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What's the Good of Mercators?: Cartography and the Political Ecology of Place

Abstract

This paper offers a methodological argument for analyzing maps in studies attentive to the politics of place and the representations of space. Recent literature on maps has focused on cartography as central to either state or national projects, but has rarely used maps as a lens to study sub-national conflicts over resources and space. I bring this literature into dialogue with analyses of the politics of place within political ecology. Drawing on Timothy Mitchell, I argue for a critique of cartography within such studies that 1) recognizes maps as both representations of landscape and attempts to reformat that landscape through representation and 2) understands maps as not simply failed attempts at social control but rather as documents that are part of complex material and symbolic struggles over space. Reading several key studies of the political ecology of place, I suggest that while these authors are attentive to nuanced struggles over space, they often overlook maps as ways of understanding particular, often state, views of landscape and geography. Analyzing maps as a means of understand views of landscape can offer new perspectives on competing agendas, epistemologies, and understandings of space in local conflicts over borders and resources. I conclude with an analysis that begins to suggest strategies, as well as pitfalls, of using maps in political ecology as well as an exploration of 'counter-mapping', which argues for local and community maps as means of contesting state views of landscape.

'What's the good of Mercator's North Poles and Equators,
Tropics, Zones, and Meridian Lines?'
So the Bellman would cry: and the crew would reply
'They are merely conventional signs!'
                    —Lewis Carroll, The Hunting of the Snark

It is de rigeur in the growing body of literature analyzing maps as instruments of power to quote Borges's famous anecdote concerning an empire so obsessed with cartography that it creates a map at a 1:1 scale. In this anecdote, future generations within the empire, finding such a map cumbersome, allow it to deteriorate into scraps on the margins of society. This story is most often invoked as either a comment on the processes of representation and replacement (Baudrillard, 1983) or a parable about colonial attempts at cartographic precision (Edney, 1997). Another and possibly more suggestive reading of this anecdote is offered by Gregory Nobles. 'Maps are more than pictures…. They represent an attempt not just to depict or define the land but to claim and control it, to impose a human and, most important, political order over it…. As an extension of imperialist policy, the map covers and threatens to smother both the land and the people on it' (1993, 9-10). Viewed in this light, Borges' allegory takes on new meaning. Mapping is a political process, a reification of particular kinds of contingent relationships into representations of land and borders. The desire to produce a map at a 1:1 scale can best be read as the simultaneously powerful and futile attempt to physically superimpose the ordered map onto an unruly landscape, thereby cementing the map's 'conventional signs,' to create more totalizing, legible political geographies.

    A growing body of critical literature on cartography attempts to understand the paradoxes inherent in Borges' tale, viewing maps, as Raymond Craib describes them, as 'replete with power and with potential that is both emancipator and repressive' and, as such, as, 'useful items for historical analysis' (Craib, 2000, 8). Authors within this literature have used maps as critical texts in understanding both nation-formation and state-formation, convincingly showing the centrality of maps and mapping in visualizing 'the nation' (c.f., Thongchai, 1994, Trivedi, 2003,

Ramaswamy, 2000), processes of territorialization and border formation (c.f. Scott, 1998, Biggs, 1999, Harley, 2001), and colonial and imperial expansion (Edney, 1997, Carter, 1987, Burnett, 2000). Collectively, this emerging literature constitutes one dynamic of the 'spatial turn' in the social sciences (Brenner, 1999), a critical reassertion space and place that has accompanied academic interest in globalization. Explorations of cartography have helped to lend a historical dimension to such analyses, demonstrating both the contingent nature of state borders, territories, and colonies, and the particular views of space and geography central to the production of what we now think of as the modern state system.

Yet the potential for maps as tools for understanding local conflicts remains largely untapped within this literature. Mapping literature tends to focus its attention primarily at the national—and sometimes global (Cosgrove, 2001)—level and rarely examines the relationship between maps and borders within the nation-state. By focusing on broad-scale projects of state and nation formation, literature on cartography has by-in-large failed to explore the role of maps in the everyday production of space and in the micropolitics of making place. This paper brings this literature into dialogue with recent writings emerging from the broad fields of environmental history and political ecology interested in the politics of place in struggles over the creation of park, forest, and village borders. This perspective, what I will call 'the political ecology of place', is, in Roderick Neumann's words, characterized by '(1) a focus on the land users and the social relations in which they are entwined; (2) tracing the linkages of these local relations to wider geographical and social settings; and (3) historical analysis to understand the contemporary situation' (Neuman quoted in Moore, 1993, 381). Analyses of the political ecology of place have helped to sharpen our understanding of conservation schemes in both the North and the South as well as highlighted their human impact and frequent conflict with more local understandings of geography, property, and conservation. In short, the political ecology of place has shown that the demarcation of land in conservation and park schemes is contingent, contested, and historically specific.

Despite this attention to the politics of place, maps have largely been overlooked as tools of analysis within this literature[2]. As such, the political ecology of place ignores central means of representing, and thus asserting control over, space. While other literature, notably work on urban planning, regularly explores maps as claims to space, the subject of struggle in contested areas such as park borders presents a particularly compelling place to explore links between state and nation formation in the context of struggles over land. Maps offer critical ways to interpret such spatial histories (Carter 1987).[3] As such, I suggest that the theoretical lessons of political ecology studies of place and new literature on critical cartography can be productively brought together to offer a powerful methodological approach to understanding processes of political representations of space. Exploring these processes of representation[4] helps to clarify spatial politics in zones where these politics determine access, extraction rights, social control, and individual and community livelihoods.

In short, these two literatures, that share some of the same political and theoretical precepts, might be used in concert as a powerful way to understand the different terrains of struggle always present in the attempt to map cartography's 'conventional signs' onto contested landscapes. I argue for a methodological use of maps that appreciates both the epistemological contributions of mapping literature and the emphasis on everyday forms of state, nation, and place making adopted in

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[2] Though not as tools of resistance. See Peluso, 1995 and discussion below.

[3] My thanks to an anonymous reviewer at for the Graduate Journal of Social Sciences for pointing this out.

[4] While this paper is largely concerned with maps as means of representing [state] visions of landscape, I wish to recognize that there are many, and various, other forms of representing space. As Thongchai observers, "Modern geography was not simply new data added to existing conceptions. It was another kind of knowledge of space with its own classificatory systems, concepts, and mediating signs" (1993, 36). As such, the conception of mapping and what a map is needs to be expanded to include alternative views of space represented, for example, in cosmological charts, codexes, or maps that don't rely on notions of scientific demarcation and measurement. Indeed, these representations are important precisely because they tend to be overwritten and erased by visions of landscape represented through the 'scientific' discourse of cartography (see below). Such documents are particularly helpful in approaches to cartography that understand maps as particular visions of landscape rather than as positivist documents of spatial truth.

literature on the political ecology of place. Such an approach moves beyond the bifurcation between state and nation formation in mapping literatures and focuses instead the intertwining of these processes in the micropolitics of struggles over place. This approach, I suggest, can help in understanding the specific practices of reformatting place and social relations through representation (Mitchell 2002), as well as begin to provide a window on ways such representations or contested and changed by those who are either drawn into or out of the map.

I will begin with a brief survey of the growing body of literature on maps and critical cartography. This literature tends to be somewhat limiting in its centralization and valorisation of maps as signifiers, often at the expense of more careful analysis of the social relationships they eclipse. I follow this discussion by exploring two different political ecologies of place that focus on park borders: Roderick Neumann's analysis of the formation of Serengeti National Park in colonial Tangyanika and Donald Moore's ethnographies of resistance in Zimbabwe's eastern highlands. Both of these authors offer compelling critiques of border conflicts that are attentive to the politics of space. In each case, however, I suggest that more careful attention to maps might serve to simultaneously clarify and problematize the analyses, highlighting the ways that conflicting geographic claims animate each of these struggles. I will conclude with a critical reading of several studies that move towards an incorporation of maps into analyses of people/park conflicts and discuss both their possibilities and limitations.

Maps, National Identity, Control

Over the past fifteen years, there have been an increasing number of analyses of the relationship between cartography, discourse, and power. This mapping literature might be broadly thought of as falling into two different categories. The first, drawing mainly on the work of Benedict Anderson and Thongchai Winnichakul, understands national geography as a collision of discourses about nation-ness (c.f., Anderson, 1991 [1983], Thongchai, 1994, Bassett 1994, Craib, 2002, Trivedi, 2003). This literature approaches cartography as a space

where these contesting discourses are resolved, folding multiple identities and real and imagined pasts into a unified map representing what Thongchai has called the nation's 'geo-body.'

> In terms of most communication theories and common sense, a map is a scientific abstraction of reality. A map merely represents something which already exists objectively 'there.' In the history I have described, this relationship was reversed. A map anticipated spatial reality, not vice versa. In other words, a map was a model for, rather than a model of, what it purported to represent…(Thongchai quoted in Anderson, 1991 [1983], 173-4).

Maps, then, become one of the tools through which the nation is discursively constructed: a visual language 'locating places within and outside the nation' (Trivedi, 2003, 15). As such, careful analyses of the history of maps and cartography, especially projects that attempt to map the nation as a whole rather than as a loose grouping of 'constituent' parts, reveal them to be 'powerful stories about the past and the present, replete with their own ideological presuppositions' (Craib, 2002, 66).

The second strand of mapping literature draws from J.B. Harley's rebellion against cartographic positivism through a 'deconstruction' of the map (Harley, 1992) and Edward Said's analysis of the connection between geography and imperialism (Said, 1979 and 1994). It also intersects with the growing number of analyses of empire as a system of rule through particular kinds of empirical knowledge (c.f. Cohn, 1987 and 1996, Stoler, 2001, various essays in Cooper and Stoler, 1997). This approach views maps as part of what James Scott calls projects of 'legibility,' or processes of simplification through which populations, landscapes, etc. become intelligible to the state (Scott, 1998). Cartography, especially cartography as a 'state' project or project of empire, is seen as a process of control through representation. 'Knowledge of the territory,' in Mathew Edney's words, 'is determined by geographic representations and most especially by the map. Geography and empire are thus intimately and thoroughly interwoven' (Edney,

1997, 1). Maps are approached as documents that attempt to make both landscapes and the people within them legible.[5]

Mathew Edney's history of cartography in colonial South Asia is a prime example of this second strand of writing. In it, Edney argues that totalizing attempts to control space through maps are part and parcel of an Enlightenment epistemology which valorises empirical and scientific data as the centrepiece of knowledge. In Edney's view, which perhaps privileges cartography at the expense of the vast numbers of other methods employed by the Raj to 'know the country' (c.f. Bayly, 1993 and 1999), British colonial administrators understood maps as panoptic tools that facilitated bureaucratic power. As Edney observes, however, this power was always both incomplete and negotiated. 'Like all instruments of state power, the surveys were exercises in negotiation, mediation, and contestation between the surveyors and their native contacts, so that the knowledge which they generated was a representation more of the power relations between the conquerors and conquered than of some topographical reality' (Edney, 1997, 25, see also Andrews, 1975). Maps as tools of rule are silencing representations of multiple, negotiated relations of power. In their attempt to ossify such relations through representation, maps are also always already inaccurate and out of date.

A reading of cartography that transcends critical cartography's nation/state divide is offered in Timothy Mitchell's analysis of the role of cadastral mapping in the creation of 'the' modern economy. Mitchell argues that this 'Economy' is a process of systematizing and quantifying particular kinds of local relationships such that they can be measured at a national level and, thus, facilitate the internal and external legibility of the nation. Maps—in Mitchell's analysis the 'great land map of Egypt'—were, 'intended not just as an instrument of administrative control or geographical knowledge, but as a means of recording complex statistical

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[5] For a similar analysis, see Hannah 2000 which focuses less on the panoptic power of cartography and, instead, engages with Foucault's notion of governmentality in production of territory in 19th century America.

information in a centralized, miniaturized, and visual form' (2002, 9). This analysis, then, offers a way to see beyond maps as either part of the nationalist imagination or as tools of social control through a reconceptualization of nation and state building as linked projects. For Mitchell, mapping, surveys, and censuses are processes of nationalization, not so much in that they 'imagine' coherent boundaries and histories for the nation-state, but in that they re-organize it from a system of local economies into an internally and externally coherent, comparable, and legible national economy.

> The nation was emerging as this space, this material/structural extension, within which villages, persons, liabilities, and exchanges could be organized and contained. The connections, linkages, commands, and flows of information that made up this political order no longer seemed to pass through particular persons and communities. They appeared to arise in the space of separation between the land and the map, the social community and the state, the revenue and its statistical representation (90).

This growing 'space' of the national economy represents, for Mitchell, a bifurcation of the social world and its statistical representations. The economy is a space which claims accuracy through technical skill and empirical knowledge.

Mitchell's critique can be productively read with Lefebvre's (1991) notion of the 'production of space.' Lefebvre's notion hinges on an ongoing, dynamic, and historically produced relationship between physical space, mental space (the abstractions and representations of physical space), and social space itself (the space of lived social relations). Lefebvre usefully adopts an understanding of social space as a network of social relationships. Rather than reifying notions of 'state' or 'space' (Cons, Feldman, and Geisler, 2004), Lefbvre posits a notion of social space that is always historically contingent. 'It is the outcome of a sequence and set of operations, and thus cannot be reduced to the rank of a simple object' (1991, 73). Adopting a staunchly Marxian critique, Lefbvre argues that the social space under modern capitalism is linked to the eclipse of use-value by exchange-value. As such, the abstract space of modern capitalism moves towards the destruction of 'the qualitative realm in which use values are ultimately consumed' (Brenner, 1997,

142). The production of this capitalist 'abstract' social space becomes a scaffolding for a totalizing global space of capital. Yet at the same time, Lefebvre argues that this totalizing scale is composed of overlapping, competing, and adjoining social spaces: 'overlapping sociospatial networks articulated on divergent geographical scales, a "hierarchical stratified morphology"' (Brenner, 1997, 144). Mitchell's critique of cadastral mapping might be read as a historical critique of this process, the formation of 'the economy' as a totalizing, yet always partial and incomplete, abstract space of modern capitalism. Mitchell's critique, much more the Lafebvre's, however, is concerned with both the colonial historical specificities of this project and with its lived social implications.

Mitchell draws four key insights from his critique of the production of space that are central for reading maps in the context of understanding conflict over space. First, he argues that while this process always makes claims to accuracy, it is more correctly understood as 'reformatted' knowledge that signifies a transfer in power from the 'field' to the surveyor's office. 'What is new is the site, and the forms of calculation and decision that can take place at this new site' (116). Mapping should thus be understood as a means of translating the site of struggle over space from a particular place to the bureaucratic, legal space of state administration (c.f. Sparke, 1998). Second, Mitchell emphasizes that movement to this 'new site' constitutes an act of removal. The move from the 'real world' to the map is a move that erases contested, political relations in sanitized statistical representations at the same time that it 'denies its own (shrinking) physicality' (117). The space that is 'produced' through the map is smooth and uncontested. Maps, to modify Ann Stoler's suggestive phrase, can help us understand the constitution of territory from the bottom up, if one is willing to read them upside down (Stoler, 1995). In other words, to use maps as critical tools, one must read them for the silences. Third, this move should not be understood as a simple process of representation. Rather, 'Expert knowledge works to format social relations, never simply to report or picture them' (118). Drawing on the epistemic critique put forward by Harley and others, maps must be understood as projects—

or at least part of projects—of social formatting and control. However, fourth and most importantly, this process, in its attempt to freeze and control social relations, is always and by definition, partial and contested. Drawing on these key insights, I suggest, one can begin to see maps as deeply implicated in conflicts centring on the regulation, classification, demarcation, and policing of space.

Contested Borders and the Political Ecology of Place

Most of the mapping literature has employed a macrostructural framework that remains either explicitly focused on the nation, its borders, and its historical imagination or attempted to understand mapping within the context of state projects of territorialization. As such, it echoes Donald Moore's criticism of the field of political ecology for eliding '(1) the micropolitics of peasant struggles over access to productive resources, and (2) the symbolic contestations that constitute these struggles' (Moore, 1993: 381).

While largely true for the field of critical cartography, Moore's comment may appear somewhat dated in the context of political ecology and environmental history studies of the politics of place. Since 1993, there has been a marked increase in studies sensitive to such struggles (Moore's writing itself represents one such powerful contribution)[6]. In what follows, I offer a reading of two such accounts: Roderick Neumann's history of the formation of Serengeti national park and Donald Moore's pioneering ethnographies of territory in upland regions of Zimbabwe. These two accounts provide spatial understandings of conflict and attention to what I will call multiple competing geographies—or concepts of what the landscape is and/or should be—present in each site of struggle. Despite this focus, maps are surprisingly absent as subjects of analysis for both authors. Drawing on Mitchell, I argue for a critique that leverages the explanatory power of maps, understanding

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[6] Others include Rangarajan, 1996, Sivaramakrishnan, 1997, 1999 and Ranger, 1989 to name only a few.

first, that maps are not only simplistic representations of the landscape but that they are also attempts to reformat that landscape through representation, and second, that maps are not simply failed attempts at social control. Rather, they are documents that are part of the complex contestations over space. Such an analysis would help develop a nuanced understanding of struggles over borders, access, and control central in political ecological conflicts. [7]

Neumann and the Creation of Serengeti National Park

Roderick Neumann's writing has largely viewed the creation of parks in colonial and post-colonial Tanzania as both a framing of landscape within a particular (European) gaze and as a series of projects of social control. In his article, 'Ways of Seeing Africa,' Neumann traces the translation of colonial views of an 'Edenic' African landscape in the creation of Serengeti National Park. Neumann argues that this Edenic view, concomitant with the emergence of an industrialized England, was a reflection of colonial ideologies of landscape as either productive or consumptive (aesthetic); a view that simultaneously implied both 'a sense of ownership and control' (1995a, 152). Neumann charts the contested process of establishing zones for 'preserving Eden' in the 1920s that involved pressure from outside the colony and internal debate within the different branches of colonial administration (see also Neumann, 1998). Central to this struggle was the question of what to do with the large numbers of Maasai living within the proposed park boundaries. As Neumann observes, this question was, at least initially, mediated by colonial discourse around race that parcelled residents of Tanzania into Africans that would be developed and those who were 'primitive,' and thus should be 'protected as part of the fauna' (1995a, 155). As such, the debate around the

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[7] Though I have chosen to focus on political ecology studies of place for reasons discussed above, I argue that the methodological argument presented here is relevant for other emerging spaces, such as the expansion in the use of maps as documents demonstrating claims, counterclaims, and various competing views of land with the rise of spatial statistics associated with Geographic Information Systems (GIS) technology. Indeed, I suggest that the methodological approach I suggest here might be one strategy that could be productively employed in the growing literature seeking to critique the social and political construction of GIS technology (c.f., Piper, 2002, Harvey, 2001, Schuurman 2002).

proposed park and its inhabitants in the 1920s, 30s, and 40s, was carried out exclusively, in Neumann's analysis, by Europeans, and was centred on how to view the 'landscape's people', their relationship to nature, and their customary rights.

Neumann traces this debate through the establishment, in 1948 of the National Park Ordinance, which regulated movement of those within the park and served to establish a park boundary which was immediately disputed by Africans living within and around it. The Ordinance also nominally preserved the legal rights of park inhabitants while providing a legal basis for park officials to regulate these rights. As Neumann demonstrates, the Ordinance served as the basis for an ongoing series of disputes over park boundaries and legal rights of park 'residents.' What is clear from Neumann's analysis, is that these disputes constituted a distinctly spatial politics focused on how space would be apportioned for people and wildlife as well as who would regulate that space.

Critical to understanding these politics are three points. First, the connection between differing ideologies and varied understandings of landscape is central to the development of Serengeti National Park. The very concept of the park itself rises out of the North American discourse on national parks and a Victorian view that segregated landscape based on production values and aesthetics, as opposed to understandings based around local practices and use of land and resources. Second, these ideologies of landscape were bound up with ideologies of race, creating a viewpoint which understood Africans as belonging within particular spaces. As Neumann observes, 'Fulfilment of the European vision of primitive Africans living 'amicably amongst the game' meant freezing economic development and cultural change within resident communities' (1995a, 160). Third, these ideologies, in the contestation over the park, were mapped back onto the land in a variety of conflicting and changing ways.

It is unfortunate that Neumann's analysis, then, doesn't pay more attention to spatial manifestations of these different social geographies. It seems clear that

the establishment of national parks is part of a national, or at least, imperial view of Tanzania as a coherent whole. Neumann argues that preservation of Edenic landscapes was and is part of the colonial (and postcolonial (see Neumann, 1995b, 1997, and 1998)) imagination of Africa and Tangyanika. However, he doesn't seem to explore documents (maps) produced by various parties in the debate over the Serengeti that lay claim to particular boundaries and views of spaces. Conflicting visions of the Serengeti were produced by numerous different parties: the colonial administration, national and international preservationist groups, pressure groups interested in balancing aesthetic views of the land with productive needs, and the Maasai themselves. I suggest that an understanding of how these different parties represented landscape might help to clarify the struggles to reformat space. An analysis of maps, and other representations of landscape, would help to show these visions of the Serengeti, conflicting spatial understandings of social relations, and the specific grounds on which these different views contested, conflicted, and agreed with one another[8]. As such, exploring maps is one important way to clarify and analyze spatial disputes over land and resources.

Moore and Ethnographies of Resistance in the Zimbabwean Uplands

Donald Moore's work has largely focused on capturing 'the cultural politics of environmental struggles in Zimbabwe's Eastern Highlands' (Moore, 1998, 382). He has explored differing, changing, and conflicting concepts of geography in struggles over land access and resource control in the lush mountainous district of Kaerezi on the border of Mozambique. In a series of recent articles, Moore traces the postcolonial struggles around geography in Kaerezi, always grounded in the memory of particular kinds of colonial expropriations and resistances, through three separate, yet intimately linked sites of conflict: government resettlement schemes

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[8]Neuman's later work (1997 and 2000) has focused on the ways that state visions of landscape, imposed through borders and buffer zones, are sites that produce violence through their inflexible apportioning of space.

in the Kaerezi river valley, conflicts around expansion of the abutting Nyanga National Park, and struggles over management of the Kaerezi river.

The first 'site' of resistance for Moore is a postcolonial villagization scheme that serves as a resettlement zone for Kaerezians displaced in the colonial period. The scheme's goal was to compartmentalize landscape into residential, arable, and grazing land and to order the 'residential' zones into spatially even, gridded households. As Moore observes, this spatialization of land, and the gridding process in particular, echoed the very colonial practices that Kaerezians had fought against:

> The cordoned-off residential sites were a cornerstone of state resettlement policy, designed to promote 'development' and environmental 'conservation.' The administrator used the English term villages to describe the linear grids, as if to suggest that the unpeopled landscape—marked by rusted metal stakes on barren terrain—constituted a vibrant community in waiting. Most Kaerezians called these empty spaces simply the lines, the same term used for colonial land use plans that had forced Africans into linear settlement grids separated from fields and pastures. (2000, 654)

Reminiscent of James Scott's observation that 'Rather than trying… to bring the map into line with reality, the historical resolution has generally been for the state to impose a property system in line with its fiscal grid' (Scott, 1998, 39), the resettlement plan favoured a rigidly determined, easily legible view of land as opposed to a more 'socially' logical one. As Moore observes, 'Moving into the concentrated linear grids, where the government promised to dig boreholes at a future, unspecified date, represented moving away from reliable waterpoints and toward uncertainty and a greater dependence on the government' (Moore, 1997, 98). Moore's analysis documents the overt resistance to this plan as well as internal differentiation and disagreement within the Kaerezi community.

Linked to this conflict are debates around the 1987 expansion of Nyanga National Park into land that had previously served as a buffer zone between the park and the resettlement scheme. Concomitant with this expansion was a proposal

by the Parks service to annex a protected river corridor to promote ecotourism and fishing. Suspicion of this plan which, like the resettlement scheme, was associated with colonial expropriations, along with a debate over a new cattle dip, located within the 500 yard protected corridor around the river, led to widespread resistance and debate over the Park Service's remapping of protected territory. Recounting the minutes at a meeting to discuss this plan, Moore writes,

> The local chief provoked applause from his constituents when he invoked the memory of forced evictions from the same land in the 1970s, 'The National Park wants to burn huts in my area. We thought the whites had returned.' The MP [member of parliament] responded by stressing that a 'farm and a chieftainship are not the same thing.' Today, he continued, the government recognizes property boundaries as they are written in title deeds and demarcated with beacons placed by a state official from the office of the surveyor general, not as they are remembered in oral traditions (1993, 390).

The MP's reliance on the legalism of the rational state is an interesting one, given that boundaries, deeds, and demarcations he referenced were almost all manufactured by the 'state' without input or cooperation of the Kaerezi residents.

The discourse of precise legal boundaries, as Moore argues, however, is central to understanding the construction of the conflict as 'legal' state interests against more 'irrational' peasants.

> Invoking the colonial separation of functionally discrete cordoned spaces sanctioned by property deeds, the MP scolded his constituents for not having a map to reveal the 'true boundary.' His actions accord with Harley's (1988, 284) observation that 'the map may be regarded as a means by which the state... could more effectively control a tenant or peasant population.' The MP's faith in the map's ability to speak the truth hinged on his viewing Kaerezi as an alienable commodity transferred from one owner to another by virtue of title deeds.... The particular cultural practice of dutifully recording property boundaries on a map underpinned this entrenched belief in Kaerezi's status as a commodity owned and administered by its present owner, the state. The chief, in contrast, invoked an alternate cultural vision of Kaerezi as his chieftainship by virtue of ancestral inheritance (1993, 390-1).
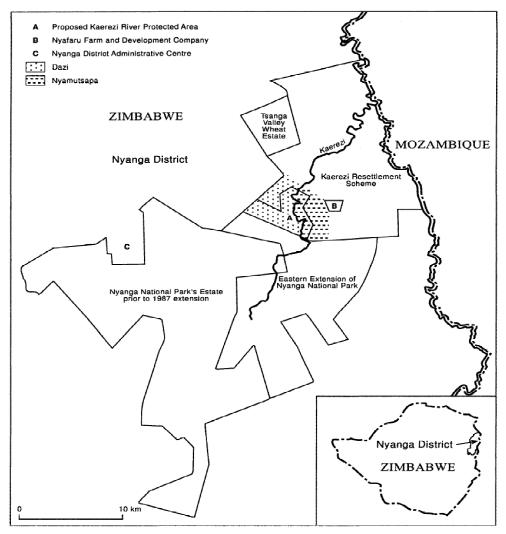
Reminiscent of Mitchell's analysis of maps as part of a system of representation that allowed for the imagination of a 'national' economy, Moore again highlights local contestations as a struggle over whose map will be superimposed over the landscapes. The conflicting representations lie between the geography of a map legitimized by bureaucratic authority or one which draws both on specifically localized cultural practices and memory of injustices and promises of reparations unfulfilled in the postcolonial era. The conflict between these geographies is a struggle over the social formatting, in Mitchell's terms, of space.

The analysis of cartography in the exchange between the MP and his angry constituents is an apt demonstration that maps are central to struggles over land and resources, both in their material forms (state produced maps that are part of the production of state power) and in their symbolic forms (calling on history, tradition, struggle, etc.) that are no less real or contested for their failure to be committed to paper. Despite this, I argue that Moore's analysis might benefit from a closer exploration of representations of landscape (official and otherwise) at play in conflicts over space in Kaerezi. In analyses so focused on the imposition of particular geographies on space, one wonders, for example, what the state visions for 'the lines,' as opposed to other views of the resettlement project, looked like. It would further be interesting both to understand what kind of oppositions were raised, symbolic or otherwise, to the MP's legalistic deployment of maps as 'official' documents and to explore the history of border demarcation around the park expansion and protected area.

More importantly, one might observe that in the four articles reviewed for this paper, Moore only includes two maps, the first a slightly less detailed version of Figure 1, both, presumably, produced for explanatory purposes. Moore provides neither a source for the maps or a discussion of what they were based upon. This presentation of academically sanitized maps is common practice in studies focused on a specific area or case. Rather than presenting existing maps of the 'field' (and analyses thereof) authors frequently offer redrawn, authorless maps that both

make the area under study legible to the reader, but also, in their very authorlessness, present themselves as closer to 'the truth.' Moore's unreflexive deployment of these maps is

disappointing considering both his careful analysis of the multiple and multifaceted meanings of space. One might suggest that in an analysis so attentive to discursive appropriations of space, the 'objective' or at the very least, unself-conscious cartographic portrayal of landscape deserves its own deconstruction. This map, in and of itself, displays a largely peopleless landscape without demonstrating the

'spatial distributions' within the resettlement scheme that are the subject of struggle. Further, and most problematically, borders on Moore's map are drawn as cleanly and crisply as any cadastral survey and appear not as sites of contestation, but rather as pre-ordained facts.

This said, even a map as 'unproblematically' presented as Moore's raises interesting questions about his analysis. One might wonder why only particular borders on this map present problems for Kaerezians. It is surprising, for example, that despite the fact that the resettlement project shares a frontier with Mozambique; it is only internal borders that appear, in Moore, to be at play in the contested geographies of Kaerezi. Further, the politics of park expansion and the control of the Kaerezi river appears more critical when one sees that part of the river ran through the original park while the headwaters originated a mere 6-7 kilometres away in private farmland. Perhaps most significantly, the Kaerezi River is the only body of water pictured on the map. While Moore never mentions other streams or rivers, one presumes that in a lush upland region such as Kaerezi, they exist. Moore's map, then, either radically simplifies landscapes and resources (in the same ways that 'official' cartographies might) or the struggle—over first, the headwaters and second, the protected area—take on new importance if they are indeed, struggles over a single water supply. Either way, Moore's map can be said to centralize and highlight his primary object of analysis in the article in which it is presented: the river.

Bringing the Map Back In

Throughout this paper I have been arguing for a political ecology that includes maps and mapping as both a tool and object of analysis. I would like to conclude with a reading of two pieces that suggest paths towards this model. Benjamin Orlove's analysis of conflicts around the regulation of protected reed beds in Peruvian Lake Titicaca is based around a close reading both of maps created by Peru's National Forestry Centre (CENFOR) establishing jurisdiction over reed beds along Titicaca's Western shore and peasant maps designed to establish counter

claims based on the traditional use of particular beds as raw materials for a number of important subsistence activities. Dividing his analysis into state maps and peasant maps, in Matthew Sparke's suggestive terms 'contrapuntal cartographies' (1998), Orlove tells a story of peasant opposition to state control that revolves around two fundamentally different views of geography.

Orlove's argument points out some basic different 'ways of seeing' evident in the two different 'types' of maps. On the one hand, peasant maps feature a marked absence of 'towns' or more state controlled, administrative spaces. On the other hand, the state maps fail to represent peasant villages, suggesting that these less-legible communities play no part in the designation of protected reed beds. Similarly, the peasant maps' representation (or lack there of) of roads suggests a rural, self-contained space while the state maps seem to present a more ordered, urban view of the reed bed areas. In other words, each set of maps are idealized geographies representing different views of power and autonomy. Orlove also argues that the peasant maps' failure to produce a picture that is 'to scale' suggests a different set of relationships to features

such as mountains (important in local ritual practices) and views of independent communities (equally spaced on the maps as they are equally important in peasant cosmology, as opposed to demarcated by scientific spatial measurement). In this sense, the peasant maps are what Gould and White would call 'Mental Maps,' (1986 [1974]) or maps that project particular perceptions of space and place shaped by cultural, social, and environmental orders, as opposed to views governed by modern cartography. Yet the term mental maps itself, in its suggestion of the difference between perception and reality, already privileges state views of landscape as truth in opposition to peasant views. Though the mental maps of the peasants in Orlove's analysis may represent particular idealized views of landscape, it should be noted that the state maps are also idealized, yet in different ways. The state maps represent a series of spatial divisions corresponding to the mandates of laws designating the reed beds as reserves. Specifically, Orlove reads the maps as representative of an evolving administrative process. The first map separates the

reserve from the rest of the lake, the second map divides the reserve up into different types of conservation zones, and the third map, responding to village claims, allocates particular parts of the reserve to village users under year long contracts. As such, while the state maps lay claim to geographic 'accuracy' they reflect a shifting and unstable administrative groundwork that constantly needs revision.

Further, Orlove argues that the maps are documents of larger narratives at play in the struggle over reed beds in Lake Titicaca. The state maps represent a series of compromises and decline in CENFOR's power, for example, through persistent exclusion of an adjacent contested zone, which appears without demarcations on the fringes of the peasant maps. More importantly, the third state map, made four years after the first two, signifies a 'cessation of power' in its demarcation of plots for local cultivation. As Orlove suggestively argues, 'The proleptic narrative of the state, by requiring compromises by the state to be presented as prefigured in laws, makes them not real compromises at all' (1991, 23). Maps, as such, become a liminal form of legal authority that have the power to represent conflict and compromise as naturalized, projecting reformatted views of space backwards onto history. While Orlove's third state map does indeed show this compromise, it can only be understood as such through Orlove's comparative analysis of maps over time, thus rescuing conflict over reed access from what Harley (2001) calls the silence of maps.

More suggestive is Orlove's analysis of state consideration, valuing, and incorporation of peasant maps as subsets of a larger legal project.

> CENFOR officials reserved the term mapa (map) for the state maps, employing for the peasant maps the term croquis, a word that is often translated as 'sketch' but also includes the sense of 'rough draft.' This conceptualization allowed them to present any difference between peasant maps and state maps as the result of peasant errors, errors so numerous and severe as to place the peasant maps in another category altogether. The term croquis also has a narrative implication: it suggests that the peasant

maps will serve as the basis for a later corrected map, drawn by state officials. (25)

Orlove's description suggests that peasant maps represent a liminal form of legal authority. Their status is indefinite and it may (or may not) serve as a basis for future maps, drawn at a more precise scale. The term croquis, in its rough draft nature, also suggests that it is not only

 inaccuracies on the peasant maps that may be corrected in the government redrawing; it could also be the claims themselves. Most importantly, perhaps, this observation suggests strategies for hegemonic incorporation of peasant claims by state authorities. Peasant maps lack scientific legitimacy. They are, in the context of cartographic precision, indeed sketches. Yet it is the very relationship of accuracy and precision that structures their illegitimacy in the eyes of CENFOR. As such, the 'mental' maps of the peasants are posed against the official maps of the state. The state maps, in their claim to legitimacy within the frame of cartographic precision, represent 'true,' or at least legal, visions of landscape, which supersede and replace the peasant croquis. As such, the incorporation of peasant maps into state maps represents a simultaneous assimilation and correction: the transforming, editing, and redrawing of the peasant maps as truth. The continual redrawing of state maps that project themselves back into history as 'natural' effectively supersedes the peasant maps at the same time that it does or does not give legal recognition to their claims.

Orlove's analysis offers a model, of sorts, for incorporating maps into analyses of territory conflicts in park-reserve/people conflicts. Yet the model, in many ways is incomplete. It presents a homogenized binary picture of conflict that may oversimplify the struggle over reed beds in Lake Titicaca. Both state and peasants remain fundamentally undifferentiated in this model. While CENFOR appears as a direct conduit of state authority, peasant communities seem to uniformly share a perspective on space. It would be interesting to compare the CENFOR maps to representations of space made by other local representatives of

state power (politicians, community leaders, etc.). It might also be observed that the peasant maps reproduced in Orlove's article represent radically different epistemic and cosmological views of community, geography, and daily life.

A more theoretical contribution to the political ecology of place and maps is presented in Nancy Peluso's analysis of counter-mapping in East Kalimantan. Peluso's analysis recounts how forest communities, in cooperation with NGOs, have used sketch maps of local and traditional land holdings, combined with more 'accurate' GPS data, to produce maps that make claims to land that has been indiscriminately folded into forest reserves. While counter-mapping as a technique has been explored elsewhere (see Aberley, 1993 and Fox, 1990) what I find particularly interesting about Peluso's analysis is her critique of what mapping means for communities. Peluso argues that counter-maps can be used to undermine monolithic state mapping projects. 'One effect of having multiple maps of a single forest, for example, could be to challenge the accuracy of a 'standard' map used for planning' (1995, 386). As such, in the case of counter-mapping, challenges to larger bureaucratic mapping projects come as much from adding detail as representing alternate geographies.

Peluso, however, does not posit counter-mapping as a new means of resistance for forest communities, but rather sees it more relationally. Counter-maps do allow communities to communicate in 'the elite language of the powerful' (387). Thus 'vernacularizing' maps—producing them at the community, rather than state, level—might be thought to represent a form of empowerment. The picture, however, is somewhat more complicated, especially in remote upland forest regions in Eastern Kalimantan. Peluso poses the relative benefits of being 'on the map' as related to the actual levels of state presence.

> Whereas abstract space on a map represents merely state claims to power rather than a state capacity to enforce its claims, local people's actual control may be enhanced by exclusion from the map. When the degree of state surveillance increases, e.g., because of an increased value of resources or

because of a reduction in resources located elsewhere, local people's inclusion on the map is more desirable (388).

Yet Peluso also notes, similar to Mitchell, that maps serve to reformat social relations. To be 'on the map' also implies a transition from local to more state recognized/cadastral forms of property rights. Mapping is a question of legibility and the benefits of such legibility must be viewed relationally. If these areas can be understood as non-state spaces, in Scott's (1998) sense of the term, then counter-mapping is more than a simple process of re-presentation. Going beyond Orlove's analysis of the absorption of peasant maps by state maps, the process of counter-mapping incorporates particular kinds of relationships into official knowledge. Further, to a greater or lesser extent, it locks social relations into what Mitchell would call 'the language of calculability' (2002), relationships intelligible within the context of the economy. In other words, the appropriation of the government's official language (here mapping methods) also means intelligibility within that language.

An interesting counter-strategy that Peluso proposes is bare-minimum representation. 'By purposely making maps 'empty' or 'homogenous space,' counter-mappers can reduce the potentially negative effects of such a territorialization. In other words, communities can retain the most internal flexibility in interpreting and changing land uses if individual rights within the village are not mapped' (402). Peluso posits this strategy as a means of minimizing conflict, both between communities and the state and inside and amongst different communities. But a more interesting suggestion is implicit in her observation. In the expansion of park and reserve borders, it seems largely impossible to avoid having particular state geographies mapped onto local space. The goal of counter-mapping is, on the one hand, to stem the erasure of other spatial relationships by government maps, but, on the other, to also to carve out as much non-legible space within these maps as is possible. As Peluso writes, 'local notions of territoriality have had to change as extensive land-based projects have threatened them; they will change further with

mapping. Yet, given the alternate futures—of not being on the map, as it were, being obscured from view and having local claims obscured, there seems to be no choice' (403).

Conclusion

J.H. Andrews begins his classic study of the Ordinance Survey in 19th century Ireland with an enigmatic quite from Lord Salisbury in 1883, who commented, 'The most disagreeable part of the three kingdoms is Ireland, and therefore Ireland has a splendid map' (Andrews, 1975, v). Lord Salisbury's observation is suggestive in its double meaning: not only is the landscape of Ireland disagreeable, but so, in the context of colonial rule, are the people in it. It is as much the contestation over landscape as the landscape itself that causes the creation of a 'splendid map.' Salisbury's quip also highlights the centrality of maps in the production of particular official visions of space. In such zone's of conflict, maps, as key texts in the production of social space (Lefebvre, 1991), cannot help but be interesting, whether for what they show, or for what they do not. It has been a central argument of this paper that maps can and should be read by political ecologists— and social scientists more broadly—in much the same way Lord Salisbury seems to suggest.

Conflicts over park borders are only one of many 'sites' where scholars have begun to re-examine the relationship between states, people, and place (Brenner et al., 2003). Yet they are particularly interesting places to think through questions that have become more important within political ecology and critical literature on cartography as well as within the social sciences and humanities in general. The eco-political conflicts examined by political ecologists of place are productive sites for asking questions about state demarcations of space, the ways such demarcations structure peoples lives, and the symbolic and material conflicts over resources that emerge at sites of state regulation. Parks, as sites of state spatial management are places where the logic of Borges's parable might be explored at length; where particular views of geography might been seen as competing with each other in an attempts to smother the landscape. By paying more attention to

the 'splendid maps' that emerge in such places, we can begin to understand the narratives of state, nation, and place formation coded in cartography's conventional signs.

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