

Common Property, Collective Action and Ecology

Summary

The Joint Committee on South Asia has been working for a number of years, mostly in collaboration with the Smithsonian Institution, on a project concerning applications of the venerable "tragedy of the commons" model to specific instances of environmental degradation in South Asia. Several publications are in progress, focused on the case of the Sundarbans coastal ecosystem bridging India and Bangladesh. It is proposed to extend that work geographically, conceptually and theoretically in the form of a project which will involve both broader paradigmatic and methodological perspectives and integration with policy analysis. The conference in Bangalore is seen as an Intellectual extension of that work and the first stage of a larger collaboration across disciplines and resources.

The Puzzle

The literature on the "tragedy of the commons," beginning with the classic 1968 article in Science by Garrett Hardin, posited a seemingly inexorable dynamic in which the inability of individuals to limit access to common pool resources resulted in the degradation of the commons to the detriment of all individuals precisely because individuals were pursuing their own interests. Hardin's deceptively powerful model has yoked the commons and common property management to environmental degradation, though questions of local cooperation and state-society relations in regard to natural systems expand far beyond the original model's reach.

Hardin's perverse sub-optimal outcome (an exemplar of what Sartre calls the general problem of "counter-finality") was reinforced by game-theoretic work in non-repeated prisoner's dilemmas: despite the superior payoff of cooperation, individuals would be unable to find cooperative solutions. As a consequence, theoretical conclusions tended to posit only two alternatives to the tragedy of the commons: Leviathan (a strong and interventionist state) [a result presaged by Kautilya's positing the necessity of the danda, without which all would be lost or privatization of the commons. As Bromley and Chapagian have argued, one consequence of the strong theoretical commitments to a rationalist methodological individualism has been that anthropological investigations which demonstrate cooperation and behavior other than individual self-maximization of material interests are dismissed by economists as "quaint anecdotes" with no implications for theory.

Game-theoretic literature has since advanced with demonstrations that in repeated games (more analogous to the real world than the highly restrictive assumptions of the prisoner's dilemma), cooperation is a live possibility, implying social learning (Axelrod, E. Ostrom, et al.). Certainly in the field of environmental protection, there are theoretical reasons to expect the outcome which is frequently observed: neither privatization nor Leviathan assures protection of central environmental values. Nevertheless, local cooperative solutions remain problematic, in literature, in part because of the very power of centralized Leviathans intervening in the space necessary for face-to-face communities to work solutions.

In line with the predictions of repeated games work on cooperation, there are clearly empirical examples of effective small-scale society responses to commons dilemmas. One outstanding puzzle is then: under what conditions does social learning in the sense of evolution of institutions and working rules occur? Social scientists interested in commons dilemmas then confront central problematics in public economics: how does a public good get regularly produced? with how much stability? subject to what countervailing pressures? Historical work on local commons in the subcontinent suggests that local dynamics became less important in determining the extent of cooperation as the state centralized control and removed capacity for local management from villages through novel proprietary claims. But the attractive position taken by the localists ignores what may be called a second-order commons dilemma: all local institutional arrangements for dealing with natural systems are embedded in a larger common interest defined by the reach of eco-systems beyond the scope of any local solution. The most elaborate scheme for conserving and sharing water locally may be rendered pointless by upstream diversion or deforestation. Local commons overlap; ecological systems do not respect human boundaries.

Clearly a precondition for resolution of at least some kinds of commons dilemmas is widely shared perception that a public good is at stake. For material values produced by nature (commercial timber, edible fish) this perception is not problematic. But for second-order commons dilemmas, natural systems assume value not from instrumental use but in and of themselves (the "deep ecology" position in opposition to social ecology). In the field of ecological threats, is this recognition a matter of long-standing practice, new information or changes in relative preferences, or some interactive effect of the three? What can be said about alternative sources of values and norms for collective action on commons issues affecting the environment?

A second problematic is implied by the literature on collective action: the role of higher order institutions of authority (various levels of the state) in providing space and authority for local

solutions, mediating between local institutions on over-lapping commons dilemmas, and responding to dilemmas which are beyond the reach of any local response. For political scientists, these questions raise the opportunity for investigating various models of the state which abound in the literature, and for developing a theory of the local state, which is largely ignored. Moreover, the state is a central source of environmental pressures and a focus of defensive reactions by ordinary people whose common local interests are threatened by the state's actions. Is there anything special theoretically about the collective action of populations defending locally-defined rights in contrast to the collective action required for local institutional solutions to commons dilemmas or in contrast to collective action on issues of class and material inequality?

The "tragedy" paradigm is often interpreted to mean that common property is a recipe for socially disastrous outcomes, encapsulated in the maxim: "that which is everyone's concern is in fact no one's concern." [Aristotle is sometimes (unfairly to my mind) accused of beginning this line of reasoning.] Actually, the model predicts the consequences of the failure to create common property institutions. This interpretation opens the prospect for analysis of the conditions under which common property systems are possible. Narrowing our concern, we ask under what conditions the perception of a public good (or prevention of a public bad) with regard to commons dilemmas created by the intersection of social and natural system dynamics will effectively emerge and be translated into institutions, given the structure of law and authority which that state provides (or attempts to provide). We then want to know what can be said systematically about the conditions for maintenance of those institutions, including the question of emergent pressures which challenge them (e.g., population pressure is a frequently posited threat, but state policy and deterioration of the larger environment must figure as well).

We conceptualize this work as interdisciplinary not because of the totemic nature of the method in the academe, but because of our experience thus far and because of the nature of the problem. We believe that there are specifiable pay-offs for theory in core disciplines in this conceptualization, not merely a blurring of the edges of theory. The centrality of institutions in what is a problematic organized around methodological individualism opens the way for genuinely interdisciplinary work. Ecosystems are sufficiently large and complex that purely local solutions inevitably raise the question of larger structures of authority. If the core of economics concerns a science of choice under constraint, the core of political science is the explanation of dynamics within different systems of power and authority. Beyond theory, the practical stakes are enormous for ordinary people and for whole ecological systems.

As intersecting social and natural dynamics are centrally involved, the need for

incorporation of natural scientists becomes apparent. One of the most challenging and potentially important propositions from the science of ecology concerns the non-obvious linkage-dependencies across systems which cut across those traditionally studied by social scientists: units dictated by social arenas and administrative law (the village, state, province, nation, etc.) or social morphology (castes, tribes, classes, ethnic groups). The intersection of these traditional arenas and social groupings with environmental systems should raise new conceptual problems for social scientists. We believe further that the evolution of institutions must be historically grounded (not from mere inclination, but for good theoretical reasons involving the role of experience in cognition that mediates between interests and action). Indeed, much of the new vigorous work in institutional economics depends explicitly on re-interpretation of historical materials. Likewise, disciplines such as anthropology which worry systematically about systems of shared cognitions and values have a great deal to say about the symbol pools available for the translation of interests into behavior.

Implications for Theory and Method

One of the major fault lines in contemporary social science discourse concerns a new and potentially more productive way of couching the venerable level-of-analysis question. An invigorated methodological individualism challenges macro accounts of the cultural or structural variety to provide the micro foundations of macro events. In political science and sociology, this challenge is an explicit borrowing from microeconomics in the form of rational actor and public choice theory. The response from the structuralists and culturalists has been vigorous but not always engaged with the literature being criticized. Nevertheless, one healthy consequence of the challenge from methodological individualism has been to refocus attention on the concrete mechanisms which intervene between initial conditions and outcomes. Simultaneously, unexamined commitments to primordialism and organicist conceptualizations of society come under pressure. The less healthy consequence has been expansion of the wedge between traditional area studies types and the more nomothetically inclined theorists who find science in deductive rigor and formal modelling. Inevitably, this drive to formalism further divides the humanities from the "harder" of the social sciences.

We see both these divisions as unfortunate and unnecessary. There are learned and intelligent people working both sides of the divide, but frequently in unproductive conflict with one another. More importantly, sophisticated work in the rational actor mode recognized the crucial role of perception and belief in connecting interest to behavior, as well as the methodological tension introduced by the distinction between objective interest (which is subject to deductive

logic) and subjective interest (which can be handled by revealed preferences only at the cost of tautology, or met frontally with phenomenological work).

Our reason for couching this problematic in a paradigm which is explicitly derived from methodological individualism and rational-actor theory is two-fold. First, the field of intersecting social and natural systemic dynamics is so complex that useful work must state the problematic sharply and simply or risk becoming unmanageable. Second, a clearly-stated problem permits those outside the paradigm to state precisely where their lines of analysis departs from assumptions and methods embedded in what has become a contender for a new orthodoxy in the social sciences. What is useful and wrong-headed in the tradition of methodological individualism which dominates much of the literature on cooperation and conflict in social systems of various sizes?

A final methodological tension will emerge from this collection of issues and people. The grounds for choosing methods are frequently unexamined commitments to and variable weightings of values widely disputed in the philosophy of science: parsimony, fit, generalizability, deductive power. By bringing together scholars who have different commitment to these criteria for validity, we expect to find (or develop) more common ground than has been evident in the literature thus far.

Our plan is a three-tier conference structure aimed at theoretical development and policy relevance. First, we seek to bring together scholars with theoretical interests and serious field work experience in the same region to address the questions raised above. We hope that the result of this conference will be not only an important publication, but also a mechanism for sharpening the theoretical focus and identifying the most fruitful dimensions for a second conference, more broadly based in terms of geography and practical policy issues. Theory is far more important than academics realize; it is not just as Keynes said that self-described practical people are unknowingly in the clutches of some dead economist, but all organization of information presupposes analytical categories, normative loadings and tacit assumptions about how the world works (as implied every time we say "that just isn't practical"). The "tragedy" metaphor is assumed in much of the policy discourse justifying both Leviathans and privatization.

In the third conference, we would want to bring together theorists with carefully selected members of the international policy community involved in real projects with commons dilemmas and environmental consequences. In addition, we would like to include a category of activists who have considerable experience on the ground as well as a reflective bent. The third conference

should allow us to ask concretely about lacunae in the theoretical work, to see if what we have to say resonates with practical reason, and to move toward grounded propositions about dimensionally specific dilemmas which may be of real value to people.

Conference Outline

We would like to have in general circulation two broad papers, one on the foundations in methodological individualism of literature on commons dilemmas, social anarchy, cooperation and the production of public goods. The second would take an explicitly macro approach to these issues treated by economists as questions of aggregation of individual behaviors.

We then see four sessions, and would like for participants to choose among these: 1) Defensive Reactions: how has common action in defending rights against states and markets? Under what conditions is resistance successful? 2) Phenomenology of Nature and Institutions: how do real people conceptualize the natural world, its value, limits, constraints and the social arrangements for utilizing nature for livelihoods? What are the links or contradictions between real perceptions of interests, free riding, contribution to a common good, etc. and received theory? 3) Small-Scale Solutions to Commons Dilemmas: how are local institutions maintained, integrated with various levels of the state, or stressed by endogenous and exogenous forces? How does the empirical world mesh with the theoretical? 4) State and Environment: how can we better conceptualize the interests of various levels of the state (which is far more horizontally and vertically disarticulated than the monolith of macro social theory allows)? How does the politics of putting stress on or supporting local institutional solutions really work?

Ron Herring

For the Planning Committee

Ronald Herring, Political Science, Northwestern University

Paul Greenough, History, University of Iowa

Clive Bell, Economics, Vanderbilt University