

Chapter Twenty-eight

BLINDED BY HISTORY: THE GEOGRAPHIC DIMENSION OF ENVIRONMENT AND SOCIETY

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Answering the question “what can geography teach environmental history?” presents an opportunity for useful exchange between two fields that share considerable disciplinary overlap. After all, environmental history and human geography are close cousins in the extended family of academia. Both fields are fundamentally concerned with the encounter between humans and the environment, both eschew the longstanding tendency within academia to ignore the environmental dimension of human affairs, and both subscribe (implicitly and explicitly) to the value of interdisciplinary research.

Our personal histories (and chorologies) reflect the intertwining of the two disciplines. One is an unorthodox geographer with a penchant for history and an off-and-on engagement with environmental historians in debates, conferences, and publications. The other is an unorthodox environmental historian trained under the guidance of a founding mother of the field, but in an amalgam program in environment and society, with considerable influence from geographers. We share an abiding affection for both disciplines and, most of all, for the subject matter they cover. With that in mind, one should consider this a friendly critique of environmental history from close quarters.¹

We believe that the two fields have much to teach each other. For example, greater consideration of historical origins would strengthen geographers' work and help to alleviate the historical flatness that pervades so much social science research. Geographers could also benefit from the meticulous research strategies and well-written narratives that distinguish so much work by historians. Nevertheless, these matters of form and depth are not our primary concern. Moreover, we have been asked to focus on the lessons environmental historians could draw from geography, not the other way round.

Finding meaningful differences between geography and environmental history is not always easy. The two fields explore many of the same topics and display many of the same preferences. For example, they share an abiding interest in the history of ideas about nature. Geographer Clarence Glacken (1967) set the standard for such intellectual histories with his survey of Western thought from classical times to the eighteenth century, and modern geographers have been deeply concerned with the intersection of nature and culture (e.g., Sauer 1925, 1975; Harvey 1997; Watts 2005). Environmental historians, too, have looked deeply at changing beliefs, attitudes, and ideologies concerning nature with the modern advance of science, capitalism, and nationalism (e.g., Nash 1967; Merchant 1980, 1989; Sears 1998; Worster 1994; Cronon 1995). Geography reverberates with such inquiries to this day, incorporating the latest in social theory and philosophy (e.g., Smith 1984; Braun and Castree 1998; Braun 2002; Kosek 2006).

Our concerns lie elsewhere, however; we wish to engage with the social science side of both disciplines – i.e., the analysis of the social use and abuse of nature – rather than the history of ideas. We see three main areas, long addressed by geographers, that offer promising ideas for the practice of environmental history: (1) the central role of urbanization in transforming the modern environment; (2) the use of political ecology to understand the social dynamics of environmental hazards; and (3) the need to consider the geographic dimensions of human activity, i.e., space, place, and scale.

We have two general points to make. The first is that environmental history is relatively young as a field and geography has been grappling with much the same subject matter for longer. This means that geographers have had more time to learn from their (often considerable) mistakes, such as environmental determinism, reductionist views of scale and locality, ahistorical analysis, cultural organicism, and inattention to politics and conflict. Environmental historians sometimes fall unwittingly into similar traps. This is not a question of disciplinary virtue or error, but of sharing some hard-won lessons.

A second point is the importance of a critical analytic stance. Historians as a rule shy away from theory and criticism, more than social scientists, in the pursuit of objectivity, specificity, depth, and narrative power. Nevertheless, those qualities alone do not suffice without the hard edge of social theory, if we are to fully understand the operation of a process such as environmental change by human hands. Here, some form of political economy is an indispensable tool, which has been employed to good effect by critical geographers in recent years. Political economy – how economies and states shape human affairs – offers a way to grapple with the underlying forces behind urbanization, resource use, and social-spatial dynamics, and the accompanying human-environment interactions.

Urban Environments

Capitalism and modernity are synonymous with urbanism, and cities now contain a majority of the world's population. Yet environmental history has shown a decidedly rural outlook, focusing on natural resources, conservation, and hinterlands (e.g., Worster 1979; McEvoy 1986; Langston 1995; Isenberg 2000). Environmental histories outside North America echo the emphasis on rural regions and peoples (Totman 1989; Whited 2000; Guha 2000). By shifting their gaze toward cities and urbanization, environmental historians can gain wider perspective on the sources of environmental change, the range of impacts of human activity on nature, and the kinds of social movements that arise to hold back the tide.

To be sure, a handful of environmental historians have studied city environments, exploring urban development, form and infrastructure, and impacts on land and water (e.g., Melosi 2000, 2001, 2005; Platt 2005; Tarr 2003). Then, of course, there's Cronon's (1991) magisterial treatment of Chicago's resource-based economy. Still, environmental historians too often ignore nature within the city and the second nature of the built environment, as noted by scholars within the field (Melosi 1993; Rosen and Tarr 1994). Geographers have been studying cities much longer, and did some of the earliest studies of urban environments (e.g., Detwyler and Marcus 1972; Platt et al. 1994).² Overall, historians would do well to draw on the work of urban geographers, who have pushed the theoretical envelope on the shaping of cities and the carving up of nature to provide for urbanization.

City-building and the environment

Understanding environmental transformation today necessarily means coming to grips with the construction of urban landscapes – one of the most profound alterations of land and ecology undertaken by humans. Urban geographers recognize that cities are “built environments” powerfully shaped and transformed by human activity, and have long turned a keen eye on the molding of the material landscape of cities (Jackson 1984; Relph 1987; Vance 1990; Whitehand 1992; Ford 1994). Moreover, geographers have been particularly attentive to the capitalist dynamics of city-making (Dear and Scott 1981; Harvey 1989; Smith 1996). These writers address the economic forces that create urban space, the way cities are built up only to be torn down, and the systematic arrangement and reshaping of urban land uses. Environmental historians have all but ignored such matters.

One of the key dimensions of city-building is the dramatic reconfiguration of land, water, and air to accommodate the hardscape of industry, commerce, transport, and residence. Urbanization has had a profound

impact on the natural substrate of cities, and has meant carving up hill and dale, covering up wetlands and creeks, and destroying wildlife habitat. This wholesale environmental transformation – normally invisible to later generations of urban dwellers – has been explored in depth by geographers such as Davis (1998), Brechin (1999), Gandy (2002), and Swyngedouw (2004). The attention paid by these scholars to the political-economic forces driving the city-building process leads them to a sharp critique of the moneymaking imperative behind land development and the extraction of rents, as well as the power of urban elites to bend nature and the state to their purposes. When environmental historians treat similar material, it has usually been in a more measured and uncritical way, and we are left wondering why cities wreck such havoc as they grow (e.g., Rome 2001; Orsi 2004; Rothman 2007; Klinge 2007).³

The environmental ramifications of urbanization affect human beings as well as the natural world. Air pollution, garbage dumps, and sewage discharges pose an intense and direct hazard to city dwellers, and their unequal impact on underprivileged communities remains a scandalous part of American (and global) life. While environmental historians document important urban topics such as sanitation, garbage disposal, and water pollution (Melosi 2000, 2001, 2005; Rome 2001), they would do well to tackle environmental justice directly. Most of the scholarship on environmental justice has been done in other disciplines, notably geography (Pulido 1996, 2000; Craddock 2000), sociology (Bullard 1990; Szasz 1994), and planning (Gottlieb 1993; Corburn 2005) – with some notable exceptions (Hurley 1995; Sellers 1997).

Urban land use

Questions of land use – where to build, what to build, and how to build – ought to be of the highest concern to environmental historians. Geographers have demonstrated that land use illustrates a great deal about social ordering and valuation of the environment (Tuan 1974; Cosgrove 1984; Olwig 2002). Yet environmental historians pay these issues scant attention, in contrast to geography (Heiman 1988; Walker and Heiman 1981; Pincetl 1999; Johnson 2006). Environmental historians would do well to analyze the history of land use debates and reform as a lens to understand the changing valuations of nature and shifting ideas about the proper relationship between humans and the natural world.

Land use planning, in particular, helps determine development patterns across huge swaths of territory and set the parameters of urban infrastructure, such as roads, sewers, and schools; consequently, it is hugely influential to environmental quality and to social justice. Environmental historians pay little heed to planning history, a topic on which geographers have

made signal contributions (Pincetl 1999; Harris 1996; Hise 1997). Urban geographers are normally well versed in the pantheon of urban designers and planners, including Frederick Law Olmsted, Patrick Geddes, and Benton Mackaye. These men did more than design urban spaces; they actively engaged questions of central interest to environmental historians: What is a "livable" city? What is a sustainable city? How do city dwellers interact with nature? No environmental historian ought to be unaware of the ideas of planning with nature that animated men like Ebenezer Howard or Ian McHarg (Hall 2002).⁴

Just as environmental historians tend to overlook the hardscape of cities, so, too, do they too often ignore the conservation of naturalized landscapes within urban areas – the country in the city – consisting of parks, open spaces, and wildlife preserves (but see Rothman 2004). Such urban green spaces complicate views of what constitutes natural areas, the meaning of environmental degradation and recovery, and the motivations behind a love of "nature," among other things (Bridge 2001; Walker 2007). Environmental historians could learn from the geographers, planners, landscape architects, and urban historians who take the study of the naturalized city seriously. The pastoral landscapes of urban parks, suburbs, and greenways are considered a basic element of urban geography (e.g., Walker 1978; Smith 1984; Ford 1994; Gandy 2002; Young 2004). These also receive close attention from a number of urban historians (e.g., Jackson 1985; Rosenzweig and Blackmar 1992; Schuyler 1986). Surprisingly, naturalized landscapes in the city have never been claimed by environmental history.

Urbanization of the countryside

Urbanization extends well beyond the city limits and the suburbs; it dramatically alters the fields, farms, and open spaces of the rural countryside. After World War II, in particular, the city powerfully transformed the American countryside. It did so not just by exploiting the hinterland's natural resources for urban development, as did nineteenth-century cities, but by bringing the patterns of urban development – the capital-intensive building projects, the sprawling residential subdivisions, and the commercial strips – to the country. Urban dwellers demanded recreation, scenic vistas, and other natural amenities; since these resources could not be extracted, urban dwellers flocked to them, giving rise to "seasonal" cities (Wright 1993; Thomas 2009).

While environmental historians have detailed the meaning and impact of recreational and tourist demands on rural areas (Rothman 1998; Coleman 2004; cf. Klein 1993), they pay less attention to the extension of the urban form into the countryside. In fact, such development closely resembles that on the edge of cities, particularly residential subdivisions, in density, scale,

and design. Moreover, the recreational Levittowns of the countryside have resulted in many of the same environmental problems that plague metropolitan areas (Rome 2001): inadequate sewage treatment, water pollution, loss of open space, degradation of wildlife habitat, and mounting fiscal costs for municipal services. For the most part, it is geographers and planners who discuss these developments in detail (Heiman 1988; Duane 1999; Sayre 2002; Walker 2007).

As with urban development, the politics shaping seasonal cities, the negotiations among urban developers, rural landowners, and local and state politicians, warrant greater attention by environmental historians. These negotiations reveal much about the political dynamics shaping widespread development and land use change. They also provide insight into the evolving social relations, property arrangements, and attitudes toward nature affecting rural land use over time (Thomas 2009). On these topics, environmental historians would do well to follow the lead of geographers and planners (Walker and Heiman 1981; Popper 1981; Pincetl 1999; McCarthy 2001; Kosek 2006).

Political Ecology

Grounded in cultural ecology and geography, political ecology is a recent field that examines multiple forms of resource use and their relationship to social, economic, and political pressures. It takes a distinct analytical approach to understanding human-environment interactions that environmental historians could learn from. Political ecologists focus on relations of class, gender, and race, the economic matrix of production and exchange, the role of the modern state and its politics, and identity formation and environmental justice (Watts 2000). Under the heading of political ecology we consider three geographic problems: nature as hazard, nature in agriculture, and nature as natural resources. In each case, political economy is an essential tool of inquiry – whether it's the market exposure that vastly increases risk of natural disasters in Central America, the gender relations that affect food production in West Africa, or state expropriation of surplus from the extraction of natural resources.

Natural hazards and social risk

Political ecology emerged as a critique of the prevailing wisdom among postwar geographers over natural hazards and environmental change.⁵ A generation of geographers argued that disasters caused by drought, flood, wind, and pests were anything but natural (Wisner 1977; Watts 1983, 1986; Blaikie 1985). Rather, the risk of devastation by such events was tied

up with social inequality, market prices, and debt, among other things (Redclift 1984; Blaikie and Brookfield 1987; Peet and Watts 1996). This scholarship was based on broad-based political economy that often conflicted with prevailing wisdom in the developed world and global institutions such as the World Bank.⁶

Political ecologists asked why local people were repeatedly put at risk of natural disasters and found that they suffered from economic exploitation, lack of financial resources, and marginalization within national politics. Rather than blame nature, overpopulation, or peasant ignorance, political ecologists placed responsibility on ruling elites, the world market, and complicit governments and international institutions like the International Monetary Fund. Political ecologists offered sharp critiques of Malthusian population control, market liberalization as the road to prosperity, and introduction of advanced technologies of control, such as dams.

While political ecologists initially focused on developing countries, their attention has extended to include developed countries, including the United States (Schroeder 2005; McCarthy 2005a). Even geographers outside the domain of political ecology showed growing sophistication about the social origins of natural disasters (e.g., Hewitt 1983, 1997; Platt 1999; Colten 2005). A few environmental historians have drawn attention to social inequality, elite indifference, and natural hazards in the United States – notably Steinberg (2000) and Kelman (2003) – but the topic warrants greater attention.⁷

Agrarian systems

Agriculture is the single largest human land use across the globe, as well as the mainstay of the majority of the world's population until very recently. In analyzing the sources of poverty, risk, and environmental degradation around the world, political ecologists necessarily moved into agrarian studies, taking up questions of peasant livelihoods, dependent development, and transitions to capitalism in the global South. This led, in turn, to a more profound analysis of rural social relations and production that includes property arrangements, provision for common resources, and governance systems (Watts 1987; Peluso 1992) and then to agrarian systems and food supply at larger scales (Freidberg 2004).

Influenced by poststructuralism and feminism, political ecologists added further layers of complexity to their studies by taking in critical views of developmental discourses (Escobar 1995) and ideas of nature applied by states and global institutions (Neumann 1998). They also turned greater attention to gender relations and conflicts over land and rights (Rocheleau et al. 1996; Schroeder 1999), colonization and racial contestation (Cockburn and Hecht 1989; Moore et al. 2003), and popular struggles against exploitation and imposed development schemes (Bobrow-Strain 2007).

In recent years, geographers have applied agrarian studies to developed countries like Britain and the United States, which likewise possess unequal rural social orders, complex property systems, indebtedness and contract farming, and dysfunctional state policies. Geographers have examined chicken farming in North Carolina (Boyd and Watts 1997), Western grazing and the public lands (McCarthy 2002), hog farming in Iowa (Page 1993), and gathering rights in New Mexico's forests (Kosek 2006).

Among environmental historians, Worster (1979) is well known for taking a hard look at American farm practices, showing clearly the effects of markets, territorial expansion, and the environmental conditions on farming, as well as the ways that state institutions have shaped both. Nonetheless, Worster falls back on "culture" as the ultimate cause for the Dust Bowl, recapitulating the organicism of the old cultural geography and eschewing the hard conclusions of critical political economy. Stoll's (2002) work on nineteenth-century US agriculture touches on the big forces of Western expansion, sectionalism, and mechanization, but without rooting them deeply in capitalist dynamics. In their excellent studies of California agribusiness, Iglar (2001) and Stoll (1998) are close in spirit to political economy, though neither goes as far as geographers covering the same terrain in theorizing the logics of class struggle (Mitchell 1996), finance (Henderson 1998), land and competition (Guthman 2004), or agrarian capitalism as a whole (Walker 2004).

Degradation and resource conflict

Another dimension of the exploitation of natural riches is how resource extraction has devastated the world's backcountry. This concern goes back to George Perkins Marsh (1864) – who had such modern avatars as geographer Sauer (1938a, 1938b) and near-geographer Mumford (1938), who in turn collaborated on a pathbreaking symposium on human sources of environmental change (Thomas 1956; cf. Simmons 1989). Geographers and environmental historians have been quite close in spirit on the subject of environmental disruption, and both rather unorthodox in terms of political orientation (whether liberal, center, or old left). Classics of the genre are Blaikie (1985), a study of the causes of soil erosion that helped launch the field of political ecology, and Worster (1979), which helped launch environmental history through an interrogation of the Dust Bowl. Similarly, one could compare the pioneering deforestation studies of geographer Williams (1989) and historians Tucker (1988) and McNeill (1992).

Environmental historians have gone on to produce some excellent studies of forests, fisheries, and rivers in North America (e.g., Langston 1985; Rajala 1998; Taylor 1999). Nevertheless, using a critical political economy, geographers have produced some of the most telling dissections of resource

economies, social orders, and human ecologies; exemplary studies are Sayre (2002), Braun (2002), Prudham (2005), and Kosek (2006). They provide a deft combination of the machinery of regional resource economics, the way class and race shape institutions and environmental perceptions, and the reasons why state agencies and actors are so deeply complicit in environmental degradation – without forgetting, to be sure, the ecological basis of the resource and the disputes over natural science implicit in all assessments of the natural order of things.

In addition, resistance, conflict, and violence resulting from competing resource uses and claims constitute explicit research topics for political ecologists. From Peluso's (1992) studies of Indonesia to Bobrow-Strain's (2007) analysis of Chiapas, political ecologists have explicitly tackled class and race conflicts, repression through violence, and popular struggles to regain control of land and resources (cf. Peet and Watts 1996; Peluso and Watts 2001; Moore et al. 2003). While environmental historians do address war, they tend to focus on its ecological consequences as opposed to its underpinnings in resource conflict (Tucker and Russell 2004). By following political ecologists' lead, environmental historians could shed more light on powerful social and political dynamics surrounding resource access, rights to land use, and environmental loss.⁸

For US environmental historians, such an approach might help to generate more understanding of the ordinary folk, following the lead of Jacoby (2001; cf. Olwig 1984).⁹ Common people have resisted development, opposed pollution, and attempted to protect the air, water, and open spaces close to home; women, especially, have organized innumerable local fights against pollution, toxic dumps, and other assaults on their living spaces (Pulido 1996; Moore et al. 2003; Bullard 2005; Walker 2007). Environmental historians need to follow geographers and sociologists in keeping their ears close to the pavement and telling more stories of popular resistance and reform, in the manner of Hurley (1995).

Space, Place, and Scale

Geographers lay special claim to the spatial dimensions of human activity, arguing that space, place, and scale are critical tools for understanding human activity and its effect on the environment. "Space" refers to the relations among things (people, species, institutions) and places. Space is not an absolute position or distance, nor is it a container for activity. It is always relative (even to the earth), especially so as it relates to social interaction, social relations, and social significance. "Place" is a socially constituted, loosely bounded space and is embedded with social meanings. Place is more than the local and parochial, and it can occur at many scales. Both space and place are part of the way societies are structured. "Scale" refers to the different levels at which

human events unfold, not just the “size” of places such as local, regional, and national. The problem of scale is threefold: things occur at every scale, things at different scales interact constantly, and things jump scales all the time (by “things” we mean events, actions, institutions, etc.). Keeping one’s analytic eye jumping from scale to scale is no mean feat.

The three-cornered problem of space, place, and scale has generated a flurry of theorization among geographers because there is no easy way to think about how the social world operates in many different places at the same time, how places interact in larger wholes, and how various systems function at multiple scales. Classic geography, in fact, took many wrong turns in its approaches to spatiality, leaving geographers of the last generation to undo the damage (e.g., Soja 1989; Massey 1994, 2005; Harvey 1997; Cresswell 2004; Sheppard and McMaster 2004; Sayre 2005). What they have made clear is that space is not a simple concept in social theory, any more than in physics. While some environmental historians have come to recognize the importance of these ideas, the field as a whole would do well to give greater consideration to this triad.

Space, place, and difference

Despite their attention to place-based histories, American environmental historians often overlook the meaningful differences between parts of the country – urban and rural, east and west, north and south. Too few recognize the degree to which region and place have shaped environmental values and politics, despite the notable example of Hays (1987). For example, New England, New York, and California played leading roles in promoting conservation in the Progressive era, as illustrated by the creation of such pioneering organizations as the Appalachian Hiking Club, the Audubon Society, and the Sierra Club, as well as conservation spaces such as the Boston metropolitan park system, the Adirondack Forest Reserve, and Yosemite and Sequoia National Parks (Walker 2007).

To the extent that environmental histories tackle local difference, it is likely to be ecologically based, even in social-cultural analyses such as Taylor’s (1999). In this respect, environmental historians are recapitulating geographers’ early focus on the natural region (e.g., Semple 1911; Sauer 1925; cf. Livingstone 1993). What today’s geographers offer is greater attention to the political-economic logic of local difference. Geographers consider how localized power politics and systems of economic production affect logics of environmental change through resource extraction, agrarian production, urbanization, land conservation, and the like. Good examples of this approach are the work of McCarthy (2002) and Sayre (2002) on Western ranching and land rights or Henderson (1998) and Walker (2004) on California agribusiness.

Geographers further understand local places as cauldrons of political action and key loci of environmental and land use regulation in a federal system such as that of the United States. Local and state governments implement place-based ideas about a range of policies affecting the environment, including tax, infrastructure, and land use policy. California, for instance, has imposed the most stringent air pollution laws and Oregon boasts a history of strong state land use controls (Pincetl 1999). In contrast, Colorado largely abandoned comprehensive land use controls and Florida sacrificed its wetland wealth to sugar barons and land developers (Hollander 2008). Environmental historians might pause to consider why this degree of divergence has occurred in environmental policy. It is too often treated as a random effect of localized politics than the outcome of profound regional differences in outlook, organization, and power politics (Thomas 2009).

Thinking in scale

A common way of approaching large-scale human-environment interactions is to consider the demands cities place on resource hinterlands – a classic theme in geography. The idea dates back to Von Thünen (1826), who showed how economic rents shaped the countryside around market centers. Twentieth-century scholars took a harder line on the way cities exploited rural areas, drawing vast natural resources out of the countryside (Innis 1933; Baran 1957; Mumford 1938, 1970).¹⁰ This theme continues in the works of recent geographers (Walker and Williams 1982; Brechin 1999; Gandy 2002; Swyngedouw 2004; cf. Kaika 2005; Heynen et al. 2006). Environmental historians of a geographical bent have done some of the most brilliant work addressing urban exploitation of hinterland resources (e.g., Cronon 1991; Robbins 1994; Elkind 1998). Yet the latter accounts could be strengthened by employing a more robust political economy (Page 1998). For example, Cronon does not move beyond a circulationist model to grasp the force of agro-industrialization across city and countryside in the nineteenth century (Page and Walker 1991; Walker 2004). Robbins takes a trenchant view of regional exploitation, but employs an internal colony model that lacks a sufficient theory of capitalist development in the West (Walker 2001). And both are insufficiently attentive to class power expressed at various scales, from the city to the world (Brechin 1999; Harvey 2003).

Looking beyond national scales to global hinterlands can also improve one's understanding of resource consumption and the way developed countries shape resource extraction, land use, and environmental quality across the world. The fingerprints of city dwellers are all over the global countryside, in resource pipelines, food systems, and tourist resorts. It is well known

that resource consumption in developed countries is a dominant force shaping the global countryside (Tucker 2000; Dorling et al. 2008). This involves high levels of personal consumption by the world's richest people, production systems that devour resources by the barrel-full, and globetrotting tourists tramping across the last beaches and forests. Geographers have been at the forefront of studies of the worldwide spread of consumer culture (Domosh 2006), global industrialization (Dicken 2007; Chari 2004), globe-straddling resource corporations (Bradbury 1984; Bridge 1999, 2008), international tourism (McAfee 1999), and global food systems (Wrigley and Lowe 1996).¹¹

As environmental history has become a global endeavor, it has often drawn on geography and political ecology. It is tricky business to disentangle the intellectual roots of global environmental history, but it is worth noting the number of geographic contributions. Geographer Michael Watts (1983) set the stage for environmental histories of Africa by both geographers (Fairhead and Leach 1996, 2003) and historians (Beinart and Coates 1995; Beinart 2003). Latin American environmental history not only traces its origins to Sauer (1966), but has been greatly advanced by the work of modern geographers such as Watts (1987) and Brannstrom (2004), as well as historians such as Melville (1994). Geographer Suzanna Hecht (Cockburn and Hecht 1989) opened up Amazonian environmental history even before Dean (1995) and Raffles (2002). Geographer Richard Grove (1995, 1997) led the way not only in Caribbean environmental history, but also in the broad project of reconsidering the origins of modern conservation in tropical colonies. The environmental history of India has both been influenced by political ecology (e.g., Gadgil and Guha 1993; Gadgil 2001) and advanced by such geographers as Rangan (2001) and near-geographers as Rajan (2006).¹²

Moving to the global scale has naturally prompted efforts to write worldwide environmental histories. The field has boomed since the pathbreaking work of historians such as Crosby (1972, 1986), Ponting (1991), Guha (2000), Hughes (2002), and McNeill (2000). Geographers have been in the mix as well, including Turner et al. (1990), Grove (1995), Redclift (2006; Benton and Redclift 1994), and Williams (2003). Nonetheless, such sweeping geo-histories, while providing a large-scale temporal and spatial perspective on environmental change, are subject to certain pitfalls of jumping across scales. One is the additive fallacy, in which assembling many local case studies substitutes for deeper analysis of the common forces (or differences) behind similar effects (e.g., Diamond 2005). Another problematic move is to jump over intermediate scales, larger than the usual national narratives of environmental history, such as the Atlantic economy, the Indian Ocean, or sub-Saharan Africa (Rangan and Kull 2009). A third failure is to fall back onto environmental determinism of a subtle kind, as in the "large continent-strong species" theory of Crosby (1986) (cf. Diamond 1997).¹³

Geographic expansion and frontiers

One of the crucial dimensions of political economy is the geographic expansion of the capitalist system around the world (Harvey 2003). While the ideology of the frontier in American history has made many historians allergic to the concept, the frontier has returned in global studies, including global environmental history. The European world system had a frontier dimension, for example, from the early trading enclaves to the expanding slavery of the New World and the spread of white settler colonies thereafter (McNeill 1983). Equally is it clear that today's capitalism is expanding into new frontiers, from China to India (Cartier 2001; Johnston et al. 2002; Chari 2004) – and even within the United States (Hollander 2008).

Grasping the nettle of the global frontier requires serious engagement with such topics as war and conquest, race and slavery, states and development, and the spatial dynamics of capital accumulation. In these respects, geography – inflected by political economy – offers some guidelines for environmental historians. We can point to three examples of how geographers are advancing the field of environmental studies in these regards. The first is Moore's (2003, 2006, 2007) sophisticated model of early modern expansion from Europe, combining economy, geography, and ecology. In Moore's model, the rise of mercantile capitalism rapidly expands the commodity frontier; the search for resources, such as silver, sugar, and timber, leads to intensive exploitation of new regions; and extraction and processing result in severe ecological degradation that forces a shift to new frontiers. A second example is Harvey's (2003) reframing of primitive accumulation, or the subsumption of nature by private property and profit-making, as an ongoing process of "accumulation by dispossession." A third example of innovative thinking is Bridge's (2001, 2008) explorations of the frontier of resource extraction in terms of global production networks entangled with various states.

Another topic we all need to engage is the critical relation of the global periphery to the center of the Euro-American system. On the one hand, the metropolitan centers maintain staggering leads in wealth, technology, and military force. Out of these centers have come so much surplus capital, innovation, and warfare that one might be forgiven for thinking that the peripheries are damned to eternal marginality, poverty, and futility. Nonetheless, the fixed view of the center will not hold. Critiques have come from several directions: that surpluses from Caribbean slavery were decisive in propelling Europe to the top (Blackburn 1997), that the age of revolution and birth of the modern state reverberated between Europe and the Americas (Anderson 1983), or that new industrial spaces can leapfrog over old centers of production (Scott 1988). Global environmental history can add to this geographical dialectic between Europe and its colonies, as with the evolution of modern conservation forestry (Grove 1997; Rajan 2006) or scientific discovery in the

age of botanical and fossil collection (Brockway 2002; Schiebinger 2004). One could make similar arguments about center and periphery in other historic centers of power in the world, such as China and India, but the European system overwhelmed others in importance from 1500 onward.

Conclusion

Our survey of environmental history should be taken in a spirit of collegiality and constructive criticism. We firmly believe that there is nothing to be gained from academic rivalry and one-upmanship between geographers and environmental historians – to the extent that one can even sort the two out in a clear-cut way. After all, the unpleasant reality that hangs over us all is our shared marginality within the academy. Until recently, the two disciplines have had a similar, subsidiary place: environmental history as a small subdiscipline of history and geography as a minor discipline within the academic order of the United States.¹⁴

Yet both geography and environmental history have made great strides over the past quarter-century. Environmental history has created a substantial niche within history, just as geography has gained new prominence. In fact, what at one point contributed to the marginalization of the fields – their attention to nature – has been a key factor in their rise to grace in recent years. The environment and the wider compass of “nature and culture” are hot topics today, when the human impact on the earth is so massive that earth scientists have relabeled the present age from the Holocene to the Anthropocene. Within this new climate, the interdisciplinarity of both fields, particularly their ability to engage the physical and natural sciences, has proved a boon.

Nonetheless, the explosion of interest in environmental questions can be a mixed blessing. While the expansion of environmental studies programs of various sorts around the world is to be welcomed, there are three dangers to the kind of enterprise human geographers and environmental historians are engaged in. The first is the enormous bias in the contemporary university and popular ideology toward environmental *sciences*, with the view that disruptions in nature are to be handled by further scientific insights and technological fixes – despite the fact that both science and technology are heavily implicated in the excesses of human exploitation of the earth. A second danger is the inevitable bias toward the immediate and the practical, as in environmental *policy studies*. Not that there’s anything wrong with good policy formulation, but it cannot just be a matter of quick assessment of environmental impacts and proposals for moderate changes in this or that state regulation; the sources of our environmental maledictions are too profound for that, and only serious history and social science can bring them to light.

The third challenge to our mutual enterprise is simply reinvention of the wheel, with bigger disciplines elbowing their way to the head of the table.

In order to stay at the forefront of environmental studies, geography and environmental history must continue to engage in dialogue, learn from each other, and offer each other support of the practical, as well as intellectual, kind. This is the kind of pragmatics rarely discussed in polite academic conversation, but is the necessary infrastructure for carrying on into the future – one that ought to be bright, considering our achievements thus far.

NOTES

- 1 Many thanks to Nathan Sayre, Michael Watts, and Jake Kosek for comments and criticisms.
- 2 A rural bias characterized geography for much of its early history, starting with European geographers in the nineteenth century (Livingstone 1993) and continuing in the United States with the work of Semple (1911), Sauer (1925, 1963), and Hartshorne (1939). Geography, however, underwent a profound change (and schism) in the postwar era (Peet 1998).
- 3 Mike Davis is, strictly speaking, of no disciplinary lineage, but most often calls upon geography as his spiritual home. Matt Klinge, it should be said, was a geography major at Berkeley before gaining his doctorate in history at the University of Washington. The frequency with which geography and environmental history claim the same scholars is further evidence of how close the two disciplines can be.
- 4 Pincetl's doctorate is in urban planning at UCLA, but her connections to geography run deep. Greg Hise had two geographers as dissertation advisors at Berkeley; he presently holds the urban history post formerly occupied by the late Hal Rothman. Peter Hall's degrees were in geography, even though he is often seen as a planner and planning historian today.
- 5 In part, political ecologists reacted to a generation of work on natural events, such as those by Gilbert White, Robert Kates, and Ian Burton, who looked at false perceptions of extreme natural events.
- 6 This group was deeply influenced by ecological anthropology, especially the work of Wolf (1982), and by the revival of Marxism in the 1970s.
- 7 And Steinberg acknowledges his debt to geographers, particularly Kenneth Hewitt.
- 8 Peluso is not, strictly speaking, a geographer, but works closely with the geographers at Berkeley from her post in the Society and Environment Program in the College of Natural Resources.
- 9 The main exception to this is attention to Native Americans (White 1980; Spence 1998).
- 10 For more neutral accounts of urban resource supply, see Blake (1956) and Wolman (1965).
- 11 The changing scale of environmental regulation also merits greater attention among environmental historians. Geographers have examined the perverse effects of the neoliberal era on environmental controls internationally (McCarthy 2005b).
- 12 Both spent time in geography at Berkeley. Thanks to Michael Watts for helping to educate us on this literature.

- 13 Crosby's earlier work (1972) was better on this score. Diamond is trained as a biologist, but has a joint appointment in geography at UCLA.
- 14 In Britain or Canada, by contrast, geography occupies a more prominent position. On some of the reasons for American geography's marginalization, see Smith (2003).

REFERENCES

- Anderson, Benedict. 1983. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.
- Baran, Paul. 1957. *The Political Economy of Growth*. New York: Monthly Review Press.
- Barton, Gregory. 2002. *Empire Forestry and the Origins of Environmentalism*. Cambridge: Cambridge University Press.
- Beinart, William. 2003. *The Rise of Conservation in South Africa: Settlers, Livestock and the Environment, 1770–1950*. New York: Oxford University Press.
- Beinart, William and Coates, Peter. 1995. *Environment and History: The Taming of Nature in the USA and South Africa*. New York: Routledge.
- Benton, Ted and Redclift, Michael. 1994. *Social Theory and the Global Environment*. London: Routledge.
- Blackburn, Robin. 1997. *The Making of New World Slavery: From the Baroque to the Modern, 1492–1800*. London: Verso.
- Blackmar, Elizabeth. 1989. *Manhattan for Rent, 1785–1850*. Ithaca: Cornell University Press.
- Blaikie, Piers. 1985. *The Political Economy of Soil Erosion in Developing Countries*. Harlow: Longman.
- Blaikie, Piers and Brookfield, Harold. 1987. *Land Degradation and Society*. London: Methuen.
- Blake, Nelson. 1956. *Water for the Cities*. Syracuse: Syracuse University Press.
- Bobrow-Strain, Aaron. 2007. *Intimate Enemies: Landowners, Power, and Violence in the Chiapas*. Durham, NC: Duke University Press.
- Boyd, William and Watts, Michael. 1997. "Agro-Industrial Just-In-Time: The Chicken Industry and Postwar American Capitalism." In Michael Watts and David Goodman, eds. *Globalizing Food: Agrarian Questions and Global Restructuring*. London: Routledge, pp. 192–225.
- Bradbury, John. 1984. "The Impact of Industrial Cycles in the Mining Sector: The Case of the Quebec-Labrador Region in Canada." *International Journal of Urban and Regional Research* 8 (3): 311–331.
- Brannstrom, Christian. 2004. *Territories, Commodities and Knowledge: Latin American Environmental History in the Nineteenth and Twentieth Centuries*. London: Institute for the Study of the Americas.
- Braun, Bruce. 2002. *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast*. Minneapolis: University of Minnesota Press.
- Braun, Bruce and Castree, Noel. 1998. *Remaking Reality: Nature at the Millennium*. New York: Routledge.
- Brechin, Gray. 1999. *Imperial San Francisco: Urban Power, Earthly Ruin*. Berkeley: University of California Press.

- Bridge, Gavin. 1999. "Harnessing the Bonanza: Economic Liberalization and Capacity Building in the Mineral Sector," *Natural Resources Forum* 23 (1): 43–56.
- Bridge, Gavin. 2001. "Everyday Ecologies: Cities, Nature, and Teaching Urban Ecology," *Journal of Geography* 100 (July/August): 154–165.
- Bridge, Gavin. 2008. "Global Production Networks and the Extractive Sector," *Journal of Economic Geography* 8 (3): 389–419.
- Brockway, Lucille. 2002. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. New York: Academic Press.
- Bullard, Robert. 1990. *Dumping in Dixie: Race, Class and Environmental Quality*. Boulder: Westview Press.
- Bullard, Robert, ed. 2005. *The Fight for Environmental Justice: Human Rights and the Politics of Pollution*. San Francisco: Sierra Club Books.
- Bunker, Stephen. 1985. *Underdeveloping the Amazon*. Urbana: University of Illinois Press.
- Bunker, Stephen and Ciccantel, Paul. 2005. *Globalization and the Race for Resources*. Baltimore: Johns Hopkins University Press.
- Cartier, Carolyn. 2001. *Globalizing South China*. Oxford: Blackwell.
- Chari, Sharad. 2004. *Fraternal Capital: Peasant-Workers, Self-Made Men and Globalization in Provincial India*. Stanford: Stanford University Press.
- Cockburn, Alexander and Hecht, Susanna. 1989. *The Fate of the Forest: Developers, Destroyers and Defenders of the Amazon*. London: Verso.
- Coleman, Annie. 2004. *Ski Style: Sport and Culture in the Rockies*. Lawrence: University Press of Kansas.
- Colten, Craig. 2005. *An Unnatural Metropolis: Wrestling New Orleans from Nature*. Baton Rouge: Louisiana State University Press.
- Corburn, Jason. 2005. *Street Science: Community Knowledge and Environmental Health Justice*. Cambridge, MA: MIT Press.
- Cosgrove, Denis. 1984. *Social Formation and Symbolic Landscape*. London: Croom Helm.
- Craddock, Susan. 2000. *City of Plagues: Disease, Poverty, and Deviance in San Francisco*. Minneapolis: University of Minnesota Press.
- Cresswell, Tim. 2004. *Place: A Short Introduction*. Oxford: Blackwell.
- Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West*. New York: W. W. Norton.
- Cronon, William, ed. 1995. *Uncommon Ground: Toward Reinventing Nature*. New York: W. W. Norton.
- Crosby, Alfred. 1972. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood Press.
- Crosby, Alfred. 1986. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press.
- Davis, Devra. 2002. *When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution*. New York: Basic Books.
- Davis, Mike. 1998. *Ecology of Fear: Los Angeles and the Imagination of Disaster*. New York: Metropolitan/Henry Holt.
- Dean, Warren. 1995. *With Broad Ax and Firebrand: The Destruction of the Brazilian Atlantic Forest*. Berkeley: University of California Press.
- Dear, Michael and Scott, Allen, eds. 1981. *Urbanization and Urban Planning in Capitalist Societies*. New York: Methuen.

- Detwyler, Thomas and Marcus, Melvin, eds. 1972. *Urbanization and the Environment: The Physical Geography of the City*. Duxbury, CA: Belmont Press.
- Diamond, Jared. 1997. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W. W. Norton.
- Diamond, Jared. 2005. *Collapse: How Societies Choose to Fail or Succeed*. New York: Viking.
- Dicken, Peter. 2007. *Global Shift: The Changing Contours of the Global Economy*. London: Guilford Press.
- Domosh, Mona. 2006. *American Commodities in an Age of Empire*. New York: Routledge.
- Dorling, Daniel, Newman, Mark, and Barford, Anna. 2008. *Atlas of the Real World: Mapping the Way We Live*. London: Thames and Hudson.
- Duane, Tim. 1999. *Shaping the Sierra: Nature, and Culture, and Conflict in the Changing West*. Berkeley: University of California Press.
- Elkind, Sarah. 1998. *Bay Cities and Water Politics: The Battle for Resources in Boston and Oakland*. Lawrence: University Press of Kansas.
- Escobar, Arturo. 1995. *Encountering Development: The Making and Unmaking of the Third World*. Princeton: Princeton University Press.
- Fairhead, James and Leach, Melissa. 1996. *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic*. New York: Cambridge University Press.
- Fairhead, James and Leach, Melissa. 2003. *Science, Society and Power: Environmental Knowledge and Policy in West Africa and the Caribbean*. New York: Cambridge University Press.
- Ford, Larry. 1994. *Cities and Buildings: Skyscrapers, Skid Rows, and Suburbs*. Baltimore: Johns Hopkins University Press.
- Freidberg, Susanne, 2004. *French Beans and Food Scares: Culture and Commerce in an Anxious Age*. New York: Oxford University Press.
- Gadgil, Madhav. 2001. *Ecological Journeys: The Science and Politics of Conservation in India*. New Delhi: Permanent Black/Ravi Dayal.
- Gadgil, Madhav and Guha, Ram. 1993. *The Fissured Land: An Ecological History of India*. Berkeley: University of California Press.
- Gandy, Matthew. 2002. *Concrete and Clay: Reworking Nature in New York City*. Cambridge, MA: MIT Press.
- Glacken, Clarence. 1967. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from the Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press.
- Gottlieb, Robert. 1993. *Forcing the Spring: The Transformation of the American Environmental Movement*. Washington, DC: Island Press.
- Grove, Richard. 1995. *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860*. Cambridge: Cambridge University Press.
- Grove, Richard. 1997. *Ecology, Climate, and Empire: Colonialism and Global Environmental History, 1400–1940*. Cambridge: White Horse Press.
- Guha, Ramachandra. 2000. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. Berkeley: University of California Press.
- Guthman, Julie. 2004. *Agrarian Dreams: The Paradox of Organic Farming in California*. Berkeley: University of California Press.

- Hall, Peter. 2002. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford: Blackwell.
- Harris, Richard. 1996. *Unplanned Suburbs: Toronto's American Tragedy, 1900 to 1950*. Baltimore: Johns Hopkins University Press.
- Hartshorne, Richard. 1939. *The Nature of Geography: A Critical Survey of Current Thought in Light of the Past*. Lancaster, PA: Association of American Geographers.
- Harvey, David. 1989. *The Urban Experience*. Baltimore: Johns Hopkins University Press.
- Harvey, David. 1997. *Justice, Nature and the Geography of Difference*. Oxford: Blackwell.
- Harvey, David. 2003. *The New Imperialism*. New York: Oxford University Press.
- Hays, Samuel. 1987. *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955–1985*. Cambridge: Cambridge University Press.
- Heiman, Michael. 1988. *The Quiet Evolution: Power, Planning and Profits in New York State*. New York: Praeger.
- Henderson, George. 1998. *California and the Fictions of Capital*. New York: Oxford University Press.
- Hewitt, Kenneth. 1983. *Interpretations of Calamity from the Point of View of Human Ecology*. Boston: Allen and Unwin.
- Hewitt, Kenneth. 1997. *Regions of Risk: A Geographical Introduction to Disasters*. London: Addison Wesley.
- Heynen, Nik, Kaika, Maria, and Swyngedouw, Erik, eds. 2006. *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*. London: Routledge.
- Hirt, Paul. 1994. *A Conspiracy of Optimism: Management of the National Forests Since World War II*. Lincoln: University of Nebraska Press.
- Hise, Greg. 1997. *Magnetic Los Angeles: Planning the Twentieth-Century Metropolis*. Baltimore: Johns Hopkins University Press.
- Hollander, Gail. 2008. *Raising Cane in the Glades*. Chicago: University of Chicago Press.
- Hornborg, Alf, McNeill, J. R., and Martinez-Allier, Joan, eds. 2007. *Rethinking Environmental History: World-System History and Global Environmental Change*. Lanham, MD: AltaMira Press.
- Hughes, J. Donald. 2002. *An Environmental History of the World: Humankind's Changing Role in the Community of Life*. London: Routledge.
- Hurley, Andrew. 1995. *Environmental Inequalities: Class, Race, and Industrial Pollution in Gary, Indiana, 1945–1980*. Chapel Hill: University of North Carolina Press.
- Igler, David. 2001. *Industrial Cowboys: Miller & Lux and the Transformation of the Far West, 1850–1920*. Berkeley: University of California Press.
- Innis, Harold. 1933. *Problems of Staple Production in Canada*. Toronto: Ryerson Press.
- Isenberg, Andrew. 2000. *Destruction of the Bison: An Environmental History, 1750–1920*. Cambridge: Cambridge University Press.
- Jackson, J. B. 1984. *Discovering the Vernacular Landscape*. New Haven: Yale University Press.
- Jackson, Kenneth. 1985. *The Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press.

- Jacoby, Karl. 2001. *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation*. Berkeley: University of California Press.
- Johnson, Kathy. 2006. "Sovereigns and Subjects: A Geo-Political History of Metropolitan Reform in the US," *Environment and Planning A* 38 (1): 149–168.
- Johnston, Ron, Taylor, Peter, and Watts, Michael, eds. 2002. *Geographies of Global Change: Remapping the World*. Oxford: Blackwell.
- Kaika, Maria. 2005. *City of Flows: Modernity, Nature and the City*. London: Routledge.
- Kelman, Ari. 2003. *A River and Its City: The Nature of Landscape in New Orleans*. Berkeley: University of California Press.
- Klein, Kerwin. 1993. "Frontier Products: Tourism, Consumerism, and the Southwestern Public Lands, 1890–1990," *Pacific Historical Review* 62 (1): 39–71.
- Klinge, Matthew. 2007. *Emerald City: An Environmental History of Seattle*. New Haven: Yale University Press.
- Kosek, Jake. 2006. *Understories: The Political Life of Forests in Northern New Mexico*. Durham, NC: Duke University Press.
- Langston, Nancy. 1995. *Forest Dreams, Forest Nightmares: The Paradox of Old Growth in the Inland West*. Seattle: University of Washington Press.
- Livingstone, David. 1993. *The Geographical Tradition*. Oxford: Blackwell.
- McAfee, Kathy. 1999. "Selling Nature to Save it? Biodiversity and the Rise of Green Developmentalism," *Environment and Planning D: Society and Space* 17 (2): 133–154.
- McCarthy, James. 2001. "States of Nature and Environmental Enclosures in the American West." In Nancy Peluso and Michael Watts, eds. *Violent Environments*. Ithaca: Cornell University Press, pp. 117–145.
- McCarthy, James. 2002. "First World Political Ecology: Lessons from the Wise Use Movement," *Environment and Planning A* 34 (7): 1281–1302.
- McCarthy, James. 2005a. "First World Political Ecology: Directions and Challenges," *Environment and Planning A* 37 (6): 953–958.
- McCarthy, James. 2005b. "Scale, Sovereignty, and Strategy in Environmental Governance," *Antipode* 37 (4): 731–753.
- McEvoy, Arthur. 1986. *The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850–1980*. Cambridge: Cambridge University Press.
- McNeill, J. R. 1992. *The Mountains of the Mediterranean World: An Environmental History*. New York: Cambridge University Press.
- McNeill, J. R. 2000. *Something New Under the Sun: An Environmental History of the 20th Century World*. New York: W. W. Norton.
- McNeill, William. 1983. *The Great Frontier: Freedom and Hierarchy in Modern Times*. Princeton: Princeton University Press.
- Marsh, George Perkins. 1864. *Man and Nature: Or, Physical Geography as Modified by Human Action*. New York: Scribner.
- Massey, Doreen. 1994. *Space, Place and Gender*. Minneapolis: University of Minnesota Press.
- Massey, Doreen. 2005. *For Space*. London: Sage.

- Melosi, Martin. 1993. "The Place of the City in Environmental History," *Environmental History Review* 17 (1): 1-23.
- Melosi, Martin. 2000. *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*. Baltimore: Johns Hopkins University Press.
- Melosi, Martin. 2001. *Effluent America: Cities, Industry, Energy, and the Environment*. Pittsburgh: University of Pittsburgh Press.
- Melosi, Martin. 2005. *Garbage in the Cities: Refuse, Reform, and the Environment*. Pittsburgh: University of Pittsburgh Press.
- Melville, Elinor. 1994. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico*. Cambridge: Cambridge University Press.
- Merchant, Carolyn. 1980. *The Death of Nature: Women, Ecology, and the Scientific Revolution*. New York: Harper and Row.
- Merchant, Carolyn. 1989. *Ecological Revolutions: Nature, Gender, and Science in New England*. Chapel Hill: University of North Carolina Press.
- Mitchell, Don. 1996. *The Lie of the Land: Migrant Workers and the California Landscape*. Minneapolis: University of Minnesota Press.
- Moore, Donald, Kosek, Jake, and Padian, Anand, eds. 2003. *Race, Nature and the Politics of Difference*. Durham, NC: Duke University Press.
- Moore, Jason. 2003. "Nature and the Transition from Feudalism to Capitalism" (Review), *Journal of the Fernand Braudel Center* 26 (2): 97-172.
- Moore, Jason. 2006. "Ecology and the Rise of Capitalism." PhD dissertation, University of California, Berkeley.
- Moore, Jason. 2007. "Silver, Ecology, and the Origins of the Modern World, 1450-1640." In Alf Hornborg, J. R. McNeill, and Joan Martinez-Alier, eds. 2007. *Rethinking Environmental History: World-System History and Global Environmental Change*. Lanham, MD: AltaMira Press, pp. 123-142.
- Mumford, Lewis. 1938. *The Culture of Cities*. New York: Harcourt Brace.
- Mumford, Lewis. 1970. *The Pentagon of Power*. New York: Harcourt Brace Jovanovich.
- Nash, Roderick. 1967. *Wilderness and the American Mind*. New Haven: Yale University Press.
- Neumann, Roderick. 1998. *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa*. Berkeley: University of California Press.
- Olwig, Kenneth. 1984. *Nature's Ideological Landscape*. London: Allen and Unwin.
- Olwig, Kenneth. 2002. *Landscape, Nature and the Body Politic: From Britain's Renaissance to America's New World*. Madison: University of Wisconsin Press.
- Orsi, Jerrod. 2004. *Hazardous Metropolis: Flooding and Urban Ecology in Los Angeles*. Berkeley: University of California Press.
- Page, Brian. 1993. "Agro-Industrialization and Rural Transformation: The Restructuring of Midwestern Meat Production." PhD dissertation, University of California, Berkeley.
- Page, Brian. 1998. "Charting the Middle Ground: History, Geography and City-Hinterland Relations in the Great West," *Ecumene* 5 (1): 81-104.
- Page, Brian and Walker, Richard. 1991. "From Settlement to Fordism: The Agro-Industrial Revolution in the American Midwest," *Economic Geography* 67 (4): 281-315.
- Peet, Richard. 1998. *Modern Geographical Thought*. Oxford: Blackwell.

- Peet, Richard and Watts, Michael, eds. 1996. *Liberation Ecologies: Environment, Development, Social Movements*. London: Routledge.
- Peluso, Nancy. 1992. *Rich Forests, Poor People: Resource Control and Resistance in Java*. Berkeley: University of California Press.
- Peluso, Nancy and Watts, Michael, eds. 2001. *Violent Environments*. Ithaca: Cornell University Press.
- Pincetl, Stephanie. 1999. *Transforming California: A Political History of Land Use and Development*. Baltimore: Johns Hopkins University Press.
- Platt, Harold. 2005. *Shock Cities: The Environmental Transformation and Reform of Manchester and Chicago*. Chicago: University of Chicago Press.
- Platt, Rutherford. 1999. *Disasters and Democracy: The Politics of Extreme Natural Events*. Washington, DC: Island Press.
- Platt, Rutherford, Rountree, Rowan, and Muick, Pamela, eds. 1994. *The Ecological City: Preserving and Restoring Ecological Biodiversity*. Amherst: University of Massachusetts Press.
- Ponting, Clive. 1991. *A Green History of the World*. New York: St. Martin's Press.
- Popper, Frank. 1981. *The Politics of Land-Use Reform*. Madison: University of Wisconsin Press.
- Prudham, Scott. 2005. *Knock on Wood: Nature as Commodity in Douglas-Fir Country*. New York: Routledge.
- Pulido, Laura. 1996. *Environmentalism and Economic Justice: Two Chicano Struggles in the Southwest*. Tucson: University of Arizona Press.
- Pulido, Laura. 2000. "Rethinking Environmental Racism: White Privilege and Urban Development in Southern California," *Annals of the Association of American Geographers* 90 (1): 12–40.
- Raffles, Hugh. 2002. *In Amazonia: A Natural History*. Princeton: Princeton University Press.
- Rajala, Richard. 1998. *Clearcutting the Pacific Rain Forest: Production, Science, and Regulation*. Vancouver: University of British Columbia Press.
- Rajan, Ravi. 2006. *Modernizing Nature: Forestry and Imperial Eco-Development, 1800–1950*. New York: Oxford University Press.
- Rangan, Haripriya. 2001. *Of Myths and Movements: Rewriting Chipko into Himalayan History*. London: Verso.
- Rangan, Haripriya and Kull, Christian. 2009. "What Makes Ecology 'Political'? Rethinking 'Scale' in Political Ecology," *Progress in Human Geography* 33 (1): 28–35.
- Redclift, Michael. 1984. *Development and the Environment: Red or Green Alternatives?* London: Methuen.
- Redclift, Michael. 2006. *Frontiers: Histories of Civil Society and Nature*. Cambridge, MA: MIT Press.
- Relph, Edward. 1987. *The Modern Urban Landscape*. London: Croom-Helm.
- Robbins, William. 1994. *Colony and Empire: The Capitalist Transformation of the American West*. Lawrence: University Press of Kansas.
- Rocheleau, Dianne, Thomas-Slayter, Barbara, and Wangari, Esther. 1996. *Feminist Political Ecology: Global Issues and Local Experiences*. New York: Routledge.

- Rome, Adam. 2001. *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism*. Cambridge: Cambridge University Press.
- Rosen, Christine and Tarr, Joel. 1994. "The Importance of an Urban Perspective in Environmental History," *Journal of Urban History* 20 (3): 299–310.
- Rosenzweig, Roy and Blackmar, Elizabeth. 1992. *The Park and the People: A History of Central Park*. Ithaca: Cornell University Press.
- Rothman, Hal. 1998. *Devil's Bargains: Tourism in the 20th Century American West*. Lawrence: University Press of Kansas.
- Rothman, Hal. 2004. *The New Urban Park: Golden Gate National Recreation Area and Civic Environmentalism*. Lawrence: University Press of Kansas.
- Rothman, Hal. 2007. *Playing the Odds: Las Vegas and the Modern West*. Albuquerque: University of New Mexico Press.
- Sauer, Carl. 1925. *The Morphology of Landscape*. Berkeley: University of California Press.
- Sauer, Carl. 1938a. "Destructive Exploitation in Modern Colonial Expansion," *Comptes Rendus du Congrès International de Géographie (Amsterdam)*, 2 (3c): 494–499.
- Sauer, Carl. 1938b. "Theme of Plant and Animal Destruction in Economic History," *Journal of Farm Economics* 20 (8): 765–775.
- Sauer, Carl. 1963. *Land and Life*. Berkeley: University of California Press.
- Sauer, Carl. 1966. *The Early Spanish Main*. Berkeley: University of California Press.
- Sauer, Carl. 1975. *Man in Nature*. Berkeley: Turtle Island Press.
- Sayre, Nathan. 2002. *Ranching, Endangered Species, and Urbanization in the Southwest: Species of Capital*. Tucson: University of Arizona Press.
- Sayre, Nathan. 2005. "Ecological and Geographical Scale: Parallels and Potential for Integration," *Progress in Human Geography* 29 (3): 276–290.
- Schiebinger, Londa. 2004. *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge, MA: Harvard University Press.
- Schmitt, Peter. 1969. *Back to Nature: The Arcadian Myth in Urban America*. New York: Oxford University Press.
- Schroeder, Ric. 1999. *Shady Practices: Agroforestry and Gender Politics in the Gambia*. Berkeley: University of California Press.
- Schroeder, Ric. 2005. "Debating the Place of Political Ecology in the First World," *Environment and Planning A* 37 (6): 1045–1048.
- Schuyler, David. 1986. *The New Urban Landscape: The Redefinition of City Form in Nineteenth Century America*. Baltimore: Johns Hopkins University Press.
- Scott, Allen. 1988. *New Industrial Spaces*. London: Pion.
- Sears, John. 1998. *Sacred Places: American Tourist Attractions in the Nineteenth Century*. Amherst: University of Massachusetts Press.
- Sellers, Richard. 1997. *Preserving Nature in the National Parks*. New Haven: Yale University Press.
- Semple, Ellen. 1911. *Influences of Geographic Environment: On the Basis of Ratzel's System of Anthro-Geo-Geography*. New York: Henry Holt.
- Sheppard, Erik and McMaster, Robert, eds. 2004. *Scale and Geographic Enquiry: Nature, Society and Method*. Oxford: Blackwell.
- Simmons, Ian. 1989. *Changing the Face of the Earth*. Oxford: Blackwell.

- Smith, Neil. 1984. *Uneven Development*. Oxford: Blackwell.
- Smith, Neil. 1996. *The New Urban Frontier: Gentrification and the Revanchist City*. London: Routledge.
- Smith, Neil. 2003. *American Empire: Roosevelt's Geographer and the Prelude to Globalization*. Berkeley: University of California Press.
- Soja, Edward. 1989. *Post-Modern Geographies*. London: Verso.
- Spence, Mark. 1998. *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks*. New York: Oxford University Press.
- Steinberg, Theodore. 2000. *Acts Of God: The Unnatural History of Natural Disaster in America*. New York: Oxford University Press.
- Stoll, Steven. 1998. *The Fruits of Natural Advantage: Making the Industrial Countryside in California*. Berkeley: University of California Press.
- Stoll, Steven. 2002. *Larding the Lean Earth: Soil and Society in Nineteenth Century America*. New York: Hill and Wang.
- Swyngedouw, Erik. 2004. *Social Power and the Urbanization of Water: Flows of Power*. Oxford: Oxford University Press.
- Szasz, Andrew. 1994. *Ecopopulism: Toxic Waste and the Movement for Environmental Justice*. Minneapolis: University of Minnesota Press.
- Tarr, Joel, ed. 2003. *Devastation and Renewal: An Environmental History of Pittsburgh and Its Region*. Pittsburgh: University of Pittsburgh Press.
- Taylor, Joseph. 1999. *Making Salmon: An Environmental History of the Northwest Fisheries Crisis*. Seattle: University of Washington Press.
- Thomas, Sarah. 2009. "The Politics of Growth: Private Rights, Public Amenities, and Land Use Debates in Seasonal Cities, 1955–1980." PhD dissertation, University of California, Berkeley.
- Thomas, William L., ed. 1956. *Man's Role in Changing the Face of the Earth*. Chicago: University of Chicago Press.
- Totman, Conrad. 1989. *The Green Archipelago: Forestry in Preindustrial Japan*. Berkeley: University of California Press.
- Tuan, Yi-Fu. 1974. *Topophilia: A Study of Environmental Perception, Attitudes and Values*. Englewood Cliffs, NJ: Prentice-Hall.
- Tucker, Richard. 1988. *Twentieth Century Global Deforestation*. Durham, NC: Duke University Press.
- Tucker, Richard. 2000. *Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World*. Lanham: Rowman and Littlefield.
- Tucker, Richard and Russell, Edmund, eds. 2004. *Natural Enemy, Natural Ally: Toward an Environmental History of Warfare*. Corvallis: Oregon State University Press.
- Turner, Billy Lee, Clark, William, Kates, Robert, Richards, John, Mathews, Jessica, and Meyer, William, eds. 1990. *The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere over the Past 300 Years*. New York: Cambridge University Press.
- Vance, James. 1990. *The Continuing City: Urbanization in Western Civilization*. Baltimore: Johns Hopkins University Press.
- Von Thünen, Johann. 1826. *Der Isolierte Staat in Beziehung auf Landwirtschaft und Nationaloekonomie*. Hamburg: Perthes.
- Walker, Richard. 1978. "The Transformation of Urban Structure in the 19th Century United States and the Beginnings of Suburbanization." In Kevin

- Cox, ed. *Urbanization and Conflict in Market Societies*. Chicago: Maaroufa, pp. 165–213.
- Walker, Richard. 2001. "California's Golden Road to Riches: Natural Resources and Regional Capitalism, 1848–1940," *Annals of the Association of American Geographers* 91 (1): 167–199.
- Walker, Richard. 2004. *The Conquest of Bread: 150 Years of California Agribusiness*. New York: New Press.
- Walker, Richard. 2007. *The Country in the City: The Greening of the San Francisco Bay Area*. Seattle: University of Washington Press.
- Walker, Richard and Heiman, Michael. 1981. "Quiet Revolution for Whom?" *Annals of the Association of American Geographers* 71 (1): 67–83.
- Walker, Richard and Williams, Matthew. 1982. "Water from Power: Water Supply and Regional Growth in the Santa Clara Valley," *Economic Geography* 58 (2): 95–119.
- Watts, David. 1987. *The West Indies: Patterns of Development, Culture, and Environmental Change since 1492*. Cambridge: Cambridge University Press.
- Watts, Michael. 1983. *Silent Violence: Food, Famine and Peasantry in Northern Nigeria*. Berkeley: University of California Press.
- Watts, Michael. 1986. "Drought, Environment and Food Security." In M. Glantz, ed. *Drought and Hunger in Africa*. Cambridge: Cambridge University Press, pp. 171–212.
- Watts, Michael. 1987. "Powers of Production – Geographers among the Peasants," *Society and Space* 5 (2): 215–231.
- Watts, Michael. 2000. "Political Ecology." In Trevor Barnes and Eric Sheppard, eds. *A Companion to Economic Geography*. Oxford: Blackwell, pp. 257–275.
- Watts, Michael. 2005. "Nature/Culture: A Natural History." In Ron Johnston and Paul Cloke, eds. *Spaces of Geographical Thought*. London: Sage, pp. 142–174.
- White, Richard. 1980. *Land Use, Environment and Social Change: The Shaping of Island County, Washington*. Seattle: University of Washington Press.
- Whited, Tamara. 2000. *Forests and Peasant Politics in Modern France*. New Haven: Yale University Press.
- Whitehand, J. W. R. 1992. *The Making of the Urban Landscape*. Oxford: Blackwell.
- Williams, Michael. 1989. *Americans and Their Forests: A Historical Geography*. New York: Cambridge University Press.
- Williams, Michael. 2003. *Deforesting the Earth: From Prehistory to Global Crisis*. Chicago: University of Chicago Press.
- Wisner, Ben. 1977. "Man-Made Famine in Eastern Kenya." In P. O'Keefe and B. Wisner, eds. *Land-Use and African Development*. London: International African Institute, pp. 197–215.
- Wolf, Eric. 1982. *Europe and the People Without History*. Berkeley: University of California Press.
- Wolman, Abel. 1965. "The Metabolism of Cities," *Scientific American* (September): 178–190.
- Worster, Donald. 1979. *Dust Bowl: The Southern Plains in the 1930s*. New York: Oxford University Press.
- Worster, Donald. 1994. *Nature's Economy: A History of Ecological Ideas*. Cambridge: Cambridge University Press.

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