

Political ecology and the epistemology of social justice

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Abstract

Piers Blaikie's writings on political ecology in the 1980s represented a turning point in the generation of environmental knowledge for social justice. His writings since the 1980s demonstrated a further transition in the identification of social justice by replacing a Marxist and eco-catastrophist epistemology with approaches influenced by critical realism, post-structuralism and participatory development. Together, these works demonstrated an important engagement with the politics of how environmental explanations are made, and the mutual dependency of social values and environmental knowledge. Yet, today, the lessons of Blaikie's work are often missed by analysts who ask what is essentially political or ecological about political ecology, or by those who argue that a critical approach to environmental knowledge should mean deconstruction alone. This paper reviews Blaikie's work since the 1980s and focuses especially on the meaning of 'politics' within his approach to political ecology. The paper argues that Blaikie's key contribution is not just in linking environmental knowledge and politics, but also in showing ways that environmental analysis and policy can be reframed towards addressing the problems of socially vulnerable people. This pragmatic co-production of environmental knowledge and social values offers a more constructive means of building socially just environmental policy than insisting politics or ecology exist independently of each other, or believing environmental interventions are futile in a post-Latourian world.

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1. Introduction

One of the most distinctive themes in the writings of Piers Blaikie over the years is a strong political imperative and desire to correct social injustices. On the first page of *The Political Economy of Soil Erosion in Developing Countries*, Blaikie (1985, p. 1) wrote: '[this] is not a neutral book. It takes sides and argues a position because soil erosion *is* a political-economic issue, and even a position of so-called neutrality rests upon partisan assumptions' (emphasis in original).

Yet, despite such statements, it has become almost accepted wisdom that Blaikie's early work was somehow underpoliticized. Reviewing this famous book in 1997, Michael Watts (1997, p. 77) wrote, 'the distinctively political content of political ecology was (and is) sadly missing in much of Blaikie's work...'

What does this statement mean about the application of 'politics' in political ecology? At one level, this comment refers to the generally uncomplicated analysis of political processes in Blaikie's early work – a criticism Blaikie later acknowledged (Blaikie, 1997, p. 79). But at a wider level, this statement also indicates differences in opinion concerning the normative objectives of political ecology versus its analytical procedures. Blaikie clearly expressed political intentions in his work, but Watts believed his methods were insufficient.

This paper argues that Piers Blaikie's writings on political ecology should not be dismissed as being underpoliticized, but instead be seen as important first steps for a new and engaged focus on the politics of environmental epistemology (or, what we know about environment, with whose inputs, and with what effects). Rather than seeking to demonstrate how a particular approach to 'politics' could be applied to predefined notions of 'environment,' Blaikie sought instead to demonstrate how social values and envi-

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ronmental knowledge are co-produced. Moreover, he tried to show that changing these values, or diversifying the social framings of environmental analysis, may result in more socially just environmental knowledge and policy.

But at the same time, Blaikie's own approach to achieving these objectives changed over time. In the early 1980s, he and his collaborators relied upon a generally structuralist Marxian analysis of environmental and social change. After this period, Blaikie rejected structuralist analysis and instead sought more locally-determined, discursive and participatory approaches to environmental crisis and social vulnerability. These different approaches, and their implications for how environmental knowledge is made, have raised further challenges for providing a socially relevant direction to physical environmental science and policy.

This paper assesses Blaikie's contributions to political ecology, and in particular his approach to the co-production of environmental knowledge and social values. The paper starts by reviewing Blaikie's (and his collaborators) work during the early 1980s, and then moves on to summarise Blaikie's proposed alternatives to structuralist analysis. After this, the paper considers the criticisms and dilemmas resulting from this and political analysis of environmental epistemology in general. The paper concludes by arguing that Blaikie's approach to reframing environmental knowledge in the terms of social justice also offer insights for wider debates about the politicized collection and use of knowledge in environmental analysis. Insights from critical science and the sociology of scientific knowledge may provide useful ways to build on Blaikie's work.

2. A new paradigm?

The writings of Piers Blaikie and his collaborators in the 1980s represented a significant turning point towards seeing environmental changes in social and political terms. My own experiences as an undergraduate offer one small example of how these were seen. Some fellow students and I were planning to undertake research in Nepal. When reading about the country, we came across *Nepal in Crisis* (1980), co-authored by Piers Blaikie, John Cameron and David Seddon.

Nepal in Crisis was different. Most writing about Nepal described the distinctiveness of its cultures and landscapes, or portrayed Nepal as a passive recipient of aid. *Nepal in Crisis*, however, adopted a structural global political economy approach to explain social marginalization and environmental degradation simultaneously. Indeed, the image of combined economic and ecological decline was both urgent and worrying:

Nepal is now in a state of crisis, fundamentally rooted in a failure of productive organization associated with its economic and political underdevelopment. Already there are frequent famines, and the processes of erosion and ecological decline, coupled with continuing population growth, will contribute to an

increase in apparently 'natural' disasters in the future (Blaikie et al., 1980, p. 5).

It is worth noting that today, these and other authors now criticize this vision and especially the so-called 'Theory of Himalayan Environmental Degradation' – in which population pressure and commercialization may lead to a downward spiral of deforestation and land failure (Blaikie et al., 2002; Blaikie and Muldavin, 2004; Ives, 2004). But for we callow students at the time, this was exciting stuff. To date, we had only studied 'soil erosion' as a dry geomorphological subject, where the writings of scientists such as Schumm or Trimble highlighted presented erosion in terms of thresholds or tradeoffs of biophysical surface processes. In the writings of Blaikie and his colleagues, however, erosion was a symptom of dysfunctional societies and economies, and impacted mainly on the poorest and most vulnerable people.

This approach was later expanded in Blaikie's single-authored book, *The Political Economy of Soil Erosion in Developing Countries* (1985). This work both elaborated the political discussion of erosion's causes and impacts, and recognized the diverse social contexts in which erosion is considered problematic. Crucially, the point behind Blaikie's work seemed to be a radical approach to epistemology – suggested by works such as *Radical Geography* (Peet, 1977) – that empiricism itself was political, and researchers should not accept orthodox explanations of problems from physical science or expert agencies uncritically. Unlike orthodox approaches to soil erosion, Blaikie's work suggested that researchers had the opportunity to create new and more socially just worlds by refocusing scientific research in line with development objectives. Rather geekishly, we wondered: Is this a paradigm shift occurring before our eyes?

According to Blaikie, this was a paradigm shift. He wrote: '[it] is not just a question of a comprehensive and intellectually satisfying method for studying soil erosion. The approach here is in direct conflict with both the dominant conventional wisdom about soil erosion... and with the institutions charged to deal with it' (1983: 29). And that paradigm shift was decidedly political. The final chapter of *Political Economy of Soil Erosion* pointed to vested interests in both creating and measuring erosion: 'a principal conclusion of this book is that soil erosion in lesser developed countries will not be substantially reduced unless it seriously threatens the accumulation possibilities of the dominant classes' (Blaikie, 1985, p. 147).

But by this stage, it was also clear that these approaches were being questioned. *Nepal in Crisis* and other works (Blaikie, 1981, 1983) adopted an approach decidedly rooted in structural Marxian political economy. *The Political Economy of Soil Erosion*, however, began to acknowledge more diverse root causes of degradation, and examined the social and institutional influences on environmental knowledge itself. These alternative influences became more prominent in Blaikie's writings after the 1980s.

3. Alternatives to structuralism

If Blaikie's work in the early 1980s linked structural Marxism with environmental crisis, his writings since have sought to replace Marxian political economy and ecocatastrophism with alternative means of defining environmental change and social justice. These new approaches asked two key questions: How do we understand environmental crisis? And how do we identify social vulnerability?

Concerning environmental explanation, some initial steps were achieved in the edited volume, *Land Degradation and Society* (Blaikie and Brookfield, 1987). This work expanded the discussion of social contexts of environmental meaning begun in *Political Economy of Soil Erosion* by emphasizing the historical elements of environmental change, the importance of social marginalization, and the political influences on how environment is measured. Today, this book may be seen as early discussions of what are now called critical science, or science studies. Moving away from simply measuring 'erosion', Blaikie and Brookfield (1987, xix) wrote: 'it therefore becomes necessary to examine critically the political, social and economic content of seemingly physical and "apolitical" measures such as the Universal Soil Loss Equation, the "T" factor and erodibility'. (The 'T' factor is used in some hydrological models to describe the distance between the top of a slope and the start of overland runoff; the Universal Soil Loss Equation is a widely adopted predictive tool of erosion based on research in the USA).

In turn, this new focus on the politics of environmental explanation also encouraged a rethink of *a priori* assumptions about structural connections of capitalism and environmental degradation. Blaikie later wrote regarding desertification:

The case for the globalization of capital being causal in desertification looks rather amateur, since the scientific evidence of permanent damage to the environment points in other directions... For want of attention to a large and accessible body of climatological and ecological information, the case for adding desertification to the long list of other socially induced woes now looks very thin (Blaikie, 1995, p. 12).

These transitions in Blaikie's approach both reflected, and contributed to, two broader changes in political ecology. First, many analysts adopted insights from post-structuralist debates about the political origin and institutionalization of environmental knowledge, and especially the role of environmental discourses and narratives. Environmental narratives have been defined as convenient yet simplistic beliefs about the nature, causes and impacts of environmental problems, which also influence the generation of further environmental research and proposed solutions (Leach and Mearns, 1996). For example, Roe (1991) argued that the well known parable of the 'tragedy of the commons' is repeated in various forms of development and

environmental practice, yet is based on simplistic *a priori* assumptions about how environment is fragile, and how individuals act politically. Rather than considering whether these statements are 'true' or 'false' in orthodox scientific terms, post-structuralist narrative analysis aims to identify how these statements of presumed certainty have been 'stabilized' by selective social processes, with the implication of reinforcing certain political objectives.

The second transition in political ecology was an increased awareness of the limits of ecological notions of stability and equilibrium that underlie many popular narratives of environmental change and crisis. Botkin (1990), Rocheleau et al. (1996), Turner (1993) and Zimmerer (2000), for example, have discussed concepts of non-equilibrium ecology to show that it is very difficult to make confident statements about long-term ecological responsiveness based on limited temporal and spatial data, and when the evaluations and measurements of ecology are influenced by humans in culturally (and sometimes gender) specific ways. Indeed, these and other authors have argued that non-equilibrium views about ecology also empower the political analysis of environmental knowledge because they can show how resource management frameworks are co-produced with visions of ecological stability. Policies that restrict livelihood activities such as smallholder agriculture have often been justified using equilibrium, or 'nature in balance' arguments. Using non-equilibrium frameworks, however, may empower local resource users' strategies as both ecologically and developmentally feasible alternatives (although it is possible to take these local strategies too far) (Adams, 1997).

Consequently, much research within political ecology since the 1980s has focused on how and why institutionalized beliefs about environmental change come into place, and on finding alternative, more inclusive, ways of addressing environmental problems. In Nepal, as discussed, the so-called Theory of Himalayan Degradation has been shown to be a simplistic and unrepresentative indication of environmental or social change (Thompson et al., 1986; Ives and Messerli, 1989; Ives, 2004). Other narrative work includes the argument that smallholder farmers are not as responsible as commonly thought for deforestation in West Africa (Fairhead and Leach, 1996); or that desiccation and desertification may not result primarily from overgrazing or human settlement in drylands (Bassett and Zuéli, 2000). Indeed, the political use of 'crisis' has emerged as a further theme of analyzing narratives, where it is argued, in the words of Roe (1995, p. 1066): 'Crisis narratives are the primary means whereby development experts and the institutions for which they work claim rights to stewardship over land and resources they do not own'.

Blaikie's work connected in various ways with these themes. The book, *Nepal in Crisis* was clearly a crisis narrative: but does this mean there is no 'crisis' in Nepal? Blaikie and his co-authors sought to clarify this question by updating the book, and publishing a paper that acknowledged the first edition of *Nepal in Crisis* had mistakenly inferred

too universally from the logic of the capitalist mode of production. Nepal had not slid into environmental collapse or deepening poverty (although, clearly there has been political disturbances and poor people continue to suffer from land appropriation and lack of commercial opportunities). Rather than denying any environmental or developmental problems, the authors argued that the narrative of crisis sometimes blinded researchers to what actually was happening (Blaikie et al., 2002, p. 1267). These works therefore differed from Blaikie et al.'s 1980s writings by adopting an epistemology that avoided the *a priori* structural links of capitalism, social vulnerability and environmental crisis, but instead showed how environmental knowledge could contribute to vulnerability. Indeed, a further co-written paper demonstrated how the Theory of Himalayan Degradation had evolved to be a discursive political strategy by the state to legitimize control over resources and people (Blaikie and Muldavin, 2004, p. 520).

These writings were also relevant to Blaikie's other writings on defining social vulnerability and environmental risk. As with his environmental research in the 1980s, Blaikie largely identified social vulnerability through a Marxian political economy analysis of dominant and marginalized classes (sometimes also mapped onto spatial areas such as Nepal itself). His later work sought to find alternative, and more empowering ways of identifying development problems. Here, the book *At Risk* (Blaikie et al., 1994, reissued as Wisner et al., 2004), co-authored with Terry Cannon, Ian Davis and Ben Wisner, considered a more complex analysis of vulnerability, and adopted insights from Amartya Sen concerning the construction of adaptive capacity through more participatory approaches to development.

At Risk criticized approaches that blamed 'natural' hazards on physical processes, or insufficient engineering technology alone, and instead explored two models of explaining social vulnerability. The 'Pressure and Release' model identifies different levels of structural causes of vulnerability – such as long-term poverty, or lack of institutions – which may make specific locations or people vulnerable to physical events. The 'Access' model, however, borrows more clearly from Senian concepts of entitlements and capabilities. 'Access involves the ability of an individual, family, group, class or community to use resources which are directly required to secure a livelihood in normal, pre-disaster times, and their ability to adapt to new and threatening situations' (Wisner et al., 2004, p. 94). The difference between these two models in part reflected Blaikie's own transition from looking at large-scale transitions in social and political causes of vulnerability (often involving the state and international political economy), towards seeing vulnerability from the viewpoint of the poor, and often in terms other than environmental change itself. By doing this, Blaikie and his colleagues adopted a radically different approach to identifying environmental risk than that applied by some analysts of global environmental change, who have proposed that 'regions' – rather than

individuals or social groups – may be 'at risk' (e.g., Kasperson et al., 1995).

These new themes in Blaikie's work demonstrated a rejection of the old Marxian explanations of environmental degradation and social marginalization, and the adoption of newer, more locally determined approaches. Yet, despite these changes, Blaikie has also criticized some new themes in political ecology for not being focused enough on political objectives, or for failing to provide sufficiently grounded explanations of physical environmental change. On one hand, he praised post-structuralist analysis for overcoming many of the simplifications and *a priorism* of structuralism:

these [post-structuralist] studies... emphasize politics rather than economics, alternative accounts of reality rather than the author's own environmental and social data, and agency and resistance, rather than structural inequality (Blaikie, 1999, p. 133).

But simultaneously, he demonstrated frustration with the relativism and deconstruction associated with some post-structuralist approaches:

There are undoubtedly formidable problems when attempting to make causal connections between social and environmental processes... there are usually so many intervening variables that the project may seem like trying to find a needle in a haystack when, as post-structuralist critics might add, you cannot find the haystack... It could be pointed out that all except the most discursive deconstructionists attempt to establish exactly the same type of causal relations, even if they do not take explicit epistemological responsibility for it (Blaikie, 1999, p. 140).

Indeed, Blaikie also pointed out (somewhat stereotypically?) that post-structuralist deconstruction of narratives 'seldom attempts to fill the vacuum which results from deconstruction with its own version of environmental or social truth,' and that much deconstruction of colonial science 'owes much more to modernist and realist science than to any post-modern deconstruction' (Blaikie, 1999, pp. 142–143; see also Blaikie, 1996). Accordingly, rather than just engaging in the deconstruction of environmental narratives, some of Blaikie's work also sought to reconstruct a more epistemologically realist form of explanation that was of greater assistance to vulnerable people. For example, one co-authored study about soil degradation in Botswana incorporated both a deconstruction of multiple perspectives of environmental change by attempting to provide 'closure' (or clarification) concerning which perspective might suit available evidence (Dahlberg and Blaikie, 1999). Under this approach, the authors sought 'closure' by generating datasets based upon the different perspectives about soil degradation, and then triangulating them by seeking similarities and differences in the data collected. In this way, Blaikie used post-structuralist insights to acknowledge plural perspectives on soil degradation, and to eschew the belief that there was 'one' accurate version of biophysical problems.

But in addition, he acknowledged that using these perspectives side-by-side could help show which versions were not supported by evidence. Moreover, he could also make this research more helpful to the needs of poor people by organizing this analysis to address their own experiences and problems of soil degradation. (Of course, Blaikie is not the only one to try this: a similar approach was taken to testing different definitions of forest and forestland by Robbins, 2001; these approaches have been called ‘hybrid science’, see Forsyth, 2003, pp. 224–226).

By adopting these techniques, Blaikie demonstrated he was not simply content with post-structuralist analysis that focuses only upon deconstructing narratives (such as by showing how they reflect historical political meanings and partial social participation). Rather, he was also arguing for a more critical way to reconstruct environmental explanations by making the normative connections between social values and different knowledge claims transparent, and by prioritizing the needs of vulnerable people when building different explanations. Indeed, Blaikie foreshadowed this approach in his earlier statement on page 1 of *Political Economy of Soil Erosion* when he stated he would ‘take sides’.

And in turn, these insights show two further things. First, philosophically, Blaikie was clearly experimenting with forms of skeptical, or critical realism because he sought to achieve some level of scientific progress in a world where knowledge claims reflect current and historic power relations (Hannah, 1999). Under the discussion of critical realism by Bhaskar (1975), our understanding of ‘externally real’ items such as soil erosion, rainfall, or tree growth, is often likened to ‘peeling the layers of an onion’ because it distinguishes between ‘actual’ observations (day-to-day experiences), ‘empirical’ measurements (scientific research) and the insights these give about ‘real’ structures (underlying causes). Blaikie was effectively implementing this in his search for ‘closure’ and his triangulation of multiple information sources.

Yet in addition, Blaikie was also showing a tactical interest in influencing scientific or policy networks by acknowledging that knowledge also had to be considered legitimate. Optimistically, he noted (1999: p. 144), ‘by adopting an epistemology which avoids relativism and unreconstructed pluralism, it may be possible to address specific audiences in languages they recognize to identify real and feasible choices’.

But Blaikie’s suggestions about the problems of structuralism, and the need for reconstructed environmental explanations have also been questioned and need further discussion.

4. Questions and challenges

Both the post-structuralist trends in political ecology and Blaikie’s revisions to these have been criticized by observers who have seen either too little or too much structure or politics in explaining or addressing environmental

degradation. Two common questions are: where is the politics, or where is the ecology, in political ecology? (e.g., Walker, 2005).

Initial responses to Blaikie’s writings on political ecology in the 1980s claimed that his political analysis was too shallow. In his original review of *Political Economy of Soil Erosion*, Watts (1986, pp. 305–304) commented that ‘the scope of this book is of course much too large’, and that the ‘intellectual scaffolding’ chosen by Blaikie of marginalization, proletarianization and incorporation, were too broad and pessimistic. He commented, ‘I am also still unsure quite how soil erosion enters the rough and tumble of everyday politics’ (Watts, 1986, p. 305). Peet and Watts (1996, p. 8) later claimed that the ‘chain of explanation’ methodology adopted by Blaikie and Brookfield (1987) – which was originally presented as crude box diagrams in *Political Economy of Soil Erosion* and earlier papers (Blaikie, 1981, 1983) – was ‘an extremely diluted, diffuse, and on occasion voluntarist series of explanations’ (Peet and Watts, 1996, p. 8).

Some other themes of these early criticisms were that Blaikie’s political analysis did not engage closely enough with how structural capitalism impacted on politics, or that Blaikie’s work was too concerned with physical aspects of environmental change. Peet and Watts (1996, p. 6) commented that *Land Degradation and Society* was too ‘land’ focused, and urged more attention to the interactions between local communities and global forces in political ecology. They emphasized the link between political ecology and global capitalism by writing: ‘Forged in the crucible of Marxian or neo-Marxian development theory, ... “political ecology” was ... inspired ... by peasant and agrarian societies in the throes of complex forms of capitalist transition’ (Peet and Watts, 1996, p. 5).

Bryant and Bailey (1997, p. 6) echoed this uneasiness about the physical focus of some political ecology, citing: ‘Political ecologists tend to favor consideration of the political over the ecological ... Yet greater attention by political ecologists to ecological processes does not alter the need for a basic focus on politics as part of the attempt to understand Third World environmental problems’. They also reiterated structural political analysis by proposing that political ecology should chiefly focus on the actions of non-state actors, and particularly on the usual positionality of state and industry actors in opposition to NGOs and grassroots activists. (Of course, it is worth noting that all these authors have since moved on in various ways).

In response to these criticisms, Blaikie admitted that ‘Watts is right to identify the neglect of politics in *Soil Erosion*. The intellectual repertoire which I had at the time was drawn from structural Marxism, cultural ecology and a very grounded connection between people and the resources they used’ (Blaikie, 1997, p. 79). But these early criticisms of Blaikie’s political ecology may also be questioned. In particular, did they imply that ‘politics’ in political ecology should be about conflicts between different actors without also questioning how apparently physical artifacts are denoted? These questions, of course, have

recently been discussed largely by work of post-structuralist authors such as Latour (1993) – who have suggested that nature–society linkages should be seen as hybrids – or discourse theorists such as Hajer (1995) – who have explained how discourse-coalitions can reify beliefs about physical reality. Moreover, a further theme of political ecology today is how far environmental discourses and actors' positionality might not be predictable, as suggested by the common opposition of NGOs and transnational corporations – that positionality and actors themselves may reflect less obvious expressions of power (e.g., Agrawal, 2005). But it may be fair to say that the work of Blaikie (1985) or Blaikie and Brookfield (1987) did pioneer the analysis of environmental science and artifacts as politicized objects within political ecology, and to call this apolitical may be to suggest a divide between nature and society that many now question.

Others have also questioned how far the new political ecology is 'ecological'. Here, it is the opposite side of the coin. One commonly heard fear is that linking politics and environmental knowledge may mean a loss of scientific realism or engagement with pragmatic politics. Ecological scientists such as Vayda and Walters (1999) have complained that political ecology is now too absorbed with exploring social structures than understanding environmental change (a point partly reiterated by Walker, 2005). Other authors have also questioned how far political ecology engages with or theorizes detailed patterns of ecological change (Zimmerer, 2000; Bassett, 2001). In a different vein, moreover, some structural Marxists have worried that newer, post-structuralist political ecology might take too much attention away from the still serious impacts of capitalism. For example, Bernstein and Woodhouse (2001) suggested 'telling environmental change as it is' should mean reverting to structuralist explanations of environmental degradation, and suggested that the deconstruction of environmental narratives by Leach and Mearns (1996) effectively romanticizes local knowledge and overlooks the impacts of commodified agriculture in Africa.

These specific arguments took place in journals associated with Development or Environmental Studies. Some debates in Geography journals, however, have presented this basic conflict between structuralist and post-structuralist forms of analysis more specifically as an assessment of the benefit of actor network theory as the preferred method of some post-structuralist geographers (see Castree, 2002). Actor-network theory is an approach to understanding the distinction between 'society' and 'nature' that takes into account the history and partial social participation that lead to these boundaries being drawn. Additionally, some analysts have used actor network theory to refer to the 'symmetry' (rather than independence) of social structures and environmental truth claims. According to one discussion, proponents of this approach argue, typically, that 'analyses premised on further refining the nature of the relationship between categories presumed to be separate and pure are, at best, obfuscatory' (Bakker and Bridge, 2006, p. 6). Opponents, however, claim such statements are engaging in a dis-

abling form of relativism: '[it] has no way of distinguishing among 'things' – things of different powers, and things of different ontological properties – save only as an *effect*' (Kirsch and Mitchell, 2004, p. 689).

Such debates need clarifying regarding Blaikie's own positions. First, it is clear that, while Blaikie has overtly engaged in deconstructing environmental narratives, he has also been assertive in seeking an underlying realist contribution to environmental explanation. He wrote:

A counterweight to the deconstruction of science must also be provided. A case could be made that the bulk of what is styled as political ecology has been written by social scientists, who have paid little attention to what natural scientists have had to say about their environments, usually with embarrassing results (Blaikie, 1995, p. 11).

Second, Blaikie's approach to deconstruction has not been an unlimited relativism, which rejects the possibility of making any truth claims independently of social solidarities. Rather, he has urged attention to which social solidarities create truth claims, and identifying the social justice of listening to these different groups. The concept of 'closure' discussed above (Dahlberg and Blaikie, 1999) is not Popperian falsification, based on comparing alternative universalistic hypotheses, but rather a process of inquiry inspired more by the philosopher of science Willard Quine, which seeks to indicate the social embedding of truth claims (Morad, 2004). This approach may create localized understandings of environmental processes rather than universal scientific statements that are usually applied out of context. In Blaikie's case, this approach also may achieve more developmentally friendly environmental policies based on empowering poor people to define environmental problems and contribute knowledge about them. These approaches are, in the words of Poon (2005), 'not positively positivist'.

And third, the rejection of environmental narratives does not mean that environmental inquiry or development should ignore the inequalities arising from capitalism or similar structures. Indeed, Bassett (2001) provides examples of how institutional arrangements may reduce impacts of plantation cotton production on environment and poverty in Cote D'Ivoire. Rather, it is the implosion of politics or environment to old assumptions of structural frameworks that should be avoided. Kirsch and Mitchell (2004, p. 690) suggest that this combination of networks and structures could be called 'structural questions of networked agency'. Similarly, some of the contrasting worldviews associated with environmental narratives may still exist despite deconstruction. For example, it is still clear that media and political lobbies still create eco-optimist, and eco-pessimist positions, despite researchers demonstrating such positions are simplistic (Thompson et al., 1986).

The implication of these points is that Blaikie's approach to political ecology represents an integration of environmental knowledge and social justice that is not yet fully adopted or understood in all environmental debates.

As Castree (2002) noted, the common opposition made between actor network theory and Marxism is usually misplaced. But Blaikie is making an additional point of using a critical epistemology to generate information about vulnerability and environmental problems in order to assist important developmental problems. As Blaikie has known since *Nepal in Crisis*, many researchers or activists want to make a difference, but often do so on the basis of an inadequate, or overly generalized perception of the problem. This is not to reject social justice as a basis for undertaking research, but to question more thoroughly how we have come to see environmental change and social inequality, and to ensure that our interventions reflect this skepticism.

For these reasons, Blaikie's approach to political ecology can be seen to be more than either the deconstruction of environmental narratives (in the manner of much post-structuralist analysis), nor trying to explain environmental change more accurately by 'peeling the onion' (in the critical realist sense). Rather, it is a politicized acknowledgment of the co-production of environmental knowledge and social values in ways that, tentatively, try to reconstruct environmental explanations and interventions in the favor of vulnerable people. This reframing has arisen, in part, because many empirical challenges to environmental narratives have come from studies of marginalized people who are delegitimized under environmental narratives (such as, shifting cultivators and hill farmers), plus many political ecologists have tried to empower socially vulnerable groups by careful participatory research or by building political arenas where they can speak (Escobar, 1996). This kind of political ecology acknowledges that social values and environmental knowledge are co-produced, but also endorses a normative agenda to research that allows socially vulnerable people to participate in shaping future knowledge generation. (Still somewhat geekishly, I once tried to express this argument in a workshop paper entitled, 'Peeling the onion or sharing the knife?')

5. Conclusion: on being political in political ecology

This paper has reviewed the work of Piers Blaikie on political ecology to demonstrate his contribution to understanding the politics of environmental epistemology, and to highlight some important remaining challenges for environmental analysis. Much general debate about politics and ecology tries to identify *a priori* definitions of politics or ecology, which overlook how the two are linked. Yet, against this, too many academics argue that linking ecology and politics implies the disabling position that no political interventions or environmental explanations can be undertaken. This paper – and Blaikie – argues this is a false choice.

Indeed, it is not just Blaikie who has said as much. Other debates, chiefly in science studies, have also considered the dilemmas of critical epistemology and political action. Jasanoff (1996, pp. 393, 412), for example, wrote: 'broadly speaking, [there] are concerns about the uneasy fit between epistemological relativism and normative belief or action'.

But 'by adopting a relativizing pose with respect to particular claims of knowledge, science studies does not abandon the commitment to be explanatory and normative'.

For this reason, this paper argues that political ecologists should not ask whether Blaikie's most famous work was sufficiently political or not, but rather seek ways to apply his form of politics more successfully. As Low and Gleeson (1998) have also suggested, we need to question our assumptions about social justice if we are to achieve it more effectively. Applying Blaikie's lessons may therefore require questioning many of the dualisms that seem to define how we conduct political ecology these days.

First, there is an assumption that ecological research may fall into categories that are broadly epistemologically realist or relativist. Here, it is important to note that even strong forms of scientific realism reflect social structures, and that seeking less strong approaches to realism are based upon experiences of environmental change that are transparently and locally bound to the social groups that find them meaningful (see Dahlberg and Blaikie, 1999). At such points, there is little difference between realism and relativism. Being 'relativist' therefore does not necessarily mean suggesting no locally grounded 'truths' can be found. Yet, being 'realist' does not necessarily mean denying social influence. To date, much deconstruction of environmental narratives has attacked naïve simplifications of environmental change for political objectives. But more work can be done on reconstructing alternative environmental explanations to replace these narratives. Linked to this, there is also a need to question how far scientific method or other forms of legitimacy (such as notions of expertise) are powerful in gaining authority in environmental policy. Debates in science studies and the sociology of scientific knowledge offer important avenues to pursue these questions.

Second, more attention should be given to whether the politicizing of environmental truth claims should be conducted through the idioms of symmetry or co-production. Classically, the concept of symmetry has implied that each truth claim has its associated social structure and consequently researchers should see how different claims (and associated upholding structures) emerge. (This approach is often associated with actor-network theory). In contrast, co-production focuses instead on the mechanisms by which visions of social order give rise to associated knowledge and vice versa. Consequently, rethinking knowledge or social order may therefore allow the creative or positive reconstruction of both environmental understanding and politics, such as in favor of vulnerable people, as Blaikie has argued. This is a more positive and interventionist approach to environment and social justice than classical positions adopted from symmetry (Jasanoff, 1996, 2004).

And thirdly, political ecologists need to consider the relationship of facts and norms in both political and ecological analysis. Some early criticisms of Blaikie's work claimed he was insufficiently political because he did not look at struggles between villagers, transnational corporations and centralized states. But these criticisms overlooked

the highly normative motivation to his work, and his pioneering attempts to show the politicized measurement of environment. Moreover, political ecologists are increasingly noting how uncritical environmental science and structural politics give rise to environmental narratives and beliefs that are simplistic and frequently unhelpful to poor people. Political ecology should not adopt separate understandings of politics or ecology, or see one as a guide to the other. The challenge for political ecology lies in understanding both environmental and political change in ways that enhance social justice, but which do not impose *a priori* notions about each.

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