# The Prejudices of Property Rights: On Individualism, Specificity, and Security in Property Regimes

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It is a truth universally acknowledged that a nation with little wealth must be in want of land privatisation.[1] This received truth — a prejudice — continues to animate the policy dialogue in a number of countries where traditional property regimes have not been shown to be failures (Bromley, 1991). In other words, given the ecological-economic nexus, common property regimes can be quite appropriate, despite various efforts to prove them 'inefficient' or destructive of environmental resources (Bromley, 1992). In this article we shall address a different prejudice pertaining to property rights — namely, that the transition from common property to private property represents a move towards more *individual*, more *specific*, and more *secure* land rights (Cohen and Weizman, 1975; Demsetz, 1967; Feder, 1987; Feder and Feeny, 1991; Feder and Noronha, 1987; Feder and Onchan, 1987; Feeny et al. 1990; North and Thomas, 1973; Platteau, 1996; Ruttan and Hayami, 1984). This is a prejudice because, to the extent that these outcomes are thought to be desirable, they are only so because of the normative system out of which they arise. In the extreme, institutions that ratify individualism at the expense of social cohesion can be questioned on grounds of sustainability.

We motivate our story by a simple illustration. Individual *I* may undertake activity *A* which leads to outcome *B*. If the activity is undertaken, to what extent can the individual expect to reap the rewards or suffer the consequences implicit in the outcome? It is conventionally asserted that efficient incentives are provided by an assignment of rights where *I — and that individual only —* is affected by the outcome *B*. It is said that efficiency demands complete internalisation — decision (*A*) and outcome (*B*) should remain within the perimeters of a single decision-maker (*I*). If internalisation is not complete, discrepancies between private and social costs and benefits will emerge (Pigou, 1920). In general, activities for which costs are dispersed will be supplied in excess of the social optimum, while those for which benefits are dispersed will be undersupplied. However, the conventional view of social costs ignores the dual nature of externalities, as well as the costs of specifying, enforcing, and exchanging exclusive rights (Coase, 1960; Dahlman, 1979; Randall, 1983;

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* Byline goes here.

[1] With apologies to Jane Austen.

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Barzel, 1989). On this broader view, the discrepancy between social and private costs is only an imagined discrepancy between economic performance in the real world and performance in a fictional world of costless transacting. The presumption of externalities, therefore, simply reflects the fact that the costs of internalisation exceed the benefits (Vatn and Bromley, 1997).

Assume that $N$ farmers *jointly* manage an agricultural plot. If one farmer ($I$) spends an extra $A$ hours labouring in the field, the crop yield will increase by $B$. If each farmer's share of the harvest is $1/N$, individual $I$ will receive $B/N$ as a result of effort $A$. Note that the right of individual $I$ to undertake $A$ and subsequently claim $B/N$ is an *individual right*.[2] The right is potentially specific, with a high level of precision in both the definition of the permitted action and the outcome to which the individual may lay claim. The right is inherently neither more nor less secure than what we usually regard as a *private right* in land. If the concept of security of rights is to have any meaning, it must be understood that $I$, after undertaking $A$, may have a secure right to $B/N$. Finally, even though the right may be individual, specific and secure, the arrangement outlined above appears to be a poor way of organising rights. In the absence of any additional restrictions, the incentive to undertake $A$ is already halved when a group of two farmers replaces an individual cultivator. Before elaborating on each of the above examples, a brief note on rights and duties seems necessary.

2 '*A*' can more generally be understood as any activity—labour, purchase of commercial inputs, or abstinence from further extraction of fuelwood—that represents a cost to the individual and which contributes to an increase in the value of the outcome at a decreasing rate. This form of tenure has been described as 'monolithically egalitarian' (Berry, 1993).

## First principles: rights and duties

To have a right is to have the capacity to *compel* the coercive power of the state — or the pertinent authority system — to defend your interest in a particular outcome. A right is not simply passive permission to have and to control some object or to do certain things. A right is instead a much more sweeping ability to *command the state* (or a comparable authority system) to protect you and your interests. When that power over the relevant authority system is exercised on behalf of an asset of economic significance then the individual has what we would call a *property right*. A property right is therefore 'a claim to a benefit (or income) stream that the state will agree to protect through the assignment of duty to others who may covet, or somehow interfere with, the benefit stream' (Bromley, 1991: 2). It is the correlated duties on others that give rights their empirical content (Commons, 1961). Prohibitions and requirements are clearly related, in that their function is to circumscribe the possible set of individual actions.

Of particular importance here is the distinction between rights and privileges: 'if X has a right against Y that he shall stay off the former's land, the correlative (and equivalent) is that Y is under a duty toward X to stay off the place … whereas X has a *right* … that Y, the other man, should stay off the land, he himself has the *privilege* of entering on the land; or, in equivalent words, X does not have a duty to stay off' (Hohfeld, 1913: 38-9). The status of *privilege* gives X the ability to act without regard to the implications for Y, that is, to behave without consideration for the interests of other persons. Those (Y) whose interests are irrelevant to the agent with *privilege* (X) are defined as having *no rights* with respect to the actions of X.

What provides X with a right, rather than merely a privilege, with respect to a parcel of land is therefore the correlated duty of Y to refrain from entering on the land — and that capacity to exclude carries the explicit sanction of the state. Both X and Y may hold unconstrained rights of action on different plots of land, or they may hold rights to different sets of actions on an unconstrained expanse of land. But if duties apply to neither actions nor land, they will possess *privileges* rather than *rights*. The sanctioning of a certain form of behaviour towards a given resource is therefore insufficient for a right to emerge; what emerges is a mere privilege. The presence or absence of exclusion is a critical question in relation to the types of legal conceptions that apply to given objects. But, when exclusion is present and the relevant conception is therefore a *right*, a further question concerns the specific manner in which this exclusion is achieved. In other words, what is the boundary by which the right-holder's property interest is defined, and through which outsiders are excluded?

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Notice that we have the description of individual choice in terms of penalty-reward configurations, and that there is the propensity to view restrictions as less than absolute and thus capable of changing the penalty and reward structures of certain actions rather than removing them from the choice set. Certain restrictions will, when enforced, render an activity impossible, but most restrictions will simply make the activity less attractive; rules may be broken and rights may be violated. Whether or not a violation will take place depends on whether the (expected) reward exceeds the (expected) penalty. In this respect, rules differ from other economic incentives only in form, and the difference in form primarily relates to the existence of thresholds in the relationship between activity and net reward.

In the face of most restrictions, agents are still free to choose from choice sets not of their choosing. If the assignment of rights or duties is to be effective, however, it must alter the penalty and reward structure in such a way as to induce adjustments in behaviour. Duties are assigned in order to encourage agents to undertake activities that, left to their own devices, they would choose to neglect, or to reduce or desist from activities they would otherwise wish to undertake. Similarly, effective rights assignments allow agents to initiate or increase activities from which they benefit, or to terminate or reduce activities from which they do not. Effective duties impose costs upon individuals, while effective rights confer benefits. And, except when privileges ensue, the removal of a duty is the granting of a right and vice versa.

We see that rights and duties, from the point of view of the rights-holder — and for the purposes of economic analysis — are generally equivalent to autonomous incentives such as prices. This seems uncomplicated when comparing the imposition of a duty such as a tax with a change in price. On the other hand, rights and duties are also linked to fundamental issues of liberty and identity in a way that prices are not.[1] But economists cannot have it both ways. If we are willing to view the removal and imposition of constraints as mere changes in penalty-reward structures, and at the same time employ a view of rational behaviour that sees choice as automatic, we cannot also see the imposition of a constraint as a subtraction in the number of options facing individuals. The subtraction is, instead, a subtraction of benefits. Nor can we make an appeal to any basic difference in the individual scope for influencing the assignment of rights versus the scope for influencing prices. In this respect, then, the economic approach would seem strangely at odds with libertarian philosophy, with its celebration of the freedom to choose. A further implication is that, since rights and duties *primarily serve to allocate costs and benefits*, it is impossible to determine whether a right or a duty has been assigned without reference to some prior position. This in turn means that the distinction between what economists consider voluntary action and what is coercion, becomes tenuous (Basu, 1986; Nozick, 1972).

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1 For a discussion of rights as liberty versus rights as utility, see Coleman and Krauss (1986).

## On specificity and security

### *On specificity of rights*

That rights become more specific as scarcity of resources increases is often advanced as self-evident, with no attempt to define more closely the concept of specificity. One must distinguish between the *specification* and the *specificity* of a right. Whereas the former is external to a right and dynamic in nature, the latter is internal and static. To expand the bundle of rights that a farmer possesses over his land, or to assign rights to a previously unclaimed resource, is certainly to specify rights. But it is not necessarily to *specify very specific rights*. The general implication seems to be that more specific rights represent a removal of scarce resources from the public domain into the hands of specific rights-holders. For example, rights may be assigned to resources that previously were exploited under conditions of open access. But this action assigns *more* rights rather than *more specific* rights.

Specificity may also refer to the degree of precision with which existing rights are defined (Eggertsson, 1990). A right defines permissible behaviour on the part of the rights-holder — and others — with respect to a given object or circumstance. A lack of precision may thus be linked to the sanctioned behaviour of the rights-holder, or to the associated duties of others, or to the object over which the rights and duties extend. A farmer may be uncertain as to the exact location of the boundary that separates his land from that of his neighbour. Within a precisely defined physical boundary, access may be vague with respect to the types of resources covered, the acceptable amount of extraction, and the period within which extraction may occur. Alternatively, the concept of specificity may embody the idea of detail, which here denotes the level of fragmentation of rights. Thus, rights that distinguish between access to different tree species are more detailed than rights that do not, and rights that define access to grazing land in terms of different seasons are more detailed than rights that do not. Detail is of relevance when rights are assigned in some manner other than location.[2]

Increasing precision and detail both imply the removal of resources from the public domain, and degrees of both precision and detail may grow as scarcity increases. The rising value of resources may justify the costs of more detailed

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2 When rights are not specific they are said to be ambiguous. This clearly has an application in the case of an amorphous boundary, be it physical, temporal, or conceptual. But it is a poor way of describing lack of detail. A right to cut firewood in a given area is, through omission of any qualifying clause, a right to cut all tree species, and this lower level of detail is not intrinsically more ambiguous than the level where trees are separated by species. The statement that 'everyone can do everything', although lacking in detail, is not ambiguous.

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and precise rights specification (Bromley, 1991). There is also the matter of how increasing precision and detail affect enforcement costs. Increasing detail will generally raise the costs of enforcement (or of insecurity), since the process of assigning rights to successively smaller units is additive, i.e., one retains all the previously specified boundaries of exclusion, while at the same time adding new ones. Increasing precision, on the other hand, will in general reduce enforcement costs.

Boserup (1965) used the term specific in yet another sense. In her terminology, specific rights applied to permissible activities in a specific location, whereas general rights applied to permissible activities but in no definite location. However, as will be discussed below, location is only one of several dimensions in which rights may be defined. In this sense, increasing specificity may simply mean a shift from one form of individual rights to another. We thus have the following proposition:

***Proposition 1: Making rights more specific embraces several distinct processes.***

*On security of rights*

In a recent book on land tenure security in Africa, the concept of security is said to contain three separate parts: *breadth* of rights, *duration* of rights, and *assurance* of rights (Bruce and Migot-Adholla, 1994). This conception blends three distinct dimensions of rights into the security mixture; the *size* of the bundle of rights, the *duration* of different rights, and the *risk* of losing each one. This blending, we suggest, makes the concept of security intractable, since there is no logical thread with which the three separate dimensions can be stitched together. Moreover, there is no consistent manner in which to assign weights to the different parts.[3]

For security to survive as a coherent concept, we insist that breadth of rights and duration of rights must be jettisoned, leaving only the idea of security — assurance — to do the necessary work. Security of rights certainly involves the risk of having the bundle of rights reduced through attenuation or annulment, but is not expressed through the size of the existing bundle. As for duration, the problem concerns the content or substance of a right rather than its security. Whereas a right to cultivate a field for one year is fundamentally different from a right to cultivate a field indefinitely, two identical rights can differ in the security with which they are held. We can denote the duration of the period

[3] It should be noted that the concept of tenure security used in Bruce and Migot-Adholla (1994) was developed in response to the challenge posed by the need to synthesise the results of empirical inquiries from a variety of African communities. Ideally, the same proxies should have been used in all surveys in order to provide comparative insights. This was, however, not possible in practice. Thus, the various surveys compiled in the book used the three different concepts, or combinations of these, as proxies for tenure security. In terms of that particular inquiry, therefore, the approach seems justified. In general, they can be analysed separately and there is no need to aggregate the three concepts.

between activity *A* and outcome *B* as *D*. If the right to *B* is held for a period shorter than *D*, then the farmer will receive 0. Assuming the right is perfectly protected, and is held for a period equal to or longer than *D*, the farmer will receive *B*. There may, of course, be uncertainty attached to the exact length of *D*, but this uncertainty is conceptually the same as that associated with droughts or other hazards beyond human control. Only uncertainty related to the period for which the right is held — not the period itself — will, in this view, cause insecurity.

Time is thus one dimension in which boundaries of exclusion may be defined. Conventionally, the problem of duration is seen as relatively straightforward. If the social objective is to maximise welfare over an infinite time horizon, permanent rights will generally be superior to rights of limited duration. This will be especially true when investment activities generate outcomes that are realised after — or over — very long time periods. In other words, for any given distribution of non-permanent rights, there will exist a superior distribution of permanent rights. Exceptions apply if rights of limited duration lead to sufficient savings in transaction costs. Such savings form the logic behind many contractual relations within firms and tenancy institutions, and constitute the reason why many goods can be rented or leased in some way or another (Coase, 1937; Cheung, 1969). Temporal restrictions may also be an expedient way to avoid overexploitation of resources when other corrective measures are expensive. We thus have the following proposition:

***Proposition 2: Security is assurance and nothing more.***

*Security as expectations*

A conventional view of tenure security is 'the risk of losing the land'. Or tenure security 'can also be defined more broadly as the perception of the likelihood of losing a specific right to cultivate, graze, fallow, transfer, or mortgage' (Barrows and Roth, 1990: 292). This definition of security (actually insecurity) contains three important dimensions. First, it acknowledges that security is primarily a feature of each individual right. Insecurity linked to one right may influence — or spring from the same source as — that of another right, but the security of a right to graze is not necessarily related to the security of a right to fallow. Secondly, it does not take for granted that all these rights are contained within the same unit of land, as does the conventional definition. The right to graze may apply to a different area of land, and a different time period, from the right to cultivate or fallow. One does not lose land, but one loses the right to use or benefit from some resource in some way. Thirdly, it emphasises the difference between *perception of* the likelihood and the likelihood itself. On the other hand, the definition focuses exclusively on the outright loss of rights, and thus ignores some other aspects of insecurity.


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Risk and uncertainty come in a number of different forms. The outcome of an activity such as crop cultivation may be influenced by risks of pest damage and theft. And just as the farmer may consider incurring the production costs of reducing the risk associated with pests, he may consider incurring the transaction costs of reducing the risk associated with theft. Only the potential violation implied in the latter source of risk, however, involves security of rights. To violate is to *break* rather than *alter* the rules, and violations are inversely related to enforcement of rights. Enforcement involves the monitoring and punishment of rights violations, which determine the likelihood of detection and the nature and gravity of a stipulated penalty once a violation is observed. The incentive to violate is thus determined partly by the probability of detection, and partly by the severity of the penalty if the violation is detected and the penalty imposed. This incentive to violate is in turn inversely related to the security of the person whose rights may be violated. Variables related to the expected outcome when a right is not enforced will also influence the incentive to violate. Of particular importance here is the value of the benefit stream (the property) to which the right is held.

Alteration of rights concerns the stability of rights structures. A farmer may, for example, face the risk of being evicted, in which case he will lose a number of rights. If this risk is, say, 0.50, a farmer undertaking *A* will expect to realise *B*/2. Alternatively, the farmer might face a risk of having some rights replaced by an inferior set of rights. A tax on produce might be imposed, or the farmer might be forced by government policy to sell a particular quantity to a particular buyer at a particular price. The resulting cost springs from two sources: the reduced benefits of a new set of rights, and the expectation that this new set of rights will actually be imposed.[4]

Imprecision, discussed earlier, is a further source of insecurity. Uncertainty as to the exact nature of rights may lead to conflict, or to incomplete utilisation for fear of such conflict. But precision also concerns the capacity to ascertain whether or not a violation has actually taken place. A lack of precision will therefore increase costs of enforcement and further reduce security.

Rights will thus be more secure if they are more precise and more diligently enforced, and if they are less vulnerable to wilful alteration. Violation, attenuation, replacement, annulment, and imprecision of rights may each assume different forms. Each form can be associated with a number of potential outcomes, each of which in turn is linked to a particular loss of benefit and a particular likelihood of occurrence. This leads to the realisation that the

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4 The distinction between having a right attenuated and having it replaced or annulled depends on the degree of detail applied in the definition of a particular right. Having rights attenuated may, in this sense, also include the specification of rights which are less likely to receive adequate enforcement or which have less precise boundaries. If the anticipated change is towards more rather than less valuable rights, the social cost will generally be lower than what is implied by the rights structure itself when stable. A change in rights will, of course, also entail transition costs related to measurement and bargaining. Whereas such transition costs, from the perspective of institutional evolution, are dynamic, the effects of behavioural modifications arising from the anticipation of rights changes are static costs.

security of a right is not the perception of a single likelihood but rather a locus of perceived likelihoods and associated changes in net benefits. And each point on this locus may modify behaviour in some way, rendering some socially desirable activities infeasible or less attractive, and some undesirable activities more attractive. Recall that insecurity of tenure is commonly believed to reduce investment demand, to hamper the emergence of credit markets, and to impede efficient allocation of land. The use of land as collateral and efficient redistribution, however, concern possession of rights to *transfer* land rather than security as such.

Security, as defined above, is not easily measurable. Determining the probabilities of multiple outcomes and their associated effects is insufficient; the true measure involves the individual perception of these probabilities. The cost of insecurity finds expression through the effects of the behavioural modifications to which this perception gives rise. These problems become even more acute when one moves from the relatively simple concept of a single right to the more complex concept of tenure — a bundle of rights. Insecurity of tenure, in this view, is merely a collection of the perceptions of an individual — the fear of not being able to benefit in full from the set of rights to which one lays claim, and the uncertainty associated with the nature of this set of rights. We are thus led to the following proposition:

***Proposition 3: Security of tenure concerns a locus of perceived likelihoods.***

## Communal rights and individual rights

*Individual rights in a collective*

Much has been written about communal tenures (common property/group ownership). The initial step was to clarify the fundamental distinction between open access and common property that had been confused in earlier writings (Ciriacy-Wantrup and Bishop, 1975). It is now well recognised that communal tenures generally denote a regime of rights and duties where a well-defined group of users interacts with environmental resources according to a mutually accepted set of rules (Bromley, 1989, 1991, 1992; Stevenson, 1991).

Leaving the concept of tenures — or bundles of rights — aside for the moment, what is a communal right? In essence, for any given benefit stream there are either individually assigned rights or no rules of use among members of the group of co-owners. This is the logical entailment of Hohfeld's (1913, 1917) legal conceptions. If both X and Y have a right against Z that he (Z) shall stay off the land, X and Y can be said to possess this right collectively. However, without further specification of their mutual rights, X and Y will each possess, simultaneously, privileges and no rights with respect to each other. In other words, X and Y may each act, with respect to the other, as they wish. Thus, when a group holds a *right in common*, there exist *duties* on the part of all non-members. However, if there are no rules specifying individual


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rights and duties *within the group*, we shall have restricted entry — necessary for a common property regime to exist — but the potential for behaviours among legitimate members of the group that resemble problems associated with open access regimes. In other words, each member of the group is susceptible to the predations of every other member on the benefit stream *within* the commons.[5]

It makes sense to speak of collective or communal rights when rights are assigned to a group through the very fact of their being a group. The rights of a village to manage its land and to exclude non-villagers from cultivation may be such a case. Here the village has a right against members of all other villages to use this land. Again, however, unless the villagers agree among themselves on a more detailed structure of individual rights and duties, such a communal right may well entail uncontrolled use within a common property regime. Communal rights, understood in this way, define the relationship between a group and other groups but shed no light on internal mechanisms that may control resource extraction by members of the group — say, the villagers.

Returning to the concept of tenure, Lewis (1963) discusses three scenarios in which the term 'communal tenure' is used. In the first of these, different individuals or groups may hold rights to different resources that co-exist on the same plot of land; we can call this 'multiple tenure'. The second is 'communal use with collective management'; the situation where *I* does *A* and receives *B*/*N* captures this arrangement. The third scenario denotes a situation where rights of use are individual but where rights of transfer are denied.

In a general extension of the last of these scenarios, communal tenures may therefore be characterised by the absence or attenuation of certain individual rights, for instance the right to sell land.[6] A refusal to grant an individual the right to sell a given asset such as land implies an individual duty *not to sell*. This individual duty against alienation is matched by a collective right to be spared the social costs that presumably would arise from such a sale. The benefit stream with which we are concerned is that which arises from another individual's non-alienation of land, but this benefit stream will generally not be subject to individual appropriation. The good in question here — protection against alienation by others — is essentially non-rival; one person's enjoyment of the benefits of 'non-alienation' does not come at the expense of others' enjoyment of those benefits.

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5 Another term to describe this condition is a lack of *internal authority* (Larson and Bromley, 1990).

6 For a comparable view of the concept of communal rights, see also Ault and Rutman (1979). John Bruce (1986) more generally defines individualisation as 'a reduction of community controls over land use and distribution, enhancing the rights of the individual landholder/farmer' (p. 52). Conceptually, there is no reason why the relevant 'community' could not be society at large represented by a national government. The rights of individual landowners in much of Europe, for example, are restricted by laws that limit alienation of agricultural land and laws that protect the rights of all members of society to roam freely on uncultivated and undeveloped land.

Consider again the case where farmer *I* by doing *A* will create *B* but receive only *B*/*N*. The benefit stream here concerns a share of the output. This right can, as noted earlier, be considered an individual right, and the relevant boundary of exclusion is between this share and other shares. As also noted, without further restrictions this rights structure would seem inefficient. Given diminishing returns, no activity will be carried out to its desired level, since each individual will receive only a fraction of the marginal product of the expended resource. Each member of the group could, however, be assigned specific duties in terms of provision of different inputs. One might aim to determine an optimal output mix and associated optimal levels of effort for all activities, and then assign duties to each group member such that these levels are reached. As in the former example of non-alienation, the communal structure of rights here implies individual duties. In this latter case, however, the good — the benefit stream arising from an individual's duty to supply inputs — exhibits rivalry in use, and is eventually appropriated individually by the other group members as shares are claimed.

In both of these cases there is a collective action problem associated with the creation of those rules that engender the resulting rights, duties, privileges, or no rights. But this is true of all institutional arrangements, including private property. The problem of enforcement of these rules is somewhat different. First, whereas the collective action involved in setting up an institution is generally of a fixed nature and goes to the very heart of membership itself, the individual enforcement problem is recurrent and requires enforcement of enforcement, and in turn enforcement of enforcement of enforcement of enforcement…..[7] Secondly, whereas the establishment of rights always requires a collective effort, since all rights flow from collective bodies, there is scope for individual enforcement of these rights. The assumed superiority of private rights in part springs from the notion that individual incentives to enforce such rights are greater. But this assertion rests, like all others that extol private rights in land, on the assumption that externalities or spillovers are less of a problem in private rights structures than in communal structures - an assumption that cannot go unexamined. Of course, if transaction costs are zero — if the tasks of negotiating, specifying, and enforcing property rights are costless — any arrangement is Pareto-optimal in the conventional sense (Coase, 1960; Cheung, 1968). But transaction costs are never zero. We therefore conclude that:

7 A problem with the creation of rules and exclusion, however, is that the very fact of inclusion may be an important aspect of the good, as in the case of non-alienation of land.


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***Proposition 4: Land rights structures contain individual rights or privileges only.***

*The partitioning of rights*

Two of Lewis's three scenarios represent the prevailing view of communal tenure. One view sees it as a property regime in which certain individual rights (say alienation) are denied. Note that this view starts with the Western bias of methodological individualism that pervades contemporary economics. Lost in this allegorical indictment is the possibility that individuals might actually gain something from such common tenures. The other view sees communal tenure as collective management as opposed to individual management — yet another version of the predisposition of Western commentators. With respect to the first view, communal land rights may provide a good that private rights, by definition, are incapable of supplying. For example, individuals embedded in a communal tenure arrangement cannot — except in the rarest of circumstances — be dispossessed. Moneylenders often find individual tenure and title to land to be a helpful expedient to their accumulation of land. Moreover, communal land rights can facilitate provision of the same goods as do private rights, albeit through different institutional structures.

In the realm of collective management, one cannot overlook the positive externalities that emanate from such arrangements. Recall that negative externalities are pervasive in an atomised world in which each individual is an autonomous decision-maker, answerable only to his/her own priorities and imperatives. This autonomous actor will seek to shift costs elsewhere in the economy so as to maximise private returns. Pollution is nothing but the shifting of waste control expenses to other economic entities. That is why we call them ***external****ities*, and that is why they are regarded as *social* costs (Bromley, 1991; Vatn and Bromley, 1997). With collective management, these spillovers are ***internal****ised* within the group. This is familiar ground. When environmental economists address externalities we posit the counterfactual of *unified ownership*, so that the new consolidated firm - consisting of polluter and victim - now come under one owner who can maximise value by considering the relative values of factory and laundry output. This is the essential message of the much-revered Coasean approach to externalities among some economists (Coase, 1960). The question then arises as to why, if internalisation of externalities is held up as the ideal (efficient) outcome to committed Coaseans, internalisation of externalities in land management through communal tenure is thought to be such a quaint and primitive (and inefficient) property regime?

The challenge in any economic regime is to ensure that each actor will take into account the costs and benefits of individual action that fall on others. Individual land rights are often assumed to solve this problem, since the division of activities and the distribution of output initially issue from the same territorial boundary (Larson and Bromley, 1990). However, such individualised rights do *not* eradicate the potential for spillovers, regardless of

whether such spillovers lead to bargaining solutions of the type discussed by Coase (1960) or the taxes explored by Pigou (1920). A regime of individual rights with the potential for multifarious and pervasive external effects will therefore entail the same type of problems encountered in the communal scenario. The policy key is to discover incentive compatible institutional arrangements within the larger property regime to solve such problems. The prodigious loss of high-quality topsoil from America's farmlands certainly suggests that these private property rights — whose *individuality*, *specificity*, and *security* cannot be in doubt — are not sufficient to induce sound natural resource management, or to bring about the absence of social costs in the form of sediment-laden streams, rivers, and lakes.

Demsetz finds what we might call the *static* superiority of private rights in the fact that:

> the externalities that accompany private ownership of property do not affect all owners, and, generally speaking, it will be necessary for only a few to reach an agreement that takes these effects into account. The cost of negotiating an internalisation of these effects is thereby reduced considerably. (Demsetz, 1967: 356-357)

This is wishful thinking. Field (1989) considers a given area of land cultivated by a fixed number of independent firms. This area could be managed collectively by all the firms, or they could all be assigned private rights to particular individual plots. Between these extremes the area could be divided into any number of commons, constrained only by the number of firms. As the number of commons increases, the number of firms per commons decreases — with a gradual transition from the communal to the individualised solution. Field's model partitions the costs of rent dissipation associated with a given tenure structure into those costs that arise because of incentive problems within each property unit (transaction costs), and those costs that arise because of potential encroachment by groups or individuals outside each unit (exclusion costs). In Field's model the former costs increase with the number of firms within a unit, whereas the latter costs increase with the total length of physical boundaries within the whole area and thus with the number of property units or entities. The implicit perspective of the model is that of a planner who seeks an answer to the question regarding the optimal number and size of common tenures.[8]

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8 Field's model also assumes that marginal, as well as total, exclusion costs increase with the number of property units, although the opposite would seem more plausible. A small change in the number of units when this number is low will logically lead to a greater increase or decrease in total boundary length than will a similar change when the number of commons is large. If we assume that total transaction costs are proportional to the number of firms within


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Using this simple model, Field shows that private rights theoretically may be inferior to communal rights, even in a static sense, because of the higher exclusion costs that attend the greater aggregate length of territorial property boundaries. A transition from communal to private land rights would entail the partitioning of land amongst the commoners along territorial boundaries. The potential for spillovers across such boundaries would therefore multiply. Field also observes that as the value of land increases the incentive to encroach will also increase, and therefore the costs of exclusion, as well as the costs of transacting, will rise. Field's analysis directly challenges the received wisdom that an increase in land value automatically raises demand for individualised rights because of the allegedly higher gains of internalisation. If the increase in exclusion costs outpaces the increase in transaction costs, an increase in land value may cause a shift towards more communal tenure. Field cites evidence from European history that shows precisely this transition. We thus have:

***Proposition 5: The performance of a rights structure depends not on whether rights are individual or communal, but on how individual rights are partitioned.***

*Rights with respect to settings and circumstance*

Communities often contain a multitude of resources subject to a variety of production processes, with each process in turn characterised by distinct stages. There are a large number of potential rights assignments governing the distribution of benefits and costs. But if access to scarce resources must ultimately be seen in terms of either individual rights or privileges, collective management can be seen to consist of individual rights assigned in a manner that is distinct from what we consider <u>private</u> rights. Thus, where *I* by doing *A* acquires a right to *B*/*N*, it makes no sense to speak of alienation of land, since land is not the object over which individual rights extend. Instead, the question of alienation concerns the opportunity to sell the right to a specified share of the output (*B/N*) and any associated duties of input provision (*A*).

We can illuminate this point by a discussion of multiple tenures, the third stylised conception of communal tenure posited by Lewis (1963). In these regimes, individuals possess rights to specific resources or resource attributes rather than to specific plots of land. Such arrangements are found in many different forms in traditional communities throughout the world. The origin of multiple tenures can be seen to reflect custom related to how claims to resources are established. Traditional Lockean norms related to rights appropriation often dictate that you do not own what you have not expended any effort on. To the extent that resources in a 'natural' state, and resources

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each commons and that total exclusion costs are proportional to the total length of boundaries, both marginal cost curves will generally be declining with the number of commons. The essential points of the model are, however, not related to the shapes of the marginal cost curves.

bearing evidence of human 'improvement', usually co-exist on the same unit of land, different rights held by different individuals or groups will quite plausibly emerge. Multiple claims may also co-exist on a particular plot of land where separate individuals have enhanced resources in different ways.

Multiple tenures, like collective management, describe a situation in which more than one individual possesses rights to particular resources within a given plot of land. And like collective management, rights held under multiple tenures need not be any less individualised than those held under what is normally understood as private land rights. The essential difference concerns the way in which individual rights are divided. Understanding of *private property*, *collective management*, and *multiple tenure* is therefore linked to the way in which humans, at different times and places, define the object called 'land'. As noted by Bohannan (1960, 1963), the Western notion of land rights links exclusion to the dimension of location. However, if one defines 'land' in terms of trees and soils and water, individual (private) land rights would denote some form of multiple tenure, with individual rights assigned to each separate resource. In this case, land rights partitioned according to location would be considered 'multiple', since each separate resource category would be subject to multiple claims.

The vocabulary applied here is such that a collective or communal right is one where a group of individuals holds a claim — a right — against non-members. In itself, and unless rights are further partitioned to the individual level, the assignment of a collective right serves only to limit the public domain. If, in order to avoid some form of open access, rights must ultimately be assigned to individuals, an assertion that individual property rights are statically superior has little meaning — except in the sense that they are superior to privileges. And even in this sense, the assertion may be flawed when enforcement is costly, or when a community or society considers it prudent to deny certain individual rights, and the benefits thereof can be considered public goods.

In the context of land, individual rights can be assigned such that exclusion is achieved along one or more of at least four different types of boundaries: (i) location; (ii) resource categories or attributes; (iii) shares; and (iv) time. Western custom has it that the term *private property* is applied whenever territorial boundaries obtain, whereas rights separated along one of the other boundaries, or a mixture of two or more of these boundaries, are labeled *common property* or *communal property*. The assertion that private property is 'superior' is therefore nothing more — and nothing less — than an assertion that territorial boundaries are more efficient and therefore universally to be preferred when compared with other types of demarcation rules.[9] It must be

[9] Note also the value judgment that efficiency is the sufficient basis for goodness (Bromley, 1990).

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further noted that the boundaries associated with different tenures are linked to the way land is defined. It is one thing to claim that the objective of cost minimisation *may* dictate the way in which one defines rights. It is quite another to claim that cost minimisation *should* dictate the way in which different cultures define an object such as land. Thus:

***Proposition 6: How rights are defined depends on how objects are defined.***

## Structures, boundaries, spillovers

### *Autonomy and congruence*

One may distinguish problems of structure from problems of security or specificity by observing that rights, even when perfectly defined and enforced, may generate spillovers of the type in the example where farmers jointly manage an agricultural plot and where no duties apply to input provision. Such spillovers (free riding) cannot be reduced by improving the precision of the relevant boundary of exclusion or through its more diligent enforcement. Instead, these spillovers can be reduced only through the introduction of new 'boundaries'.

The term 'autonomy' can be applied to the degree to which an action and its associated outcome are seen to remain within the same boundaries. In the case of land, the degree of autonomy depends on the way land is defined and the associated dimension in which boundaries of exclusion are delineated. A lack of autonomy will either entail rent dissipation or will necessitate the specification and enforcement of additional boundaries.

A lack of autonomy may become a particularly acute problem where investments and innovations are concerned. In an economy dominated by rudimentary techniques and immediate appropriation of existing natural resources, simple rights of access and use may be sufficient. But when emergence of the more lengthy and complex technologies of processing and production is attended by persistent spillovers, the introduction of duties becomes necessary. Assigning duties for actions that are not repeated or predictable is costly even if feasible, particularly under conditions of rapid exogenous change. We have in mind here the introduction of an alien technology or the pressure of new market opportunities and imperatives. Problems related to the provision of variable inputs can often be solved through the creation of duties at a reasonable cost. Within a given technology, the temporal variability in the need for such inputs will not be high. The same is not true for investments, and although it is possible to assign duties to contribute to investments already identified, this is likely to be costly. Furthermore, duties can feasibly apply only to known quantities; you cannot reasonably assign duties to seek out and adopt new technologies, let alone invent them. This serves as an illustration of the general incapacity of duties successfully to account for differentiation in individual ability and preference.

In contrast, the term 'congruence' can be used to describe the degree to which different rights are assigned according to the same boundaries of exclusion. Increasing congruence may here generate scale economies in enforcement and reduce the spillovers that arise at the interface between the exercise of different rights. This relates to the problem of fugitive resources.

The term 'fugitive' refers to the fluctuating location of one resource in relation to that of another. A freely roaming cattle herd, for example, can be said to be a fugitive resource. But the condition of being fugitive requires that the institutional structure permits free movement. Motion, of course, is a relative concept, and if our point of reference is the object over which rights extend, then it is the land — and not the cattle — that is the fugitive resource under conditions of open access. It is, of course, easier to do something about the movement of cattle than about the movement of land. That is, cattle can be made to follow the land but not the other way around, which is why private rights are separated according to territorial boundaries, with land rather than cattle serving as the reference point. Although congruence in the boundaries by which rights to different resources are divided will entail benefits, these will not always be sufficient to overcome problems linked to the disparate nature of these resources, for example, the problem of assigning rights to wild birds along the same boundaries as those for land.

Enforcement costs associated with boundaries of exclusion were earlier seen to relate to their precision. There are, however, additional considerations. First, precise boundaries are not synonymous with easily observable boundaries. One might stipulate that only trees older than ten years can be cut for firewood. This is a precise boundary, but one that is difficult to observe and to comply with, and therefore costly to enforce. In areas of standing forests but extreme shortages of firewood, it is not uncommon to find local institutions (rules) that prohibit the cutting of 'live' trees for firewood. Nor is it uncommon in such areas to find trees on the margin of survival ravaged for their twigs and branches. Indeed, it is also not unheard of for some healthy trees to be sabotaged in various ways so that they might become eligible for harvesting next year when they are dead (or near-dead). Thus, for inexpensive enforcement, both precision and observability are required. Precision is necessary in order to reduce uncertainty as to the content of a right, while observability reduces problems of monitoring. Secondly, there is the matter of what we might call permanence. A right to claim a share of a given output may be both precise and easily observable. However, to the extent that output varies across time, shares will have to be remeasured and redetermined each time claims are made, because the right is defined in terms of an object of fluctuating physical proportions. In general, structures where rights are initially divided along boundaries that are precise, observable, and unchanging will tend to reduce enforcement costs associated with any given level of security.

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Proponents of private land rights — again stressing that these rights are always thought to be assigned according to location — would claim that such rights perform admirably in most of these regards. In other words, they would insist that, for most non-industrial uses of land, boundaries related to location engender a higher degree of autonomy than boundaries defined along some other axis. It is thought that the portion of the outcome of any reasonable action that will cross a territorial boundary is often trivial, thus avoiding the need for contracting or legislation along new boundaries. Secondly, there is said to be adequate scope for gathering rights associated with a variety of activities within the same territorial boundary. Finally, a precise territorial boundary is both permanent and often, though not always, easily observable.

In contrast, to make a rule (individual *I* by doing *A* will create *B* but will receive only *B*/*N*) workable, additional duties and associated boundaries must be included. The spillovers arising from such a rule structure are costly and not easy to reduce, because a large portion of the outcome of an individual action affects others and because so many different individuals are affected by this portion. Moreover, the boundaries associated with collective management, even when precise and observable, may often lack permanence. Autonomy arises as a problem in multiple tenures because activities with regard to one resource will frequently lead to outcomes that affect other resources — either through the difficulty of gaining physical access to the resource, or through modifications to the resource itself. The concept of congruence is alien to multiple tenures through the very nature of the boundaries according to which rights are assigned. And these boundaries lack permanence since the resources over which rights extend are constantly changing.[10]

To make prescriptions with claims to universal validity on the above basis would be rash. Many resources, such as biodiversity and wild animals, simply do not lend themselves to exclusion along territorial boundaries. Collective management structures also require further consideration. First, even when proceeds are shared, the individual will undertake an optimal amount of an activity when the opportunity cost of undertaking it is shared in an identical manner to the outcome - for example, when the income forgone in wage labour or the money spent on fertiliser would have to be shared. This is of considerable relevance in many communal settings. Enforcement must, of

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Multiple tenures may also disintegrate as land becomes scarce. Many of the resources to which different individuals hold rights are linked to the existence of forest or woodland resources such as firewood, fruits, and wildlife. As land becomes scarce and more permanent cultivation methods are adopted, the forest will retreat and subsidiary rights to forest resources will vanish. Uchendu (1970) notes that an incentive for change may exist because multiple interests in a given piece of land are obstacles to lumpy investments and the adoption of new technologies. A further point is that multiple tenures will tend to emerge when appropriations of different resources are not linked through location — for example, when planting trees or building dwellings do not automatically establish claims to surrounding land. Such interlinkage may provide positive investment incentives and greatly reduce the rent dissipation resulting from strategies of rights appropriation (Sjaastad and Bromley, 1997).

course, accompany such rules with respect to each separate good and its distribution, but this is a problem of congruence not of autonomy. Also, land rights cannot be considered here in isolation from other rules.[11] Norms and rules governing access to land are merely one expression of the interdependence and social cohesion characteristic of the community, and the implication that the benefit-cost constellations of various rights structures differ — but that 'all other things are equal' — is problematic. Moreover, insofar as existing communal structures depend upon a functioning collective sanctioning body, problems associated with its creation are irrelevant. And if the structure permits the smooth internalisation of new spillovers through existing mechanisms, many of the fixed costs of internalisation are sunk costs.

Other mechanisms may exist whereby the need for coercive or centralised respecification and enforcement of individual rights and duties is done away with. Among these are Sen's (1967) assurance game (see also Runge, 1981, 1984), Becker's (1974) theory of social interactions, and Basu's (1986) people's tyranny, when the latter is seen to relate to the enforcement of a 'good' rather than a 'bad'. In each case it can be argued that the question of the origin and formation of the traits necessary to sustain such mechanisms — the assurance of other group members' co-operation, the 'benevolence' and associated redistributive role of the head of the group, or the convention whereby a failure to censure will itself engender censure — has not been resolved. Again, however, insofar as these mechanisms accurately describe particular expressions of reality, costs of establishment are sunk costs and of no relevance when considering the relative effectiveness of existing rights structures. Whether centralised or decentralised, a feature of collective management structures may thus be the existence of mechanisms that permit the inexpensive internalisation of new spillovers.[12]

Furthermore, collective management structures possess a different kind of permanence — a permanence in relation to the share of the outcome of an activity that will remain external. In other words, when rights are defined in terms of fixed shares of a given outcome, there is no scope for reducing the

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[11] This point is of profound importance. One will often see lamentation concerning anarchy and natural resource degradation in societies where the larger institutional structure is itself dysfunctional. The only surprise is that this should surprise us.

[12] A general feature of decentralised mechanisms is that they dissolve when groups become large, and this is why communal structures relying on such mechanisms tend to be of limited size. The local nature of most communal structures might be seen to imply both low stability and high flexibility - at once providing the individual with greater scope for influencing changes in rights, and also rendering him more vulnerable to the adverse efforts of others. The interdependence and complex network of rights and duties intrinsic to such structures will, however, tend to work in the other direction. In addition, there are many examples of private rights structures with local sanctioning bodies in traditional communities.

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spillovers implicit in the structure without specifying new boundaries. Within territorial boundaries, however, there is considerable scope for both reducing and increasing spillovers through the adoption of new technologies. This flexibility may lead to fewer spillovers, but it may also lead to cost shifting. Exchange is promoted by rights structures that generate savings in transaction costs. Because markets generate pressure to identify more efficient boundaries, awkward rights assignments are unlikely to persist for objects that are subject to extensive exchange. Markets will, however, also encourage negative spillovers through increased pressure to minimise costs if technologies that serve to disperse costs are more profitable than technologies that do not (Swaney, 1990; Vatn and Bromley, 1997). Flexibility in terms of manipulating spillover levels may, as it were, cut both ways. We see that:

***Proposition 7: Lack of autonomy entails externalities that can only be corrected through the imposition of new or additional boundaries.***

*Multiple tenures*

Multiple tenures may be particularly suited to various forms of specialisation in the use of natural resources. They may provide a measure of flexibility thereby allowing access to different resources to be governed by their relative scarcity and excludability. In communities where some resources are scarce and some abundant, the arrangement may be appropriate if resources are distributed unevenly across the land. Multiple tenures, by avoiding exclusion from resources that are abundant in the community as a whole but potentially scarce for individual owners, dispense with the need for costly re-aggregation.

However, if different types of scarce resources exist in isolated pockets, a subsistence economy may also generate tenures characterised more by collective management or by scattered individual parcels. The problem of re-aggregation of rights could conceivably be extended. If there are a variety of resources requiring different skills and production processes, multiple tenures may avoid the costly re-aggregation of rights that would attend a property structure whereby rights were defined in terms of location. Thus, if one dropped an expert logger and an expert hunter onto an uninhabited island, it might be rational to assign rights to all trees to one and all game to the other, rather than divide the island itself and thereby force them to contract over rights of access to each other's territory.[13] Such a process is more difficult to envisage in the context of a subsistence economy where the division of labour and specialisation implicit in the above scenario are absent. In this case, individual households will instead hold rights to different resources in a variety of locations. We see that:

[13] This puts us in mind of the aphorism attributed to Henry George that you could place one hundred individuals on a deserted island and make one of them the owner of all of the land, or of the other 99 individuals, and it would make no difference to him or to them.

***Proposition 8: Multiple tenures necessarily recognise heterogeneity in settings and circumstances.***

*Transitions*

The microeconomic perspective on evolving institutions regards cost minimisation as the sole motivation for change and ignores the processes through which the provision of institutional change must pass. At any point, the problem of change can be viewed in terms of two types of costs: the cost of 'doing' and the cost of 'not doing', the former generally corresponding to transaction costs as these are commonly defined in the literature, and the latter coinciding with the conventional definition of social cost. Thus, there are costs associated with effecting more rigorous enforcement of existing rules, and costs attached to not effecting more rigorous enforcement. There are, in other words, costs of changing the rules as well as costs linked to the rules as they exist.

The economic theory of property rights as it has developed over the past three decades views the evolution of rights as a simple exercise in minimising the aggregate of these costs through attainment of the usual marginal equivalencies. In its purest and most deterministic — and teleological — form, this theory denies the possibility of the existence of true inefficiency. For example, the absence of collective action or the emergence of institutional path dependence are not considered to be problems; they are simply manifestations of the fact that the costs of organisation or of switching to a different institutional path exceed the benefits.[14]

Recent work within institutional economics acknowledges the desire of individuals and groups to create institutions favourable to their own interests, without regard for the common good (Bromley, 1989, 1991; Eggertsson, 1990; North, 1990). From a microeconomic viewpoint, the problem of how power influences rights formation can conceivably be viewed as a problem of spillovers at the constitutional level; decisions on rights structures are taken without account of how they affect society at large. Extending the Coase theorem, one might argue that bargaining could correct the flaws inherent in any initial distribution. However, at this level the problem of liability becomes insurmountable because the transaction costs of negotiating adjustments in rights assignments would be prohibitive, and because no higher authority exists to which appeals can be made. Nor does an auction-type allocation of rights provide a solution. The cost-minimisation approach here becomes problematic because of the implied inter-personal or inter-group utility comparisons (Demsetz, 1979).

14 As noted by Mishan, such a view inevitably leads to the conclusion that 'What is, is best' (Mishan, 1972: 123).


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The problem of power is primarily one of distribution. Power concerns the ability of one individual to put others in a legal position they would not freely choose (Bromley, 1991). Power concerns *to whom rights will be allocated* as well as the *type of rights to be allocated*. The problem arises only when a relationship between structure and power differentiation can be established. Note that it is precisely here that the standard microeconomic approach of discussing different regimes in abstract efficiency terms seems justifiable only in the absence of such a relationship. Sweeping changes in the structure of rights will, however, entail both winners and losers, and one therefore encounters the problems that attend the concept of virtual Pareto improvements. At some level, as one ascends through the institutional hierarchy — and as the problems of negotiation and compensation increase — application of the cost-minimisation paradigm becomes futile. Therefore:

***Proposition 9: The purposes of rights assignments must be clearly understood before outside observers are entitled to pass judgment on their efficacy using normative criteria such as 'efficiency'.***

## Conclusions

We have offered an exegetical inquiry into the exact meaning of individual, specific, and secure rights in land. We have argued that a coherent view of security sees it as the perception of how rights may be altered or violated. Specificity of rights concerns the precision of the boundaries by which rights are divided, and the level of fragmentation of the categories into which rights are divided. The assertion that land rights tend to become more secure and more specific as the value of land increases is consistent with these definitions. If, however, individual rights are required to avoid the problems of open access, the comparison of different rights structures in terms of individuality has no meaning. Land rights structures differ primarily in the boundaries whereby individual rights are separated. The discussion here has revolved around 'private' rights structures, where individual rights are partitioned according to location, and different 'communal' structures, where individual rights are withheld or partitioned in terms of shares or resource categories.

It could be argued that the territorial boundaries associated with private land rights are such that they tend to maximise the autonomy of activities and their outcomes and thus minimise the necessity to adjust through the creation of new duties and associated boundaries. Also, the precision, observability, and permanence of territorial boundaries generally permit less costly enforcement than boundaries associated with communal rights structures. Against this, arguments related to insurance and scale must be advanced. More important, in order to render comparisons empirically meaningful, sunk costs of collective action and wider social concerns must be taken into consideration.

In more specific terms, an evolutionary account of land rights as the simple and gradual introduction of constraints to limit free riding and rent dissipation

is incompatible with the concepts elaborated here. Since the various rights structures are characterised by fundamentally different boundaries of exclusion, a transition from one to another involves the dismantling of one institution and the creation of another rather than the simple addition of new restrictions. This does not, of course, imply that such a transition necessitates extensive revision of social custom. Tenures generally contain a mix of different rights assignments, and a transition will most often represent the application of a familiar institution to new contexts.

It is important to understand that locally evolved property institutions contain complex rules whose purpose is to meet specific social and environmental objectives. Even taboos and superstitions, regarded by some outsiders as quaint and primitive, will often, upon careful inspection, be seen to serve a logical purpose. Unfortunately, the land tenure policies and programmes introduced into developing countries have a discouraging legacy of ignoring such complexity. Sweeping changes are introduced — often informed only by a few received truths from social and economic circumstances quite orthogonal to those thought in need of repair — and these often lead to devastating outcomes. In this neglect, policy- makers can be aided by an incomplete, and often false, understanding of property rights and the concepts that surround them. The objective of this article has been to expose some of the reigning prejudices, and to show why some of the received axioms of what has come to be called 'property rights economics' are flawed. Unless these issues are understood, there can be little hope of improving matters on the ground where poor people spend their lives interacting with each other with respect to nature's meagre bounty.

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