcock, *supra* note 13, at 382.

[28] *See* Peter Larmour, *Land Registration in Papua New Guinea: Fifty Years of Contention*, *in* LAND REGISTRATION IN PAPUA NEW GUINEA: COMPETING PERSPECTIVES 1, 1–5 (2003), *available at* http://dspace.anu.edu.au/bitstream/1885/40180/1/Curtin03-1.pdf (last

protectionist policy towards customary land ownership has created a situation in which indigenous groups wanting to sell or lease land for development *without surrendering principles of customary land tenure* are hindered by long-standing restrictions on direct dealings between customary landowners and third parties—rules that, ironically, were designed to guarantee indigenous tribes control over the resources at their disposal.[29] As a result, land development in PNG has remained relatively static in the absence of a strategy capable of achieving both goals.[30]

This Article proposes that land mobilization policy in PNG should take a new direction: rather than conforming to Western conceptions of property ownership, PNG should embrace and work within the Melanesian philosophy of land tenure. Customary land tenure is currently seen as a significant obstacle to a comprehensive land development program in PNG due to its complex nature.[31] This complexity may be attributed to the fact that customary land in PNG is governed not by national law but by customary law.[32] Over eight hundred tribes exist in PNG, each with its own unique language and each operating within its own system of customary law, which is the set of unwritten rules governing social activity within the tribe.[33] Customary law in PNG is informal and dynamic.[34] Therefore, because customary land is governed according to informal principles, land management practices in PNG tend to vary widely and fluctuate over time. However, this Article argues that customary land tenure principles are not a hindrance to effective land mobilization precisely because of their fluid nature, which may in fact facilitate the highest-valued land uses over the long run. In addition, customary land tenure vests control over valuable resources in groups of indigenous landowners that have managed those resources conscientiously for centuries, thus achieving both protectionist and development-oriented goals.[35] For these reasons, as this Article concludes, widespread legitimation of customary land tenure principles would be the best approach to land management in PNG.

The basis for this conclusion is an extended analysis of the customary land tenure regime. Drawing on theories of communal property own-

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visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[29] KLOPF, *supra* note 18, at 21.

[30] *See* Trebilcock, *supra* note 13, at 380 (citing WORLD BANK REPORT, *supra* note 25, which notes that "[d]isputes over land ownership in a nation with neither the machinery nor the political will to deal with them have been a major constraint on development.").

[31] *Id.*

[32] L. T. JONES & P. A. MCGAVIN, LAND MOBILISATION IN PAPUA NEW GUINEA 26, 28 (2001).

[33] U.S. Department of State, Background Note: Papua New Guinea, http://www.state.gov/r/pa/ei/bgn/2797.htm (last visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[34] *See* Cooter, *Kin Groups and the Common Law Process*, *supra* note 24, at 38.

[35] *See* Power, *supra* note 14 (noting that PNG has, in fact, thousands of years of experience in land management under customary land tenure and thus could easily transition into a tenure system that retains group control).

ership and on Michael Heller's theory of anticommons property,[36] Part I of this Article suggests that customary land in PNG is a kind of "mixed commons/anticommons" property: communal with respect to intra-tribal land management and anticommunal with respect to commercial dealings with non-group members. For example, informed by Elinor Ostrom's seminal work analyzing land management in close-knit societies, this Article posits that customary landowning groups are able to govern subsistence uses of their land in such a way as to avoid wasteful self-interested behavior among group members.[37] However, given the tension between traditional cultures and global influences in PNG today, in a commercial context the complex nature of customary land tenure tends to prevent resources from flowing smoothly or routinely to higher-valued uses. In other words, this Article will show that, in the communal context, customary landowning groups engage in efficient land management, but in the anticommunal context, the highest-valued land uses may be blocked.

Part II of this Article outlines the land mobilization strategy adopted by the PNG government to overcome the anticommons problems associated with group ownership of customary land. This Article will show that this strategy, which relies on regulatory and market-based means to transform customary land into quasi-private property, has largely failed to capitalize on PNG's land resources because it is plagued by bureaucratic inefficiency and because it does not reflect the traditional conception of land ownership held by many customary groups.

In Part III, this Article posits the essential elements of an optimal strategy for overcoming anticommons problems and thus facilitating the highest-valued uses of customary land. As this Article will show, such a strategy should be grounded in customary principles of land tenure and should minimize State interference. In this way, land management in PNG can serve the needs of the country in a way that respects its native inhabitants and its natural resources.

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[36] Heller defines anticommons property as "the mirror image of commons property." Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 622 (1998). The anticommons regime still has ownership vested in multiple parties, but by having too many owners, the land is "prone to underuse—a tragedy of the anticommons." *Id.*

[37] *See generally* ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION (1990) (arguing that where stable institutions of self-government exist to manage against overconsumption, resources can be held in common even without privatization or enforcement imposed by an outside force). Among arms-length bargainers, parties will often engage in opportunistic behavior as a wealth-maximizing strategy. GARY D. LIBECAP, CONTRACTING FOR PROPERTY RIGHTS 19 (1989). Such behaviors include delay (blocking a use from going forward by refusing to assent to that use) and shirking from property-enhancing activity. *See id*. at 4, 19–20.

I. Customary Land in PNG: A Land Regime Analysis

A. A Bird's-Eye View of the Customary Land Regime

1. Land Rights in the Customary Regime

Although from an outsider's perspective much of the customarily owned land in PNG may appear "'waste, vacant, and ownerless'"—as it was described by colonial governments seeking to appropriate surplus land—land in PNG is not a universally accessible resource.[38] Rather, all customary land in PNG is held in group ownership. Access to and use of land in group ownership depends on membership in a definable group.[39] Group-owned land is a recognized category of communally owned property among Western property theorists, as will be discussed below; however, from a Western perspective, the property regime unique to customary land can be confusing. The distinction between a Western conception of ownership and a traditional conception of ownership may be drawn along two axes: space and time.

In the words of one scholar, Thomas Harding, land ownership under a Western conception

> [C]onfers a number of definite rights: principally the right to use the land; the right to exclude others from its use and enjoyment; the right to transfer it by sale, lease or gift; and, perhaps most notably, the right to receive income from the property independent of use. This particular combination of rights—use, exclusion, alienation and income—does not occur in any Papua New Guinea society.[40]

Harding does not suggest that the rights of use, exclusion, alienation, and income are not recognized under traditional land tenure. Indeed, among customary societies the rights and responsibilities of landowning groups are ostensibly the same as those of a unitary private landowner in that a group as a whole may lay claim to all the traditional rights associated with property ownership described by Harding above.[41] Presumably, a landowning group would have a right to use and occupy its land and to exclude members of a neighboring landowning group from that land or,

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[38] Cooter, *Inventing Market Property*, *supra* note 21, at 766 (citation omitted).

[39] Jones & McGavin, *supra* note 32, at 26 (Figure 3.1).

[40] T. Harding, *Land Tenure*, *in* Anthropology in Papua New Guinea 107 (I. Hogbin ed., 1973).

[41] *See* Robert Ellickson, *Property in Land*, 102 Yale L.J. 1315, 1322 (1992) (defining group-owned property as property over which use rights are restricted to members of a group "small enough to permit intermittent face-to-face interaction"). For group-owned property, the group exercises the role of a unitary private landowner, with the right to exclude non-group members. *Id*.

conversely, offer them access privileges.[42] A landowning group would also presumably have the power to sell or lease its land and receive revenues from such sale or lease.[43]

In the case of customary land in PNG, land uses are governed differently by various kinds of landowning groups**,** which may be formed on the basis of lineage, geography, or participation in common activities.[44] For example, the tribe, which is the largest customary social organization and is founded wholly on kinship lines, exercises no control over land rights due to its large and diffuse nature.[45] Instead, rights to large swaths of land are generally vested in a subset of the tribe, such as the clan.[46] In this management role, a clan will govern common hunting areas and croplands (particularly those that require rotation among smaller plots), and the clan bears responsibility for defending its lands from neighboring landowning groups.[47] Smaller groups (sub-clans), having up to a few hundred members, are responsible for determining use rights among clan members, as well as sales or leases of the land within their control.[48] Clan land is directly managed at the level of the lineage or village for intensive uses like gardening.[49]

It is at the level of the family and the individual within customary landowning societies that the distinction between customary and Western conceptions of property ownership is at its starkest. Whereas in Western society individuals may lay claim to all of the proverbial "sticks" of the Western "bundle" of property rights enumerated above, in traditional societies these sticks are generally "unbundled" and disseminated among individual group members. Membership in the landowning group entitles families and individuals to a wide array of resource rights, such as a right to harvest timber for subsistence use from a particular stand of trees or a right to fish from a certain stream.[50] Some rights are vested exclusively in

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[42] Cooter, *Inventing Market Property*, *supra* note 21, at 767–68.

[43] *See* JONES & MCGAVIN, *supra* note 32, at 30–31.

[44] Trebilcock, *supra* note 13, at 383 (citing Ron Crocombe and Robin Hide, *New Guinea: Unity in Diversity*, *in* LAND TENURE IN THE PACIFIC 304 (Ron Crocombe ed., 1971)). Social groups in PNG may be classified in the following way: the immediate/nuclear family consists of the parents and children; the clan/sub-clan includes all members originating from the same male ancestor (in patrilineal societies) or the same female ancestor (in matrilineal societies). JONES & MCGAVIN, *supra* note 32, at 29. This is the level at which land ownership rights are conferred. *Id.* The lineage is "closely related to the clan unit, however, where more than one clan or sub-clan is descended from an original founder then the lineage will consist of all of these related groups." *Id.* The tribe encompasses all of these subunits and is defined by a single language**.** *Id.*

[45] Trebilcock, *supra* note 13, at 383.

[46] *Id.*

[47] *Id.*

[48] *Id.*; JONES & MCGAVIN, *supra* note 32, at 30–31 (under customary law, land was occasionally transferred to a different individual or group in a manner similar to a sale or lease).

[49] Trebilcock, *supra* note 13, at 383.

[50] *See* Hartmut Holzknecht, *Customary Property Rights and Economic Development in Papua New Guinea*, *in* PROPERTY RIGHTS AND ECONOMIC DEVELOPMENT: LAND AND NATU-

individuals—for example, ownership of an economic tree such as coconut or betel-nut palm—whereas others are vested in families or households—for example, rights of intensive use (such as gardening or occupancy) of a particular plot of land.[51] This claim may be strengthened by using the plot over a long period of time, inheriting it, spilling blood on it, burying dead in it, planting permanent crops, or building a permanent house on it.[52] Usufructuary rights "may be granted in virtual perpetuity as long as users hold to the original terms of agreement."[53]

It is often difficult for adherents of Western property theory to understand these "unbundled" rights as true rights of ownership. Under Western conceptions of property, the sticks in the bundle of property rights are concentrated in a particular geographic space.[54] In other words, an "owner" of a specified parcel of space may be understood to hold all rights of use, exclusion, alienation, and income with respect to that designated space.[55] As scholar Peter Sack writes, "Western law sees a piece of land . . . as one thing-like property unit, although it can divide the rights to this one object into a hierarchy of separate estates."[56] Adherents to traditional philosophies of property ownership, on the other hand, understand the world to be composed of "an infinite number of separately ownable objects," with the result that "different individuals or groups can own different objects on the same piece of land."[57] Therefore, rather than dividing property rights geographically, customary landowning groups in PNG tend to allocate property rights on the basis of function. Stuart Banner succinctly explains this dichotomy in his description of the traditional land ownership structure among the Maori people of New Zealand:

> [Under the Maori system] a person would not own a zone of space; he would instead own the right to use a particular resource in a particular way. One might possess the right to trap birds in a certain tree, or the right to fish in a certain spot in the water, or the right to cultivate a certain plot of ground. Possession of such

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RAL RESOURCES IN SOUTHEAST ASIA AND OCEANIA 139, 140 (Toon van Meiji & Franz von Benda-Beckmann eds., 1999).

[51] *Id.*; Trebilcock, *supra* note 13, at 383.

[52] Cooter, *Inventing Market Property*, *supra* note 21, at 768. *See also* Trebilcock, *supra* note 13, at 383–84.

[53] CUSTOMARY LAW IN PAPUA NEW GUINEA: A MELANESIAN VIEW viii (Richard Scaglion ed., 1983).

[54] PETER G. SACK, LAND BETWEEN TWO LAWS: EARLY EUROPEAN LAND ACQUISITIONS IN NEW GUINEA 33, 36–38 (1973); Stuart Banner, *Two Properties, One Land: Law and Space in Nineteenth-Century New Zealand*, 24 LAW & SOC. INQUIRY 807, 811 (1999).

[55] Cooter, *Inventing Market Property*, *supra* note 21, at 768.

[56] *See* SACK, *supra* note 54, at 42 (1973).

[57] *Id.*

> a right did not imply the possession of other rights in the same geographic space.[58]

As Banner notes, whereas both Western and customary landowners possess multiple rights over resources, only under a Western system are these rights "bundled . . . into a single geographic space."[59]

As functional use rights to customary land are disseminated among members of a particular landowning group, in many cases each of these "sticks" of the traditionally recognized bundle of property rights may belong to a different family or individual with respect to the same plot of land.[60] A family within a clan may, for example, be granted a right to collect certain foods from a specific tract of forest land while another family holds the right to harvest a portion of that forest's timber for sale.[61] Certain rights may be shared by one or more clan members with respect to the same parcel.[62] In some circumstances, no one possesses a particular right with respect to that parcel; for example, customary law often prohibits individual group members from selling their land interest.[63] As a result, the question of ownership quickly becomes clouded. Where ownership rights are dispersed among different people, "asking who owns the land is like asking which player is the football team."[64]

Local residents are intimately familiar with clan ownership interests, which have been developed and refined (and often contested) over the course of generations. Robert Cooter, a scholar of customary land law in PNG, describes customary land in this way: "Every plot of land—even jungle, bush, and swamp—apparently has a name, a customary owner or owners and an oral history, usually including its resident spirits."[65] This characterization of customary land suggests a second way in which traditional and Western understandings of ownership differ. Peter Sack notes that the overlapping layers of property rights within the same sphere can best be understood if property ownership is seen as a "continuing historical process" rather than a "static legal condition."[66] In other words, ownership rights in traditional society are fluid over time whereas Western conceptions of ownership are founded upon the predictability of stable property interests.

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[58] Banner, *supra* note 54, at 811 (citation omitted).
[59] *Id.*
[60] *See* Trebilcock, *supra* note 13, at 383.
[61] *See* Alyssa A. Vegter, Comment, *Forsaking the Forests for the Trees: Forestry Law in Papua New Guinea Inhibits Indigenous Customary Ownership*, 14 PAC. RIM L. & POL'Y J. 545, 552 (2005).
[62] *See* Trebilcock, *supra* note 13, at 383.
[63] *See* Cooter, *Inventing Market Property*, *supra* note 21, at 768.
[64] *Id*. at 769.
[65] *Id.* at 766.
[66] SACK, *supra* note 54, at 43.

To illustrate his point, Sack points to fluctuations in ownership claims belonging to women who marry outside of the immediate landowning group. As he notes, although some customary landowning societies in PNG require that a woman give up all rights to her group's land upon marriage, in reality it is "more appropriate to say that [these] rights are dormant during her marriage but that they can be reactivated when the marriage is terminated" by death or divorce.[67] Moreover, during the course of her married life, a woman's ownership rights in her native group's lands will change depending on a variety of factors including her place of residence (or physical proximity to those lands), the productive capacity of those lands, the rules of her husband's landowning group, and the cooperation of her husband.[68] Similarly, with respect to any resource over which a woman may claim direct ownership (such as a fruit tree), customary law recognizes that upon marriage she will not lose rights to that resource, although her relatives may acquire a subsidiary usufruct right to that resource without her permission if she is no longer in close proximity to the village.[69] As this example demonstrates, within traditional societies the quality and strength of an individual's ownership rights may vary over time.

Given the often variable and fragmented nature of ownership rights within traditional societies, it may be argued that a practical determination of who "owns" customary property in PNG, if one can be made at all, will depend largely on context. For example, if defense obligations over the land are in question, clan members will assert that the land to be defended "belongs" to the clan.[70] On the other hand, if asked who "owns" a parcel of land where a family has buried its dead, clan members will respect that family's claim and acknowledge that the land belongs to the family.[71] As the preceding discussion has demonstrated, while full "ownership" of a geographic parcel of land in the Western sense does not exist among customary landowners, identifiable property rights and interests in land are clearly recognized.

2. Decision-Making in the Customary Land Regime

In the purest form of Western private property ownership, an individual owner ostensibly claims "sole and despotic dominion" over his property to manage it as he will, and thus decisions about land use are generally made by that individual alone.[72] This kind of dominion, however is

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[67] *Id.*
[68] *Id.*
[69] *Id.* at 43.
[70] Cooter, *Inventing Market Property*, *supra* note 21, at 767.
[71] *Id.* at 768.
[72] *See, e.g.*, WILLIAM BLACKSTONE, 2 COMMENTARIES *2. It should be noted that a number of decisions with respect to uses of private property are impacted by parties other than the property owner—for example, easement holders, state and local governments (through taxes and zoning regulations), and the courts. However, as compared to communal land

only possible among individuals whose mutual obligations are minimal.[73] A clan is characterized by family relationships and ancestral lines; therefore, community interests and family ties must serve as the backdrop to all dealings in land. As Robert Cooter writes,

> If . . . I am part of a clan and my nephew wants to buy some land, the answer is not simple. What do I owe his father, who is my brother? How severe is his need relative to mine? Will he help me defend my land? Can my children live amiably alongside his children? These questions arise because ownership of customary land is an aspect of long-run relations that involve many reciprocal obligations.[74]

Therefore, particularly given the importance of land and its subsistence and spiritual value in the lives of the indigenous tribes of PNG, a decision to reallocate land use rights or to ratify a new land use is never made in a vacuum. We have seen, however, that in contrast to a system of private property ownership, where ownership is clear and the transaction costs of decision-making are at a minimum, group-owned land in PNG is governed by a complex system of fragmented and overlapping property rights. In the absence of clear ownership boundaries, how are decisions made with respect to uses of customary land in PNG?

Customary land management is relational in nature. In other words, with respect to customary land in PNG, "property" should be defined not as "the right of persons over things, but as obligations owned between persons with respect to things."[75] Studies show that customary land management practices in PNG are grounded in the defining feature of the kinship group: reciprocal obligation.[76] For example, within a clan, a family may be granted rights to harvest timber for subsistence use on condition that it will contribute to the welfare of the clan as a whole by participating in defending the forest.[77] This system of cooperative exchanges is applied to inter- as well as to intra-tribal dealings. Land use rights may be conferred among clans in exchange for promises fulfilled: for example, a clan may be granted ownership of a tract of land if it agrees not to divert water from a downstream clan.[78] This network of ownership rights may be said

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ownership, private property ownership concentrates decision-making power in a single individual or family. Generally, this concentration of decision-making powers is one of the distinct advantages of private property ownership because it significantly lowers transaction and monitoring costs. Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (PAP. & PROC.) 347, 356–57 (1967).

[73] Cooter, *Inventing Market Property*, *supra* note 21, at 769.

[74] *Id.*

[75] Vegter, *supra* note 61, at 553.

[76] *Id*.

[77] *Id.*

[78] *Id*.

to enhance cooperation and mutual investment in conscientious resource exploitation.

Reciprocal obligations color every aspect of the decision-making process in relation to group land, but this concern for group interests exerts itself with particular force in the context of decisions about disposal of an interest in land. Ownership interests in land are often nominally vested in the head of a lineage by virtue of birth and social status, and it is this chief who is responsible for allocating use rights over group land according to customary cooperative principles.[79] Major decisions involving land matters, however, require the consensus of all lineage members.[80] "Major" decisions include sales or leases of land in clan ownership. This requirement of unanimous consent with respect to disposal of land interests may be justified on two levels. First, given the fragmented nature of ownership rights within a particular geographic space, only the clan as a whole is capable of alienating a portion of clan land without disturbing individual use rights against the will of the rights-holder. Second, disposal of land to outsiders may have significant political repercussions for a landowning group. As Peter Sack observes, "It makes an important difference whether a female member of the group married to an outsider comes to collect the fruits of [her] trees or whether it is her daughter who belongs to her father's group and is married to a member of a third group."[81] Thus, although a group may have no interest in preventing its own members from controlling use rights over a specific tree or garden, the group's interest in maintaining its autonomy may be a strong rationale for preventing outsiders from acquiring these rights.[82]

In accordance with principles of participatory governance, to which most customary groups in PNG adhere, each landowning group member's vote counts equally, effectively giving each voting member a veto over a proposed land use requiring unanimous agreement. This customary practice has been ratified within the formal legal system as well: under the PNG Constitution, which recognizes customary law as part of the underlying law of PNG, all decisions that would affect a significant change in land use require consent and approval of the clan.[83]

The customary land tenure regime in PNG cannot easily be classified according to prevailing theories of property ownership. For example, certain features of the customary land tenure regime—namely, fragmented and fluid use rights and the rules of unanimity and equal participatory governance—may be associated with an anticommons property structure as defined by Michael Heller.[84] On the other hand, other features—namely, use

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[79] JONES & MCGAVIN, *supra* note 32, at 29–30.
[80] *Id.*
[81] SACK, *supra* note 54, at 44–45.
[82] *Id.*
[83] KLOPF, *supra* note 18, at 21.
[84] *See generally* Heller, *supra* note 36.

determinations based on cooperation and reciprocal obligation—are integral to the communal property structure, particularly as it operates within close-knit landowning groups. Given these conflicting features, this Article will classify customary land in PNG as "mixed commons/anticommons" property.

B. Customary Land as Commons

In order to understand the structure of customary land in PNG as containing elements of both "commons" and "anticommons" property, it is important first to understand what these two land regimes entail. To this end, the following section will outline prevailing theories of communal property ownership.

1. An Overview of Communal Ownership Regimes

In his seminal article positing a theory of property rights, Harold Demsetz outlines three property regimes: private ownership, communal ownership, and state ownership.[85] Generally,

> [c]ommunal ownership means that the community denies to the state or to individual citizens the right to interfere with any person's exercise of communally-owned rights. Private ownership implies that the community recognizes the right of the owner to exclude others from exercising the owner's private rights. State ownership implies that the state may exclude anyone from the use of a right as long as the state follows accepted political procedures for determining who may not use state-owned property.[86]

For the purposes of this Article, a discussion of communal property ownership is most useful.[87] According to Demsetz, communal ownership regimes are characterized by use rights held in common by everyone, such as traditional rights to till and hunt on land or a right of access to public walkways.[88] In a communal regime, every person has an unrestricted right to use a particular piece of land, with the logical consequence that none of these users has a right to exclude any other potential user from that land. Effectively, as C. B. Macpherson notes, in a communal owner-

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[85] Demsetz, *supra* note 72, at 354.

[86] *Id.*

[87] It should be noted that modern property law scholars question whether communal ownership and state ownership should be separate classifications. Robert Ellickson, for example, argues that although the state has unique sovereign powers to tax, regulate, and exercise eminent domain, in its capacity as a land manager it is largely indistinguishable from nongovernmental landowning groups. Ellickson, *supra* note 41, at 1322 n.23.

[88] Demsetz, *supra* note 72, at 354.

ship regime, multiple owners hold rights *not* to be excluded.[89] Under both of these definitions, rights of use are dominant over rights of exclusion in a communal property regime.

Whereas Demsetz speaks of communal ownership regimes as an undifferentiated class, property scholar Robert Ellickson expands upon this definition in a way that illuminates our understanding of customary land ownership in PNG. Reclassifying communal ownership regimes into the category of "public property"—characterized as land accessible by "more than a small number" of persons—Ellickson breaks this category into subcategories of group property, open-access land, and horde property.[90] Open-access land is closest to Demsetz's understanding of communal ownership in that use privileges over open-access land are universal.[91] In an open-access regime, no exclusionary rights effectively exist. In a group ownership regime, on the other hand, use privileges over the land are restricted to the members of a specified group that is, in Ellickson's words "small enough to permit intermittent face-to-face interaction."[92] Access privileges to horde property are moderately restricted but extend beyond the confines of small group membership.[93] All these regimes—open-access, group, and horde—may be described as commons property.

Commons property has long been recognized as creating negative externalities. Aristotle observed that "what is common to the greatest number has the least care bestowed upon it. Everyone thinks chiefly of his own, hardly at all of the common interest."[94] On the assumption that individuals will self-interestedly seek to maximize the value of their rights in a system of communal property ownership, arguments have been made that many of the costs associated with an individual's use of communally owned property are actually borne by other users of that property.[95] Particularly, natural resources in communal ownership are subject to over-exploitation as each individual user seeks to maximize the value of his communal rights by hunting or working the land to the fullest extent possible before a resource is depleted.[96] Thus, land in communal ownership is often overburdened when users are inclined to exploit the land's assets, shirk from value-enhancing efforts, or pollute the property without regard to the costs or benefits of such activity that may be conferred on their neighbors.[97] Such self-interested behaviors can create what economic scholars such as Robert Ellickson call "deadweight losses" when the costs inflicted on others ex-

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[89] *See* C.B. Macpherson, *Liberal-Democracy and Property*, *in* PROPERTY: MAINSTREAM AND CRITICAL POSITIONS 199, 201 (C. B. Macpherson ed., 1978).

[90] Ellickson, *supra* note 41, at 1322.

[91] *Id.*

[92] *Id.*

[93] *Id.*

[94] Aristotle, *Politics*, Book II, Ch. 3 (*quoted in* OSTROM, *supra* note 37, at 2).

[95] Demsetz, *supra* note 72, at 354.

[96] *Id.*; Ellickson, *supra* note 41, at 1325–26.

[97] Ellickson, *supra* note 41, at 1326.

ceed the benefit to an individual from engaging in opportunistic behavior.[98]

The classic discussion of this dynamic, now popularly understood as the "tragedy of the commons," was put forward by Garrett Hardin in 1968. Hardin's canonical example of this tragedy is the open field or grazing pasture. As Hardin explains, because the harmful effects of overgrazing are shared by all herdsmen grazing their animals in the pasture, the utility to each herdsman of grazing an additional animal will always outweigh the negative utility to that herdsman of overgrazing.[99] As a result, every herdsman will have an incentive to continually increase the number of animals he pastures on a particular plot, thus becoming "locked into a system that compels him to increase his herd without limit—in a world that is limited."[100] Because every herdsman has the same impulse, the result is overexploitation and "ruin."[101]

For Hardin, one solution to the tragedy of the commons is conversion of public property to private property.[102] This solution reflects the relative advantages of private property over communally owned property as enumerated by Harold Demsetz. According to Demsetz, converting communally owned property to private property effectively internalizes in a single owner the costs associated with a commons structure, thus providing an incentive for this landowner both to curb behaviors that negatively impact the land and, conversely, to engage in land-enhancing activities.[103] Moreover, for those costs that cannot be internalized by a private property owner (for example, costs borne by neighboring private property owners), Demsetz would argue that the private property structure greatly reduces the transaction costs involved in negotiating to overcome externalities.[104] Whereas the transaction costs of reaching an agreement among multiple parties can be quite high—particularly for parties with conflicting interests—reducing the number of parties involved would presumably reduce these transaction costs. Therefore, the strategy of privatizing communally owned land would tend to decrease the overall deadweight losses and transaction costs associated with the communal land regime, creating

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[98] *Id.*

[99] Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968). The first systematic study of this "tragic" phenomenon was developed by Jens Warming. Jens Warming, *Om "Grundrente" af Fiskegrunde*, 49 NATIONALØKONOMISK TIDSSKRIFT 495 (1911), *translated in* Peder Andersen, *"On Rent of Fishing Grounds": A Translation of Jens Warming's 1911 Article, with an Introduction*, 15 HIST. POL. ECON. 391 (1983). Warming's analysis was independently discovered by H. Scott Gordon in H. S. Gordon, *The Economic Theory of a Common Property Resource: The Fishery*, 62 J. POL. ECON. 124 (1954); and extended by Steven N. S. Cheung in Steven N. S. Cheung, *The Contractual Nature of the Firm*, 26 J.L. & ECON. 1 (1983).

[100] Hardin, *supra* note 99, at 1244.

[101] *Id.*

[102] *Id.* at 1245.

[103] *See* Demsetz, *supra* note 72, at 356–57.

[104] *Id.*

what Robert Ellickson would characterize as an "efficient" change in land rules.[105]

Alternatively, to resolve the tragedy of the commons Hardin suggests keeping commons lands in public ownership but allocating entry rights to such land on the basis of wealth, merit, lottery, or first-in-time.[106] Establishing a hierarchy of entry rights to public land would avoid a commons tragedy not by reducing the absolute number of users that may exploit the land and its resources (as in the privatization process), but by vesting a clear exclusion right in a small group of owners over other potential users of the land. Of course, each member of the small group with entry rights to the land would still have the same incentives to create negative externalities borne by the rest of the group. However, while such a structure does not necessarily reduce the overall deadweight losses incurred with respect to public property, because the number of parties involved is limited, presumably the transaction costs associated with negotiations to resolve such externalities would also be lowered. The sum of deadweight losses and transaction costs under a system of allocated use rights to public property would therefore be less than the sum of those costs associated with property in unrestrained communal ownership. This change in property regime would be efficient under Robert Ellickson's definition.[107]

In addition to Hardin's own suggested solutions to the commons tragedy, property scholars have pointed to another potential context in which commons property may avoid tragic over-exploitation. This scholarship has arisen largely out of a criticism that Hardin's choice of open fields as a canonical example of the tragedy of the commons was inapt. As these scholars note, traditional common grazing areas (particularly those of medieval England, upon which Hardin's example was based) were group-owned rather than purely open-access property.[108] Henry Smith notes that in the mid- to late Middle Ages in England, access to a grazing area was strictly limited to members of a closed group and land uses were governed by rules internal to this group.[109] By failing to acknowledge the distinction between open-access and group-owned common property, these scholars would argue, Garrett Hardin failed to perceive the distinct efficiency advantages of group-owned property over open-access property.[110]

For example, in contrast to Hardin's theory that all communally owned property will suffer from over-exploitation in the absence of a clear

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[105] Ellickson, *supra* note 41, at 1326 ("Different land regimes . . . involve different combinations of transaction costs and deadweight losses. A change in land rules is *efficient* when it reduces the sum of these two sorts of costs.") (emphasis in original).

[106] Hardin, *supra* note 99, at 1245.

[107] *See* Ellickson, *supra* note 41, at 1326 (efficiency is achieved when there is a reduction in the sum of deadweight losses and efficiency costs).

[108] *See, e.g.*, Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. 453, 458 (2002).

[109] *Id.*

[110] *See* Smith, *supra* note 108, at 458.

hierarchical structure among users, Elinor Ostrom proposes in her work on the commons that group-owned property is unlikely to suffer from the tragedies associated with open-access property, particularly among close-knit landowning groups run by participatory governance principles. On the basis of three empirical examples—group land management among the alpine villages of Switzerland, rural villages of the Tokugawa period in Japan, and the canals of Spain—Ostrom argues that communal land ownership functions effectively among groups whose members exercise significant control over institutional arrangements and property rights within the group.[111] For example, in describing the land management practices of Törbel, a Swiss alpine village of about six hundred residents that owns its land communally, Ostrom notes that the rules of governance within the group are voted on by all villagers, thus keeping monitoring and transaction costs low and reducing the potential for intra-group conflict.[112] These rules include limitations on access to common property, allocations of meadow grazing rights and fines for villagers who attempt to obtain excess grazing rights, appropriate procedures for timber harvesting, and other guidelines for land management carried out by the village "alp association."[113] Similarly, in the Japanese villages of Hirano, Nagaike, and Yamanoka, communal lands are governed by rules developed by a village assembly composed of the heads of decision-making households.[114] These rules—which set narrowly tailored harvesting limits for common resources, land-enhancement requirements such as cultivation and prescribed burns, and monitoring and sanctioning procedures—are designed to quell self-interested behavior among group members.[115] Although infractions remain a problem, the long-term success of these locally developed rule systems provides evidence that common property need not be policed by externally imposed regulations.[116]

Although each of these various landowning groups is responsible for managing uncertain and complex environments, each has maintained successful land management strategies. Successful governance among close-knit landowning groups may be traced to a number of factors. Ostrom herself points to seven design principles common to long-enduring communal societies: clearly defined resource boundaries, congruence between governance rules and local conditions, a participatory governance structure, monitoring, graduated sanctions, adequate conflict resolution mecha-

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[111] OSTROM, *supra* note 37, at 61.
[112] *Id.* at 61–65.
[113] *Id.* at 62–65.
[114] *Id.* at 66.
[115] *Id.* at 67–69.
[116] *Id.* at 68–69 (quoting Margaret A. McKean, *Management of Traditional Common Lands (Iriaichi) in Japan* (Apr. 21–26, 1985), *in* PROCEEDINGS OF THE CONFERENCE ON COMMON PROPERTY RESOURCE MANAGEMENT 533–89 (National Research Council ed., 1985), *reprinted in* MAKING THE COMMONS WORK: THEORY, PRACTICE & POLICY 63–98 (Daniel W. Bromley ed., 1992)).

nisms, and legitimation by external governmental authorities.[117] At bottom, however, Ostrom argues that successful governance lies in the stability of expectations: throughout numerous generations, members of close-knit groups live and work daily side by side, and thus they are acutely aware of the predictable impacts of individual behavior on their own reputation (based on social norms shared by the group), on other group members (whose lives are inextricably connected with their own), and on future generations (who will be the beneficiaries of their legacy).[118]

The flexibility and dynamism associated with daily interaction among close-knit group members is also key to group longevity: indeed, as Robert Ellickson notes, through constant "communication, monitoring, and sanctioning[,]" close-knit groups can develop a spontaneous usufructuary scheme without making a conscious collective decision to adopt a system of property rights at all.[119] Although in the studies described Elinor Ostrom is specifically concerned with more formal systems of rights allocation among close-knit groups, she recognizes that flexibility within these systems is a necessary element of maintaining institutional equilibrium. As she notes in describing the subjects of her inquiry, "[i]n these [three] cases, the appropriators designed basic operational rules, created organizations to undertake the operational management of their [common-pool resources], and modified their rules over time in light of past experience according to their own collective-choice and constitutional-choice rules."[120] In the same way, based on a proposition extrapolated from Harold Demsetz's theory that all land regimes evolve in a cost-minimizing direction, Ellickson argues that land rules governing group-owned property continually evolve to minimize costs to the group members.[121] It is the evolution of workable norms governing interaction between members of a close-knit landowning group that will determine its success, as defined and evidenced by its sustainability over the long-term.[122]

Ostrom notes that, in her empirical examples, communal property ownership is not merely a remnant of an outdated, inefficient land regime that has survived due only to the inertia of tradition. Rather, she gives evidence that each of these management groups is and has long been familiar with the relative costs and benefits of both individual and communal land tenure.[123] In each case, communal land tenure has best suited the needs of the group—another factor contributing to the longevity of the landowning institution. For close-knit groups, particularly those whose traditional values are geared toward maintaining the land at a productive capacity

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[117] OSTROM, *supra* note 37, at 90.
[118] *See id.* at 88.
[119] Ellickson, *supra* note 41, at 1366.
[120] OSTROM, *supra* note 37, at 58.
[121] Ellickson, *supra* note 41, at 1320.
[122] OSTROM, *supra* note 37, at 88–89.
[123] *Id.* at 61, 63.

for the benefit of future generations, communal land tenure serves group interests by "[promoting] both general access to and optimum production from certain types of resources while enjoining on the entire community the conservation measures necessary to protect these resources from destruction."[124] In other words, as group needs change over time, members of a landowning group can work within a cooperative structure to meet subsistence needs while still planning for the needs of future generations. Moreover, Ostrom points to other studies showing that communal land tenure meets the unique needs of landowning groups when crop yields, production values, and development capabilities are low, when large swaths of land are needed for optimal use, or when large numbers of people are needed to capitalize on the resources available.[125] Group ownership of land is also an effective risk-spreading mechanism where risks are high and no better insurance is available to group members.[126] For all these reasons, communal land ownership may impose fewer absolute costs on landowning group members than a regime of privatization would create.

It should be noted for our purposes that in modern times most communal property structures are supplemented by some modified form of private property rights. Landowning groups, noting the benefits of private property ownership in terms of reducing transaction costs and encouraging positive land stewardship, have granted members some measure of private rights in communal land.[127] Customary landowning groups often grant individuals and families private rights to plots of land for their subsistence needs, although Robert Ellickson argues that based on utilitarian considerations these private rights can vary considerably according to the set of entitlements granted, the physical boundary lines drawn, and the time period of ownership (i.e., perpetual or temporary).[128] Ellickson suggests that this incorporation of private rights into a fundamentally communal property structure is a conscious effort on the part of traditional landowning groups to reduce transaction and monitoring costs with respect to "small events—such as planting and harvesting crops, caring for children and animals, and maintaining dwellings and other structures."[129] Allocating quasi-private rights in specific parcels of land to individuals or families within a landowning group tends to increase overall efficiency in land management.

As these examples from Elinor Ostrom and Robert Ellickson demonstrate, traditional societies have recognized and successfully dealt with the

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[124] *Id.* at 63 (citation omitted).

[125] OSTROM, *supra* note 37, at 63.

[126] Ellickson, *supra* note 41, at 1341.

[127] *Id.* at 1369–70 (arguing that this development of private property within communal landowning structures tracks the development of literacy within customary groups).

[128] *See, e.g.*, OSTROM, *supra* note 37, at 61, 66; Ellickson, *supra* note 41, at 1371. *See also* Ellickson at 1375–76 (arguing that these private rights are restricted by blanket prohibitions on alienability and approval requirements for proposed transfers or leases).

[129] Ellickson, *supra* note 41, at 1329.

problems of communal land ownership for centuries. Unsurprisingly, customary landowning groups in PNG, as traditional societies, adhere to principles of land tenure that are grounded in communal ownership, and they have taken similar approaches to resolving the problems associated with communal property ownership.

2. The Communal Nature of Customary Land

Customary land is fundamentally communal in that it is group-owned. However, the communal aspect of PNG is also made evident by analyzing the relationship of use rights to exclusionary rights in the customary land tenure regime. In the purest form of communal ownership, as discussed above, multiple owners have privileges to use a certain resource but none can claim rights of exclusion with respect to that resource. Thus, we may infer that if privileges of inclusion dominate a given property regime, it should be analyzed as commons property.[130] Undeniably, certain aspects of the customary land structure in PNG are characterized by rights of use rather than rights of exclusion. For example, as this section will show, customary land in PNG is essentially communal in nature with respect to intra-tribal land management, or dealings in land that remain wholly internal to a landowning kinship group.

With respect to land use within a customary land-owning group in PNG, group members have limited exclusionary rights. As property scholars have noted, according to Western notions of ownership, the interest that underpins a right to property is not merely an interest in using a thing at a particular moment in time but is instead a broader interest in purposefully dealing with the object that we own.[131] Thus, a landowner's bundle of ownership rights includes broad rights of use (beyond mere physical use) that naturally imply broad rights of exclusion—for example, a landowner's right to transfer his property imposes a duty on others not to interfere with the transfer of that property.[132] However, because customary land ownership rights are allocated according to function rather than concentrated in a geographic plot, group members hold only narrow use rights and, therefore, narrow rights of exclusion.[133] For example, in the event of a transfer of land interests between group members, other group members with usufruct rights over that land will generally retain those rights, regardless of whether this circumstance is anticipated in the transfer arrangement.[134] This example supports a conclusion that use rights take precedence over rights of exclusion with respect to intra-tribal land dealings

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[130] Heller, *supra* note 36, at 673.
[131] *See* J.E. Penner, The Idea of Property in Law 71 (1997).
[132] *Id.*
[133] *See* Cooter, *Inventing Market Property*, *supra* note 21, at 768.
[134] *Id.* at 787.

and, therefore, that in this context customary land should be analyzed as communal property.

Having established that intra-tribal land dealings are fundamentally communal in nature, this Article argues that everyday decision-making with respect to land use within customary landowning groups in PNG functions efficiently, based on Elinor Ostrom's theory that close-knit kinship groups can manage commons property in such a way as to avoid overexploitation. Primarily, applying Ostrom's criteria, the long-enduring success of PNG's customary groups in managing subsistence land uses is strong evidence of the efficiency of its communal land regime.[135]

In addition, among customary groups in PNG, strategic behaviors are curbed by consensus: resource use rights are often sharply delimited, usually coming with exploitation limits set by mutual clan agreement.[136] Daily interaction among group members also helps keep information costs and transaction costs associated with reallocating property rights low.

Spontaneous adjustments to use rights can be made through compromise and cooperation because the close-knit kinship group has continuous access to information about how well its system of use rights is functioning on a daily basis. In this way, once rights to group-owned resources are allocated, they may be strengthened, weakened, or reallocated as necessary.

Under PNG customary land tenure, elements of private property are part of the larger communal structure. For example, some rights to land are granted as permanent rights rather than life interests and are passed down through either patrilineal or matrilineal lines.[137] According to Robert Ellickson, this level of private property ownership is efficient, at least with respect to small events such as planting gardens or building homes, because it keeps the overall transaction costs of decision-making low with respect to each family's subsistence-based land uses.[138] Where Westernization has led to breakdowns in the clan's ability to exert authority over the group because individuals disregard complex resource monitoring procedures, private ownership of land may reduce monitoring costs because it then becomes more effective for individual plot owners to monitor entry to designated pieces of land.[139] Although private rights in group-

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[135] *See* Ellickson, *supra* note 41, at 1358.

[136] *See* Vegter, *supra* note 61, at 552.

[137] *Id.*

[138] Ellickson, *supra* note 41, at 1327–28.

[139] John McManus provides some empirical evidence of the costly monitoring of communal resource use in the context of beaver hunting among the Montagnais and Naskapi North American Indian tribes. As McManus describes, these tribes had no central coercive authority for the enforcement of property rights and no institutional constraints other than those established within the tribe itself. Thus, enforcement of the exclusive right to harvest furs within communal territory was generally left to the individual, which encouraged faster depletion of beaver resources. McManus argues that constraints on behavior within these tribes were stricter with respect to commercial resource uses as opposed to subsistence resource uses. John McManus, *An Economic Analysis of Indian Behavior in the*

owned land are becoming an increasingly popular strategy among customary groups to achieve efficient land management, insofar as privileges of inclusion dominate much of the intra-tribal resource management of customary land in PNG customary land may still be classified as communal property at its foundation.

Based on this analysis, it may be argued that customary land bears all the markings of well-managed common property with respect to internal tribal affairs, fitting neatly into Elinor Ostrom's theory of resource management among close-knit landowning groups. Customary land has been shown to function efficiently with respect to intra-tribal land dealings. Therefore, this paper will not expend further analysis on the communal aspects of customary land in PNG. Rather, it is the "anticommunal" qualities of customary land that impedes negotiations for highly valued land uses and, therefore, merits closer analytical attention.

C. The Emergence of the Anticommons

1. An Overview of the Theory of the Anticommons

As we have seen, the tragedy of the commons, although popularized as a theory in 1968, has been recognized in practice for generations. The "tragedy of the anticommons" on the other hand, has only recently come to light as a robust theory of property relations. Although the term "anticommons" and the concept associated with it originated with Frank Michelman in 1982, a fully realized theory of the anticommons tragedy was developed in 1998 by Michael Heller.[140] Michael Heller's seminal article on the anticommons phenomenon will serve as the basis for an analysis of customary land ownership in PNG in the context of commercial dealings with non-kin.

Whereas commons property is dominated by use rights, in an anticommons, multiple owners have exclusionary rights with respect to a scarce resource but no one owner has use privileges over the others.[141] In his article on the anticommons phenomenon, Heller writes that:

> [A]n object is held as anticommons property if one owner holds one of [the] core [property] rights in an object, and a second owner holds the same or another core right in the object, and so on, with no hierarchy among these owners' rights or clear rules for conflict resolution.[142]

North American Fur Trade, 32 J. ECON. HIST. 36, 45–50 (1972).

[140] Heller, *supra* note 36, at 667 (outlining previous definitions of anticommons property).

[141] *Id.* at 624.

[142] *Id.* at 670.

In other words, in an anticommons situation, core property rights such as the right to occupy, the right to sell or lease, the right to claim revenues from a sale or lease, and the right to determine the use of a particular piece of property are divided and/or shared among multiple owners on an even playing field. In this context every core use right has a corollary exclusionary power: no proposed change in the use or ownership of anticommons property will move forward without consensus among all the rights-holders involved. As a result, anticommons property is prone to underuse in that each owner can block the others' efficient use of the property.[143] This is the "tragedy" of the anticommons.

Heller explores this proposition in the context of Moscow storefront property, which he suggests is the "canonical" example of a tragedy of the anticommons.[144] He bases his theory on historical evidence of storefronts standing empty throughout Moscow (even after being privatized in the post-socialist era) while entrepreneurs took to the open sidewalks to sell goods from metal kiosks. In the beginning of Russia's transition from socialism to capitalism, Heller notes, many mobilization strategies failed with respect to storefront property in Moscow. As he writes, "leasing of stores, conversion of industrial land to commercial use, new commercial real estate development, and other alternatives to privatization of existing stores all stalled during the first years of transition," with an end result that the majority of Moscow storefronts stood unused while kiosks dominated the streets.[145]

The reason lies in unclear title: storefront property in Moscow at that time was a tangle of conflicting property rights and competing decision-makers.[146] This problem originated from the structure of socialist land law, and governmental regulation carrying out the transition to a market-based system of private property ownership further exacerbated the confusion. As a result, several categories of rights-holders—including the federal government, and any number of state, regional, and local agencies, enterprises, committees, and councils—held, and often shared, ownership rights in any given storefront property. For example, although under the post-Soviet market property regime the right to sell a specific property may have been allocated to one or more administrative bodies, still others could claim the right to receive revenue from the sale; the right to lease the property; the right to receive lease revenue; the right to determine use of the property; or the right to occupy the property.[147]

Such an intense degree of fragmentation of rights creates prohibitively high transaction costs in decision-making, particularly among parties with competing interests. Where particular rights are shared, co-owners must

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[143] *Id.* at 624.
[144] *Id.*
[145] *Id.* at 635.
[146] *See* Heller, *supra* note 36, at 634–35.
[147] *See id.* at 638, Figure 2.

agree among themselves to exercise those rights. Moreover, any use of the storefront property requires consent from all involved parties. As Heller observes, failure to reach a decision was the most common outcome with respect to storefronts in Moscow, particularly since even one involved party could effectively exercise a veto over any potential decision.[148] Thus, Moscow's retail market fell victim to the tragedy of the anticommons: by bringing bargaining to a standstill, multiple competing decision-makers on equal footing effectively blocked high-valued uses of storefront property.

Based on an empirical study comparing how storefront and other forms of property in Russia weathered the transition from communal to "private" ownership, Heller hypothesizes that "private property emerges less successfully in resources that begin transition with the most divided ownership . . . [and] more successfully in resources that begin transition with a single owner holding a near-standard bundle of market legal rights."[149] Assuming privatization to be the end goal, Heller concludes that the anticommons problem can perhaps be solved by "re-bundling" core property rights in a sole decision-maker.[150] In other words, one owner must have the full power to occupy the premises, to determine how the property will be used, and to sell or lease the property as well as receive revenues from this sale or lease.

Heller argues that re-bundling may be achieved either through markets or through regulation—although, as he ultimately concludes, neither route is likely to *reliably* convert anticommons property into "useful" private property.[151] For example, both national and local governments could take direct steps to reallocate property rights by abolishing or expropriating existing rights or transferring these rights to a single decision-maker.[152] However, particularly in the Moscow storefront property example where some informal occupancy rights had been exercised for seventy years or more, existing rights-holders would likely oppose such regulatory action as a compensable taking of their property.[153] Requirements to compensate owners for regulatory takings would impose significant costs on the government as well as generate additional administrative complexity. Moreover, government intervention in the property-rights structure could also backfire by undermining investor confidence in the free market, thus discouraging future investment.[154] For these reasons, regulatory re-bundling strategies are likely to fail.

Alternatively, anticommons property could be re-bundled through individual market negotiations. For example, a rights-holder in anticom-

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[148] *See id.* at 639.
[149] *Id.* at 631.
[150] *Id.* at 640.
[151] *Id.* at 687–88.
[152] Heller, *supra* note 36, at 641.
[153] *Id.* at 637, 641.
[154] *Id*. at 641.

mons property looking to develop that property could, rather than attempt to negotiate with other uncooperative rights-holders, attempt to buy out each of these property owners. However, because of the number and bureaucratic nature of the rights-holders often involved, as in the Moscow storefront example, formal market transactions are likely to fail due to prohibitively high transaction costs or to the strategic behavior of hold-outs.[155]

On the other hand, informal market transactions have been successful in overcoming anticommons problems. As an example, Heller points to the Moscow street vendor system. Heller suggests that kiosk merchants faced an anticommons structure in the form of government regulators and the mafia, which limited access to street property.[156] However, rather than arriving at the same loggerhead impeding negotiations for high-valued uses of storefront property, kiosk merchants were able to circumvent this anticommons problem through illegal contracting. Routinized bribery to government officials and protection contracts with the mafia enabled street kiosks to flourish. Widespread tolerance of these informal contracts, therefore, provided the earliest solution to the tragedy of the anticommons in a country with a flagging retail market.[157]

Further, Heller acknowledges that the anticommons is "not necessarily tragic."[158] For example, an anticommons situation might not always preclude productive land uses because certain groups of people can "manage non-private property efficiently by developing and enforcing stable systems of informal norms," as described above in the case of commons property.[159] In other words, as with communally owned property, close-knit groups like the customary landowning groups of PNG are likely to manage a resource efficiently, even if that resource is held in anticommons form.

Despite the close-knit nature of customary landowning groups in PNG, however, it may be argued that these groups do experience anticommons problems with respect to potential commercial dealings with non-kin. As the following section suggests, anticommons problems in this context may be attributed to conflicting attitudes toward capitalist practices within customary landowning groups and to State interference in decision-making.

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[155] *Id.* at 640.

[156] *Id.* at 643.

[157] However, Hernando de Soto suggests that informal economies tend to produce other efficiency drains, as will be discussed further in Part III of this Article.

[158] Heller, *supra* note 36, at 673.

[159] *Id.* at 674.

2. The Anticommunal Nature of Customary Land

a. In Structure

Whereas communal property is characterized by use rights, the nature of the anticommons is fundamentally exclusionary, and a property regime in which rights of exclusion predominate over rights of use should be analyzed as an anticommons regime.[160] In PNG, exclusionary principles operate forcefully among customary landowning groups with respect to commercial dealings between clan members and non-clan members. Thus anticommons problems may potentially arise for customary landowning groups in the context of dealings with other clans, with non-indigenous PNG residents or businesses, with the State, and with foreign investors.

Structurally, the arrangement of property rights with respect to customary land in PNG has both the defining features of an anticommons. First, just as Heller describes anticommons storefront property in 1990s Moscow as characterized by fragmented and overlapping property rights, with respect to customary land in PNG the traditional bundle of property rights is "unbundled" and its strands are dispersed among and/or shared by any number of clan members, as described above. Thus, except where discrete resources such as economic trees are granted into individual ownership, there is no practical hierarchy of use-rights within customary landowning groups such that would vest in one owner the right to determine the ultimate use of a resource.[161]

It should be noted that while rights to customary land are generally dispersed widely among clan members, rights to a specific parcel are of-

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[160] *Id.* at 673.

[161] SACK, *supra* note 54, at 42, 44–45. This is not to say that there is not a functional hierarchy of rights within customary landowning groups. As Peter Sack writes:

> The different strength of the claims of different categories of group members or "attachers" to share the use of the land within a group's sphere of control, can be described as a hierarchy of rights. Another kind of hierarchy develops when a sphere of control is divided by transferring parts of the right of control to sub-groups or individuals. A third kind of hierarchy is made possible by the traditional notion that ownership is a result of human effort; several persons can independently in different ways establish claims to the same object.

SACK, *supra* note 54, at 43. However, this traditional notion of hierarchy may be distinguished from Western notions of hierarchical estates in land, which would privilege one estate owner (namely a fee holder) over another (for example, an easement holder) with respect to determining the ultimate use of the land. *See id.* at 42. Although traditional notions of hierarchy may help facilitate efficient resource use within a customary landowning group, when a decision to sell or lease land outside of clan ownership is involved, this traditional form of hierarchy does not vest in one user a right to make that decision without the approval of other affected rights-holders. *See id.* at 44–45. In a Western system, on the other hand, owners of land in fee may sell their property without necessarily involving the holder of an easement on that property, although the easement will generally survive the sale.

ten not as attenuated as in Heller's Moscow storefront example. For example, in the Moscow of the mid- to late-1990s, the right to sell certain storefront property belonged to one of a number of organizations such as a property committee, while the right to occupy belonged to a workers' collective**,** and, at the same time, the right to receive revenues from a lease of the property belonged to a maintenance organization.[162] In PNG, however, although little scholarship on customary land goes into such detail with respect to allocations of rights to specific parcels of land, in general, the most widely allocated rights to land are use and access rights. If a right of sale or lease is granted at all, it will tend to flow with a right of occupancy. Inheritance rights also tend to flow with occupancy, unless customary law specifies that inheritance rights shall pass matrilineally or patrilineally.[163] Although certain rights tend to be clustered, this does not interfere with characterizing customary land ownership as an anticommons regime with respect to dealings with non-clan members. Rather, it emphasizes that an anticommons problem is particularly likely to arise in the context of a lease or sale of an area of group-owned land consisting of multiple occupied plots, which would require the cooperation of several families or households. This kind of sale is foreseeable in the event of large development projects (generally, projects proposed by non-indigenous businesses or foreign investors), where successful development will likely require a significant amount of land.

A second defining feature of anticommons property, which Heller argues is the primary reason that storefront property in Moscow remained unproductive after the fall of Soviet Russia, is the veto power that accompanies ownership of one or more of these unbundled rights.[164] Again, as discussed above, this veto power also exists among members of customary landowning groups. In successful groups, customary practice recognizes the right of all individuals affected by the operational rules of the group to participate in modifying those rules.[165] Further, in PNG, both formal law and customary practice require unanimous consent among all rightsholders for any proposed action to go forward.[166] This principle is rigorously applied, even at the level of individual plots of clan land. For example, from his study of land courts in PNG, Robert Cooter describes a case in which two relatives, both with use rights in a parcel of land that each claimed was his alone, disagreed over whether to sell the property to a third party interested in investing in the land's improvement.[167] When one relative decided to sell the land without consulting the other, the court in-

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[162] Heller, *supra* note 36, at 638, Figure 2.
[163] *See* Cooter, *Inventing Market Property*, *supra* note 21, at 768.
[164] Heller, *supra* note 36, at 674–75.
[165] OSTROM, *supra* note 37, at 90, Table 3.1.
[166] JONES & MCGAVIN, *supra* note 32, at 29–30; KLOPF, *supra* note 18, at 21.
[167] Cooter, *Inventing Market Property*, *supra* note 21, at 787.

validated the sale, ruling that because the land is under shared ownership both parties must agree to any development of it.[168]

b. In Function

Having determined that customary land in PNG bears structural resemblance to the canonical anticommons example of storefront property in Moscow, an accurate analysis of whether customary land in PNG similarly suffers from anticommons problems requires exploration first of what Michael Heller means by a "right to exclude" and, second, whether this right functions the same way in customary landowning situations as it did in early post-Soviet Moscow.

Although the anticommons structure in Moscow left its storefront property almost wholly unused during the transition to a system of private property ownership, Heller does not limit rights of exclusion to physical exclusion. If this were the case, due to the communal aspects of its property structure, customary land in PNG would not meet Heller's definition of an anticommons. Instead, Heller focuses on what he terms an "effective" right of exclusion, whereby any one rights-holder can exercise a veto over any projected use of the anticommons property by refusing to agree to that use.[169] Indeed, each owner of anticommons property who holds a fragmented, nonpossessory right can often best protect his own interest from interference by refusing to consent to proposals from other rights-holders attempting to exercise their own use rights.[170]

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[168] *Id.* at 787–88.

[169] Heller, *supra* note 36, at 673. As noted above, all rights of use entail concomitant rights of exclusion, but these rights need not be rights of actual use or exclusion. In his discussion of property rights as "gatekeeper" rights, J. E. Penner notes that "the important feature of property is the individual's *determination of the disposition* of a thing, not any requirement that he use it on his own." PENNER, *supra* note 131, at 75. *See also* Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 744 (1998) (describing property rights as "gatekeeper" rights: "At its core, the gatekeeper right is the right to determine the use of resources, by exercising the power of exclusion and inclusion."). The right of exclusion, in Penner's view, is any auxiliary right that enforces or protects this broad use right. Thus, the right of exclusion may be a positive right, in the way that setting up a fence will actually exclude others from one's property or, as Penner argues, it may also be a negative right, which places a duty on others not to interfere with a rights-holder's property interests. PENNER, *supra* note 131, at 73. With respect to nonpossessory property interests, only negative exclusionary rights are available to protect that interest: "although the holder of [a nonpossessory interest] does not have a general right to exclude others from defined metes and bounds, such a person is given a full panoply of legal rights to protect the limited interest that they have from interference by others." Merrill, *supra*, at 748. Although Merrill's account suggests in this way that every property right has an exclusionary valence—a position not widely accepted among property theorists—this Article does not attempt to forward that theory. Instead, this Article focuses on veto rights over transfers of land, which are most clearly exclusionary in nature.

[170] In Heller's example, all of the relevant players hold only nonpossessory rights to storefront property in Moscow. The "right of occupancy" currently exercised in relation to many post-Soviet Moscow storefronts—which is presumably closest to a possessory interest of all of the competing rights at issue—is merely an ambiguous, "squatter-type" right that

To evaluate whether this exclusionary veto functions the same way for customary land in PNG as it does in Heller's canonical example of the anticommons, the veto must be meaningful—in other words, it exists in practice among customary landowning groups in PNG as robustly as it does in theory. This evaluation requires a determination of whether the decision to alienate land from clan ownership—a decision which must be made largely within the landowning group—is likely to be made in accordance with informal norms (such as those used efficiently to govern intra-tribal land management) or whether other incentives are likely to affect the decision-making process.

For the rights-holders of Michael Heller's Moscow example who have no specific connection to one another and are presumably operating at arms-length, clearly each member has equal incentive to act in his own self-interest and exercise his exclusionary veto. For customary landowning group members, on the other hand, who interact on a daily basis and are highly attuned to the demands of reciprocal obligation, the veto right that an individual group member possesses over the behaviors and decisions of his fellow landowners may be less robust in practice. Among customary landowning groups, the combination of homogeneous interests and stable social norms would presumably tend to keep opportunistic behaviors in check. This commitment to cooperation and compromise, however, might also weigh heavily in the opposite direction by suppressing meaningful dissent.

Land rights are usually vested in the head of a lineage, which can be an individual or group of individuals, who sits at the top of the hierarchical chain of command.[171] For this reason, it may be argued that any exclusionary veto power held by clan members is merely a formality. Instead, group members generally defer to the judgments of heads of the lineage group.[172] Clan leaders often take responsibility for resolving minor disputes among group members over land rights using traditional methods of conflict resolution.[173] Historical evidence demonstrates, however, that with respect to significant proposed changes in land use such as a sale or lease of clan property, clan members do not blindly acquiesce in the views of the clan leaders. In an example highlighting the fluidity of customary law, the Tolai people—whose custom prior to 1953 was to vest in its clan leaders the discretion to decide whether to sell clan land—responded to the irresponsible, profit-seeking decisions of its leaders by refusing to recognize their power.[174] Instead, the clan instituted new customary law

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is not integrated into the formal rights-holding structure of Moscow storefront property. No positive rights of physical occupation or actual use of storefront property have been allocated in the post-socialist system. Heller, *supra* note 36, at 636–37.

[171] JONES & MCGAVIN, *supra* note 32, at 29.

[172] *Id.* at 31.

[173] *Id*.

[174] Cooter, *Inventing Market Property, supra* note 21, at 788.

requiring that land not be sold without the agreement of all affected members.[175] As this example demonstrates, therefore, even in a kinship group with an established internal hierarchy, each member's veto power is still meaningful, at least with respect to land use decisions affecting the clan as a whole.

Similarly, the authenticity of this veto power might be called into question given the internal pressure of clan and family obligations that might encourage clan members to go along with a majority consensus. In the context of a kinship group, as noted above, interests and expectations tend to be aligned, particularly given the informal norms that have developed to enhance cooperation and mutually beneficial decision-making with respect to intra-tribal land management.[176] Indeed, this is the primary justification for Elinor Ostrom's assertion that kinship groups will manage communal property more efficiently than arms-length bargainers: because interests are aligned in favor of cooperation, transaction costs in reaching a decision are significantly lower among kinship-based landowning groups.[177] Although this may be the case, it does not make the veto right associated with each family or sub-clan's land use privileges any less powerful. In fact, it may be argued that this veto right is enhanced in the case of substantial changes in land use. Given the requirement of unanimous consent for all major decisions with respect to land use, a family with a claim to land that is being considered for development purposes may effectively block the proposed change by refusing to assent to it. The family's incentive to do so would be considerably strengthened if they have built a permanent dwelling or buried their dead on that plot of land.

Therefore, as the above paragraphs suggest, the reciprocal obligations arising from kinship relations do not affect the quality of a veto right in a customary landowning group, although they may come into play in resolving loggerheads through mutual compromise. Because the veto power itself is the hallmark of anticommons property, customary land tenure does reflect the paradigmatic structure set out by Heller.[178]

One important way to determine whether a veto over land use decisions functions the same way among customary landowning groups as among post-Soviet owners of anticommons storefront property is to assess when this veto is most likely to be exercised and which actual land uses that veto will most likely affect. In evaluating exclusionary power within customary landowning groups in PNG it is instructive to focus again on the distinction between intra-tribal land management (governing subsistence land uses) and dealings with outsiders (involving commercial transactions). When commercial uses such as sale or lease are at issue, mean-

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[175] *Id.*
[176] *See supra* Part I.B.1.
[177] *See* OSTROM, *supra* note 37, at 63–65, 67.
[178] *See* Heller, *supra* note 36, at 666.

ingful exclusionary principles start to take shape within customary landowning regimes. As Thomas Merrill would suggest, for property in common ownership the right to exclude outsiders is the only incidence of private property ownership that survives in a robust form: "the other incidences . . . may exist only in a highly attenuated form or not at all."[179] Thus it is in the context of potential commercial transactions with non-kin that the anticommons qualities of Moscow storefront property and of customary land in PNG should be compared. This Article argues that anticommons problems may arise in customary landowning societies at two levels: first, within the tribe in the process of reaching a decision to alienate clan land, and, second, when the State exercises its own powers of exclusion over commercial transactions in customary land.

As elaborated above, customary landowning groups are able to manage intra-tribal subsistence land uses efficiently through cooperation and consensus. The effectiveness of informal customary mechanisms rests largely on the bonds of trust and of reciprocal obligation that are shared within family networks. Economists posit that trust is a highly valued element of transactional relationships. Drawing from a large economic literature on trust, L. T. Jones and P. A. McGavin posit that trust "implies the sharing of vulnerabilities between parties . . . ; involves a mutual assessment by individual parties of the others' behaviour . . . based on past interactions; [and] provides shared codes of conduct between parties . . . ."[180] As they note, trust under this definition necessarily underlies all economic transactions in varying degrees depending on "the level of certainty, security, and control that each individual 'truster' believes the 'promisor' is able to provide."[181] Higher degrees of trust ensure more efficient bargaining by reducing what Jones and McGavin term the "cognitive demands" on exchange parties—for example, concerns about pricing, quality of service, and timeliness.[182]

Further, economic theorists also define trust in terms of well-supported beliefs developed by bargaining parties over the course of systematically fair dealings between repeat players that each party to the transaction will contribute his or her fair share to the public good.[183] Under this definition, trust fosters positive economic benefits in that individuals who observe others consistently contributing to the public good will voluntarily respond in kind, thus fostering widespread optimal investment.[184] Noting the benefits of trust on investment levels, Hanoch Dagan and Michael Heller suggest that a communal ownership regime established against a backdrop of default

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[179] Merrill, *supra* note 169, at 750.
[180] JONES & MCGAVIN, *supra* note 32, at 72.
[181] *Id.* at 74.
[182] *Id.*
[183] *See* Philip Pettit, *The Cunning of Trust*, PHIL. & PUB. AFF., Summer 1995, at 202, 209–10.
[184] *Id.*

legal rules designed to encourage the development of trust among communal group members is the best way to secure the benefits of managing common pool resources without the risk of creating perverse incentives.[185] Intra-tribal management of subsistence land uses in PNG supports this hypothesis: one of the proven benefits of trust relationships based on stable expectations among members of customary kinship groups in PNG is that common pool resources used within the clan for subsistence purposes are managed efficiently and exploited conscientiously.[186]

Bargaining parties "who directly (or through reputation) know each other and operate with shared institutional backgrounds are able to . . . develop a trustworthy relationship with relatively few transaction costs."[187] It may be argued that, for this reason, while bonds of trust are easily formed among members of a customary landowning group—and are a fundamental element of the kinship structure—cross-cultural trust among kinship groups and non-kin is considerably more difficult to achieve. For example, although some traditional societies routinely incorporate non-kin into the kinship group, Hartmut Holzknecht describes the process of incorporating an outsider into a customary kinship group in pre-colonial and colonial PNG as a process that required residence in and commitment to that group, which had to be solidified over generations by intermarriages and continual re-affirmation of membership.[188] Further, as L. T. Jones and P. A. McGavin note, in PNG, "where the role of parties is often misinterpreted or poorly defined and the institutional framework is characterised by dissonance and insecurity, the process of establishing rapport and trust is complicated and demanding."[189]

Trust considerations not only underlie the bargaining process with respect to wholesale transfers of customary land to non-kin, but they are also central to transactions in which kinship groups must have ongoing interactions with non-kin throughout the course of an extended relationship such as a lease.[190] In this context, evidence suggests that members of a land-

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[185] *See* Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549, 574, 582 (2001). Dagan and Heller posit a theory of the "liberal commons"—a solution to the problems created by communal ownership in the form of a new regime of property ownership based partly on Ostrom's theory that cooperation among close-knit landowning groups can lead to economic and social gains. Within this framework, Dagan and Heller argue that trust fosters economic success and thus an ideal land ownership regime would encourage the development of strong relationships among property owners.

[186] *See supra* note 118 and accompanying text.

[187] JONES & MCGAVIN, *supra* note 32, at 73.

[188] Holzknecht, *supra* note 50, at 141. *See also* Banner, *supra* note 54, at 825–26.

[189] JONES & MCGAVIN, *supra* note 32, at 73.

[190] This Article focuses primarily on the decision-making process within a customary landowning group leading to a commercial transaction in land with non-kin. Although an extended analysis of how continuing relations between kin and non-kin should be governed after such a transaction has been completed is a natural extension of this discussion, it is beyond the scope of this Article. It will suffice to note that the dynamics of kin/non-kin relations will likely be different for transactions transferring rights to a non-kin purchaser than for transactions in which the selling group and the purchaser will maintain continued

owning clan will likely be skeptical of agreeing to sell or lease clan land to a non-kin transferee who is not restrained by the same social norms as members of the kinship group and thus may be more likely to engage in self-interested behavior. For example, Jones and McGavin suggest that customary landowners who interact with developers under State leases do not trust these developers to distribute the proceeds from their development projects fairly.[191] Trust relationships between customary landowning groups and the State (a repeat player in such transactions) are similarly ruptured. Customary landowners are unwilling to engage in leasing transactions under State mechanisms because the State consistently privileges the interests of developers and engages in rent-seeking and political gaming.[192] Distrust also infiltrates relations among neighboring customary landowning groups, given that tribal warfare remains a fairly common occurrence among the landowning tribes of PNG.[193]

As the above discussion suggests, when it comes to arrangements that would alienate land out of clan hands (either in fact or functionally, as through leasing arrangements), there might be some natural level of resistance based on distrust that would increase the transaction costs associated with achieving high-valued uses of customary land.[194] Of course, this picture of the insular kinship group in PNG is greatly oversimplified. In reality, attitudes of kinship communities toward dealing with outsiders, particularly with respect to sale or lease of clan land, have become considerably more complex since the colonization of PNG by Great Britain in the nineteenth century. Economists report that since the imposition of colonial administration, PNG's heavily tribally controlled economies of goods production and circulation have increasingly been replaced by systems oriented toward the world outside the local region.[195] As an Imalan clansman of the Belon tribe notes in his introduction to a series of essays on culture

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dealings. Trust is central to ensuring the efficiency of both types of transactions. It also might be noted that even sales of customary land will involve some continued relationship between kin and non-kin as neighboring landowners whose behaviors might create negative externalities for each other.

[191] JONES & MCGAVIN, *supra* note 32, at 75.

[192] *Id.*; Andrew Pai & Jacob Sinne, *A Framework for Management of Customary Land for Development and Investment in Urban Centres of Papua New Guinea*, *in* CULTURE AND PROGRESS: THE MELANESIAN PHILOSOPHY OF LAND AND DEVELOPMENT IN PAPUA NEW GUINEA 187, 196 (Nancy Sullivan ed., 2002).

[193] AMNESTY INTERNATIONAL, ANNUAL REPORT 2005: PAPUA NEW GUINEA http://web.amnesty.org/report2005/png-summary-eng (last visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[194] Distrust may actually be beneficial for customary landowners in discouraging some dealings with non-kin. For example, because non-kin transferees (particularly potential developers) are presumably more experienced at appropriating land, customary landowners might be at a bargaining disadvantage due to disparities in information costs, leaving them vulnerable to price-gouging. Further, because a non-kin transferee would likely have interests that are at odds with the interests of the larger group, governance of clan land following a sale would likely be made more difficult due to the influence of a relatively unrestrained non-kin actor. *See generally* Heller, *supra* note 36.

[195] Holzknecht, *supra* note 50, at 142.

and progress in PNG, "Today you have to have money. If you like, you can stay traditional, but it depends—will you have food or ground for that? You talk about custom, but it is hard now for people to make their customs, it's expensive now, they have to buy it."[196]

As a result, although colonization and its effects did not directly change the underlying ideologies of kinship and ownership, they did have a significant effect on tribal attitudes toward land, mineral, and resource valuation.[197] In other words, whereas pre-contact economies were rooted in trading partnerships and ceremonial or competitive exchanges of resources that had primarily local value, colonial and (now) post-colonial tribal economies have begun to view the resources at their disposal in an increasingly global, capitalist light.[198] Hartmut Holzknecht writes:

> [I]t was inevitable that major changes took place: leaders were able over time to exert less and less control over younger men by the customary strategies of controlling marriage and affinal arrangements or exchange and trading relationships. New systems of production of wealth, derived through education, migration, and remittances gradually replaced the old, while still retaining the customary idioms and structures revolving around kinship practices.[199]

Significantly, although each kinship community has developed its own way of accepting or resisting the influences of capitalism, attitudes toward capitalist practices are increasingly becoming individualized.[200] As the kinship group has been replaced in the minds of indigenous Papua New Guineans as the main source of wealth and power, the influence of community opinion has diminished, and consensus within a community on the merits of capitalist practices is becoming more and more difficult to reach.[201] However, the traditional mechanisms of land management are still in place—namely, the requirement that all significant changes in land use be supported unanimously by all affected clan members. In an atmosphere of fragmented attitudes toward capitalism among customary peoples, proposals to sell or lease clan land for commercial or development purposes are more likely to be blocked, and customary land will thus be subject to the tragedy of the anticommons.

It is for this reason that economic theorists have claimed that customary land tenure is a severe impediment to development activities in PNG. Michael Trebilcock, for example, points to the theory of property rights

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[196] Askim Siming, *Welcome, in* CULTURE AND PROGRESS: THE MELANESIAN PHILOSOPHY OF LAND AND DEVELOPMENT IN PAPUA NEW GUINEA 1, 4 (Nancy Sullivan ed., 2002).

[197] Holzknecht, *supra* note 50, at 142–43.

[198] *Id.*

[199] *Id.* at 143 (citation omitted).

[200] *Id.*

[201] *Id.* at 142–43.

posited by Harold Demsetz to explain how transaction costs among customary landowning groups are one of the most serious impediments to efficient land mobilization.[202] Although he does not refer to it as such, Trebilcock highlights the anticommons structure of property ownership as the primary source of these transaction costs: the rule of unanimity in decision-making, exacerbated by the lack of clear leadership among customary landowning groups, effectively creates "prisoners' dilemma" type problems leading to zero sum or negative sum outcomes from "non-cooperative resolution of conflicting claims."[203] He notes that strategic behavior, in the form of free-riders and hold-outs, is most likely to arise for customary landowning groups in the context of commercial transactions with non-kin and that transaction costs are likely to increase as the influence of social pressure on group members decreases:

> [I]t can be predicted that increased population mobility reflecting higher levels of education, improved transportation infrastructures, increased opportunities to participate in the development of the country, intermarriage, and so on will render the composition of landowning groups less stable than in the past, thus attenuating group pressures and social constraints that have traditionally been relied on to induce joint-welfare maximizing behavior and further increasing the transaction costs involved in securing necessary consents to, and compliance with, decisions about land use.[204]

As Trebilcock might predict, the anticommons problems that arise with respect to commercial land dealings in customary groups will only increase over time, given the widening gap between traditional decision-making procedures and the development of individualist behaviors among group members.

Apart from the growing tensions within customary landowning groups, it is also important to remember that customary landowning group members are not the only voices with veto power over land uses in PNG. Another dimension in which the distinction between intra-tribal subsistence land uses and commercial dealings with non-kin is relevant is in the role of the PNG government with respect to customary land.

In general, the State legislature does not directly involve itself in intra-tribal land management. Rather, shortly after PNG gained independence from Australia in 1975, the government enacted legislation to establish village land courts that apply customary law to disputes over land management.[205] Robert Cooter suggests that land disputes requiring the refine-

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[202] Trebilcock, *supra* note 13, at 397 (citing Demsetz, *supra* note 72, at 357).

[203] Trebilcock, *supra* note 13, at 396.

[204] *Id.* at 396–97.

[205] *See* Cooter, *Kin Groups and the Common Law Process*, *supra* note 24, at 35. *See also* Village Courts Act of 1989 (Papua New Guinea); Land Disputes Settlement Act of

ment of customary property rights reach the courts with sufficient frequency to support the process of developing a body of customary land law.[206] Subsistence uses of customary land are governed by tribal mechanisms or, in the event of a dispute, by this jurisprudence of customary common law.

However, formal land dealings with non-kin—specifically, commercial dealings such as sales or leases—are heavily regulated by the PNG government. Under the PNG Constitution, customary land may only be sold among tribes or to the State. Further, under the Land Act of 1996, all commercial dealings with respect to customary land are subject to State approval.[207] In this situation, therefore, absolute exclusionary power over commercial land uses lies with the State itself.[208]

The prohibitions and restrictions on customary land management under the PNG Constitution and the Land Act of 1996 would appear to grant the PNG government the sole right to exclude, unattached to any particular use right over customary land.[209] However, under the Land Act of 1996, the State may also exercise an additional right over customary land: the right to lease. Section 10 of the Land Act partially revokes the government's blanket prohibition on transactions in customary land by permitting governments to lease land with or without compensation from customary owners, either by agreement or through compulsory process.[210] This section of the Land Act codifies the most popular mechanism employed by the government to release customary land from the constraints of customary law, in the form of a "lease-lease-back" scheme administered by the Department of Lands.[211]

The lease-lease-back scheme is a strategy designed to prepare customary land for development by providing security of tenure guaranteed by the State. Under a non-compulsory lease-lease-back scheme, customary landowners agree to lease their land to the State, which in turn subleases the land to an individual or business seeking to use or develop the land once the Minister for Lands and Physical Planning is satisfied that the land is not required by the original landowners.[212] Lease-lease-back agreements

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1975 § 45 (Papua New Guinea).

[206] *See generally* Cooter, *Inventing Market Property*, *supra* note 21.

[207] KLOPF, *supra* note 18, at 21.

[208] Note that Michael Heller's article on the anticommons contains no analogue to this kind of direct State involvement in the determination of land uses (at least with respect to property in the post-Soviet era, when anticommons problems began to occur). *See generally* Heller, *supra* note 36.

[209] The PNG government does claim eminent domain over all land and water in PNG, and it also claims rights to all minerals and petroleum. Tony Power, *Landowner Compensation: Policy and Practice*, *in* COMPENSATION FOR RESOURCE DEVELOPMENT IN PAPUA NEW GUINEA 85 (Susan Toft ed., 1997).

[210] Land Act of 1996 § 10 (Papua New Guinea); MUGAMBWA & AMANKWAH, *supra* note 12, at 359.

[211] Cooter, *Inventing Market Property*, *supra* note 21, at 775.

[212] Land Act of 1996 § 7 (Papua New Guinea). The Minister may lease customary land for business or agricultural purposes by compulsory process without compensation to the customary owners. *Id.* at § 11. The government also has the power to acquire property

are generally granted solely for agricultural or development purposes.[213] Leases are granted for a period of 99 years, at the end of which all rights to the land purportedly revert to the original customary landowning group.[214] This feature of the State leasing strategy was implemented based on a presumption that customary landowning groups would be more easily persuaded to agree to give up rights to their land if they believed that the loss would only be temporary.[215]

Unless customary land is leased through a compulsory process, members of a customary landowning clan are involved in the decision of whether to lease clan land to the government. Because the State's right to lease customary land is contingent upon a prior lease from customary landowners, which effectively transfers decision-making powers to the State, upon lease customary landowners have no say in how their land will be used for as long as the lease is in place.[216] Although this practice may contradict traditional principles of participatory governance, one could argue that it encourages more efficient land management by reducing the transaction costs associated with decision-making. The lease-lease-back program uses market principles to vest a relatively standard bundle of property rights in one "owner"—in this instance, the government—which it can then transfer wholesale. By effectively re-bundling fragmented land rights, under Heller's theory this plan for large-scale market transactions in customary land might be considered a successful strategy for avoiding anticommons problems with respect to leased land over the long term.

However, the lease-lease-back scheme creates more problems than it resolves. Putting aside the question of whether customary land groups would indeed reach a consensus on whether to lease land to the State, through this scheme the government has injected itself into the decision-making process, which creates anticommons problems by vesting an additional ex-

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through its emergency powers without compensation to the landowner, as long as the property is returned to the landowner as soon as the emergency situation has ended.

The Constitution guarantees, however, that "property cannot be compulsorily acquired by the government unless the land is acquired for a specific public purpose or a reasonably justifiable reason." KLOPF, *supra* note 18 at 17; PNG CONST. § 53(1). For example, government acquisition of land other than customary land is allowed as a consequence of an offense against the law or if the land has been abandoned. In addition to acquisition of land, the government may also restrict property ownership rights for environmental or cultural conservation purposes. The National Parliament may pass laws otherwise restricting property ownership rights provided that the legislation (a) expressly states an intention to restrict such rights, (b) specifies the rights it will restrict, and (c) is certified by the Speaker of Parliament. KLOPF, *supra* note 18, at 17–18.

[213] Land Act of 1996 § 11 (Papua New Guinea).

[214] Francis Irara, *Customary Land Registration: A Demon or a Blessing in Disguise?*, *in* CULTURE AND PROGRESS: THE MELANESIAN PHILOSOPHY OF LAND AND DEVELOPMENT IN PAPUA NEW GUINEA 140, 144 (Nancy Sullivan ed., 2002).

[215] C. E. P. (Val) Haynes, *The Land Mobilisation Program and Customary Land*, *in* CUSTOM AT THE CROSSROADS 129, 136 (Jonathan Aleck & Jackson Rannells eds., 1995).

[216] Many authors have noted that severing customary landowners from participation in determining uses of customary land in this way has contributed to the failure of effective land mobilization. *See, e.g.*, Pai and Sinne, *supra* note 192, at 187–96.

clusionary right in the government. For example, Michael Heller argues that where multiple parties share the same use right with respect to a piece of property, in order to exercise that right all parties must agree to do so.[217] When more parties are involved in the decision-making process, the transaction costs of coming to a consensus increase. The lease-lease-back scheme, in its noncompulsory form, is predicated on cooperation between customary landowning groups and the State, each of which ostensibly holds rights to lease a specific parcel of customary land. Both parties must fulfill their leasing responsibilities in order to achieve an efficient (or high-valued) use of that parcel. Theoretically, then, if one party refuses to agree to lease, the land will remain unused in the absence of alternative development opportunities.

It is unlikely that this particular anticommons problem will occur with respect to a State lease of customary land. First, the State has the option of compulsory acquisition available to it, giving the State more power than customary landowners to determine commercial uses of customary land, although this hierarchy generally only applies under emergency conditions.[218] Second, given the dire need for economic development in PNG, the abundance of customary land, and the limited development options available to customary landowning groups, presumably both customary landowning groups and the State will have relatively homogeneous interests in completing a lease. It should be further noted that the lease right held by customary landowners is considerably limited in comparison to the State's right to lease customary land. Due to prohibitions on direct sale or lease of customary land except to other customary landowning groups or to the State, the PNG government is effectively the only formal avenue available to customary landowning groups for mobilizing customary land.[219] Although this government monopsony may facilitate smoother leasing transactions in that it establishes a pattern of repeat play that tends to reduce transaction costs, this situation can be detrimental to the interests of customary landowners because it decreases their bargaining power and thus distorts customary land values.[220]

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[217] Heller, *supra* note 36, at 639.

[218] *See* KLOPF, *supra* note 18, at 17.

[219] *Id.* at 18.

[220] *See, e.g.*, Eric Kades, *The Dark Side of Efficiency: Johnson v. M'Intosh and the Expropriation of American Indian Lands*, 148 U. PA. L. REV. 1065, 1112 (2000). Kades suggests that the United States government purposely established itself as the only purchaser of Indian lands as part of a larger strategy to drive down the costs of tribal land acquisition. It should also be noted that the lease-lease-back scheme distorts land values in that, although by statute lands available for lease must be widely advertised and all applicants must be considered, applicants do not engage in bidding over a State lease. Rent on State leases is set by the Minister of Lands and Physical Planning, under advisement of the Land Board, and tender offers for less than the set rental figure are considered void. Land Act of 1996 §§ 69, 71, 73, 83 (Papua New Guinea) (*excerpted in* MUGAMBWA & AMANKWAH, *supra* note 12, at 362–63, 378–79).

However, State involvement in determining commercial uses of customary land does create anticommons problems from another direction. Under the current system, where a customary group has agreed to lease its property to the government for development purposes, the State may effectively veto that decision through the inevitable inefficiency of government bureaucracy. In practice, the lease-lease-back scheme has met with precisely this difficulty: due to a backlog of applications stalled in the Department of Lands, use of the lease-lease-back program to open up customary land for development has been extremely limited, with the result that owners of customary land find leasing to non-kin through formal means "difficult or impossible."[221] As Michael Rynkiewich writes, the failure of customary land mobilization strategies in PNG is due to poor governance:

> Papua New Guinea has experienced a "centralisation of power followed by neglect and non-performance." From Bougainville to Kutubu, the State has been unable to organise, unable to regulate, and unable to sustain land and resource agreements. That is, the State has been unable to be a reputable broker between landowner and developer . . . . While there are competent people in land offices around the country, they are hampered in their work by lack of funding, changes of government, regular shifts in policy that follow the rapid succession of Ministers, and the interference of Members of Parliament and developers for the various provinces and regions.[222]

The systematic nature of bureaucratic inefficiency in the leasing of customary land has impeded the development of a market capable of ensuring high-valued uses of such land because it discourages customary landowning groups from leasing land to non-kin through formal means. Thus, given this example, it may be argued that State intervention functionally operates as an exclusionary veto in land management. The result is underused anticommons property.

II. From Theory to Practice: Attempting To Fix the Anticommons Problem in PNG

Despite strict limitations on the sale of customary land, the PNG government has engaged in a campaign to create a market in customary land since the 1950s. It cannot escape notice that all the alienated land in PNG—the only land in the country that can be held in freehold with a

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[221] Cooter, *Inventing Market Property, supra* note 21, at 776. *See also* Charles Benjamin, *Sectoral Land Issues and Government Policy Directions*, *in* Culture and Progress: The Melanesian Philosophy of Land and Development in Papua New Guinea 97, 99 (Nancy Sullivan ed., 2002).

[222] Rynkiewich, *supra* note 12, at 51 (citation omitted).

core bundle of rights consolidated in a single landowner—has been fully utilized whereas customary land has remained largely undeveloped.[223] This situation would tend to confirm the suspicions of property theorists like Harold Demsetz that communally owned resources are often managed inefficiently in comparison to resources held in private tenure. As a result, official thinking about land use in PNG has historically centered on proposals for a comprehensive system of registration of interests in customary land, in an effort to make customary land more closely resemble private property.[224]

Most governmental proposals to register customary land in PNG have centered on clarifying existing rights through exhaustive record-keeping because it is often "the absence of any documentary system of title or registry of interests in customary land . . . [that creates] substantial insecurity of tenure and disincentives to development."[225] However, merely clarifying existing rights to anticommons property does not address the problems of underuse that this property structure tends to create. Michael Heller suggests that the content of property rights bundles, rather than the clarity of existing fragmented and overlapping rights, is the key to resolving anticommons issues and thus is the proper focus of policymakers and property theorists.[226] Therefore, this section will focus on those economic development strategies at work in PNG that are aimed at re-bundling or reallocating property rights in customary land. This Article will briefly outline some of these strategies, touching on aspects of each that might have some bearing on its effectiveness in overcoming anticommons obstructions to commercial land dealings in PNG.[227]

A. Regulatory Strategies

Michael Heller defines regulatory strategies to mobilize anticommons property as strategies that "abolish rights previously granted, eliminate

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[223] *See* ROMILLY L. KILA PAT, *supra* note 23, at 4.

[224] *See generally*, Peter Larmour, *Land Registration in Papua New Guinea: Fifty Years of Contention*, *supra* note 28, at 1–5; Peter Larmour, *Registration of Customary Land: 1952–1987*, *in* CUSTOMARY LAND TENURE, *supra* note 22, at 51, 51–72. The vast majority of the scholarship on customary land tenure in PNG written during the 1990s focuses on the numerous governmental efforts to implement widespread registration of interests in customary land and the limited success these efforts achieved. Nevertheless, the Land Registration Act does make provisions for registration of customary rights. Land Registration Act of 1981 § 98. East Sepik Province has also passed its own customary land registration statute under which clans may register their lands. Under this system, "registration . . . has little or no effect upon the legal powers of the groups whose boundaries are recorded. Their property rights are allocated according to customary law . . . ." Cooter, *Kin Groups and the Common Law Process*, *supra* note 24, at 43**.** Registration does not change substantive property law and thus neither strengthens nor weakens existing property rights. *Id.*

[225] Trebilcock, *supra* note 13, at 394.

[226] Heller, *supra* note 36, at 621, 640.

[227] An exhaustive account of each of these land mobilization strategies is beyond the scope of this paper, as each has received in-depth treatment by other authors.

subordinate levels or agencies of government . . . expropriate or condemn existing rights . . . [or] transfer rights to, or consolidate rights in, the equivalent of a 'sole owner.'"[228] To this point, the PNG government has taken few formal steps to reallocate property rights in a systematic fashion.[229] One reason that the government has not taken more direct regulatory action with respect to customary land in PNG may be the nature of this land as mixed commons/anticommons property. Although a comprehensive regulatory strategy might help to overcome underuse of some parcels held in customary tenure, direct reallocation of property rights in customary land would also involve re-bundling communal use rights in such a way as to interfere with intra-tribal land management. Widespread re-bundling of property rights is not only practically infeasible but would also disrupt centuries of communal kinship-based land tenure. In its Constitution and other statutory law, the PNG government has voiced a commitment to respect the integrity of customary law and practice.[230] To this end the State has been unwilling to interfere with the internal workings of kinship groups, even to the extent that it has established village courts to adjudicate disputes in accordance with customary law. Given the unique significance of land to landowning clans in PNG and the violence with which they are willing to defend their land rights, it is not surprising that

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[228] Heller, *supra* note 36, at 641.

[229] It should be noted, however, that the PNG government does have a practice of effectively condemning customary land to access mineral and petroleum resources, over which the State has absolute ownership. Direct dealings in land are generally prohibited under the Land Act; however, foreign companies may deal directly with customary landowners under government-issued exploration and development licenses. *See generally* Tony Power, *Landowner Compensation: Policy and Practice*, *supra* note 209, at 84–93.

Admittedly, this condemnation practice does not "re-bundle" property rights in such a way as to create permanently marketable private property, as was envisioned by Heller. However, by exercising its right to mineral extraction the government does effectively consolidate core rights to the surrounding land in a sole owner (the government itself). It also gives that owner clear hierarchy in decision-making. Therefore, this condemnation practice could still be considered a possible means of overcoming anticommons problems.

Customary landowners have difficulties reconciling this condemnation practice to their views of property ownership, which suggests an argument that this effective condemnation is a compensable taking of customary property. However, although the government would argue that it is just claiming a valid right to the minerals underlying customary land, it has nevertheless developed an informal policy of compensating customary landowners for the use of their land through royalty sharing, mitigating non-mineral related development, employment preferences, and education and training opportunities. *See id.*, at 85–87. In this way, the PNG government may have managed to overcome some of the drawbacks of regulatory strategies enumerated by Heller. Overall, however, this particular strategy is not so broad in applicability to adequately respond to general anticommons problems.

[230] Although first regarded by the PNG government as foreign law, customary law is currently accepted as part of the underlying law of PNG. *See* KLOPF, *supra* note 18, at 21. *See also* Owen Jessep & Anthony J. Regan, *Developing a Coherent Underlying Law—Integrating Custom and Common Law: Part One*, *in* TWENTY YEARS OF THE PAPUA NEW GUINEA CONSTITUTION 114, 115–18 (Anthony J. Regan, Owen Jessep & Eric L. Kwa eds., 2001).

the government has not engaged in widespread reallocation of customary property rights.[231]

However, the PNG government has implemented processes for the voluntary re-bundling of rights. The primary mechanism employed by the PNG government to facilitate markets in customary land is one designed to turn group-owned property into private property.[232] In 1963, PNG enacted the Land (Tenure Conversion) Act, which enabled Papua New Guinean citizens to convert an interest in customary land to freehold alienated land.[233] Under this Act, upon conversion, the converted land ceases to be regulated by custom and all other rights over the land are ostensibly abolished.[234] The land then becomes "alienated land," and an estate in fee simple is registered with the Registrar of Titles in the name of the applicant, in accordance with the procedures adopted for all other freehold land in PNG.[235] Although only one individual may apply to the Land Titles Commission for registration of individual freehold title, up to six individuals may register as joint tenants or tenants in common.[236] Security of title to converted land is guaranteed by the government, as for all other freehold land registered in PNG.[237] The converted land may be sold or leased to PNG citizens or it can be leased to foreigners with government approval although the government constraint on land conversion tends to distort land values particularly around towns and cities.[238]

Proponents of the customary land tenure conversion program would posit two circumstances in which groups might decide to convert their land to freehold: (1) to realize the best price on surplus land, and (2) to extinguish reciprocal obligations with respect to land in the event that kinship relations deteriorate and a clan effectively ceases to operate as a clan in economic life.[239] Few customary landowning groups, however, have actually taken advantage of tenure conversion. Although there are no available statistics showing how many hectares of land have been converted, in the pe-

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[231] *See generally* SEAN DORNEY, PAPUA NEW GUINEA: PEOPLE, POLITICS AND HISTORY SINCE 1975 101–30 (3d ed. 2000). In his chapter entitled *Bougainville: Origin of the War 1988–90*, Sean Dorney describes violent guerilla warfare in the Bougainville province to sabotage a copper mining operation from which customary landowners saw no economic benefit and suffered much environmental degradation from mining waste that retarded crop growth, led to the extinction of the flying fox, poisoned economic trees and fish, and caused birth defects among village children.

[232] *See* Cooter, *Inventing Market Property*, *supra* note 21, at 777–78.

[233] *See generally* Land (Tenure Conversion) Act of 1963 (Papua New Guinea); Cooter, *Inventing Market Property*, *supra* note 21, at 777–78. A "citizen" under this act includes a business group, a land group, a customary kinship group, a customary descent group, and a customary local group or community. Land (Tenure Conversion) Act of 1963 §4 (Papua New Guinea).

[234] Land (Tenure Conversion) Act of 1963 § 16 (Papua New Guinea).

[235] *Id.*

[236] Trebilcock, *supra* note 13, at 386.

[237] Cooter, *Inventing Market Property*, *supra* note 21, at 778.

[238] *Id.* at 778–79.

[239] *Id.* at 778.

riod between 1975 and 1987 the number of conversion applications processed per year ranged from 19 to 166.[240]

The success of this Act has been minimal not only because so little customary land has been converted under its provisions, but also because even after conversion, customary interests in converted land are often not fully extinguished.[241] Because the concept of freehold land is entirely foreign to custom and usage in PNG, the process of land conversion has inevitably created misunderstandings—with the result that many clans have successfully challenged conversion agreements in the land courts on grounds that these conversions were involuntary or fraudulent.[242] Often, the courts have granted customary owners compensation as remedy; alternatively, converted land is returned to its customary owners. Sufficiently frequent reversion of converted land to customary ownership has significantly limited the potential of converted land as a marketable commodity and "has left a cloud over many freehold titles."[243]

Aside from its flaws in practice, commentary on the Land (Tenure Conversion) Act suggests that its scheme of voluntary re-bundling of property rights is not an effective response to anticommons problems among customary landowning groups. As Robert Cooter writes:

> The Land (Tenure Conversion) Act envisions the members of traditional groups bargaining together and reaching an agreement to transform their customary land rights into freehold . . . . The broad outline of this process resembles John Locke's theory that property arises from mutual advantage and agreement to protect natural rights better. There is, however, a fatal difference. The Lockean model of the social contract envisions people bargaining together who already possess natural rights similar to freehold. . . . [However, c]ustomary owners in PNG do not start from such a position when they attempt land tenure conversion. Conversion to an alien system of ownership like freehold is not contemplated in customary law, so customary law does not clearly delineate who, if anyone, has the power to make such a decision.[244]

In this passage, Cooter pinpoints one source of the anticommons problems that arise in the decision-making process of customary landowning groups: the absence of a clear hierarchy among decision-makers.

Although customary landowning groups may be capable of reaching a consensus to exercise certain familiar use rights (such as the right to sell, lease, or reallocate land uses), any attempt to reach a consensus on consoli-

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[240] Cooter, *Kin Groups and the Common Law Process*, *supra* note 24, at Appendix I.
[241] KLOPF, *supra* note 18, at 24.
[242] Cooter, *Inventing Market Property*, *supra* note 21, at 780.
[243] *Id.*
[244] *Id.*

dating these rights together in one owner will inevitably fail because no construct for this kind of consolidation exists in customary law. Simply, there is no clear "owner" to choose: any or all clan members may have subsistence use rights over the land to be converted, and moreover, all clan members have an equal right to participate in the decision-making process. Confusion over the foreign concept of unitary ownership would therefore create more anticommons problems than this process of converting group-owned land to private property was intended to resolve.

It should be noted that this problem is not necessarily limited to anticommons property in the context of customary landowning societies. Taking Michael Heller's Moscow storefronts as an example, if the Russian government had implemented a similarly voluntary process of converting anticommons to private property, the decision would be no more easily made. Indeed, it is the failure to reach a mutually satisfactory consensus among conflicting rights-holders that creates anticommons property in the first place. A proposal to consolidate property rights in a single rights-holder might in fact meet greater resistance from a set of self-interested parties dealing at arms-length without the social pressures created by kinship bonds. Thus, we may conclude that the reasoning behind the Land (Tenure Conversion) Act is flawed not necessarily because the concept of consolidated ownership is foreign to customary landowning groups, but rather because consolidation based on mutual assent cannot easily survive an anticommons property structure.

B. Market Strategies

The only quasi-market-based strategy employed by the government of PNG to re-bundle property rights is the lease-lease-back scheme described in Part I.C.2.b of this Article. As discussed above, this strategy has also created more anticommons problems in the form of bureaucratic inefficiency than it was intended to resolve and therefore is not an effective solution to anticommons problems in PNG.

Apart from State-approved leasing, Section 81 of the Land Act prohibits sale, lease, or other disposal of customary land except to PNG citizens in accordance with customary law, and the land courts are often unwilling to enforce commercial sales, although some magistrates will recognize leases of customary land for commercial purposes under customary law.[245] Due to the combination of these restrictions and the interminable bureaucracy involved in permissible transactions, customary landowning groups have found it nearly impossible to transfer their land to non-kin through any formal means. As Michael Trebilcock writes,

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[245] Cooter, *Inventing Market Property*, *supra* note 21, at 773.

> The intermediation role assigned to the central government under current land policies in Papua New Guinea raises several problems. First, the administrative machinery through which transactions must be processed is very intensive in bureaucratic resources and is extremely slow and inefficient . . . . Second, many customary landowners appear to resent being compelled to deal with the government . . . and consider that they could advance their interests more effectively by being able to canvass opportunities directly with a range of third parties.[246]

As a result, customary landowning groups in PNG have developed informal markets in customary land, which may be compared to Michael Heller's account of informal markets in street kiosk space in post-Soviet Moscow. Many customary landowning groups have turned to quasi-formal or informal negotiations with non-kin seeking use of or access to customary land.[247] In his fieldwork in PNG, Robert Cooter observed "substantial black market or gray market activity in land" although, as he writes, "documenting its extent seems impossible."[248]

Precisely due to their informal (and largely invisible) nature, little is known about the specifics of black market land transactions in PNG.[249] Western scholars have limited insight, therefore, into how decisions to sell or lease land on the black market are made or how enforcement of these transactions functions in practice.[250] In theory, however, it may be presumed that these informal transactions are relatively effective in facilitating highly valued uses of customary land. As Heller tells us, in post-Soviet Moscow informal re-bundling practices involving corrupt contracts and bribery provided a solution for the desperate need to establish commercial outlets.[251] In PNG, customary groups that want to sell or lease their

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[246] Trebilcock, *supra* note 13, at 396.

[247] JACK K. KNETSCH & MICHAEL TREBILCOCK, *Land Policy and Economic Development in Papua New Guinea* (1981), *reprinted in* MUGAMBWA & AMANKWAH, *supra* note 12, at 73 (citation omitted).

[248] Cooter, *Inventing Market Property*, *supra* note 21, at 776.

[249] *See generally* JOHN D. CONROY, ESSAYS ON THE DEVELOPMENT EXPERIENCE IN PAPUA NEW GUINEA 24–28 (1982); Holzknecht, *supra* note 50, at 145–46.

[250] Informal arrangements could have negative repercussions for landowning clans depending on how decisions to sell or lease land on the black market are actually made. Although traditionally all decision-making with respect to significant changes in land use required unanimous consent from the affected clan members, JONES & MCGAVIN, *supra* note 32, at 29–30, black market strategies may or may not adhere to these procedures. If decisions to sell may be made by a single clan member, informal markets would seem to create a situation where clan land—important for spiritual, subsistence, and social security purposes—can be sold out from under a clan member without his or her consent. It may be presumed, however, that disputes of this nature would be worked out through traditional mediation procedures or in land court, which is unlikely to uphold a black market sale or lease that was not conducted in accordance with customary practice. *See* Cooter, *Inventing Market Property*, *supra* note 21 at 773.

[251] Heller, *supra* note 36, at 643.

land for development or other commercial purposes but may be deterred by government intervention are finding a solution in black market direct dealings. By enabling fragmented and overlapping rights in customary land to be "bought out" on the black market and thus re-bundled in a single owner, this solution would also seemingly resolve any anticommons problems internal to the customary landowning group that might arise over the long term.

However, scholars have noted a number of potential problems with informal dealings in customary land. Due to cultural divergence between landowners and potential purchasers, written contracts are often not treated as binding by customary landowners contrary to the expectations of purchasers.[252] Instead, the great majority of sales and leases of customary land are based on informal understandings, which establish "vague, uncertain, and flexible" standards of cooperation.[253] While understandings are fluid and relatively costless, informal contracting in this way can only be suitable for parties in close-knit, long-term relationships.[254] Arm's-length dealings require firm contracts, primarily to clarify the rights of the parties and to provide for effective enforcement.[255] Although informal land dealings or other agreements between a land group and a non-group member may be enforceable within a clan based on a shared understanding with a member of that clan at a given point in time, customary law may change or be reinterpreted as tribal leadership shifts, potentially leaving these agreements unenforceable if they are not recognized under formal legislation. Few external enforcement mechanisms are available, except perhaps through mediation or in a land court, which may uphold a commercial lease under customary law but will likely invalidate a sale.[256] As a result, many outside investors might be discouraged from participating in informal arrangements with respect to customary land due to the lack of clarity and security of the land rights purporting to be transferred.

Thus, although these informal markets may increase measurable productivity on customary land, Hernando de Soto, a leading theorist on the connection between law and economic development, argues that informal economies cannot actually ensure that land is mobilized to its most highly valued use.[257] De Soto posits that a vibrant informal economy, often prevalent in developing countries, does significantly contribute to a country's overall economic performance.[258] This proposition has been put forward by scholars of PNG's economic development as well.[259] De Soto suggests,

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[252] KLOPF, *supra* note 18, at 25.
[253] Cooter, *Inventing Market Property*, *supra* note 21, at 773.
[254] *See id.* at 774.
[255] *Id.*
[256] *See* Cooter, *Inventing Market Property*, *supra* note 21, at 773.
[257] *See generally* HERNANDO DE SOTO, THE OTHER PATH: THE INVISIBLE REVOLUTION IN THE THIRD WORLD 177–82 (1989).
[258] *See id.* at 60–62.
[259] *See* Holzknecht, *supra* note 50, at 146. *See also* CONROY, *supra* note 249, at 26–27.

however, that this contribution could be strengthened considerably if the legal system helped bring informal market participants into the formal sector through property registries and provisions for enforcement of long-term contracts.[260] Arguing for the integration of informal economies into the formal sector, de Soto writes:

> [W]here there is no need to avoid detection by the authorities, the confidence created by enforceable contracts makes people more prepared to take risks and these contracts have become requisite for long-term investments. Since innovation is the riskiest investment if a government cannot give its citizens secure property rights and efficient means of organizing and transferring them—namely contracts—it is denying them one of the main incentives for modernizing and developing their operations.[261]

Therefore, as both de Soto and Michael Heller would argue, widespread tolerance of informal markets in land is only a second-best solution to anticommons problems. Without the security and clarity of contractual rights ensured by formal procedures, maximum investment levels (and thus the potential for achieving the highest-valued land uses) will not be achieved.

The State has attempted to empower land groups to deal legitimately with third parties by enacting the Land Groups Incorporation Act of 1974 ("LGIA").[262] This Act was intended to recognize customary land groups as natural corporations and to allow these corporations to hold, manage, and deal with land in their customary names.[263] Registration as an Incorporated Land Group under this Act enables a land group to hold, use, and dispose of land in any manner allowed by custom to use and manage land (or enter into agreements for the use and management of land), to borrow money on credit for such purposes, to sue and be sued in its own name, and to have all the rights and responsibilities of any other corporation.[264] Sale of customary land to non-kin is still prohibited, but leases in accordance with customary law are presumably now formally acceptable under the LGIA.[265] The manner in which land may be leased by an incorporated group must be specified in that group's constitution, which must be formally registered upon incorporation.[266] Because each group's constitution is based on its own customary law, the means of dealing in land will likely vary from group to group. Although the land owned by an incorporated group

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[260] *See* De Soto, *supra* note 257, at 161–62, 164–71, 177.

[261] *Id.* at 179.

[262] Land Groups Incorporation Act of 1974 (Papua New Guinea); Power, *supra* note 14.

[263] Land Groups Incorporation Act of 1974 (Papua New Guinea).

[264] *Id.* at 11, 13.

[265] *See* Lynne Armitage, Customary Land Tenure in Papua New Guinea: Status and Prospects § 3.1 (2001), http://dlc.dlib.indiana.edu/archive/00001043/00/armitage.pdf (last visited Nov. 4, 2006) (on file with the Harvard Environmental Law Review).

[266] Land Groups Incorporation Act of 1974 § 8 (Papua New Guinea).

is still customary land (and thus dealings with respect to that land will not be registered), formal registration of group land management and disposal procedures is supposed to provide some security and predictability for third parties entering into an agreement with an incorporated land group.

This Act, by formalizing customary law through the registration of group constitutions, could provide an avenue to legitimate some customary practices, such as leasing, that are not otherwise legally cognizable. However, this system too has its drawbacks. As Alyssa Vegter would argue, market transactions executed under the banner of an incorporated land group are no more secure in practice than transactions conducted by unincorporated kinship groups. Registration as a land group does not involve any adjudication regarding the ownership of land; therefore, entities contracting with land groups risk entering a binding agreement for the purchase of rights to land that may be in dispute.[267] This problem is exacerbated by the fact that the LGIA provides for representative decision-making by an elected committee whose decisions bind the group they represent.[268] In other words, clan members who will be affected by a proposed change in land use may not have the opportunity to participate in the decision-making process except through indirect representation.

Harold Demsetz has argued that division of decision-making functions, as in a publicly held corporation, is an effective means of minimizing transaction costs in large-group ownership of property rights.[269] Therefore, it may be argued that allowing customary landowning clans to adopt representative decision-making procedures under the LGIA is the most promising solution to overcoming anticommons problems with respect to commercial land deals.[270] However, the customary landowning group does not lend itself well to a corporate structure. Peter Donigi, a prominent PNG lawyer and representative voice for indigenous groups, suggests that this structure does not appropriately reflect customary principles and may, ultimately, hinder effective land mobilization:

> Despite the fact that the clan, in traditional culture, transcends realms beyond the understanding of . . . agents of capitalism, the agents are not prepared to give corporate legal recognition to clan structures even though these have existed in Papua New Guinea for many thousands of years. The business people insisted on introducing the structures they knew best—the corporate en-

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[267] *See, e.g.*, Vegter, *supra* note 61, at 565 (citation omitted).

[268] Trebilcock, *supra* note 13, at 408.

[269] *See* Demsetz, *supra* note 72, at 358.

[270] It may be argued that a corporate structure will not function as efficiently in the context of customary landowning clans as it might for other corporate actors that face greater competition and market constraints. Because competition and market constraints have opposing effects on the efficiency of a particular market, however, it is difficult to say whether this distinction is meaningful in evaluating the efficiency of a corporate structure governing commercial uses of customary land.

> tities pursuant to their company laws . . . . The complete disregard of the clan system and the non-recognition of the authority of the clan Chiefs will result in significant economic disaggregation and future social upheavals.[271]

Although the LGIA was enacted shortly before PNG gained independence from Australia, incorporation is still not at all a widespread practice among landowning clans in PNG.[272] Perhaps this is because customary landowners, like Peter Donigi, feel that incorporation as a land group would be inappropriate and contrary to customary law. Alternatively, perhaps, as with the Land (Tenure Conversion) Act, customary groups cannot effectively reach an agreement to incorporate as a land group because customary law does not provide a framework for understanding corporate representative governance structures. For whatever reason, the LGIA fails to serve its intended purpose of enabling widespread mobilization of customary land.

III. Recommendations: Crafting a Better Solution

Clearly, land mobilization in PNG needs to take a new direction. As the above examples demonstrate, both regulatory and market-based attempts to re-bundle communal rights to customary land have failed to facilitate highly valued uses of customary land. Therefore, it may be argued that privatization is currently not the optimal solution to the anticommons problems impeding commercial transactions in communally owned land in PNG. Reasoning from the above analyses of the nature of commons and anticommons property and of ineffective land mobilization strategies, this Article proposes that an optimal solution to anticommons problems in PNG would not only retain communal land tenure but would also keep determinations of commercial land uses strictly in the hands of customary landowners in accordance with customary principles.

A. The Optimal Solution Would Retain Communal Land Tenure

As the preceding section has shown, consolidation of customary land use rights in one clan member, either voluntarily or compulsorily, is not a viable solution to anticommons problems in PNG. Consolidation programs based on voluntary agreement to consolidate within a landowning clan will not succeed because of the nature of anticommons property and particularly because customary law does not provide a framework for understanding

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[271] Peter Donigi, Indigenous or Aboriginal Rights to Property 48–49 (1994).

[272] A Case Study on Indigenous People, Extractive Industries and the World Bank: Papua New Guinea § 2.3 (2003), *available at* http://www.forestpeoples.org/documents/prv_sector/eir/eir_internat_wshop_png_case_apr03_eng.pdf (on file with the Harvard Environmental Law Review).

unitary land ownership. Compulsory consolidation programs would unnecessarily upend centuries of tribal land ownership and would thus contradict the intent expressed in the Constitution of PNG to respect the integrity of customary law and traditional ways of life. Moreover, such a program would unnecessarily interfere with structures of subsistence land management that are already operating efficiently under a system of informal norms and reciprocal obligations. Finally, any attempt at consolidating land use rights would likely meet significant resistance from indigenous landowning clans, whose social structure is inextricably linked to principles of communal land tenure. Indigenous resistance is only one of the costs involved in establishing and maintaining a system of private property rights in PNG. As Michael Taylor writes, "Private property rights are not costlessly created, modified, and enforced; state regulation does not come free; and both may have effects which it is impossible to [price]. What solution is best must surely depend to some extent on the relative costs of the possible solutions."[273] Here, instituting a system of private property on customary land would involve considerably greater costs than retaining a system of communal land tenure.

Communal land tenure in this context also has distinct benefits. First, group ownership offers the advantages of risk-spreading and increased returns in the context of what Ellickson terms "large events," such as development projects.[274]

Second, keeping customary land in communal rather than individual ownership ensures wide distribution of the benefits that may be created by development.[275]

Similarly, the social restrictions on alienation encouraged by communal ownership within a close-knit customary landowning group ensure the survival of community and cultural identity (insofar as this identity is tied to land- and resource-based wealth). As Michael Rynkiewich points out in reference to U.S. allotment policies that fragmented Indian reservation lands during the nineteenth century, "[h]istorically, colonisers have used land registration as a means of individualising land ownership and then wresting the land away from the owner."[276] Currently, land is the primary source of wealth among customary peoples, and indigenous landowners have been concerned that a move toward a system of individual land tenure will leave many indigenous citizens of PNG landless.[277] The social pres-

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[273] Michael Taylor, *The Economics and Politics of Property Rights and Common Pool Resources*, 32 NAT. RES. J. 633, 635 (1992).

[274] *See* Ellickson, *supra* note 41, at 1334–35, 1341.

[275] Trebilcock, *supra* note 13, at 400.

[276] Rynkiewich, *supra* note 12, at 50.

[277] *See* Tim Curtin, *Scarcity Amidst Plenty: The Economics of Land Tenure in Papua New Guinea*, *in* STATE, SOCIETY, AND GOVERNANCE IN MELANESIA: LAND REGISTRATION IN PAPUA NEW GUINEA: COMPETING PERSPECTIVES 6 (2003).

sures generated by trust and continuity among members of a close-knit group would tend to keep rampant alienation of land rights in check.[278]

A reasonable concern, of course, is whether this check will be too effective. As this Article has shown, the fundamentally communal land tenure regime is a relevant factor underlying anticommons problems with respect to commercial transactions in PNG. However, it may be argued that communal ownership is not the motivating cause of the anticommons loggerhead. Rather, the fundamental source of an anticommons problem is the degree to which interests are aligned among owners of anticommons property.

For example, in comparing commons property that consistently suffers from tragic over-exploitation (namely, unrestricted open access property) to commons property that is efficiently managed (generally property under the ownership of a close-knit group), it is evident that the key distinction between these two forms of ownership is the extent to which interests are aligned among potential resource users. With respect to open-access property, user interests are radically heterogeneous: each user is fundamentally self-interested, with no thought for the costs or benefits his opportunistic behavior will impose on a group.[279] Within close-knit groups, on the other hand, interests tend to be more closely aligned.[280] Transaction costs are low among a group of decision-makers with homogeneous interests whereas transaction costs generated within a heterogeneous group can be prohibitively high, and a comparison of open-access to group-owned property reflects that outcome.[281] The same principle is at work within customary landowning groups in PNG. With regard to subsistence land uses, group interests are aligned and land management functions efficiently.[282] Where commercial transactions are involved, however, group interests become fragmented, and anticommons problems emerge.[283] The relevant question, then, is whether this heterogeneity of interests with respect to dealings with non-kin is insurmountable, warranting a shift away from communal land tenure. It may be argued that this current fragmentation of interests is not insurmountable and that, over time, individual attitudes toward commercial land dealings within customary landowning groups will move toward homogeneity. As discussed above, land rules within close-knit groups evolve in a cost-minimizing direction.[284] Thus it may be argued that communal ownership of customary land will facilitate the development of efficient land rules regarding commercial uses over the long term, if not within the immediate future.

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[278] *See supra* note 118 and accompanying text.
[279] *See supra* notes 100–102 and accompanying text.
[280] *See*, *e.g.*, OSTROM, *supra* note 37, at 88.
[281] *See supra* notes 97, 115 and accompanying text.
[282] *See supra* note 135 and accompanying text.
[283] *See supra* note 36 and accompanying text.
[284] *See supra* note 121 and accompanying text.

Gary Libecap's analytical framework describing the incentives behind contracting for reallocation of property rights is illustrative here. In general, Libecap posits that parties will be motivated to bargain for a shift in property rights when they can expect increased private gain from institutional change relative to the status quo.[285] As he suggests, pressure for institutional change may be stimulated by shifts in resource valuation, changes in production technology, or shifts in preferences.[286] The likelihood that institutional change will occur as a result of this pressure will depend on the size of expected gains, the number and heterogeneity of parties involved, information discrepancies, and the distribution of current and proposed gains.[287] Larger expected aggregate gains are more likely to motivate institutional change: at a certain point, aggregate gains are significant enough that distribution of those gains among bargaining parties will meaningfully improve their welfare.[288] Thus, it seems likely that as available land in PNG becomes increasingly scarce and values of customary land continue to rise, at some point the potential welfare gains to each landowning group member from commercial transactions in clan land will become high enough to motivate widespread changes in attitude and practice.

Moreover, customary landowning groups may eventually institute changes in customary law or practice to accommodate more commercial dealings in land with non-kin. One of the most obvious institutional changes that might arise to facilitate such commercial dealings would be the removal of internal restrictions on transfer of customary land, as dictated by the customary law of a particular landowning group or by social pressure generated among group members. Attitudinal changes toward capitalist practices among indigenous group members could encourage further movement in PNG away from a subsistence economy and toward a cash-based economy. As economic structures change and interests among customary group members align with regard to sales of customary land, it may be easier for group members to agree on whether to sell off customary land. Alternatively, landowning groups may choose to modify or eliminate the customary law requirement of unanimous consent for transfers of customary land.

Similarly, customary law might begin to recognize rights of individual group members to seek partition of their property rights from the communal land holdings, either by sale or by order of the local land court. Currently, individually motivated partition actions have no role in facilitating commercial transactions in customary land. Partition actions arguably lower the transaction costs associated with transfers of customary land by effectively reducing the decision-making parties to one individual land-

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[285] LIBECAP, *supra* note 37, at 11.
[286] *Id.* at 16.
[287] *Id.* at 21.
[288] *See id.* at 19–21.

owner; however, a strong right of partition effectively grants that landowner an unlimited right of exit from the landowning group, which can be dangerous to close-knit societies.[289] An unrestricted right of exit can disturb the efficient operations of a close-knit group by destroying trust and encouraging self-interested behavior among group members.[290] Thus, because (as this article suggests) maintaining close-knittedness within a landowning group is the best means of ensuring development of an effective customary law solution to anticommons problems in PNG, recognition of partition rights is not presently advisable. Nonetheless, as incentives for institutional change increase and attitudes toward capitalist practices shift among indigenous landowners, the benefits of partition may begin to outweigh these costs, making partition an efficient mechanism for mobilizing customary land.

Of course, there is a reasonable concern that as commercial transactions proliferate, close-knit groups will become increasingly attenuated and individual interests will begin to take precedence over group interests, thus undermining the benefits of communal land ownership. This Article does not presume that communal land tenure will always be the most efficient solution to anticommons problems in PNG. As groups become more attenuated through shifts in customary law, cultural attitudes, and economic incentives, widespread privatization of property interests may eventually become a more feasible land regime for PNG, requiring more active State governance. However, the impetus for such widespread change must start within customary landowning groups themselves—this is the only way to transition to a system of private property ownership in PNG (if so desired) without incurring considerable costs. In the meantime, communal land tenure is necessary to ensure efficient resource management and mobilization of customary land for highly valued uses.

B. The Optimal Solution Would Eliminate Governmental Intervention and Thus Keep Land Use Determinations Strictly in the Hands of Customary Owners

Michael Heller emphasizes that governments should take care to avoid creating anticommons property in defining new property rights.[291]

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[289] *See* Dagan & Heller, *supra* note 185, at 576–77.

[290] *See id*. (stating that: "Strong exit allows each commoner an unwaiveable right to leave the commons at any moment. But each commoner also knows that others can leave at any moment, raising a serious concern for those who want to stay put. The stay-putters worry what may happen between the moment the foot-out-the-door folks decide to leave and the moment they actually exit. In the interim, the stay-putters may continue to cooperate, but the foot-out-the-door folks are now playing a transitory and short-lived game. The stay-putters may worry that, during the interim period, which can happen at any time, the foot-out-the-door folks will take advantage of them, either by overexploiting or underinvesting in the commons resource.").

[291] Heller, *supra* note 36, at 688.

However, by interjecting itself into the decision-making process with respect to customary land use, the PNG government has done precisely that. The government expressly claims exclusionary power over all direct dealings in land between customary land groups and non-kin through restrictions on most commercial transactions in land.[292] Furthermore, the government exercises effective exclusionary power over all other commercial transactions through bureaucracy and delay in the approval process, which has brought formal leasing of customary land nearly to a halt.[293] Both policies, as this Article has shown, create more anticommons problems than government interference was intended to resolve.

Conversely, we have seen that with respect to intra-tribal land management, customary landowning groups function efficiently. Customary landowning groups have also demonstrated an ability to overcome anticommons problems with respect to commercial dealings in land by creating informal, economically viable markets in land.[294] Moreover, presumably members of a kinship group are best suited to understand the needs of that group, and, therefore, customary landowning clans are the governmental bodies best able to respond to internal pressure for development activity once that pressure reaches a sufficient level.

As between these two sets of actors, we may conclude that customary landowners are better suited to resolve anticommons problems within the kinship group. Therefore, it may be argued that the PNG government should leave commercial land use determinations to customary landowning groups as much as possible. As a first step, this might mean eliminating the lease-lease-back program and lifting the Land Act's ban on direct dealings in land with non-indigenous citizens. Although this prohibition on direct dealings was implemented to protect customary landowners from unscrupulous investors, the informal economy that has developed around customary land demonstrates that this blanket prohibition is unnecessary, particularly if social pressures and the rule of unanimous consent remain in effect as buffers. Lifting this ban would effectively help formalize the informal economy currently in place by rendering direct dealings enforceable in the land courts and thus facilitating a shift from a system of informal understandings to a system of firm contracts.[295] In this way, informal market actors would be empowered to contribute more significantly to the overall economic climate of PNG. Furthermore, lifting the statutory ban on direct dealings is a more appropriate solution than ignoring or amending the PNG Constitution, which guarantees customary owners rights of control over their resources.[296] The rights of indigenous people

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[292] *See* KLOPF, *supra* note 18, at 18.
[293] *See supra* note 221 and accompanying text.
[294] *See supra* note 247 and accompanying text.
[295] *See* Cooter*, Inventing Market Property*, *supra* note 21, at 773–74.
[296] *See* Vegter, *supra* note 61, at 556.

to control their land and resources are also recognized under international law.[297]

Another argument in support of strengthening customary land tenure is that property rights determined through a political process often fall victim to the numerous competing pressures on policy-makers, who must respond to constituents, budget demands, shifts in political conditions, and re-election prospects.[298] Decision-makers tend to have short "time horizons," making agreements and decisions based primarily on short-run objectives.[299] The possibilities of planning for the long-term are further reduced for politicians in PNG, where government is characterized by frequent upheaval.[300] Therefore, it may be argued that "constitutional law and pervasive social customs may provide longer-term protection for property rights."[301]

This is not to say that the State should have no role in taxing or otherwise regulating development projects on customary land. Indeed, lifting the ban on direct dealing would enable the government to take advantage of the resources generated by this vibrant informal economy. Furthermore, the State might still legitimately choose to restrict alienation of customary land to foreign investors, as this can be considered a question of foreign policy rather than property law. In general, however, the power to determine land uses—both subsistence-based and commercial—should remain within customary landowning clans.

C. The Optimal Solution Would Be Grounded in Customary Law

It may be argued that customary law itself is the primary source of anticommons problems with respect to commercial land dealings in PNG in that it requires the unanimous consent of all clan members before implementing a significant change in land use. Unanimity requirements "may lead to anticommons tragedy, that is, mutual vetoes that waste a resource through underuse."[302] However, customary law is also the only appropriate mechanism for overcoming anticommons problems in the future.

Scholars of land mobilization policies in PNG have noted that the formal laws governing land use—e.g., the Land Act and the LGIA—are,

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[297] *See id.* at 557–60. *See also* Melissa A. Jamison, *Rural Electric Cooperatives: A Model for Indigenous Peoples' Permanent Sovereignty over Their Natural Resources*, 12 TULSA J. COMP. & INT'L. L. 401, 422–37 (Spring 2005).

[298] LEE J. ALSTON, GARY D. LIBECAP & BERNARDO MUELLER, TITLES, CONFLICT, AND LAND USE: THE DEVELOPMENT OF PROPERTY RIGHTS AND LAND REFORM ON THE BRAZILIAN AMAZON FRONTIER 17 (1999).

[299] *Id.*

[300] *See* CONNELL, *supra* note 1, at 274–301.

[301] *Id.*

[302] Dagan & Heller, *supra* note 185, at 590. In the liberal commons structure Dagan and Heller propose, decisions are governed by majority rule.

in theory, workable laws.[303] However, although these laws themselves do arguably provide manageable solutions to underuse of customary land, formal governance in PNG is generally unproductive, as discussed above. Comprehensive, effective application of even the best laws is infeasible where the government charged with applying these laws is disorganized, underfunded, volatile, and often corrupt.[304] Therefore, commercial land transactions in customary land should not be governed primarily by formal law.

Customary law is particularly well-suited to resolving anticommons problems with respect to commercial land transactions in customary land, particularly during a period of shifting indigenous attitudes toward capitalist practices. Although indigenous clan members in PNG generally respect traditional ways, the nature of customary law as an unwritten system built on norms and reciprocal obligations ensures that the laws governing customary society are flexible and continually responsive to new situations.[305] The fluid nature of customary law would suggest that even if anticommons problems are currently prevalent among customary landowning groups, the natural evolutionary development process of customary law is capable of responding to fluctuations in pressure for institu-

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[303] Rynkiewich, *supra* note 12, at 51.

[304] *See id.* at 51–52.

[305] Many scholars of customary law in PNG have noted its responsive nature. The most comprehensive region-by-region study of customary laws in PNG also reflects their fluidity. *See generally* CUSTOMARY LAW IN PAPUA NEW GUINEA, *supra* note 53.

For example, a small number of customary societies have not adopted a formal system of law at all:

> Investigation of the customary law of the Abelam people in this area revealed relatively few generally agreed upon substantive rules. Their customary legal system appeared to be less of a system of application of formal legal rules to a given fact situation and more a flexible and changing system of ensuring an equitable solution through compromise.

Id. at ii. Further, even in societies that have developed more formal laws, succeeding generations have modified traditional principles: in the Madang province, for instance, "[i]t is evident . . . that . . . traditional values . . . have lost their meaning . . . . The many changes are due largely to formal education [;] . . . the impact of commercial activity (cash economy); church influence[;] and declining knowledge of ancestral ways even among the older people." *Id.* at 44–45.

Some clans have also modified their customary practices with respect to land in response to changing economic conditions. In the Western Highlands,

> [l]and was never a problem in the past, because people were never permanently settled on the land because of tribal fights. There were also fewer people[,] allowing more land for gardening, etc. However after the colonial practice of buying land [,] . . . people realised that land should be preserved and protected by individuals, so individual members of certain clans started to claim the land on which they once built houses, because they realised the economic benefits for themselves and their children.

Id. at 121. This transition from communal to quasi-private property ownership signals the capacity of customary law to respond to economic pressures.

tional change that would facilitate widespread market activity. Indeed, custom is already "vigorously at work extending informal land law," and a substantial common law of customary property is continuing to develop within village land courts.[306]

It may be argued that, while the principles of customary law are appropriate for governing commercial uses of customary land, they should be codified to ensure greater security of interests for potential investors. However, codification of customary law could have disastrous results:

> People are agents of their own destiny. There are always alternative narratives and alternative customs that can be followed to reach a desired end. But if custom is codified, there is no alternative but to accept the wrong man as a chief or the accumulation of too much land in one person's hands. It would be wise

underutilized, customary land might also have remained undeveloped because customary landowners are not paradigmatic "rational actors" seeking to maximize individual gains whenever possible. Conservation interests might underlie the failure of policies for widespread development of customary land: customary landowning groups have traditionally valued their land as they value their own lives, and they have managed it in a way as to conserve resources for future generations.

A land management policy that leaves decision-making to each individual kinship group in accordance with customary law will allow customary landowning groups themselves to determine the pace at which they want development to occur, if at all, depending upon the unique needs of each group.

While radical, this call for greater self-determination among the indigenous tribes of PNG is not unwarranted. As Nancy Sullivan writes in her introduction to a collection of essays on culture and progress in PNG,

> [A]lthough ideas about shared heritage and a "Melanesian way" are invoked to support national unity, they are never used to discuss land tenure. . . . But beware. To the outside world, there may be one Melanesian community, but within Papua New Guinea there are the far more compelling affiliations of blood, speech, custom and, not the least, land . . . . To insist on efficiency and simplicity, amongst other ideals of capital growth, is to mistake the "social good" for a few wealthy beneficiaries . . . . The more inclusive and fluid solution here is not going to be a simplification, but rather some epic of customary principles that remains open to perpetual revision: security for loans based, as it were, upon the instability of customary tenure.[309]

PNG has achieved limited success in attempting to adopt Western principles of land tenure. Now is the time to try the Melanesian way.

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[309] Nancy Sullivan, *Introduction*, *in* CULTURE AND PROGRESS, *supra* note 12, at 5, 29–30.