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**RISKS, RESOURCES, AND POLITICS:
STUDIES OF INSTITUTIONS AND RESOURCE USE FROM VILLAGE INDIA**

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INTRODUCTION

For millions of Indians who dwell in ecologically fragile environments community owned and managed resources provide basic subsistence.¹ In the absence of benefits from common pastures and woodlots, poor households may starve, lose their livestock, or be unable to cook their food.² In recent years community owned and managed resources - the source of sustenance, fodder and fuelwood for millions of Indian households - have been threatened by a constellation of adverse factors: government policies, local political rivalries, increasing pressures from a larger population, encroachment of market forces, and most important, declining local institutions. In this study, I place the influence of institutions -- defined as sets of rules that guide human behavior -- at the core of my analysis.

A large number of studies in India have documented the reliance of poor households on common resources. They have also speculated about the

¹Detailed evidence is available in Center for Science and Environment, The State of India's Environment 1982: A Citizens' Report (New Delhi: Center for Science and Environment, 1982); idem, The State of India's Environment, 1984-85: The Second Citizen's Report (New Delhi: Center for Science and Environment, 1985).

²See N.S. Jodha, "Common Property Resources and Rural Poor in Dry Regions in India," Economic and Political Weekly 21 (1986): 1169-81; idem, "A Note on Contribution of CPRs to PPR-based Farming Systems in Dry Tropical Regions of India," Paper presented at Common Property Resources Workshop in Sariska, Rajasthan, India, 1987; idem, "Population Growth and Common Property Resources: Micro-Level Evidence from Selected Areas." Paper presented at Expert Consultation on Population and Agricultural Development: Institutions and Policies, FAO, Rome, June 29-July 1.

importance of institutional arrangements in resource use.³ Nor are studies on commons restricted to the Indian context. An impressive literature from Africa, South Asia, and Latin America, shows that poor households rely on community owned resources for subsistence, fodder and fuelwood.⁴ For all such resources, institutional arrangements are believed to play a critical role in determining patterns of resource use.

My dissertation explores the role of institutions in influencing resource use in poor societies. It does so by examining the factors behind the emergence and

³Anil Agarwal and Sunita Narain, "Towards Green Villages: A Strategy for Environmentally Sound and Participatory Rural Development" (New Delhi: Center for Science and Environment, 1989); Vishwa Ballabh and Katar Singh, "Van (Forest) Panchayats in Uttar Pradesh Hills: A Critical Analysis," (Anand, Gujarat, India: Institute for Rural Management, 1988), Research Note; N. S. Jodha, "Common property resources and rural poor in dry regions in India," Economic and Political Weekly 21 (1986): 1169-81; Prakash M. Shingi, ed., Studies on Social Forestry in India: Management Perspectives (Bangkok and Ahmedabad, 1990), FAO/ IIM, RAPA Publication 1990/1.

⁴See N. O. J. Abel, M. E. S. Flint, N. D. Hunter, D. Chandler and G. Maka, "Cattle-keeping, Ecological Change and Communal Management in Ngwaketse," (Addis Ababa: International Livestock Center for Africa, and Gaberone: Ministry of Agriculture, 1987), 140; Roy Behnke, (Jr.), "Open Range Management and Property Rights in Pastoral Africa: A Case of Spontaneous Range Enclosure in South Darfur," London: Overseas Development Institute Pastoral Development Network paper 20f, 1985) 29; David L. Browman, "Andean Pastoralism and Development in Bolivia and Peru," London: Overseas Development Institute Pastoral Development Network, Paper 23d, 1987) 28; Paul Devitt, "The Management of Communal Grazing in Botswana," (Overseas Development Institute Pastoral Development Network, Paper 14d, 1982) 31; D. Guillet, "Risk Management among Andean Peasants," in Andean Peasant Economics and Pastoralism (Colombia: University of Missouri, Department of Rural Sociology, 1980) Small Ruminants CRSP Publication 1, 13-44; Lloyd Mendes, "Private and Communal Land Tenure in Morocco's Western High Atlas Mountains: Complements, Not Ideological Opposites," (London: Overseas Development Institute Pastoral Development Network, Paper 26a, 1988) 16; Y. S. Rao, Marilyn Hoskins, Napoleon T. Vergara, and Charles P. Castro, Community Forestry: Lessons from Case Studies in Asia and the Pacific Region (Bangkok and Honolulu: RAPA and EPI, 1986) 248.

creation of institutions, and the manner in which institutional rules affect human behavior. With respect to the emergence and creation of institutions, I propose - and illustrate through case studies - the importance of three factors. Considerations of efficiency, environmental risks, and local political rivalries, I argue, underlie the formation and maintenance of institutions. When analyzing the relationship between resource use and institutions, I adopt a property rights framework. I show that different bundles of property rights over resources, allocated among competing groups in villages, powerfully affect how resources will be used and benefits distributed.

In particular I focus on the resource management systems⁵ in rural communities. More specifically, the subjects of my analysis are a group of migrant shepherds; a village in semi-arid Rajasthan; and six villages in the Middle Himalayas. In each, the institutional arrangements are geared to the utilization of natural resources that resemble collective goods.⁶

⁵ All resource management systems are a proper subset of property rights arrangements which in turn are a proper subset of institutional arrangements. In the text, I often use the phrases "property rights systems" or "institutional arrangements" or "institutions" to refer to "local resource management systems" so as to direct attention to the theoretical literature that I am drawing upon.

⁶Pure public goods differ in essential aspects from the community controlled resources that I studied. Public goods are non-subtractable (their supply does not decline with use) and non-excludable, i.e. open access - no one can be excluded from using them. (See Paul Samuelson, "The Pure Theory of Public Expenditure," Review of Economics and Statistics, 36 (1954): 350-356). National defence is a common example. Toll or club goods are excludable but non-subtractable. Bridges, roads and state parks are approximate examples. Private goods are both subtractable and excludable. Most goods sold in the marketplace are examples of private goods. Gold mining during the California Gold Rush can be seen as an example of an non-excludable good whose supply declined with use.

Subtractability of goods, in combination with non-excludability raises problems of overcrowding and collective action (See Michael Laver, The Politics of Private Desires: The Guide to the Politics of Rational Choice. New York: Penguin, 1981). Excludability and subtractability both depend on the level of technological development and on the physical characteristics of the good itself.

Several general features characterize the forests and pastures in my villages. The resources⁷ lie close to the village. Fodder and fuelwood from the local resource systems are primarily used for consumption and subsistence. Only rarely do the resources make their way to outside markets. Village residents struggle to exclude "outsiders"⁸ from using their forest and pastures; this implies that the collective legal ownership rights which villagers exercise in forests and pastures are attenuated⁹ to different degrees. In some cases, the forests and pastures are

For example, atmospheric oxygen was a public good both because it was simply there - available to all, and its supply did not decrease for other individuals because of its use by one individual for breathing. However, with the prospect of ever higher air pollution, it may, in the future be possible that cost-effective private supplies of oxygen will be made available through technological breakthroughs. Similarly, the invention of barbed wire facilitated the conversion of open prairies into private ranges. Most real life goods do not possess the characteristics of excludability or subtractability to perfection. Community resources are in general imperfectly excludable and the supply of resources from them is subtractable. However, many community resources - forests, pastures, fish stocks, irrigation waters - are renewable resources. This means that through appropriate management of the stock of the resource, a regular flow of benefits can be ensured over time (See Ostrom, Commons).

⁷As is clear, both forests and pastures are renewable resources. The problems in managing these resources would necessarily be different in character from those involved in managing non-renewable local resources. The reason for this is simple. For renewable resources, users at the local level can contribute to the rate of regeneration of the resource and also step up the rate of using the resource at the same time without degrading the resource.

⁸Outsiders may be villagers from other villages. They may also be traders from towns looking for cheap fuelwood in village commons, migrant pastoralists who are passing through the village boundaries, or even village residents who are not authorized to extract benefits from the community resource.

⁹Attenuation of property rights refers to an inability to exercise the right to the fullest extent (See Eirik J. Furubotn and Svetozar Pejovich, eds., The Economics of Property Rights (Cambridge, Mass.: Ballinger Publishing Company, 1974) 4-6). All property rights are attenuated to some extent - especially when the exercise of the right conflicts with the welfare or rights of other individuals or of the community. Thus, ownership rights over some piece of land may be

"owned"¹⁰ by the village community; in others, the villagers only have the legal rights to use the benefits (fodder and fuelwood); and in yet others their rights are not legal, but de facto.¹¹ Generally, villagers invest little labor or capital in local resource systems¹² although they sometimes do contribute to its maintenance.¹³ Finally, since both pastures and forests are renewable, their continued existence

attenuated through a specification that the owner cannot build a factory over that land (zoning laws are examples). Similarly rights to ownership of a music system may be attenuated if owners cannot listen to music at loud volumes in a quiet neighborhood (See Yoram Barzel, Economic Analysis of Property Rights (Cambridge: Cambridge University Press, 1989)).

¹⁰Full ownership rights over a resource are in fact a collection of analytically discrete rights. The full set of these analytically discrete rights can be divided into five categories: the right to access a resource, to use a resource and the benefits from it, to manage the resource in accordance with principles that the owner deems fit, to exclude others from accessing, using or managing the resource, and finally the right to transfer the resource. See section II, chapter one.

¹¹The disjunction between de jure rights created and enjoyed by the government, and the de facto property rights enjoyed by the villagers, often owes its existence to the high costs of enforcement of the impractical government de jure rights. For a more detailed analysis of different ownership rights over local resources see chapter six.

¹²Exceptions to this pattern are frequently observed in the case of common irrigation institutions. In some instances villagers contribute their labor and use locally available materials to create commonly owned and controlled resources. See Shui Yan Tang, "Institutions and Collective Action in Irrigation Systems" (Ph.D. Dissertation, Indiana University, 1989).

¹³The maintenance of the resource system may require either physical improvements in the resource system or mechanisms to prevent its overuse. Both can be brought about by labor contributions. To illustrate, labor contributions geared towards physical improvements could involve weeding, or removing undergrowth (in forests); or cleaning and repairing the system (in irrigation systems). Similarly, monitoring and guarding the use of resources and sanctioning rule breakers are also a form of maintaining the resource system.

is a function of the relationship between the rate of regeneration of trees and grasses and the rate of their consumption.¹⁴

The analysis in this work is shaped by the nature of the resources and communities it examines. Since the communities are imperfectly integrated into the market, they often employ other mechanisms that contribute towards efficient resource use. Collective ownership of resources forces attention on how communities exclude outsiders and on the systems of rules they create to restrain member users. Institutional arrangements, often taken for granted in economic analyses, thus become the explicit focus of analysis.

Research in the field of new institutionalism,¹⁵ property rights,¹⁶ and

¹⁴A more comprehensive description of the different features of local resources that are managed by village communities is available in Christine Picht and Arun Agrawal, "Corporations and Communities," Paper presented at the Mini-Conference, Workshop in Political Theory and Analysis, Indiana University, Bloomington, Indiana, April 1989. There is a large number of case studies that provide details on the subject. Some of the better known collections and works are Robert McC. Netting, Balancing on an Alp (Cambridge: Cambridge University Press, 1981), and the collections of case studies by the National Research Council, Proceedings of the Conference on Common Property Resource Management, (Washington D.C.: National Academy Press, 1986) and Bonnie J. McCay, and J. M. Acheson, The Question of the Commons: The Culture and Ecology of Communal Resources, (Tucson: University of Arizona Press, 1987).

¹⁵See Robert H. Bates, "Contra Contractarianism: Some Reflections on the New Institutionalism," Politics and Society 16 (1988): 387-401; Ronald H. Coase, "The New Institutional Economics," Journal of Theoretical and Institutional Economics 140 (January 1984): 229-31; Douglas C. North, "The New Institutional Economics," Journal of Institutional and Theoretical Economics. 142 (January 1986): 230-37.

¹⁶See Armen Alchian and Harold Demsetz "The Property Rights Paradigm," Journal of Economic History 33 (1973): 16-27.1973; Yoram Barzel, Economic Analysis of Property Rights (Cambridge: Cambridge University Press, 1989); Ronald H. Coase, The Firm, the Market and the Law (Chicago: University of Chicago Press, 1988); Louis de Alessi, "The Economics of Property Rights: A Review of the Evidence," Research in Law and Economics 2 (1980): 1-47; Harold Demsetz, "Towards a Theory of Property Rights," American Economic Review 62

transactions costs¹⁷ provides insights that I use in this work. The existing literature attempts to generalize an economic approach to the study of social institutions. Scholars pursuing research on institutions in these areas retain the basic elements of economic analysis - rational behavior, optimization under constraints¹⁸ and study of equilibria - while relaxing others. In particular they relax assumptions pertaining to property rights and transactions costs.¹⁹ They hold that property rights matter and that the differences in property rights across different situations are not just a function of the physical nature of the good itself; they can be of a socio-legal nature, or result from technological differences. Changes in technology, in government policies, in local politics, and in the balance of market forces will change how goods and services are utilized. Second, and relatedly, they argue that enforcement and transfers of rights to property cannot be accomplished without incurring costs. The costs that are incurred during enforcement and transfers of rights to goods and services are termed transactions costs. Different institutional forms lead to different sets of costs and benefits for individuals and groups subject to the institutional arrangement.

(1967): 347-59; Douglas C. North, Institutions, Institutional Change and Economic Performance (Cambridge: Cambridge University Press, 1990).

¹⁷Armen Alchian and Harold Demsetz, "Production, Information Costs and Economic Organization," American Economic Review 62 (1972): 777-95; Ronald H. Coase "The Problem of Social Cost," The Journal of Law and Economics 3 (October 1960): 1-44; and Oliver E. Williamson, The Economic Institutions of Capitalism (New York: The Free Press, 1985).

¹⁸As pointed out in John R. Umbeck, A Theory of Property Rights: With Application to the California Gold Rush (Ames: The Iowa State University Press, 1981), satisficing can be seen as optimization under constraints.

¹⁹See Louis de Alessi, "Property Rights, Transactions Costs, and X-efficiency: An Essay in Economic Theory," American Economic Review 73 (January 1983): 64-81.

The first chapter of the five chapters in this dissertation lays out the theoretical framework. I begin the theoretical discussion using insights from the work of neo-institutionalists. According to most neo-institutionalists, new property rights arrangements come into being when it becomes possible to reap greater profits by creating new institutional arrangements. Thus, institutions are seen as an efficient adaptation by society to a changing environment. My discussion explains the emergence of new institutions in terms of two additional factors: one, environmental risks; and two, political negotiations among affected parties. I will suggest that in the ecological settings where I conducted research, it is necessary to consider the impact of environmental risks and political maneuverings when analyzing the creation of institutions.

The second section of chapter one investigates the relationship between resource use and institutional arrangements. Adopting a property rights framework, I present an analytical scheme for comparing different institutional forms for using resources. The issues of monitoring, enforcement and management play an important role in determining the suitability of different institutions for utilizing resources.

In the subsequent four chapters I present three case studies that illustrate and apply the theoretical framework presented in the first. Chapters two and three focus on the role that environmental risk plays in the emergence of institutions by examining two rather different aspects of the life of Raikas, migrant shepherds in Rajasthan. Chapter two introduces the Raikas - their social structure, their migration patterns, and their economic condition. The two basic questions that I pursue in this chapter are: why do the Raikas migrate and why do they migrate in groups? The answers to these questions highlight the imperatives that environmental risks pose for human society. The questions also entail the depiction of the strategy matrix through which Raikas counter environmental risks. The community institutions of the migrating shepherds, I argue, are admirably suited to tackle the risks inherent in the Raikas' environment. The discussion in

this chapter is based on participant observation and interview data from thirty Raika migrant camps.

Chapter three examines the distribution of decision-making responsibilities in the course of migration. I examine three factors which influence the structure of decision-making among the Raika shepherds. These are economies of scale, information costs, and control over decision-makers. For the most part, I argue, the distribution of decision-making among the Raikas can be seen as an adaptation designed to promote efficiency and to improve the ability of the Raika mobile camp to counter environmental risks. Towards the end of the chapter I discuss some aspects of the Raika camps' functioning that are not explained by considerations of efficiency or risk. I will suggest that these "inconsistencies" can be accounted for by political factors.

Chapter four presents a second case study: a study detailing formal and informal community rules for using fodder and fuelwood in a village in Jodhpur district. In this study I show how factional struggles in the village shape the creation of new institutional rules. In the first part of the chapter I briefly introduce the study village and the factions within it. The second part of the chapter discusses the historical and institutional context that frames the study village. To explore the impact of politics I describe and analyze struggles over the creation of rules. The chapter thus further examines two themes introduced in the theoretical chapter: one, that competing coalitions can create institutional arrangements that reduce the benefits available to themselves as well as the entire community; and two, that an examination of the informal rules for managing common resources is essential to understanding resource use.

Chapter five contains my third case study: that of Almora district in the Middle Himalayas. Using data from eleven villages, I determine the relationship between resource degradation and factors like overpopulation or market pressures. The major part of the chapter, however, is devoted to an analysis of the specific

institutional rules in six study villages and the manner in which they influence resource use.

The conclusion to this study weaves together the themes I introduce in chapter one and discuss in chapters two to five. The principal purpose of the dissertation is to contribute to the study of institutions by pointing to forces that shape them, and by presenting a framework for understanding the effects that they produce on human behavior. The effect of environmental risks and politics on institutions has not been adequately explored in the literature. Similarly, there are only a few studies that systematically examine the effect of different institutional rules on resource use. By prospecting these themes this dissertation attempts to render a more comprehensive understanding of institutions.

CONCLUSION

In the preceding pages I described and analyzed the institutional arrangements of three groups from ecologically fragile regions in India: of nomadic Raikas in Rajasthan, of settled farmers and pastoralist factions in Patawal, and of villages with community woodlots in Almora. The question that motivated the discussion was, how best to understand collective institutions that influence the lives of millions of poor households. To look at this question I drew from several literatures - from positive political economy, from neo-institutionalism, and from peasant and nomadic studies.

To understand institutions, the study adopted a two-pronged approach. Its first two case studies examined the factors that influence the creation of institutions, and the third study investigated how institutional rules affect resource use. In the first case I argued that environmental risks frame and influence the production strategies and institutional arrangements of nomadic shepherds. The study of Patawal village depicted the political struggles between rival factions in the village and showed how such political tussles lead to new institutional arrangements. Pace most neo-institutionalists, I suggested that efficiency, while an important consideration, alone can not explain institution formation. We must incorporate politics in our explanations; and in marginal environments, environmental risks as well. The third case explained resource use patterns by looking at four types of institutional rules. These four categories of rules were rules for using (resources), monitoring, sanctioning and arbitration.

The study of the Raikas, "The Grass is Greener on the Other Side!" draws from anthropological literature on nomadic pastoralism and risk management. My

analysis, however, paid little attention to questions about nomadic imperviousness to change -- a question that concerns many anthropological studies.¹ Indeed, the question, I submit, has little more than rhetorical value. The pastoralists I look at are evidently not traditional, nor impervious to change and development. Rather, it is planned development that is impervious to the needs of the shepherds.²

In fact, the picture of the Raikas that emerges in chapters two and three shows them to be ingenious herders, efficient migrants, and sophisticated decision-makers. Like poor shepherds the world over, the Raikas migrate, interact with farmers and government officials, attempt to increase their flock size, and try to generate surplus. To achieve these ends, they exploit strategies that are fundamentally similar to those of other shepherds: diversification, migration, exchange and storage. In an environment characterized by dryness, large variations in production possibilities, and sparse vegetation, the Raika strategies help the shepherds to stabilize their production levels. In detailing the manner in which the Raikas implement these strategies, this study contributes to the descriptive literature on nomadic shepherds. The description breaks new ground especially where I discuss decision-making in Raika dangs. As Niamir (1989) points out, there exist few detailed studies of decision-making among migrant pastoralists. As we examine decision-making among the Raikas two points become amply clear: one, that in their mobile camps the Raikas use hierarchy to

¹See for example, the volume edited by John G. Galaty and Philip C. Salzman, eds., Change and Development in Nomadic and Pastoral Societies (Leiden: E. J. Brill, 1981); and Wolfgang Weissleder, ed., The Nomadic Alternative: Modes and Models of Interaction in the African-Asian Deserts and Steppes (The Hague: Mouton, 1978).

²See Philip Carl Salzman, "Introduction," in Contemporary Nomadic and Pastoral Peoples: Africa and Latin America ed. Philip Carl Salzman, Studies in Third World Societies, Publication No. 17, (September 1981): vii-xviii.

facilitate decision-making, and two, that the ordinary shepherds in the mobile camps have designed effective methods to control decision-makers.

This study, however, went beyond a mere empirical indexing of the types of Raika decision-making. It suggested that collective strategies that the shepherds collude in, create institutions that help them counter environmental risks. The institutional strategies followed by the Raikas are substantially superior to individual level strategies. The first part of the Raika study showed how collective mobility contributes to risk management. In a situation where the Raikas find it difficult to gain access to institutionalized capital markets or to the state bureaucracy,³ collective mobility confers on them several advantages that would otherwise be impossible to acquire. Collective mobility provides the Raikas with greater security against criminals and in quarrels with settled populations. If shepherds were to migrate with their flocks individually, they would be easy prey to theft and intimidation.

In addition to better protection, the Raikas also gain other advantages by cooperation. They gain scale economies in purchases of supplies, in marketing their products, in grazing camels, and in information collection. They also improve their bargaining strength in everyday interactions with settled populations and with government officials. Thus it is not just that the shepherds apply a certain set of strategies for survival. It is at least equally significant that they mobilize collective strategies.

The institutions that prevail among the Raikas facilitate the task of mobilizing migration and the collective strategies they wield during migration. Set procedures lead to the selection of the same nambardar from year to year unless the nambardar is discovered to be grossly incapable or corrupt. Similarly, during migration, the existing reputation of the Raikas that they support each other in

³**Illiteracy and high levels of seasonal migration are the major causes of the poor access of the Raikas to capital markets and bureaucracy. At a more general level, illiteracy and migration are also the effects of poor access.**

fighters with outsiders, reduces the probability of such fights and while it also compels the Raikas to act together because of the fear of losing face within their community.

Collective migration is however also beset with some problems. Two major problems that Raikas confront are problems with coordinating the movement of a large group, and making decisions for the collective. To both problems the Raikas have formulated an institutional solution. An informal hierarchy aids decision-making regarding migration. The nambardar and the council of elders also decide for the entire dang on many issues where individual decision-making may be problematic. Their decisions become possible only because individual flock leaders abdicate authority over a large number of issues. And yet, the shepherds regulate the nambardar's behavior by ingenious mechanisms.

The techniques of control that the shepherds have created and adopted, turn out to be remarkably similar in principle to those employed in "modern", "developed" institutions such as the US Congress or industrial corporations. The shepherds often act to reduce the level of "hidden information"⁴ that the nambardar is privy to and which he can use to his personal benefit - by collecting, for instance information on wool prices. They also act to reduce the problem of "hidden action"⁵ - by accompanying the nambardar on his trips to purchase supplies and medicines. Such monitoring proves so effective that the shepherds seldom have to activate their ultimate threat - which is to leave the camp in mid-migration. Politically, the institutional arrangements for the migration process

⁴See William A. Niskanen, Bureaucracy and Representative Government (Chicago: Aldine-Atherton, 1971) for a discussion on how bureaucrats use hidden information.

⁵See D. Roderick Kiewiet and Mathew D. McCubbins, The Logic of Delegation: Congressional Parties and the Appropriations Process (Chicago: University of Chicago Press, 1991) 25-27 for a discussion of the problem of hidden action.

seem to be in a state of equilibrium in which the shepherds select the same nambardars and councils of elders from year to year and their decision-makers perform decision tasks skillfully enough to ensure continued selection. If politics do not seem to play a prominent role in the everyday activities of the Raikas, it is because the Raikas have apparently successfully solved potential political problems by their organization of decision-making in the camp. A consideration of their internal political structure, however, is essential to a clearer understanding of the camp.

The discussion in the second case, "I Don't Need it But You Can't Have it", is propelled by politics; more precisely, I attempted to explicitly introduce political reasoning in neo-institutional explanations of institution formation. While a number of neo-institutional scholars acknowledge that politics is significant⁶ most institutional studies of politics concern themselves with the effect of politics on outcomes. Few discuss how political battles unfold to produce new institutions. On the other hand, the second study in this work - of village Patawal, its factions and its community institutions - is specifically concerned to demonstrate how factional struggles create new institutions to guide resource use. The political battle between the Raikas and the land-owning castes in Patawal surfaced over the use of the commons; it was rooted, however, in the fundamental interests of the groups in the village. The interests of the groups revolved around the kinds of assets they owned - land or animals. The groups followed strategies that were constrained by their power and existing village institutions, but their strategies still led to new institutions for using the commons.

To protect and further their interests and relative primacy in village affairs, the dominant landowning groups in the village were willing to give up some of their benefits if at the same time they could substantially reduce benefits to their

⁶See Gary Libecap, Contracting for Property Rights (Cambridge: Cambridge University Press, 1989); and Douglas C. North, Institutions, Institutional Change and Economic Performance (Cambridge: Cambridge University Press, 1990)

competitors. To accomplish their aim, they first ensured a victory in the local elections by manipulating the Meghwals over whom they wielded economic influence. They then used the village panchayat to create new institutions that helped alter the existing use patterns for the common pasture.

The new institutions in Patawal were thrust upon one group by its rivals. This observation helps us expose a deficiency in most neo-institutionalist accounts of institution formation. Such accounts often proceed on the assumption that institutional change requires the consent of the affected parties. Different parties would agree on change only if they were all to benefit, or at least not be made worse off. New institutions, therefore, must extend the Pareto Frontier. We witnessed, however, that processes to create new institutions can be impelled purely by considerations of relative gains. In Patawal, the total benefits to the community declined when the upper-caste-dominated-Panchayat created new rules to use the common pasture. While the upper castes in Patawal also lost some of their benefits from the common, the new rules drastically diminished the benefits to the shepherds.

The study of factional struggles in Patawal can also be seen as a village study. As such it provides a useful glimpse into the character of rural social interactions. Not only does it indicate the presence of a significant public political realm in Indian villages, it also shows us how different groups in villages struggle to secure economic and political gains. Thus it calls into question anthropological work that interprets village societies as expressions of "communitarian values", or sees them as solidary collectives.⁷ On the other hand it also challenges much of the literature that portrays Indian villages as lacking in collective arrangements or

⁷See Yujiro Hayami, "Economic Approach to Village Community and Institutions," *Journal of Rural Development* 3 (April 1980): 27-49; Robert Redfield, *Tepoztlan, A Mexican Village: A Study of Folk Life* (Chicago: University of Chicago Press, 1930); James C. Scott, *The Moral Economy of the Peasant* (New Haven: Yale University Press, 1976); S. Srinivas, *The Remembered Village* (Delhi: Oxford University Press, 1955).

depicts declining village governments.⁸ All of this suggests that although village governments exist in Indian villages, they are not expressions of solidary community values. Nor, in fact, do institutions that regulate the use of common pastures necessarily indicate the existence of unqualified cooperation among villagers. Rather, the existing community institutions are most appropriately viewed as arenas where rivalries between different groups in the village are played out as the groups jockey for advantage.

The third study in this work, "Rules, Rule Making and Rule Breaking", explored how institutions influence resource use. I used data from six village institutions from the Middle Himalayas to argue that for sustainable patterns of resource use, villagers must monitor and sanction rule breaking and resolve disputes. This last study also showed that if we wish to explain different patterns of resource use, it is to institutional arrangements that we need to turn; not factors such as population or market pressures.

Overpopulation and market pressures have long constituted an important set of factors cited as responsible for resource degradation. Small rural communities, many analysts believe, are incapable of using communally owned resources sustainably in the face of pressures to consume and sell. To protect resources it is therefore necessary either to privatize communal resources or to impose government control. Yet there are also other analyses that portray small

⁸See Bernard S. Cohn, "The Changing Status of a Depressed Caste," in Village India: Studies in the Little Community ed., McKim Marriott, (Chicago: University of Chicago Press, Midway rpt., 1955); Louis Dumont, Homo Hierarchicus: The Caste System and its Implications (London: Paladin, 1966, rpt. 1972); V. R. Gaikwad, "Community Development in India," in Community Development: Comparative Case Studies in India, the Republic of Korea, Mexico and Tanzania, eds., R. Dore and Z. Mars, (London: Croom Helm, 1981); Kathleen Gough, "The Social Structure of a Tanjore Village," in Village India: Studies in the Little Community (Chicago: University of Chicago Press, Midway rpt., 1955); and International Studies of Values in Politics (ISVIP), Values and Active Community: A Cross-National Study of the Influence of Local Leadership (New York: The Free Press, 1971).

communities as quite capable of taking care of their resource base. The analysis in the last chapter of this dissertation shows that claims of sustainability on behalf of the market, the state or the "little" community may all be overstated. We saw that village communities in the mountains proved capable of protecting local resources and using them sustainably in some instances. In others, they overconsumed and degraded their community forests. What distinguished the unsuccessful from the successful cases were fractious internal village politics and the lack of attention to enforcement rules. Overpopulation and market pressures on the other hand, failed to explain adequately the condition of the forest resources in the studied villages.

The last study also confirmed that we must investigate political struggles to understand the shapes institutions will assume. In the several villages, intercaste dissensions proved pivotal in the choice of use rules for forest resources. Where caste differences loomed large, the dominant groups in the villages chose and dictated institutional arrangements that ensured a greater share to the dominant groups. Although the institutions that were created formally conformed to state policies, there was sufficient latitude for villagers to craft rules that would benefit their own factions.

This dissertation studied institutions. More specifically, it investigated the politics of institutional design and the economics of institutional impact. In investigating the origins of institutions, it concludes that environmental risks and local politics are significant determinants of institutional contours. Indeed, they can be seen as causal factors that have not been sufficiently explored in the literature. In assessing the influence of institutions on resource use, it proposes that population and market pressures are less significant explanations of resource use patterns than are institutional arrangements.

**I Don't Need It,
But You Can't Have It:**

**institutional change in an
Indian village**

*Arun Agrawal
U. C. Bakley*

Summary Description

The study shows how distributional struggles in a Rajasthan village led to new institutions. The new rules, contrary to conventional wisdom, reduced the absolute benefits from the grazing commons to all parties.

However, the dominant groups in the village increased their share of benefits and reduced future threats to it.

The Study

The landowners in Patawal village controlled the local panchayat - the source of government largesse each year. In the relief works funded by government moneys, it were primarily the members of upper caste families who received jobs and wages.

The upper caste landowners in Patawal also owned some animals. But these were chiefly livestock which grazed on the local commons - the Oran - only infrequently. The shepherds (also called Raikas), however, owned goats and sheep. During the monsoons, their browsers would not survive without the grass on the Oran since their

owners possessed little land and less money to buy feed from the market.

To share in some of the "benefits" available from the Panchayat, the Raikas put up two candidates in the panchayat elections in 1982. Since, they were the largest caste group in Patawal, they could entertain some hope of success. However, the landowning castes, alarmed at this threat to their dominance, mobilized other lower castes in the village who depended on them for employment during the monsoons. With their help, one of the Raika candidates was defeated. The one elected Raika could do little in a panchayat of 13 members except cast dissenting votes. The Raikas had greatly

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underestimated the adverse reaction from the village landowners.

To reduce the threat of future challenges to their superiority the landowning castes passed rules in the panchayat that resulted in enclosing approximately 33% of the Oran. No villager could graze animals in the enclosed portions of the Oran.

Trees were planted on the enclosed land with the help of the forest department. In view of the existing record of the forest department in planting trees, it is doubtful many would survive. A year after the planting, just about 50% of the seedlings were still alive.

At the same time, the reduction in the available forage has affected the Raikas drastically. Several families are now forced to migrate for longer periods of time in the year to find fodder for their sheep. Their absence from the village reduces the immediate probability of fresh electoral contestation.

The landowners also suffered some reduction in fodder supplies, but only to a limited extent. Although the overall benefits from the common resources in the village declined, the landowners successfully averted the threat of appreciable reductions in their share of benefits from the panchayat funds. The shepherds, on the other hand, paid for a

premature challenge with real declines in their incomes.

The study presents a counter-example to theories suggesting that institutions adapt efficiently and suggests that "gains from institutional change" needs to be interpreted broadly. It demonstrates that new institutions need not emerge only when particular groups stand to increase their benefits from the new configuration of rules.