

# ***APPROPRIATION REGIMES AND MANAGEMENT SYSTEMS FOR BIODIVERSITY: SOME COMMENTS ON ENVIRONMENTAL GOVERNANCE, THE CONSERVATION OF BIODIVERSITY AND THE ROLE OF SCIENCE.***

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The concepts, categories and labels that formed the basis of today's discussion; terms such as 'governance', 'biodiversity', 'poverty', 'legitimacy', 'conservation' and 'development,' are, of course, semantically complex, multi-dimensional, historically contingent and, perhaps concomitantly, homonymous. This point is clearly and explicitly made by both Merino, who draws an important contrast between two major models for conceiving the environment and human-environment relations, and by Agrawal and Redford, who outline the history and underlying components of 'biodiversity' and 'poverty'. Agrawal and Redford deplore how an entire genre in scholarly research has failed to come to terms—epistemologically, methodologically and analytically—with this multidimensionality. I will return to this problem later, suggesting some of the factors that may contribute to this apparent lack of scholarly rigour. To start however, I would like to suggest that the problem may be symptomatic of a broader, perhaps structural, condition: when deployed in actual social settings—be these media, policy, law, state or non-state interventions, as well as diverse forms of political action, discourse and resistance—labels, concepts and categories such as those listed above tend to be used in highly abridged forms.

This process of 'semantic flattening' is often implicit and partly due to the 'blindness' of socialization: Personal experience and formal training, for example, sensitize each one of us to some of the qualities and assumptions underlying these terms, while masking others. In addition, the rhetorical power of words such as 'biodiversity', 'conservation' and 'governance' hinges precisely in their ability to condense multiple and complex layers of meaning into a single unifying concept. The strategic deployment of these words in the highly charged locus of 'the environment' further encourages this process of condensation. In other words, the reductionism, essentialism and reification, which Merino and Agrawal and Redford deplore, have interrelated cognitive, political and historical dimensions.

The four papers that formed the core of the workshop all presented a rich, to a certain extent contrasting and complementary, view of the approaches, issues and themes embodied by the very broad topic of the panel. Due to lack of space I will confine my comments to two just two of the domains that caught my attention, both in terms of the issues that were raised and those that remained largely unexplored.

## ***The State and environmental governance:***

While all papers raise the issue of the State in relation to governance, the individual assessments vary considerably in terms of context, breadth and scale, which in turn may reflect the many different aspects of this relationship. While briefly illustrating the importance of power relations between both State and non-State institutions and individual or collective holders of local knowledge, Gupta focuses more in suggesting specific ways to encourage and facilitate the creative driving force of local innovation, and thus help create a "...*democratic means of self-governance that can combine creativity, conservation, compassion and community spirit...*"

Gupta's approach and message resonates with Merino's call for collective action models of resource governance, which in turn questions the assumption that State intervention is central to sound resource management. Merino's model of environmental governance through collective action—de-centralized, distributed, and premised on the effectiveness of strong local institutions, as well as on a socially and historically contingent view of nature—is developed in contrast and in opposition to the principal mode of biodiversity conservation. This in turn is portrayed as privileging individual over collective action, as centralized and vertically organized, and as assuming a clear discontinuity between anthropogenic and natural processes.

On the one hand Merino's analysis is a powerful reminder of the ideological divide that separates different scholars and practitioners in the field of environmental governance, suggesting deep historical roots. Missing perhaps from Merino's elegant model and clear-cut separation between these two mutually-exclusive approaches to environmental governance is recognition of an intriguing paradox and its fallout effect on collective-action based models for environmental governance: the discursive appropriation of collective action and 'participation' by hegemonic, centralized and vertically organized conservation interventions (Sullivan, 2002).

The State is itself, of course, a complex and continuously evolving entity. Sanderson refers to the "diminished state", noting how the political events and reforms of the late 20th century have "...reduced the fiscal and political capacity of the nation state." Moreover, Sanderson contends that the ineffectiveness of a weak state is—in terms of environmental governance at least—compounded by a weak civil society. It is hard to reconcile Sanderson's characterization of civil society as "in limbo," particularly given the dramatic proliferation in non-State institutions, and especially NGOs, in many domains of social and political life—and perhaps in particular, environmental governance and activism (Princen and Finger, 1994, Fisher, 1996, Clark, 2003). Sanderson also fails to note that the dismantling of the welfare state has led to new partnerships between government, the private sector and certain elements of civil society, particularly NGOs. These strategic alliances, and the concomitant blurring between the public and private sector, are particularly salient in environmental governance, and evident in how the many natural protected areas created in regions such as western Amazonia during the 1990's are currently managed. Indeed, it seems to me that it is partly as a result of these strategic partnerships, and contrary to Sanderson's characterization of international conservation organizations enjoying limited legitimacy and power, that the big international environmental organizations enjoy considerable legitimacy and power compared to many government and non-government agencies.

## Science and governance:

I celebrate Borrini-Feyerabend's call at the end of the workshop for a more rigorous examination of how and who governs science. It may be opportune in this sense to recall another initiative spearheaded by UNESCO; the 1999 World Conference of Science, which, titled 'Science for the Twenty-first Century', called for a new 'social contract' between science and society on the grounds that science has entered a new phase in which the nature of the problems it faces, and therefore its function, have changed (World Conference on Science 1999). I would like to respond to these calls by identifying a few preliminary, admittedly tentative and controversial, themes, which I hope in turn will underscore Merino's, Borrini-Feyerabend's and Agrawal and Redford's general call for greater scholarly accountability, rigour, inclusiveness and transparency, and promote discussion among colleagues.

One might begin by considering the possibility that in recent years, and in general, scientific institutions and scientists have become increasingly accountable, in some cases formally, to a different, perhaps more heterogeneous, set of collective entities than they were, say 30 years ago. This is in turn related not only to some of the changes in the relationship between science, technology and development outlined by Bell ([1973] 1999) decades ago, but to the post-1980's neo-liberal reforms and to the dismantling of the welfare state referred to by Sanderson. Science and higher education today—certainly in the US and the UK<sup>1</sup>, are under new forms of scrutiny and have to meet new kinds and levels of expectations, not only from the government (in the form of panels and review boards that monitor the effectiveness and merit of government-funded research), but also from the general public (filtered through the powerful lens of mass media) and—increasingly—from the private sector (which now directly and indirectly funds an increasing proportion of scientific research conducted).

New conflicts of interest emerge as scientists become accountable, and in some cases directly engaged with, a wider—or in some case just a different—set of institutions, actors and kinds of interventions. It may be significant, for example, that several authors—some included in Agrawal and Redford's table of case studies examining the impacts of eco-tourism—have specific and vested interests (in some cases financial) in the same ventures whose success they are evaluating. This is not to say that ideological or institutional influences in science are new, but rather, than the intensified interpenetration between the public and private spheres, and between scientists, government, NGOs, and international donor organizations, particularly in the fields of biodiversity conservation and environmental governance, demand we play close attention to how these links are formed and their influence on how the outcomes of interventions are assessed.

Coupled with this heightened accountability to a particular set of interests, science has also moved into the forefront of a number of critical, and highly contentious debates, many of them related to the environment. While this is certainly necessary and desirable, the fact is that scientists who seek to influence policy or public perceptions (and many are directly or indirectly encouraged to do that) operate in an environment where "facts are uncertain, values are in dispute, stakes are high, and decisions are urgent" (Prugh *et al.* 2000:94), and where the contradictions of pursuing an objective science amidst a value-loaded and socially charged reality are becoming increasingly evident (Shrader-Frechette and McCoy 1993). The complexity of issues related to environmental governance and the pressure of making science directly relevant to the problems of society, honourable and important as that is, may also increase the likelihood that individuals or teams, trained as they are within the confines of disciplinary boundaries that continue to

<sup>1</sup> I highlight these two cases as they are the ones I am most directly familiar with. They are also, not surprisingly, the two nations which have led the neo-liberal reform of science.

be institutionalized in research and training, inadvertently step out of their domains of legitimate expertise and authority.

An interrelated factor is the temptation to produce the quick, simple or universal answers that some policy-makers, media, grant-giving agencies or NGOs might find useful and attractive. Agrawal and Redford's paper raises the troubling possibility that particular sectors of science are producing knowledge which reflects superficial forms of 'interdisciplinary' engagement with broader social and ecological problems, or which respond not so much to the demands of academic rigour, but to the needs of the veritable industry that has grown around donor-driven development, and which constantly requires the introduction of 'novel' concepts and approaches to what are in effect some very old problems.

Finally, studies of the 'governance of science' might also wish to examine the 'proxy' variables currently used to evaluate the performance of many research and educational institutions—the number of publications and overhead-bearing grants. While there are few formal discussions as to the effects that these new measures of 'impact' and hence accountability have upon science (but see, for example, Evans, 2004, Furedi, 2004), there is a common feeling among many of my peers that these processes may be contributing to what they perceive as a form of intellectual inflation—the production of increasing volumes of literature of overall decreasing net value.

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