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### COMMUNITY, COLLECTIVE ACTION AND COMMON GRAZING: THE CASE OF POST-SOCIALIST MONGOLIA

by

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This paper applies collective action and transaction-cost theory to the theoretical debate around the management of common property regimes (CPRs), with supporting evidence from recent empirical research in Mongolian pastoralism. Rather than treating CPR management as an activity in isolation, as much of the existing literature tends to do, this study examines the use of common grazing in the context of other aspects of pastoral livelihoods. The more a given group of herders find reason to cooperate with each other across a range of activities, it is argued, the more likely it is that they will also overcome the transaction costs involved in controlling the use of the commons. The empirical analysis finds that incentives for cooperation were weakened under agricultural collectivization (1950s-80s), with possible adverse consequences for the commons. Decollectivization from the early 1990s has seen the re-emergence of autonomous cooperation among herders, accompanied by changes in intra-community dynamics, which together suggest contradictory trends for the future management of common grazing.

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# COMMUNITY, COLLECTIVE ACTION AND COMMON GRAZING: THE CASE OF POST-SOCIALIST MONGOLIA<sup>1</sup>

## 1 INTRODUCTION

The sustainable and productive management of natural resources under conditions of relative scarcity depends critically on various forms of coordination between individuals and groups within society. Sets of socially devised rules mediate the relationships between particular groups of people in society, and natural resources (McNicoll and Cain 1990; Leach and Mearns 1991). Alternative configurations of sets of rules, or institutions<sup>2</sup>, can make all the difference to whether or not a natural resource is managed sustainably and/or productively, and in determining which groups stand to gain and which stand to lose from resource exploitation (Mearns 1995a; 1995b). The management of common-pool natural resources, in particular, may be approached theoretically as a collective action problem, which arises as a result of their subtractability in use, and the difficulty of excluding unauthorized users.

A central research question, therefore, is what determines the precise configuration of these sets of rules under varying conditions. This question is amenable to comparative institutional analysis through the lens of neo- or new institutional economics (Eggertsson 1990; Bardhan 1993a; Nugent 1993), an approach that is adopted in the present study, drawing on theories of games, transaction costs, and collective action. A rich seam of literature, particularly in anthropology and economics, has been devoted to the comparative analysis of institutions for managing common-pool resources in different localities within the same natural-resource sector, such as irrigation (Wade 1988; Ostrom 1992a), forestry (Fortmann and Bruce 1988), fisheries (Berkes 1992; Ruddle *et al.* 1992), or commonfield agriculture (Campbell and Godoy 1992), either in the same or different time periods; or across several natural-resource sectors (Ostrom 1990; Bromley 1992).<sup>3</sup>

Some of the most instructive individual case studies also consider dynamics over time, and how and with what consequences sets of rules influencing the patterns of interaction between resource users may change (Moorhead 1991; Cousins 1993; Wilson and Thompson 1993). Good examples include studies of the 1957 nationalization of forests in Nepal (Bromley and Chapagain 1984), or of the consequences of attempts to

enforce state forestry codes in francophone West Africa (Thomson 1987), both of which turned controlled access commons into open access resources by undermining previously effective structures of local governance.

Less common in the literature however, are empirical studies of continuity and change in local resource management institutions with major historical discontinuities at the level of the broader polity. Fertile but as yet largely unexplored ground for such studies is provided by economies that have recently undergone or are undergoing post-socialist transition, and which undertook the collectivization of agriculture earlier (Pryor 1992). A number of detailed empirical studies have examined the consequences of the collectivization and decollectivization of agriculture for the character of rural production in China, where post-Mao economic reforms began a decade or so earlier than post-socialist transition in the former Soviet Union and Mongolia (Friedman *et al.* 1991; Ling and Jiang 1993; Ling and Selden 1993; Selden 1993). Few of these studies, however, have been explicitly concerned with the question of changing sets of rules in natural resource management (Goldstein and Beall 1989; Goldstein and Beall 1991; Cincotta *et al.* 1992; Longworth and Williamson 1993).

This paper aims to bring recent empirical research in Mongolia to bear on the theoretical debate on the management of common-pool natural resources, with particular reference to common grazing. It describes the institutional dynamics of the management of common grazing in Mongolia through two major historical transitions: the collectivization of the rural economy from the 1950s, and its decollectivization since 1990. The central thesis is as follows. In common with the Chinese studies mentioned above, we find strong elements of continuity in the character of local institutional arrangements in the rural economy, in spite of the apparently revolutionary changes in the broader polity. This phenomenon is described elsewhere for pastoral land tenure arrangements in Mongolia (Mearns 1993b). A partial explanation for this continuity is that the institutions relevant to the management of common grazing are multifaceted, and socially and culturally embedded.<sup>4</sup> The same group of interacting individuals stands to benefit from collective action in several spheres at once so that economies of scale may be achieved, thus lowering the unit costs of transacting in any one sphere. Although natural resource management may be a relatively low priority among the various cooperative activities that take place within community institutions, the likelihood of successful collective action in

controlling access to common pastures is increased, because the costs of free-riding are raised by the potential loss of benefits from all other forms of collective action.

Before turning to the case study, three central analytical themes are outlined:

- The relationship between structures of governance and those of government, and its relevance for natural resource management.
- The relevance of the concept of community in determining whether or not collective action problems, including the management of common grazing, are likely to be solved endogenously.
- The importance of considering transaction costs in comparing alternative sets of institutional arrangements for the sustainable and productive management of common grazing.

## **2 GOVERNANCE VERSUS GOVERNMENT**

A theme that is implicit in some of the literature on institutional dimensions of natural resource management, but rarely made explicit, is the relationship between the structures of governance and government. These are not at all the same thing.<sup>5</sup> Governance is defined here as the exercise of legitimate authority in transacting affairs, and is broadly understood to refer to the maintenance of social order through endogenously evolved sets of rules or authority structures, or a particular combination of locally evolved and externally imposed sets of rules. 'Legitimate' is the operative word here, and refers to the underlying basis of governance in, for example, sets of social norms (Coleman 1987; Elster 1989).

Government, by contrast, can be defined as 'the exercise of influence and control, through law and coercion, over a political community, constituted into a state within a defined territory' (Healey and Robinson 1992: 163). It is understood here to be one aspect of the broader concept of governance, referring specifically to the role of political authorities in maintaining social order. In the absence of government, either because external sets of rules have not yet been devised for specific contexts (e.g. legislation designed to

protect the environment), or because weak administrative capacity hinders the enforcement of law and policy, governance - or the lack of it - becomes entirely a question of endogenously evolved sets of rules.

With respect to natural resources, government refers to the *de jure* set of rules as set out in statutory law and state policy relating to natural resource ownership, tenure and use, and the administrative framework through which it is implemented. The broader concept of governance refers to the sum of sets of rules that apply *de facto*. Thus it includes the customary rules that also influence who has access to, and control over, natural resources; how, and at what times; the extent and manner in which those rules are monitored and enforced; and the traditional or other systems of authority through which they may be legitimated.

In some cases, the operation and manner of enforcement of statutory law may be in harmony with customary practices, in which case government supports governance. However, it is probably more common for the *de jure* and *de facto* sets of rules to come into conflict, as in cases such as the nationalization of forests in Nepal, or the enforcement of forestry codes in francophone West Africa mentioned above, with high costs in the form of natural resource degradation and depletion. Other notable examples can be found throughout much of sub-Saharan Africa in relation to conflicts between local pastoral groups and their customary land tenure rules, and the operation of statutory law and government policy (Lane and Swift 1989; Swift 1989; McCabe 1990; Moorehead 1991; Behnke 1994). Government may undermine customary structures of authority that contribute to the successful regulation and control of natural resource use, and in so doing hinder effective governance. While neither governance structures nor government structures entirely determine actual natural resource management practices, they can be one of the most important influences on patterns of interaction between resource users.

### 3 THE CONCEPT OF COMMUNITY

Recent contributions to the literature on collective action and natural resource commons seek to examine why solutions to collective action problems are arrived at endogenously in some places, and not in others (Singleton and Taylor 1992; Taylor and Singleton 1993). They find that some collective action problems remain unsolved owing to the existence of transaction costs, including search costs (identifying possibilities for



cooperation), bargaining costs (agreeing on one scheme of cooperation rather than another, which involves a process of bargaining since each scheme of cooperation implies a different distribution of gains among members), and monitoring and enforcement costs (ensuring that the cooperation of other members in the agreed scheme is enforced). Singleton and Taylor argue that the key to the endogenous solution of collective action problems is the concept of 'community', the attributes of which lower the transaction costs the group must meet in order to solve a given collective action problem. In this context, community is **not** 'a group of people who are necessarily close or well-disposed to one another, whose relations are warm or even amicable' (Singleton and Taylor 1992: 315), but rather:

a set of people (i) with some shared beliefs, including normative beliefs, and preferences, beyond those constituting their collective action problem, (ii) with a more-or-less stable set of members, (iii) who expect to continue interacting with one another for some time to come, and (iv) whose relations are direct (unmediated by third parties) and multiplex.

(Singleton and Taylor 1992: 315)

It is further argued that the community group is more likely to arrive at an endogenous solution to its collective action problem if it is comprised of mutually vulnerable individuals. For Singleton and Taylor this refers to 'the condition of a group of actors each of whom values something which can be contributed or withheld by others in the group and can therefore be used as a sanction against that actor' (Singleton and Taylor 1992: 315). In the Mongolia case described below, an important example of this is labour that herders may voluntarily contribute or withhold in certain cooperative activities. Another is reputation (Dasgupta 1988; Chong 1992). However, the attributes of the common-pool resource itself and the relationship of the user group to it are just as important in solving commons problems. Community alone is insufficient for the solution of commons problems (Ostrom 1992c). In particular, the more the user group depends on a given common-pool natural resource as a source of livelihood, *ceteris paribus*, the more likely it is to arrive at an endogenous solution to its sustainable management (Runge 1986; Wade 1987). Thus 'mutual vulnerability' also needs to encompass mutual dependence on a common resource in relation to alternative sources of livelihood.

Two further weaknesses in Taylor and Singleton's analysis merit consideration. Firstly, they argue that 'the more community there is in a group, *ceteris paribus*, the lower are the transaction costs its members must face' (Taylor and Singleton 1993: 201). This needs further elaboration. A more precise way to express this is that, owing to the multiplicity of relations between members of a community who cooperate in several spheres at once, economies of scale can be achieved in meeting transaction costs, such that the unit cost of transacting in each instance of collective action is reduced. What is important is the ratio of benefits from collective action to transaction costs. A central argument made in the context of the Mongolia case below is that herders often engage in several different but interlocking kinds of collective action within their community group. The prospect of successful collective action appears much more likely when they are considered together, since this raises the value of potential benefits in relation to the costs of transacting.

Secondly, Singleton and Taylor neglect the role of the broader political and economic environment in facilitating or detracting from the ability of local groups to solve collective action problems (cf. Ostrom 1992c). While the attributes of community may indeed tend to lower the transaction costs the group must meet in order to solve a given collective action problem, processes at work in the broader polity may at the same time raise these transaction costs. This is nowhere more apparent than in post-socialist transitional economies in which the configuration of institutions throughout society is in a state of total flux, creating an environment of unstable expectations. We return to this point in the context of the Mongolia case below. Once again, it is important to refer to the ratio of transaction costs to potential collective action benefits in any assessment of the likelihood of successfully solving commons problems.

Although the concept of community is important in explaining the possibility of the endogenous solution of collective action problems, two major caveats are in order. Firstly, there is a tendency in the theoretical literature to overplay community cohesion, and to downplay intra-community issues such as group dynamics, the role of leaders acting as catalysts in initiating cooperation (Bardhan 1993a; 1993b), and asymmetrical benefits from the commons, often underwritten by local power structures (Cousins 1993; Roe 1993). Secondly, the theoretical perspective of neo-institutional economics tends to take an excessively functionalist and rather disembodied view of community institutions. Institutions for the management of local commons are, of course, much

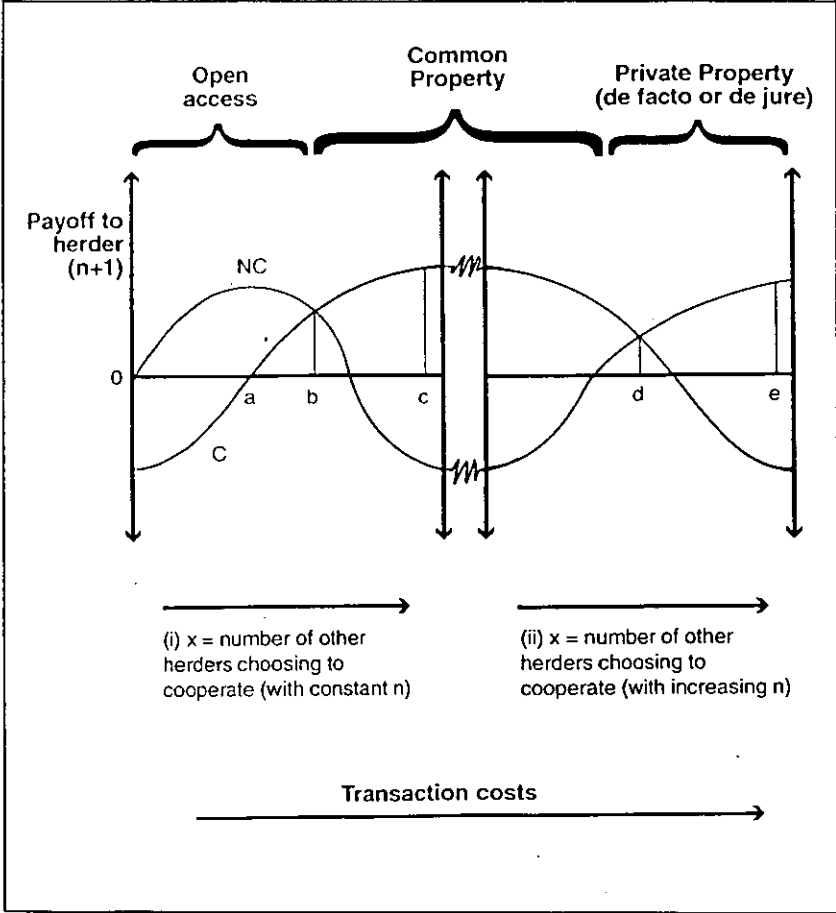
more besides. They are often based on kinship relations and co-residence, and may have religious, ritual and other cultural dimensions. This multiple belongingness of individuals in social environments demands that we take account of the embedded social context of natural resource management, rather than treating it as an activity in isolation (Peters 1987). Indeed, many of the forms of collective action on which the management of common grazing may 'free-ride' have little or nothing to do with natural resource management per se. The term 'organizational density' has been coined to convey this notion of interconnected relations in social environments, which should be recognized as an asset in efforts to induce development (Cernea 1993).

#### **4 TRANSACTION COSTS AND SUSTAINABILITY: A FRAMEWORK FOR ANALYSIS**

This section outlines a framework for analysis, to which we will refer in our following treatment of the Mongolia case. The framework, shown graphically in Figure 1, is based on an  $n$ -person, iterated prisoners' dilemma model in which strategies of neither cooperation nor non-cooperation dominate between herders using the same grazing commons.<sup>6</sup> Rather, multiple equilibria are possible, depending on a set of conditions, some of which are externally given.

Recent literature on game-theoretic approaches to the analysis of collective action has shown the extent to which, when the restrictive assumptions of the cruder prisoners' dilemma models are progressively relaxed, the grounds for pessimism as to the possibility of cooperation are significantly weakened.<sup>7</sup> The analytical framework offered here is developed in the same spirit. Although based on game-theoretic approaches to the solution of collective action problems, it derives its greater 'realism' from empirical givens, such as the power of reinforcing social norms, the critical assumption that social relations are multiple and have a depth that extends beyond the particular collective action problem of managing common grazing, and the tendency for certain groups to capture key resources as the commons become more congested and expectations become more unstable. In this sense, the framework is offered not as a model or a theory in itself, but as 'thick' phenomenological description resting on certain theoretical propositions or mechanisms (Elster 1989).

**Figure 1: Multiple equilibria with non-dominant strategies in relation to transaction costs associated with alternative property regimes**



A number of the attributes of community referred to in the preceding section are integral to this model, the most important of which is that the actors in the model constitute an almost stable group which expects to continue interacting over an extended time horizon. Therefore this group is able to learn from past experience and develop coordination norms as a guide to future action. In the left-hand portion of Figure 1 (i), the total number of herders,  $n$ , is assumed to be constant. The payoff to the marginal herder is a function of the number of other herders choosing to

cooperate, as a proportion of the fixed total  $n$ . However, in the right-hand portion of Figure 1 (ii),  $n$  is assumed to increase. The payoff to the marginal herder is still a function of the share of other herders choosing to cooperate, but now the total  $n$  is increasing along the x-axis.<sup>8</sup>

Figure 1 shows multiple equilibria with two, non-dominant strategies. The payoff curve for cooperation (C) reflects the degree to which marginal payoffs to each additional herder increase initially as more herders choose to cooperate with agreed sets of coordination norms over pasture use. At this point however ( $0 < x < b$ ) it still makes more sense for each additional herder to free-ride on the cooperative actions of other herders (i.e. the free-rider or non-cooperation payoff curve (NC) lies above the cooperation payoff curve C). Beyond  $a$ , real benefits accrue to each additional herder choosing a strategy of cooperation. At the same time, the curve NC begins to decline as social peer pressure is brought to bear on non-cooperators within the herding community by the growing number of cooperators, and as non-cooperators perceive that they run the risk of being ostracized from various other benefits of community membership, such as labour-pooling arrangements to achieve economies of scale in herding. Beyond  $b$ , there are absolute gains to be had from cooperation both in relation to the joint use of common grazing land, and in relation to other forms of collective action such as labour-pooling or achieving economies of scale in livestock product processing and marketing. These gains reach a notional maximum at  $c$ . The crux of the argument here is that the multiplicity of relations within the community tends to reinforce cooperative strategies with respect to each individual collective action problem.

Beyond  $c$  (Figure 1(ii)), the total number of herders in the community ( $n$ ) begins to increase. As  $n$  becomes large, pastures become congested, so that the unit benefits from pasture use diminish for all herders choosing to comply with coordination norms in the joint use of the commons. Thus the benefits of cooperation tend to diminish in relation to transaction costs (search, bargaining, and monitoring and enforcement costs). The cooperation payoff curve (C) therefore declines beyond  $c$ , and the curve NC begins to rise. Beyond  $d$ , NC dominates once again, owing to opportunities for the 'capture' and *de facto* privatization of the highest quality pastoral resources such as meadows normally reserved by groups of herders for joint haymaking. These opportunities arise as the costs of cooperation in resource management rise in relation to diminishing returns.

Other externally given conditions can also be factored in to the framework. For example, the tendency for free-riding to dominate beyond  $d$  is exacerbated by the lack of assurance arising in an environment of economic and political transition. This further raises the transaction costs of endogenously enforcing a cooperative outcome in the joint use of common grazing land in relation to diminishing returns. The attribute of community referred to as the stability of relations between resource users over an extended time horizon, is undermined by the dislocation of evolved forms of economic transactions with economic transition. Under such conditions it is rational for users to try to maximize returns in the short run, for example by capturing the highest quality resources.

An alternative non-cooperative strategy may be practised by outsiders to the local herding community in the form of absentee herd ownership. Absentee herd owners may increase the number of their private animals on common grazing land by placing them with other herders under contract in return for monetary payment or other economic benefits, where there are opportunities to acquire additional animals quickly (e.g. through the privatization of state or collective owned herds). As non-members of the community with alternative sources of income, absentee herd owners do not personally experience social peer pressure and loss of reputation, or the loss of benefits from other forms of collective action such as labour-pooling. Contract herders may themselves become detached from the community, since they are no longer bound by the condition of mutual vulnerability now that they have an alternative source of income. The threat of loss of reputation is therefore weakened as an incentive to cooperate. The transaction costs of monitoring and enforcement of norms over pasture use by other members of the community also increase, because the increase in the number of animals owned by absentee herd owners on the commons is more difficult to detect than if they were resident in the community and herding their own animals.

A continuum between alternative types of property regime is also represented along the x-axis in Figure 1, from effectively open access at low levels of cooperation, through common property with an increase in the share of the total number of herders choosing to cooperate, to private property (whether *de facto* or *de jure*) when  $n$  itself becomes large in relation to the resource base (assuming fixed resource endowments). Once again, the transaction costs associated with each of these property regimes vary. The management of common property requires coordination, monitoring and the enforcement of sanctions between users in a way that open access

does not, and therefore involves higher transaction costs. Equally, private property, if it is to be supported by statutory law, carries with it very high transaction costs indeed, if often hidden or taken for granted. This is especially true in contexts where the legal, administrative and economic frameworks to back up such a property regime have to be created virtually from scratch, as is the case in many post-socialist transitional economies. The capture of resources by individuals (*de facto* privatization) also carries high transaction costs associated with the need to monitor or police one's resource from encroachment by others, since its very capture may raise its value to others.

In contexts of major and systemic institutional change - of which contemporary political and economic transition in Mongolia and other transitional economies is a particularly striking example - the transaction costs of interaction between individuals in general tends to increase, since it is not clear to any individual what set of rules other individuals are playing by. In this sense, to move too rapidly away from any resource management system that appears to be doing its job effectively also incurs higher transaction costs. This alone gives an a priori rationale for supporting local institutions for common-pool resource management in transitional economies where they are shown to exist and to be effective (cf. Nugent 1993).

It is also possible to consider how ecological sustainability may vary along the x-axis. At low levels of cooperation consistent with effective open access to grazing land ( $0 < x < b$ ), ecological sustainability is of potential concern where  $n$  is large in relation to the resource base at a given level of technology. This is the classic, if stylized, case of the 'tragedy of the commons' (Hardin 1968).<sup>9</sup> As cooperative strategies come to dominate in the intermediate range of common property regimes ( $b < x < d$ ), the successful coordination and regulation of the joint use of common grazing is conducive to ecological sustainability. Assuming low and uncertain ecological production from the resource base, assuring joint use within a common-property regime is quite simply the most efficient way to meet the sustainability criterion. However, beyond  $d$ , the selective privatization of high quality resources may undermine the efficiency of the common grazing system as a whole, and thereby lead to a decline in ecological sustainability. This proposition is supported by recent thinking in ecology as applied to grazing management systems, which suggests that the

viability of the system as a whole is closely related to regulating access to, and control over, patches of key, high-quality resources (Mearns 1991a; Scoones 1991; Behnke 1994; Scoones 1994).

## **5 COLLECTIVE ACTION AND COMMON GRAZING IN RURAL MONGOLIA**

During the twentieth century, Mongolian society has experienced two major transformations. The first followed the Bolshevik inspired revolution of 1921, which by 1924 made the Mongolian People's Republic the world's second communist state after the Soviet Union (Brown and Onon 1976; Bawden 1989). The second, some 70 years later, marked the onset of post-socialist economic and political transition (ADB 1992; IBRD 1992; Aubin 1993; Collins and Nixon 1993; Lee 1993; Hahm 1994). During the first period (1921-91) Mongolia undertook the collectivization of its rural economy along Soviet lines (Humphrey 1978; Lattimore 1980; Rosenberg 1981; Mearns 1991a), while decollectivization has largely taken place in the period since 1991 (Potkanski 1993; Swift and Mearns 1993). By the standards of transitional economies in Eastern Europe and elsewhere, Mongolia has undertaken extremely rapid structural reform: 'by the end of 1992, more than 80 per cent of the industrial, service, trade and agricultural sectors had been privatized, judged by both the number of enterprises and the amount of capital stock' (Korsun and Murrell 1994: 2).

The rural sector is the mainstay of the entire Mongolian economy. It is important for domestic food security, export earnings (e.g. cashmere wool, skins and hides) and income multiplier effects from employment. Significant urban-industrial development took place over the 1960s-1980s. This was financed in large measure by high implicit taxation of the rural sector under central planning, and a substantial proportion of industrial production is based on the processing of livestock products. Agriculture directly contributes over 25 per cent of GDP, while livestock production accounts for three-quarters of agricultural value added (IBRD 1994: 2). Prior to decollectivization and the start of a major programme of privatization of state assets including state and collective owned herds in 1991-92, herders made up 43 per cent of the total population of 2.2 million. After 1991, a net flow of migrants from urban to rural areas led to an inflow of livestock owning newcomers to rural communities, owing to the shake-out of labour from the public sector, and the acquisition of animals under the privatization programme by formerly non-herding state



employees.<sup>10</sup> Overall herd ownership moved from 68 per cent state or collective owned and 32 per cent private in December 1990, to 30 per cent state and 70 per cent privately owned by December 1992. More than 90 per cent of Mongolia's animals were estimated to be in private hands by late 1994.<sup>11</sup>

All land currently remains in state ownership. The Constitution of Mongolia, which came into effect in February 1992, admits the principle of private land ownership but reserves for the state the right of 'eminent domain' over all land (Whytock 1992; Mearns 1993a). The new Land Law, ratified during the autumn 1994 session of the *Ikh Khural*<sup>12</sup> (parliament), provides for the transfer into private hands of, for example, arable and hay land (which make up less than 1 per cent of the total land area), and urban and peri-urban land for development. Pasture land, however, is specifically excluded from private ownership.<sup>13</sup> Of Mongolia's total land area of 1.6 million km<sup>2</sup>, 79 per cent is under pasture. This will remain in state hands as 'common' land under the jurisdiction of the relevant local authorities at provincial and district levels. In practice, it falls under the effective control of local herding groups as *de facto* common property, as it did throughout the period of collectivization, in spite of the state's attempts to exert control over land use (Mearns 1993b). Together, these local grazing commons make up probably the largest remaining area of common grazing in the world. However, such controversy surrounds the new land legislation,<sup>14</sup> the wording of which leaves considerable room for ambiguity in interpretation (Whytock 1992; Mearns 1993a), that conflicts over access to, and control over, these commons appear likely to increase in the near future.

It might be thought that the processes of first collectivization then rapid decollectivization in the space of four decades would exert a highly disruptive influence over the organization of rural production in Mongolia. In fact, the institutions of rural production at the family and community level appear to have been characterized by a remarkable degree of continuity, partly, it is argued, as a function of the social and cultural embeddedness of those institutions. The institutions relevant to the management of common grazing are not so much the formal organizations of the state, as the informal, kinship- and residence-based community groups (Vreeland 1962; Szynekiewicz 1977; Szynekiewicz 1982; Fletcher 1986) that serve a wide range of socially valued purposes including a minimal role in natural resource management (Bazargür *et al.* 1992; Mearns 1993b; Potkanski and Szynekiewicz 1993). In turn, sets of rules that affect the use

of pastures, including the influence over herders' own behaviour of the expectations they form of the behaviour of neighbouring herders, are a principal determinant of the degree and quality of pasture management, and hence of sustainability. The evolution of 'coordination norms' (Runge 1986) in natural resource management at the level of local institutions, and their general acceptance and internalization by individuals within those institutions, is a form of what has come to be known more generally in the collective action literature as an 'assurance problem' (Sen 1967; Runge 1984). The local institutional context, and the enabling or disabling framework at the level of state economic policies and legislative structures, therefore holds the key to assuring the sustainable management of common grazing on which the rural economy substantially depends.

## 5.1 PASTORAL INSTITUTIONS

Table 1 shows the principal institutions and organizations at different scale levels in Mongolia's pastoral economy during three historical periods: pre-collectivization (pre-1950s), collectivization (1950s-80s), and contemporary decollectivization and transition (1990s-). This section describes pastoral institutions at herding camp and neighbourhood levels. The sections that follow consider how these have been shaped by changes in the formal organizations of the state through collectivization and decollectivization. For purposes of clarity, Table 1 presents institutional configurations in the form of rather static, snapshots in time; the account that follows, however, emphasizes the dynamics of these institutions and organizations and their interrelationships over time. For purposes of illustration, Table 2 presents comparative data on pastoral institutions in two districts of Mongolia, representing contrasting ecological zones.

The *khot ail*, or nomadic herding camp, is traditionally the basic, independent social and economic unit of livestock production. It comprises a group of households who are often but not necessarily consanguineal or affinal relatives, and who assist each other in activities such as day-to-day herding, cutting wool and hair of animals, making felt, nomadic moves, and haymaking. Each family would normally keep several, perhaps even all, of the five species of animals (camels, horses, cattle (including yak in mountain areas), sheep and goats). The principal economic benefit of cooperation within the *khot ail* is to reap economies of scale in the use of scarce labour, particularly by combining each family's animals into separate flocks of sheep and goats, and herds of each species

Table 1: Historical evolution of Mongolian pastoral institutions				
Scale level	Order of magnitude (households)	Pre-collectivization (-1950s)	Collectivization (1950s-1980s)	Decollectivization (1990s-)
Herding camp	1	herding family	herding family	herding family
	1-2		<i>suur</i>	
	2-10	<i>khot ail</i>		<i>khot ail</i>
Neighbourhood	20-80	' <i>neg nutgiinkhan</i> '	team	' <i>neg nutgiinkhan</i> ' { <i>khoshoo</i>
	50-100	<i>bag</i>	brigade	{ (cooperative)
Local administration	100-250			<i>bag</i> company
	500-1,000		{ collective { ( <i>negdel</i> ) &	
	1,000-1,500		{ district ( <i>sum</i> )	district
	10,000	<i>khoshuu</i> (feudal fief)	province ( <i>aimag</i> )	province

**Table 2: Comparative data on pastoral institutions in two districts in contrasting ecological zones of Mongolia<sup>1</sup>**

	<b>Erdene district, Dornogov'</b>	<b>Tariat district, Arkhangai</b>
Ecological zone	desert and desert-steppe	forest/mountain steppe
Mean annual precipitation	125 mm	266 mm
Interannual coefficient of variation in precipitation	52%	41%
Mean herding population density	0.1 persons/km <sup>2</sup> 8.6 km <sup>2</sup> /person	0.8 persons/km <sup>2</sup> 1.2 km <sup>2</sup> /person
Area of district	10,700 km <sup>2</sup>	4,650 km <sup>2</sup>
Number of bag in district	3	5
No households in sample bag	Tsagaan Hutui 106	Booroljuut 237
Neighbourhood institutions in sample bag	4 <i>neg nutgiinhan</i> (neighbourhoods), subdivided into 9-10 <i>neg usniihan</i> (well-using groups, approx 7 households each)	5 <i>neg jalgynhan</i> (valley groups, approx 20-80 households each)
Size of <i>khot ail</i> (camps)	up to 3 households	2-10 households
Number of nomadic moves of each herding household per year	up to 20: usually 1 each winter & spring; 4-5 moves summer and autumn	4-6: 1 per season, possibly with a 2nd move in summer and/or autumn

...contd/

<b>Table 2 (contd)</b>		
	<b>Erdene district, Dornogov'</b>	<b>Tariat district, Arkhangai</b>
Pasture use	No specific seasonal pastures; key resources include browse trees, surface mineral deposits, springs and wells	Seasonal pasture deferral practised within valley communities
Approx distance of moves	2-50 km per move	1-20 km per move; total 20-50 km/year
Approx scale of ecologically viable pastoral resource unit (allowing margin for flexibility)	3,500 km <sup>2</sup> (area of bag)	200 km <sup>2</sup> (area of valley community)
Boundary definition	Resource unit is larger than user group boundary, allowing flexibility for ecological variability	User group and resource unit boundaries are congruent at the level of valley group
Need to alter household's customary grazing pattern in case of ecological hazard	4 years in 10 (approx.)	1 year in 10 (approx.)
<b>Note</b>		
1 For full details see Mearns (1993b).		

of large stock, and taking turns to provide family members to take them to pasture.<sup>15</sup> A diverse herd species composition also has advantages for the efficiency of range forage exploitation, owing to the complementary grazing and browsing strategies of different species of animal (Purev 1990; Mearns 1993b; Sheehy 1993). Membership of *khot ails* is not fixed, and individual households may come and go, but more often than not they form around a relatively stable, core group of households who customarily reside together for at least part of each year. Most *khot ails* have an acknowledged leader who is usually the most experienced male herder.<sup>16</sup> Milking is normally carried out by women from each individual household from its own animals. The social and ritual aspects of the *khot ail* are also important integrative functions (Szynekiewicz 1982).

*Khot ails* vary in size both by season, and between ecological zones. They are generally larger in the summer months, coinciding with the growing season for pasture forage, and when milking is at its seasonal peak, and smaller in winter/spring, owing to the seasonal constraint in forage availability. For a given season, as the summary data in Table 2 show, *khot ails* tend to be larger in the more productive forest/mountain steppe and steppe zones, and smaller in the drier desert and desert-steppe zones. In the forest/mountain steppe zone, *khot ails* typically range in size from two to ten households (see Table 3). In the desert and desert-steppe zone, they are rarely larger than three households, and a significant proportion of households form *khot ails* with other households only very infrequently. This differs little from the situation prior to collectivization. In the 1930s, the Russian geographer Simukov found that 60 per cent of families operated independently of others in a desert-steppe location, and of the 123 *khot ails* he surveyed, 90 per cent comprised two families only (Simukov 1934: 100). By contrast, in the forest/mountain steppe district of Ikh Tamir, he found that 31 per cent of *khot ails* had 2-4 member households; 36 per cent were of 5-6 households; 31 per cent of 7-10 households; and 2 per cent of 11-13 households (Simukov 1933: 23). The data in Table 3, for a forest/mountain steppe location in the same province in 1992, reveal a similar frequency distribution of *khot ail* sizes: 40 per cent of *khot ails* comprised 2-4 households; 27 per cent, 5-6 households; and 33 per cent, 7-10 households.

Over time there has been a gradual decline in solidarity around the kinship group as an integrative focus for local institutions. The *khot* community has shifted from one based on a strictly patrilineal line of descent, to a broad kindred or extended family that included consanguineal kin on both

sides of the family, and ultimately to a neighbourhood group of collaborating peers who may not be related to one another at all. The shortening of Mongolian kinship terminology over the last two centuries or so reflects this shift (Vreeland 1962; Szykiewicz 1977).

Nevertheless, kinship relations remain an important factor in explaining the relative cohesion of the *khot ail*. Table 3 describes the dominant character of kinship relations within *khot ails* in three of the five neighbourhood groups that made up one sample bag (sub-district) in the forest/ mountain steppe zone. Out of a total of 30 *khot ails*, 18 were characterized by strong internal kinship relations, while 12 had few or none. Of the 18 *khot ails* in which kinship relations were important, approximately half of those relationships were consanguineal (usually brothers, or father/son combinations), and half were affinal (often brothers-in-law or sons-in-law where more than two generations were present). In the 1930s, Simukov appears to have found slightly closer forms of kinship ties within *khot ails* in Ikh Tamir; more than half of those he surveyed were made up of entirely interrelated households (Simukov 1934: 101).

There are also variants on the basic *khot ail* as a cooperative unit. One of the most important among sheep herders is where two neighbouring camps form a *sakhlaltiin ail*. This is an arrangement whereby the two camps, not usually more than 500-1000 metres apart, swap over their suckling lambs in the daytime during the milking season (around April to July), so that the ewes' available milk supply does not become depleted. If each camp were to herd its lambs separately from their mothers, but independently of other camps, the labour requirements would be virtually doubled. It is common for *sakhlaltiin ail* to be of long standing, but they rarely operate for more than 10 years consecutively, given the need for camps to scatter independently during drought years when pasture growth is poor.

It is at the level of co-resident groups of families or *khot ail*, referred to here as neighbourhoods, that cooperation also takes place in the sphere of natural resource management. Although such 'management' is usually of a minimal nature, involving little more than coordinating the use of pasture land and hay meadows, water sources, and other natural resources such as salt licks (*khojar*), it nonetheless requires a degree of collective responsibility on the part of neighbouring herders. Mongolian herders invariably espouse an ideal of free and open access to pasture by all-comers. The

<b>Table 3: Summary data on <i>khot ail</i> size, kinship structure, and differentiation in livestock holdings, Booroljuut bag, Tariat district<sup>1</sup></b>				
<i>Khot ail</i>	Number of households	Mean livestock holdings per household ( <i>bod</i> <sup>2</sup> )	Range of variation in livestock holdings ( <i>bod</i> )	Dominant character of kinship relations
<b>Neighbourhood: Upper Booroljuut</b>				
A	8	26	25	affinal, over 3 generations
B	9	29	69	affinal, over 2 generations
C	5	19	16	consanguineal, 3 generations
D	5	27	19	consanguineal, 2 generations
<b>Neighbourhood: Lower Booroljuut</b>				
A	8	32	42	very few
B	10	38	75	very few
C	3	21	5	affinal, over 2 generations
D	2	45	2	consanguineal (father/son)
E	2	41	9	consanguineal (father/son)
F	7	25	22	consanguineal, 2 generations
G	6	30	27	few (2 father/sons)
H	3	30	16	consanguineal, 2 generations
I	5	20	20	consanguineal (all brothers)
J	6	40	41	none
K	4	32	25	father/son/son-in-law
L	2	33	15	first cousins

...contd/



<b>Table 3 (contd)</b>				
<i>Khot ail</i>	Number of households	Mean livestock holdings per household ( <i>bod</i> )	Range of variation in livestock holdings ( <i>bod</i> )	Dominant character of kinship relations
<b>Neighbourhood: Ikh Jargalant</b>				
A	6	39	20	very few (includes 2 brothers)
B	8	40	52	consang. & affinal, 2 gen.
C	8	43	56	very few
D	5	33	16	very few
E	3	31	17	affinal, over 2 generations
F	3	22	27	affinal, over 2 generations
G	9	30	43	none
H	3	52	71	father/son
I	4	28	31	mother/son
J	4	31	24	affinal, over 2 generations
K	7	37	71	very few
L	10	25	39	very few
M	6	23	54	very few
N	3	16	5	few
<b>Note</b>				
1 For full details see Mearns (1993a), annex 3, which includes genealogies where applicable. Data are for Autumn 1992.				
2 The <i>bod</i> is a standard Mongolian livestock unit, based on the value of a single cow or horse. Its equivalents for other domestic animals are: 14 goats, 7 sheep, 0.5 camels. It is preferred to alternative, international standard livestock units because the conversion factor is more appropriate to Mongolian breeds of domestic animals.				

behavioural reality, however, is somewhat different, and necessarily involves mechanisms for regulating access to seasonal grazing commons, such as tacitly agreeing the approximate date on which a seasonal pasture is 'opened'. The evolved set of rules and cultural norms surrounding the use of pasture land are described elsewhere (Humphrey 1978; Purev 1990; Fernandez-Gimenez 1993; Mearns 1993b). Other forms of collective action among herders at the level of the neighbourhood include forming search parties to look for lost animals (Bazargür *et al.* 1992), firewood collection in forested areas, clearing pastures following heavy snowfall and, when necessary, moving as a group to a new pasture area during times of localized *dzud* or drought.<sup>17</sup>

In common with those in many pastoral societies (cf. Baxter and Hogg 1990; Barfield 1993), Mongolian pastoral institutions at the neighbourhood level are highly diffuse or immanent, and have no existence independent of the collective activities that constitute them, let alone any formal organizational structure. The fact that for analytical purposes they may be given generic labels (e.g. *neg utgiinkhan*, 'people of one place'; *neg usniikhan*, 'people using the same water source'; and *neg jalgynkhan* or *neg goliin ail*, both referring to a 'one-valley community'<sup>18</sup>) should not be taken to imply that herders themselves will always use such terms generically.<sup>19</sup> In most cases, Mongolian herders will refer to the group of herders with whom they customarily share a place of residence by the name of a significant feature in the local landscape, such as the summit of a mountain, or a well or other water source.

As the data in Table 2 illustrate, neighbourhood groups vary considerably in size and in the spatial area they cover, depending on water availability, topography, and forage yield and quality in different ecological zones. In the desert and desert-steppe zones, where forage resource density and predictability are low, neighbourhoods appear to form a loose, confederate structure, permitting alliances between neighbourhood groups of herders for certain kinds of collective activity, while at the same time maintaining a dispersed pattern of settlement (Mearns 1993b). The member families or their forebears may have lived near one another for generations, and share ascriptive customary use rights in pasture (*törsön nutag*). Very often there would have been a religious focus (e.g. a shamanistic shrine or Buddhist temple) in the locality, providing a symbolic, ritual and social identity for such a group (Bazargür *et al.* 1992). The neighbourhood group would also have an acknowledged leader, who would play an important role in the settlement of local disputes (e.g. over land or water resources).

## 5.2 COLLECTIVIZATION: GOVERNMENT THREATENS GOVERNANCE

Until the early decades of this century, Mongolian society was rigidly and hierarchically segmented, with a highly unequal distribution of resources and privileges among aristocrats and state officials, serfs and state subjects, and Buddhist lamas (Humphrey 1978; Bawden 1989; Mearns 1991a). The feudal state interfered relatively little with day-to-day herding activities, other than to extract rent from rural production, but at least it provided an environment of stable expectations within which it could continue. The period of collectivization which followed was in many ways no less restrictive. Although it began by fostering and building on customary forms of mutual assistance in the pastoral economy, the basis for autonomous cooperation was later undermined by a gradual increase in the direct involvement of the state in the productive activities of ordinary herders.<sup>20</sup>

The period 1929-32 was one of leftist political zealotry. Against a background of religious repression, in which many thousands of lamas were slaughtered, attempts at forced collectivization also led to an estimated loss of between six and seven million head of livestock (Brown and Onon 1976: 272; Lattimore 1980: 119-121): herders chose to slaughter their animals rather than see them be collectivized. Some Mongolian scholars believe the destruction of many hundreds of temples during this period divested neighbourhood-level groups of their main integrative focus (Bazargür *et al.* 1992). The disastrous social and economic consequences of this period prompted a political 'New Turn' in 1932, with a renewed emphasis on voluntary cooperation with private ownership.

Gradual steps were taken towards the development of a cooperative movement from 1932 onwards. Cooperation between herding households was encouraged by pooling funds, supplemented by the state, for such activities as boring wells, purchasing haymaking equipment, and building winter shelters for animals (Lattimore 1980; Rosenberg 1981; Mearns 1991a). These voluntary cooperatives effectively built on, and to some extent formalized, customary forms of collective action at the level of neighbourhoods. Over time, however, they came to rely increasingly on the leadership initiative of state officials, and to emphasize the collective ownership of livestock and other productive assets. For example, the Party established, with assistance from Soviet specialists, demonstration hay-mowing stations equipped with horse drawn mowers and hand rakes.

These stations grew in number from 24 in 1938 to about 70 in 1956, by which time they had an average of 25 mowers and 18 rakes each (Thiel 1958: 178).

By 1940, there were still only 90 such cooperatives across Mongolia. The movement grew steadily throughout the 1940s, however, and by 1954 there were 198 cooperatives, with a total of 15,400 members and 979,500 livestock (Shiirendev 1966). In 1955, the decisive measure of introducing a ceiling on private livestock holdings was adopted to further encourage the emergent collectives (*negdels*). Labour shortages were chronic, and wealthier herders found it in their interests to join the collectives and collectivize their herds as they found it increasingly difficult to employ wage labour to look after their private animals. Cooperative development was most strongly represented in the Khangai forest/mountain steppe zone, which accounted for more than 40 per cent of them in 1954, while only around 10 per cent were to be found in the Gobi desert-steppes (Szuljenko 1954). This regional variation has been attributed by some to the greater need for mutual assistance to cope with the harsher environmental conditions of the central forest/mountain steppes (Szirnen and Bazargur 1987), while others stress local factors such as the role of leadership (Rosenberg 1977).

By 1959 virtually all of Mongolia's herding households were members of collectives. The politics of collectivization had by then begun to change, with a more actively interventionist role on the part of government. On grounds of economic efficiency, collectives were encouraged to increase in size. By 1958 the number of collectives had increased to 727, but these were amalgamated into 354 larger collectives by 1960 (Szirnen and Bazargur 1987: 37-39). The process of amalgamation continued, albeit at a slower rate, until the 1980s, by which time there were 255 collectives in total. By then, the unit of production and administration had effectively become one and the same; most districts (*sums*) contained only a single collective, and the collective chairman also served as district governor.

As shown in Table 1, the collectives in the period 1960s-1980s were subdivided into brigades, which replaced the former *bag*<sup>21</sup> (2-5 per collective); brigades were subdivided into teams, and teams into *suurs*, the basic herding unit, comprising one, or at most two, households. In some respects the *suur*, the lowest level production unit of the collectivized economy, was a modification of the traditional *khot ail* herding camp. The *suur* was smaller however, and more significantly, it was not an independent production unit. Efforts were made to prevent *suur* from

forming on the basis on kinship relations, on the grounds that this would run counter to the interests of the collective, but these were unsuccessful. In practice, the households of *suur* with more than one household tended to be related by blood or by marriage.

Under collectivization, the accounting unit and locus of decision-making shifted away from the individual herding household to the level of the collective itself.<sup>22</sup> This had the effect of undermining the cooperative functions of the *khat ail*, since economies of scale were, at least in theory, achieved at a higher level of organization. The brigades were to some extent specialized by type of animal; and within the brigades, the *suurs* were definitely specialized, by animal species (and even age class) and by task (Humphrey 1978). The allocation of animals and labour tasks was decided at the level of the collective. Collective members were paid a salary for looking after animals on behalf of the collective, or for discharging other allotted tasks. The marketing and delivery of all inputs and outputs was arranged by the collective, according to centrally determined, physical targets.

The collectives provided various inputs and services for livestock production to an increasing degree from the 1960s to the 1980s, including transport for making nomadic moves; supplementary feed for the critical winter/spring period; organizing the building of winter/spring stockyards and shelters; the recruitment of labour to meet contingencies such as clearing snow from pastures; veterinary and specialized animal breeding services (FAO 1990). This substantial effort on the part of the socialist state under collectivization to improve the conditions of livestock production, along with investment in health and education services and the provision of consumer goods at subsidized prices through state owned shops, led to a general rise in the standard of living for herders. At the same time it substituted for autonomous cooperation at herding camp and neighbourhood levels in activities such as day-to-day herding, clipping hair and wool (an especially labour-intensive task in the case of camels), haymaking, felt-making and organizing draught animal transport for moving base camp. As a result, such examples of spontaneous collective action among herders more or less ceased.

The expanded realm of government during the era of collectivized production may have constituted a significant threat to effective governance in the management of natural resources. For example, it has been argued that rational land use practices were jeopardized in some

places as a result of attempts to extend administrative control over territories whose boundaries bore little relation to the actual patterns of mobility of local herders. In principle, herders were supposed to remain within their district of residence, except in cases of contingency (e.g. localized *dzud*<sup>23</sup>) when the collective/ district chief would negotiate with his counterpart in a neighbouring district over access to pasture land on behalf of the collective members. Following boundary changes, however, some districts included pasture suitable for use only in a few seasons. Although herders continued to move across district boundaries to a greater extent than was officially acknowledged, the direct involvement of government at this level of resource use certainly appears to have led to a decline in herder mobility, and therefore to have compromised sustainable land use practice (Bazargür *et al.* 1992; Mearns 1993b: 91-93).

It is argued elsewhere that a tension arose during the period of collectivization between two competing 'truths' as to how decisions in the pastoral sector were actually taken: 'the official truth, at least in the eyes of those whose interests lay with the collectivized state administration, was that pasture allocation was a matter for bureaucrats and technicians employed by the collectives' (Mearns 1993b: 94). The unofficial version is that customary principles surrounding the coordination of pasture use within neighbourhood level groups continued to operate most of the time, and that they were therefore tacitly underwritten by the collectivized state. As a result of the competition between these two systems of authority, customary mechanisms for arbitrating over pasture allocation were inevitably weakened.

It was by no means always the case that customary mechanisms for dispute settlement were successful prior to collectivization, however, nor that pasture allocation was necessarily decided equitably. There were considerable disparities in wealth and power between herders. For example, in about 1920 in the territory of Narobachin monastery, out of 400 families, there were two particularly rich households with over 2,000 sheep each, while serfs owned less than six head of animals per person (Vreeland 1962: 31-34; also cited in Humphrey 1978: 134-35). It was no coincidence that much early support for the emerging collectives during the 1930s and 1940s came from poorer herders who had little to lose and much to gain from cooperation. Menjuur, a former director of Victory collective in Mörön district, Arkhangai province, for example, described the situation in 1956 as follows: 'This negdel had only 1,000 animals - 80 per cent of which

were goats!.. There were about fifty families in the negdel, and they were the poorest people' (Rosenberg 1981-82: 23). He went on to explain that

(t)he better pasture was controlled by rich families, and the negdel members had trouble finding good pasture because they kept getting kicked off pasture claimed by the rich. At that time the district party organization and administration ignored negdels and worked in favor of private ownership.. The people were under the leadership of such district and bag leaders, and it was these officials who decided pasture disputes. They did so in favour of the private owners.

(Rosenberg 1981-82: 23-24).

Such forms of nepotism did not end with collectivization, however. On the contrary,

(t)he existence of an alternative system of authority to the customary one provided better-'connected' herders (e.g. those with friends or relatives in the brigade or collective administration, or those more articulate herders with relatively greater bargaining power) with an opportunity to 'free-ride' - i.e. to ignore mutually agreed customary principles of restraint in pasture use - more or less with impunity.

(Mearns 1993b: 94).

Under collectivization, inequalities in the distribution of assets and income were considerably reduced but by no means eliminated. Strict limits were enforced on private livestock holdings until the mid-1980s, and they accounted for no more than 25 per cent of total animal numbers throughout the period of collectivization. Immediately prior to decollectivization in 1991, private livestock holdings were found to range between 30 and 100 head in one brigade in Ikh Tamir district in the forest/mountain steppe zone, for example, and between 30 and 200 head in a brigade in Erdene district in the desert-steppe zone (Mearns 1991b). Salary levels varied within collectives according to herders' skill and experience, and the type of animals herded. For example, in Tariat district in the forest/mountain steppe zone, annual salaries ranged from 6,000

tögrög for a seasonal milking worker, to between 10,000 and 20,000 tögrög for permanent herders, with the highest salaries paid to herders of large animals who regularly at least met their production quota (Cooper 1993: 154).

Let us summarize the argument so far. The expanded realm of government under Mongolian collectivization tended to undermine incentives for autonomous cooperation among herders, including cooperation in grazing management. Table 4 gives an indication of relative change in the attributes of 'community' that have been identified as being relevant to solving local collective action problems. Here we focus only on change between the pre-collective period and that of collectivization. In the pre-collective period, it is argued that all the attributes of community were sufficiently present that local collective action problems could be solved endogenously. The additional condition of 'mutual vulnerability', or dependence on a common resource in relation to alternative sources of livelihood, was perhaps less clearly met, given the then large disparities in livestock holdings among herders. During the period of collectivization, several of these attributes of community were substantially weakened. Most significant was the fact that relations between herders had become mediated by a third party: the collective, and ultimately state, administration. Herders' incomes were derived in large measure from collective salaries and state benefits. They were no longer influenced to any great extent by cooperative activities with neighbouring herders, other than those organized by the collective.

Government, during the period of collectivization, is also argued to have threatened good governance in natural resource management. This may be illustrated with reference to Figure 1. The stronger incentives for labour-pooling and other forms of collective action in the pre-collective period substantially strengthened the incentive to cooperate at the level of the neighbourhood group in the joint use of pasture land. This corresponds with the segment  $b < x < c$  in Figure 1(i). An individual herder who chose to free-ride on the cooperative decisions of others in pasture management ran the risk of losing more in the longer term through loss of reputation, or even social ostracism, than he or she might have gained through short-run access to pasture. With collectivization, however, the general decline in autonomous cooperation within local institutions, together with the eclipse of the customary structure of authority by that of state bureaucracy, led to a



relative decline in the potential costs associated with individual free-riding behaviour in pasture use. This situation is represented by the segment  $0 < x < b$  in Figure 1.

Attributes of 'community'	Pre-collectivization (-1950s)	Collectivization (1950s-1980s)	Decollectivization (1990s-)
Shared beliefs and preferences	✓	(✓)	(x)
Stable membership	✓	✓	x
Interaction expected to continue	✓	(✓)	x
Direct and multiple relations	✓	x	✓
Mutual vulnerability	(✓)	x	(✓)

### 5.3 DECOLLECTIVIZATION (1): RE-EMERGENCE OF AUTONOMOUS COOPERATION

The period since 1991 has seen a rapid process of structural reform in the organizations of rural production in Mongolia. There has been a significant retreat by the state from direct involvement in production, and prices have been freed from state control (Murrell *et al.* 1992). The collapse of state support in the form of goods and service provision has meant that the main burden of risk in livestock production is once again being shouldered by individual herding households. The most obvious response has been the

re-emergence of autonomous cooperation among herding households, at the level of both the herding camp and the neighbourhood, as shown in Table 1.

Mongolia's herding collectives began to be dismantled in 1991, and were administratively succeeded by joint-stock or limited-liability companies, cooperatives, or disbanded altogether so that their members become 'sole proprietors' or fully private herders with full responsibility for obtaining their own inputs and finding markets for their produce.<sup>24</sup> Although the general rules for privatization were decreed by law, a considerable degree of flexibility was permitted in the way they were interpreted at provincial and district levels.<sup>25</sup> Therefore, privatization varied between collectives in terms of timing, pace, and the specific rules determining the entitlements of collective members and employees.

Privatization took place in a two stage process ('small' and 'big' privatization) by share-issue and auction (Boone 1994; Hahm 1994). All citizens were entitled to 'coupons' to enable them to participate in each of these stages. Only collective members or employees were eligible to receive animals, usually according to family size and length of service with the collective. The 'small' privatization, involving 30 per cent of animals and infrastructure such as winter/spring shelters and other agricultural buildings, vehicles and machinery, and (in some places) wells, was completed during 1991-92. The remaining 70 per cent of animals and property were transferred to the newly established companies and cooperatives.

By 1991, at the level of the macroeconomy, the centrally subsidized provision of goods and services through the collectives had become untenable as a result of economic liberalization and the loss of something in the order of a third of national income previously obtained through subsidies and credits from the former Soviet Union. Over the period 1986-90, for example, the transport of winter fodder alone accounted for an average 10 per cent of total transfers and subsidies in the national accounts.<sup>26</sup> In restructuring, the newly established companies have attempted to continue providing services to herders (such as the distribution of hay and other forms of winter/spring feed supplement, arranging markets for livestock products, the supply of veterinary drugs, and transport for moving base camp), but company members are now required to pay for such services.

In the atmosphere of uncertainty engendered by the early stages of economic transition, the high expectations of company members could not realistically be met: 'the promised services were not always available, payments for them were high due to inflation, prices for products were low compared to free market ones, and nothing could be bought with the money earned' (Potkanski 1993: 127). The new companies tended to retain essentially the same management structure and style as their predecessor organizations, the collectives, and allegations of corruption in the distribution of collective assets were rife.<sup>27</sup> As a result of the economic crisis, for which company administrations were widely blamed, herders began to leave the companies, many of which collapsed during their first year of trading. In June 1991, there were reported to have been just 68 private herders in the country. By April 1992, according to the National Privatization Commission, this number had risen to 14,000; and by August that year, it was reported that one central province alone had 13,000 fully independent herders.<sup>28</sup>

Decollectivization has had profound consequences for pastoral institutions at the local level. At the level of the herding camp, the *khot ail* has re-emerged as an important form of social and economic organization in post-socialist Mongolia, for several reasons. Firstly, the return to family owned herds with a diverse species composition following privatization, as opposed to the species and labour-task specialization of collectivization, has made it necessary once again to seek economies of scale in the use of scarce labour by pooling herds for day-to-day herding. Labour economies of scale are also achieved in other activities, including moving base camp, preparing and repairing winter shelters, collecting firewood in forested areas, cutting animal hair and wool, and training animals for moving base camp. Such forms of collective action are especially beneficial to labour-scarce households (those of a young age structure, with children of pre-school age; or elderly people with non-resident, adult children) (Cooper 1993: 157-61). While livestock holdings are related to life cycle stage, because it takes time to build up the family herd, family structure also influences wealth and well-being status independently through its effect on the availability of labour for other, non-herding tasks (Mearns *et al.* 1992).

Secondly, the *khot ail*, and to some extent the broader neighbourhood, also acts as a social safety net for poorer rural households. Livestock holdings under Mongolia's harsh climatic conditions are liable to irregular and often considerable fluctuation owing to unpredictable risk factors. In their analysis of the changing significance of risk in the Mongolian pastoral

economy, Templer *et al.* distinguish between 'individual' risks, that are not highly correlated between households in a given locality (e.g. loss of workers, non-infectious animal diseases); and 'co-variate' risks that affect all members of a community (e.g. climatic events such as drought or *dzud*), although their consequences tend to be more severe for poorer households (Templer *et al.* 1993).

In the case of individual risks, various forms of mutual assistance or reciprocity may operate to pool risk between households within herding communities (cf. Fratkin and Roth 1992). In the hierarchical social formation of pre-collectivized rural Mongolia, for example, temporary dependency relationships could arise between poorer and wealthier families as a means to allow the afflicted family to build up its herds sufficiently to re-establish independence. The poor family, known as the *jarsiin ail* (literally, 'used family'), retained its own family property or *örekli*, but voluntarily attached itself to a wealthier family and offered unspecified services in return for material support. The families may have been unrelated or only distantly related (Vreeland 1962: 89-90). By definition, intra-community mutual assistance cannot be adequate for coping with co-variate risks, which necessitate some form of redistributive public action.<sup>29</sup>

With economic liberalization, levels of inequality in the distribution of private animals and other assets have tended to increase, partly as a function of the different abilities of herding households to command labour and other resources with which to respond to new economic incentives or cope with economic hardship. By 1993, for example, in one bag of Tariat district in the forest/mountain steppe zone, household herds varied in size from less than 10 head of animals to 180, while for a bag of Erdene district in the desert-steppe zone, they ranged from 25 to 550 (PALD 1993).

In this context, there is some evidence that forms of mutual assistance or dependency, not unlike those documented for pre-collective Mongolia, are beginning to reappear. These include, for example, short-term and long-term loans of foodstuffs and livestock from better off to poorer households within the same *khlot ail* (Cooper 1993: 157-61; Potkanski and Szykiewicz 1993). Although small loans and exchanges of flour, salt, tea, matches, tobacco, and candles take place between many households on a daily basis, larger 'loans' of flour and milk products are usually made only to poorer households by richer kin within the *khlot ail* or neighbourhood, without any real expectation that they will be repaid. Such relationships operate as

implicit rather than explicit transactions, but where a payoff can be identified for the better off household, it usually takes the form of a labour contribution.

Autonomous cooperation has also become significant at the level of the neighbourhood, in ways directly related to the adversity of economic transition itself. This takes the form of collective action among herding households to provide goods and services previously supplied through the collectivized state, such as transport, input and output marketing, or veterinary services. Eventually, some of these goods and services may be provided by the market, but in the institutional vacuum of economic transition, herders must either do without or provide for themselves.

For example, in response to the rising cost of rural transport, herders within neighbourhood groups have begun to re-train draught animals to assist each other when moving base camp, or to transport milk for local processing. Former collective owned trucks and other vehicles are 'lumpy' assets generally beyond the means of an individual household to acquire during the privatization process. But at the level of the *khot ail* or neighbourhood, groups of herders have purchased them jointly, and may make arrangements to market their own products, or to hire out their vehicle for use by others. Similarly, in response to the rising cost of supplementary livestock feed, herders have reverted to making hay collectively within *khot ail* and neighbourhood groups using simple hand tools (horse drawn mowers had fallen out of use with mechanization under collectivization).

An interesting new organizational development has been the emergence of grassroots cooperative organizations (*khoshoo*) that are neither customary nor state-collective institutions, although they share similarities with both.<sup>30</sup> Most of these fledgling organizations operate principally as marketing cooperatives. They perhaps mark the beginnings of a 'third realm' of civil society in rural Mongolia, between state and society (cf. Huang 1993), based firmly on private ownership and the family herding unit. Two examples are selected here to illustrate the different origins, dynamics and leadership roles of *khoshoo* in the contrasting districts of Erdene and Tariat respectively (see Table 2).

Although it is remote from Ulaanbaatar, Erdene district lies along major rail and road routes to China. Traders pass through the area regularly, and local herders find less difficulty finding markets for their products than do

herders in many other parts of the country. Until the end of 1992, the company formed following the dissolution of the collective still performed a brokerage role between its individual members and the market. A group of 16 families nevertheless took the initiative in mid-1992 to form a *khoshoo*, in order to become independent of the company, which they perceived as interfering with their potential to raise production, and to try to obtain higher prices directly from consumers or at auction (Potkanski 1993: 130). Nine families from the group were from one valley community, while seven were from neighbouring communities. Membership was open to all in the local community, but many refused entry, as they feared the venture would fail. The *khoshoo* included both better off and poorer households. The necessary enthusiasm for creating the *khoshoo* was owed in large part to a charismatic local leader, who took responsibility for preparing a business plan, for liaising with local authorities, and for keeping accounts. Another man was elected president on the strength of his good contacts in the district centre. The group jointly established a set of operating rules or guidelines specifying the range of products they would aim to market; the manner in which they would run a jointly owned truck, obtain hay and other inputs; and committed themselves to assisting each other in the event of labour shortage or other forms of individual risk.

The second example is of a dairying cooperative in Booroljuut bag, Tariat district, the leading yak producing area of the country during the collective period, but very remote from urban markets. During the 1992 milking season, a group of about 50 private yak herding families in Lower Booroljuut valley (see Table 3) organized themselves into three dairying 'teams' (*souni tasag*) to produce and market yak butter, a product which could command a relatively high price in urban markets (Mearns 1993a: 68-70). As in the case of the *khoshoo* in Erdene district, the role of leadership was essential in forming the cooperative, and in negotiating with hauliers and potential customers. In this case, the initiative was taken by the former deputy chief of the collective. The group tacitly carried over many operating norms from the period of collectivized production and marketing, and the leader emulated the directive leadership style of the collective administration. However, the rules governing participation, labour contribution and rewards, and so on, were worked out at open meetings of the *khoshoo*, with a committee of seven elected representatives. All members belonged to the same herding community.

In autumn 1992, 450 kg of yak butter produced by the *khoshoo* was sold to various customers in Ulaanbaatar and Tsetserleg, the provincial capital, including a food product wholesaler and a barracks. The proceeds from these sales took the form of food products obtained in barter exchange (e.g. bread, flour, vodka) as well as cash. By converting goods in kind to cash equivalents, the operation yielded a price paid to the participating members equal to around 8 *tögrög* per litre of milk, which compared favourably with the then prevailing purchase prices offered by the local company of 3 *tögrög* per litre from company owned yaks and 5 *tögrög* per litre from private yaks.

While the principal aim of the *khoshoo* was to command higher prices in livestock product marketing, and to seek economies of scale in purchasing inputs such as animal feed supplements, it also served other functions, which included acting as an informal grazing association. In the case of infringements of local norms governing pasture use, the *khoshoo* represented a means of legitimately expressing collective disapproval to 'free-riders' from outside the community. Those inside the community were very unlikely to jeopardize potential future benefits of membership in the *khoshoo*, ranging from higher producer prices to the likelihood of assistance from neighbours when necessary, by behaving uncooperatively in the use of local pastures.

In order to gain a deeper understanding of herders' own perceptions of the relative importance of the various rural institutions and organizations in which they participated, the technique of matrix ranking and scoring was used.<sup>31</sup> The results of one such exercise, carried out with an informant in Booroljuut *bag*, Tariat, are shown in Table 5. The institutions relevant to the informant, given in the left-hand column, were: the two customary institutions of the *khot ail* and the *neg jalgynkhan* or neighbourhood; the district and sub-district (*bag*) administrations of the state; the former collective; and the recently established *khoshoo*, of which the informant was a member. The criteria used by the informant to distinguish between these institutions are given along the top row.

The most important institution to the informant was the *khot ail*, for collective management of herds and family labour. This was ranked top consistently, except on the criterion of 'sharing the use of a vehicle'. On closer questioning, the informant revealed that 'sharing the use of a vehicle' also implied for him joint ownership of the vehicle. The *khot ail*, he felt, was too small an institution to own such a lumpy asset. The

**Table 5: Matrix ranking and scoring of institutional preferences, Tariat district<sup>1</sup>**

	members have strong common interests	communication between members is easy	it is easy to reach a decision collectively	it is possible for members to share the use of a vehicle	there is good contact between leader(s) and members	it is easy to organize collective activities
<i>khorschoo</i>	4 (5)	4 (4)	4 (2)	3 (-)	4 (4)	4 (4)
district	6 (0)	6 (0)	6 (0)	6 (-)	6 (0)	6 (0)
collective	5 (0)	5 (0)	5 (0)	4 (-)	5 (5)	5 (4)
<i>khot ail</i>	1 (5)	1 (5)	1 (5)	5 (-)	1 (5)	1 (5)
<i>bag</i>	2 (4)	3 (4)	3 (3)	2 (-)	3 (5)	3 (5)
<i>neg jalgynkhan</i>	3 (4)	2 (5)	2 (4)	1 (-)	2 (4)	2 (5)

**Note**

1 Numbers in cells refer to rank order (ascending); those in parentheses refer to score (0-5), '(-)' indicates score not given. Criteria for ranking (top row) were elicited by means of pairwise preference ranking, prompted by the question, 'which institution is more important to you and why?' The six most frequently mentioned criteria for distinguishing between institutions were chosen to form the columns of the matrix for subsequent ranking and scoring. The informant was a *khorschoo* member, Ikh Jargalant valley. For full details of the research methodology, see Mearns (1993a).



neighbourhood (*neg jalgynhan*) was consistently ranked next highest; it ranked top on the criterion of 'sharing the use of a vehicle'. At the other end of the scale, the district administration ranked bottom on all criteria, and was awarded no score at all; this has to be interpreted as indicating that the district administration was almost completely irrelevant to the informant.

Of the mid-ranking institutions, it is significant that the sub-district (*bag*) ranked consistently more highly than the *khorshoo*, perhaps because the *bag* leader was a well-respected and personal friend of the informant. In practice, the membership of the *khorshoo* overlapped almost entirely with that of the neighbourhood or valley community. The latter was considered to be more important to the informant than the *khorshoo*, however, which emphasizes the fact that in this case the *khorshoo*, as a formal institution, was based on and drew its strength from the qualities of the customary institution, within which kinship relations and mutual trust among long-standing neighbours were important integrative factors.

An anomaly in the scoring is shown for the former collective against the last two criteria. In most respects the former collective fared very poorly throughout; it was felt to be too large for its members to share strong common interests, or to be able to communicate and reach collective decisions easily. On the issues of leadership and organization of collective activities, however, it received high scores (although it was ranked low). Further questioning revealed that the informant interpreted these criteria in the case of the former collective administration to refer to its 'commandist' leadership style: it was 'easy' to organise collective activities in the sense that people did what they were told.

#### 5.4 DECOLLECTIVIZATION (2): CHANGING COMMUNITY DYNAMICS

At the same time as autonomous cooperation has become significant as a means of coping with economic hardship, economic transition has also led to a divergence of interests within herding communities that is tending to threaten prospects for the endogenous solution of collective action problems. Decollectivization brought with it significant and rather sudden changes in the structure of the rural economy. Most notable among these have been net urban-to-rural migration, and a rise in absentee herd ownership.

Many people formerly employed by the collectives as veterinary officers, animal husbandry specialists, drivers, canteen workers and the like, have managed to acquire animals in the 'small' privatization and, owing to a lack of alternative employment opportunities, have turned to herding as a source of livelihood. Some continue to live in rural towns as absentee herders, in which case herding relatives or friends may care for their newly acquired animals, in return for a share of the products, or exceptionally (in the case of non-relatives), monetary payment (Potkanski and Szykiewicz 1993: 51-53). Others look after their own animals, but remain close to rural towns, thereby increasing grazing pressure on pastures there.

In addition to employees of the former collectives, there was also a more general net flow of urban-to-rural migrants during 1991-94 in response to the relatively higher degree of economic deprivation in urban centres than in rural areas. In spite of customary assistance from rural relatives in the form of *idish* (literally, 'food for the winter') (Cooper 1993; Potkanski and Szykiewicz 1993), urban inhabitants were always more dependent on the market to meet food requirements than were their rural counterparts with private animals from which they were able to meet domestic demand for meat and dairy products. In the period 1991-94, even rural households found it extremely difficult to obtain wheat flour and other traded food products owing to shortages and rapid price inflation, and withdrew substantially into self-provisioning, as Cooper and Narangerel illustrate with data on changes in household diets (Cooper and Narangerel 1993).

Against this background, many urban inhabitants who were eligible to receive a share of the former collective herds in their district of origin began to leave urban areas to take up herding. Many were children of herders, but who had never made a living at herding, while others may have had limited experience of herding themselves. Such urban-rural migrants, as relative newcomers to herding, posed particular problems within herder community groups. Even where they were able to demonstrate some family connection, the newcomers were 'outsiders' to neighbourhood groups. They frequently became scapegoats for local discontent about the privatization of collective herds, and were often held responsible for a perceived increase in grazing pressure on local pastures (Mearns 1991b). It is undeniably true that some of the newcomers were less skilled in pasture and herd management than herders of a number of years standing, and had a greater tendency to remain relatively sedentary (Mearns 1993b).

Their presence increased the range of interests represented within local communities, which led to a relative weakening of the potential for successful collective action in controlling pasture use.

Two cases are selected here to illustrate the changes in intra-community dynamics with decollectivization, and their consequences for the management of common grazing. The first case is a series of events that took place immediately prior to decollectivization in Erdene district, in the desert-steppe zone (see Table 2) (Potkanski and Szykiewicz 1993: 44). It shows how attitudes towards non-cooperative behaviour in the use of pastures may differ, depending on climatic conditions that determine the availability of pasture at a given moment, or the relative number of 'free-riders' involved. In 1989, rainfall had been very low throughout the northern part of the district, and pastures were poor. When a surface pool formed close to herder A's winter shelter, following a short autumn rain, a number of families converged on this spot. Herder A joined them but did not speak out against their behaviour, as he knew there was no alternative grazing. The following summer, in 1990, was also dry. Herder A moved with his large flock of then collective owned sheep and goats to the vicinity of herder B's spring shelter. When he learned of this, herder B angrily chased off herder A. This was repeated for several days until herder A moved to another location. There was no lasting rift between the two neighbouring herders. From these events, it is clear that a certain degree of free-riding has always been tolerated, and need not destabilize the basic presumption of cooperation in the use of pastures within local communities.

The second case was observed in Tariat district in the forest/mountain steppe zone. The orderly system of seasonal pasture deferral that operated in this area came under threat during 1992, following the dissolution of the collective and the influx of a number of migrant families from the district centre. A few families moved to their autumn camps in Ikh Jargalant valley (see Table 3) much earlier than usual, claiming that they had done so only to construct new winter shelters and pens following privatization. However, they remained there throughout the summer. During this time they were gradually joined by others, until more than 20 out of a total of 81 families in the community had moved. The renegade group included relatively experienced herders as well as newcomers who had only recently acquired animals in the privatization of the former collective's herds. It soon became a race to graze off the autumn pastures before others could do the same, in the classic sense of a 'tragedy of the commons'.

The local *bag* leader advised against the move, but he had little effective authority to reverse it, since the renegades knew he could not provide transport in the way the former collective had done, given shortages of fuel and vehicle spare parts. Many of the older, more experienced herders were angry that less experienced herders, especially the newcomers, failed to show respect for authority or tradition. Although other members of the community regretted not having moved with the renegade group, since they had missed out on the best grazing that year from their autumn pastures, the renegade group themselves regretted that their actions had led to such an outcome. They claimed that they would not behave uncooperatively the following year, since they did not wish to see a repeat of the situation in which the autumn pastures had become heavily congested and grazed-off well before the end of the season (Mearns 1993a; 1993b).

The second of these cases illustrates the general instability of expectations that prevails in contemporary Mongolia. The state of economic, political and social flux that characterizes the reform process contrasts markedly with the rigidities and limited individual freedoms of both the pre-collective and collective periods. The feudal state prior to collectivization interfered relatively little with the day-to-day business of herd management, but provided a stable, ordered social formation within which it could continue. Similarly, under collectivization, the bounds within which herders operated were clear, known and predictable. It was still possible for neighbouring herders to form mutual expectations of each others' actions regarding the use of common pastures, and to make decisions on the basis of those expectations, which is a necessary condition for developing local coordination norms so as to overcome a 'tragedy of the commons'.

With economic transition, however, the necessary degree of institutional stability required for the upholding of group norms in the use of pastures, and for the potential exercise of sanctions within local groups, is absent. This uncertainty makes it difficult for herders to form mutual expectations of each others' actions. It tends to heighten the assurance problem of not knowing to what extent other herders are likely to stint, or voluntarily exercise restraint, in their use of pasture. Other things being equal, individual herders are likely to perceive a lower threat of sanctions against free-riding behaviour and may expect to lose less by attempting to maximize individual gain from the available pasture. While economic and political conditions are changing rapidly, it is difficult to learn from past

experience in order to anticipate the behaviour of others, since a particular conjuncture of circumstances influencing one's own and others' decisions may never be repeated. In the language of game theory, contemporary conditions in Mongolia more strongly resemble one-shot, multiperson prisoners' dilemma games than they do the iterated multiperson prisoners' dilemma game in which the players learn from past experience and develop coordination norms as a guide to future action.<sup>32</sup>

## 6 CONCLUSION

The case material presented here argues for the existence of two, competing trends in rural Mongolia under economic and political transition. On the one hand, it seeks to demonstrate the extent and importance of autonomous cooperation following decollectivization. Such cooperation takes various forms, including strategies to achieve economies of scale in the use of labour, and collective strategies for coping with the hardships of economic transition. This reassertion of collective action takes place within the context of a return to a situation in which relations among herders are more direct and multiple, as indicated in the right-hand column of Table 4. Herders benefit from collective action across several spheres at once, and may also be considered more 'mutually vulnerable', to the extent that their livelihoods depend on some degree of cooperation with others.

On the other hand, this has been accompanied by structural changes in rural society that operate in such a way as to weaken those attributes of 'community' that, other things being equal, would support the possibility of endogenously solving collective action problems. These changes are also summarized in Table 4. The divergence of interests among families within local communities, owing to the the influx of urban-orientated newcomers, a rise in absentee herd ownership, and growing wealth disparities, have tended to weaken the degree to which herders share common beliefs and preferences. Membership of those communities can no longer be considered to be stable, and the prevailing atmosphere of uncertainty engendered by macro-level political and economic transition militates against the expectation of continued interaction among herders, at least in the immediate future.

With respect to the possibility of successful collective action in controlling the use of common grazing, these two trends (of re-emergent autonomous cooperation on the one hand, and changing intra-community dynamics on

the other) run in opposite directions. We conclude by relating these trends back to the analytical framework outlined in Figure 1. The re-emergence of autonomous cooperation may be represented by the segment  $b < x < d$  in Figure 1. The prospect of successful collective action in the controlled use of common grazing is reinforced by the potential benefits of collective action in several other, interlocking spheres among herders within local communities. Herders are mutually dependent on one another, to the extent that each would stand to lose from the withholding by others of labour contributions in various cooperative activities. Even with a slight increase in the number of herders sharing the the commons ( $c < x < d$ ), a certain degree of free-riding can be tolerated, and net gains can still be derived from collective action.

The changes in intra-community dynamics following decollectivization may be represented by Figure 1(ii). The influx of urban migrants and other newcomers to herding communities means the total number of herders begins to increase, although total animal numbers are assumed to remain constant. This leads to relative congestion on the commons, so that the unit benefits of cooperation diminish in relation to transaction costs. This corresponds with segment ( $c < x < d$ ). If, at the same time, certain key attributes of 'community' become weakened (such as shared interests and preferences among herders, stability of group membership, and the expectation of future interactions) it is likely that the disincentive to free-ride on the cooperative decisions of others will also be weakened. Under such conditions, the 'tragedy of the commons' may be borne out, and ecological sustainability may be threatened as herders make pre-emptive moves to capture the best grazing first.

The highly dynamic nature of collective action in the use of the commons is epitomized by the interplay of these competing trends. We are rarely able to characterize instances of collective action in black and white terms as being either wholly 'cooperative' or wholly 'non-cooperative'. The framework outlined here is intended to assist in empirically informed analysis to identify those tendencies that drive in the general direction of one or other outcome. It should not be forgotten, however, that post-socialist economic and political transition is a historical moment of unprecedented change in society. Over time, it is to be expected that the uncertainties of transition will give way to new certainties (albeit less strong than those that prevailed during the socialist era) that will allow herders and others to re-shape institutions in such a way as to allow them to operate productively and sustainably in a market economy.

## NOTES

- 1 This is a substantially revised version of a paper first presented at the Fourth Annual Conference of the International Association for the Study of Common Property, Manila, Philippines, 15-19 June 1993. The author is grateful for helpful comments made on earlier drafts by Fikret Berkes, Daniel Bromley, Martin Greeley, Mick Moore, Richard Moorehead, Elinor Ostrom, Ian Scoones, and Mark Selden. The paper also benefited considerably from discussions with colleagues while the author was Visiting Scholar at the Land Tenure Center, University of Wisconsin-Madison, July-September 1993. The research was co-funded by the UK Overseas Development Administration, the John D. and Catherine T. MacArthur Foundation, and the Nuffield Foundation.
- 2 Institutions are understood here as regularized patterns of behaviour between individuals and groups in society, or 'complexes of norms, rules and behaviors that serve a collective purpose' (de Janvry *et al.*, 1993: 566). Organizations are usually a manifestation of, but are not synonymous with, institutions. Not all institutions have an organizational manifestation, e.g. marriage, money, the law; and some organizations are not institutions, e.g. a particular grassroots organization.
- 3 The collection of papers in Bromley (1992) draws on a common framework (Oakerson 1992) which is intended to assist in their comparative analysis. This framework has been criticized for its inadequate treatment of power and authority; structures of socioeconomic differentiation; and ecological dynamics (Cousins 1993). Further theoretical issues in the management of local commons are examined in, for example, Bardhan (1993b); and Ostrom (1992b).
- 4 This observation has strong parallels in the literature on new economic history, particularly North (1990). In common with the literature on new institutional economics, with which it overlaps, North's work emphasizes transaction costs in comparative institutional analysis: 'when it is costly to transact, institutions matter' (1990: 12). The radical change in formal institutions that takes place with economic transition raises the level of uncertainty,

and hence cost, involved in all forms of transaction. Antecedent, customary institutions therefore operate to reduce this uncertainty and make continued transacting possible. For North, this explains the persistence of inefficient configurations of institutions, in spite of their consequences in terms of sub-optimal economic performance. Leonard has also applied this notion, using game theory, to construct a general argument to explain the stickiness of structural reform in a range of contexts from African rural development to post-socialist economic transition (Leonard 1992). However, unlike North, who regards institutions as 'the humanly devised **constraints** that shape human interaction' (p3, *emphasis added*), we regard customary institutions as an important enabling factor and a key opportunity for purposive development (cf. Neale 1993).

- 5 In the emergent literature on 'good government', the two concepts are often conflated: 'governance means "exercise of authority; control" or, more broadly, "government"' (Brautigam 1991: 3). This is not particularly helpful for understanding governance issues outside the arena of formal government administration, a category in which much local level natural resource management in developing countries may be expected to fall.
- 6 The framework presented here is a development of the model elaborated by Wilson and Thompson (1993), itself derived from the game theoretic approach of Schelling (1973) and Runge (1986).
- 7 The pessimistic view may be traced back to Olson (1965). The 'one-shot' formulation of the multiperson prisoners' dilemma (MPD) model denies the possibility of communication between parties and the evolution of cooperative strategies over time. Subsequent analysts have demonstrated the possibility of sustained cooperation in iterated MPD models (Hardin 1982; Taylor 1987). Cooperative outcomes are predicated on certain conditions, such as: the future must not be discounted too heavily, so that the immediate benefits to any individual failing to cooperate are perceived to be outweighed by the threat of retaliatory strategies (e.g. withholding future cooperation) by other parties; these retaliatory strategies must be credible; and the benefits of future cooperation must be sufficiently probable to act as an incentive to cooperation in the present. The



latter condition is most likely to hold in cases where the game is infinitely repeated, or there is sufficient uncertainty about how many times it will be repeated (Seabright 1993). As already mentioned, an alternative solution is when the threat of loss of reputation, and hence benefits from future cooperation, provides sufficient incentive to cooperate in the short run; see Chong (1992) and Dasgupta (1988).

- 8 In the models elaborated by Schelling (1973), Runge (1986), and Wilson and Thompson (1993),  $n$  is held constant. In the right-hand portion of Figure 1(ii), this assumption is relaxed in order to allow certain empirically observable conditions to be included.
- 9 While Hardin used the grazing commons only as a metaphor, his error was to confuse common property with open access, a point which has been exhaustively covered in the literature, beginning with Ciriacy-Wantrup and Bishop (1975).
- 10 Estimates based on fieldwork by the author between 1991 and 1993 in two districts in contrasting ecological zones (Erdene district, Dornogov' province, in the desert-steppe zone; and Tariat district, Arkhangai province, in the forest/mountain steppe zone) suggest that the membership of herding communities increased on average by about 20 per cent between January 1991 and January 1993 (Mearns 1993a).
- 11 Data provided by State Statistical Board, Ulaanbaatar, cited in **Mongol Messenger** No 44: 4 November, 1994: 174.
- 12 The system adopted here for the transcription of Mongolian terms into English generally follows that used by Professor C. R. Bawden. For a full explanation see Swift and Mearns (1993: 8). For clarity to non Mongol language specialists, plural forms here take the English 's' rather than the strictly correct Mongolian form.
- 13 Constitution, article 6, clause 3.
- 14 The relevant legislation includes not just the Constitution and the new Land Law, but also the Civil Code (revised 1 January 1992) and other legislation with provisions concerning land, such as the Foreign

Investment Law. One of the reasons why the Land Law has proved so controversial is because of the fear of many Mongolians that expatriate Chinese resident in Mongolia will seize control of urban land.

- 15 This practice is known as *khishig ödör* ('lucky day'); see Bazargür *et al.* (1992).
- 16 Known as the *akh* (literally, 'elder brother').
- 17 For an illustrative case, see Mearns (1993b: 84 and 92).
- 18 The latter term is used by Szykiewicz (1982).
- 19 Some do, however. The phrases transcribed here were used by herders in interviews with the author during fieldwork over the period 1991-93.
- 20 The Mongolian experience parallels remarkably closely with that described for China by Friedman *et al.* (1991, especially Chapter 8, 'Against cooperation'), and Selden (1993, especially Chapter 3, 'Cooperation and conflict: cooperative and collective formation in China's countryside').
- 21 The term '*bag*' also originally referred to a customary institution at the neighbourhood level (Professor C. Dalai, President, Mongolian Association of Historians, pers. comm.), but was later adopted to refer to an administrative unit under imperialist Manchu Chinese rule from the eighteenth century until early this century. By the start of decollectivization in 1991, the term *bag* was beginning to be used to refer to the brigades under the former collectives. It now formally refers to the lowest level of government administration, or sub-district (Constitution of Mongolia 1992, article 57). Although it is not strictly a territorial unit, the *bag* is comparable in scale to the neighbourhood, but is frequently larger, incorporating several neighbourhood groups.
- 22 Indeed, it could be argued that the effective accounting and decisionmaking unit was the national economy as a whole.

- Collectives were themselves bound by production targets derived from the centrally determined five year plans, while at the same time benefiting from the provision of certain essential services (supplementary livestock feed and labour inputs) subsidized from the central state budget.
- 23 This is a collective term for various forms of climatic events involving severe frost, snowfall, blizzards, or ice covering pastures, which prevent animals from finding forage. For an account of the historical importance of *dzud* in Mongolia and Central Asia, see Meserve (1990).
  - 24 MPR Law on Economic Entities, enacted 1 July, 1991, articles 2, 24 and 31. The central difference between these types of economic entity is the minimum level of capital stock required for their foundation. A joint-stock company requires 2 million *tögrög*, a limited-liability company 500,000 *tögrög*; an entity with a capital stock less than 500,000 *tögrög* is a cooperative.
  - 25 Privatization Law of Mongolia, enacted 31 May, 1992, article 21, clause 1.
  - 26 Calculated from The World Bank (1991), Table 5.4, based on data from Ministry of Finance, Mongolia.
  - 27 Similar abuses of administrative power in the distribution of collective assets have been documented for Inner Mongolia Autonomous Region of China, which decollectivized a decade or so earlier (Sneath, 1991).
  - 28 Mr Gankhuyag, Association of Private Herders, personal communication, referring to Övörkhangaï province.
  - 29 This was achieved under collectivization through livestock insurance (which was remarkably successful by international standards), and through the State Emergency Fodder Fund. See Templer *et al.* (1993) for details.

- 30 Two types of *khoshoo* (literally, 'cooperative') must be distinguished. One is simply the rump of a former collective, in cases where collective assets fall below the minimum threshold legally required for incorporation as a joint-stock or limited liability company. Such organizations have largely retained the management style of the former collectives. By contrast, the term *khoshoo* is also used to refer to a new type of cooperative which has been spontaneously formed to serve the interests of its members. It is this latter type of *khoshoo* that is referred to here.
- 31 The choice of the institutions included in such matrices, and the criteria used to distinguish between them, are elicited from the informants by means of pairwise preference ranking. For full details of the research methodology, see Mearns (1993a).
- 32 See note 6 above.

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