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Introduction: Economies and the Transformation of Landscapes

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Introduction
Economies and the Transformation of Landscapes

CHRISTOPHER A. POOL AND LISA CLIGGETT

In the world of anthropology, the realms of economy and ecology are like two continents joined over a broad expanse—a Europe and an Asia whose inhabitants are separated by (and sometimes transcend) an arbitrary line imposed by history and culture far more than by the nature of the field's subject matters. Thus it is that students of hunter-gatherer subsistence strategies debate the application of models inspired by microeconomics while students of transnational commodity flows explore the flows' impacts on rainforest environments. Within this world of real but increasingly blurred and porous disciplinary boundaries, the concept of landscape offers a common ground, not only for the meeting of economic and ecological anthropologists, but for ethnographers, archaeologists, economists, historians, and of course, geographers. It was with the intention to offer a common ground for discussion among the disciplinarily diverse membership of the Society for Economic Anthropology that we proposed “Economies and the Transformation of Landscapes” as the theme for the 2005 annual meeting of the society, held at Dartmouth College, and this volume, which springs from it. Thirty-seven archaeologists, cultural anthropologists, geographers, economists, and historians shared case studies from their research that offered compelling and new perspectives on the ways humans, economies, and ecologies intersect to create powerful landscapes. From those presentations, twelve papers were selected, revised, and expanded to form a synthetic, though not conclusive, overview of current research on economy and landscape linkages. These papers appear in this volume.
Space, Environment, and Landscape in Anthropology

Anthropologists, including archaeologists, have a long engagement with the broadly geographical concepts of space and environment, going back at least as far as the various diffusionist and geographically determinist schools of the late nineteenth and early twentieth centuries (for detailed historical overviews see Anscueitz et al. 2001; Ashmore and Knapp 1999; Hirsch 1995; A. Smith 2003; Tilley 1994). Prior to the 1980s, however, anthropologists tended to conceptualize landscapes in ecological terms as a suite of resources distributed through space to which human populations adapted (e.g., Binford 1980; Flannery 1972; Sanders and Price 1968; Stewart 1955), or in locational and physiographic terms as factors that distorted ideal spatial distributions of economic and political central places (e.g., C. Smith 1976; see A. Smith 2003). In general, “the environment” was neatly divided between nature and culture, with the natural environment constituting the stage on which culture was acted, providing local detail to formal economic, social, and political relations (cf. Hirsch 2004: 437). When the natural environment was not treated as static, the relation between nature and culture tended to be viewed in one direction or the other—either as the effects of climate change and natural disaster on societies or the modification of the environment by society (usually the state). As the geographer Carl Sauer famously put it in 1925, “Culture is the agent, the natural area is the medium, the cultural landscape is the result” (Sauer 1963: 343). Rarely was the transformation of landscapes seen in mutualistic terms, and the capacity of stateless societies to significantly transform landscapes was often downplayed or denied (Denevan 1992; Fisher and Feinman 2005: 65).

Since the 1980s developments within and beyond the academy have dramatically changed how anthropologists view landscapes and use landscape and the related concepts of place and space as significant variables in their research (Low and Lawrence-Zúñiga 2003; Winslow 2002: 157). In the social sciences, “space” is no longer an independent entity separate from the objects and actions that exist within its measured confines. Rather, space is understood as a fundamentally relational phenomenon defined by and arising from the positions of subjects and objects with respect to one another (A. Smith 2003: 69), and it is given meaning by the sensual experiences of the actors who inhabit it and move through it (Ingold 1993; Low 2000; Richardson 1982; Tilley 1994). Specific locations invested with meanings as a consequence of human experience and practice in and through time are “places,” which, with the stretches between them, are embraced by “landscapes” (A. Smith 2003: 32). In the words of Adam Smith (2003: 32), “Landscapes assemble places to present more broadly visions of the world.”

As a consequence of these shifts in perspective, “landscape” now implies a mutually constitutive relationship between the practices of humans and the physical environment, which itself is as much a product of culture as of nature (Smith 2004: 72; de Certeau 1984: 102). As Kurt Anschuetz and his associates (2001: 160–61) emphasize, landscapes “are synthetic . . . with cultural systems structuring and organizing peoples’ interactions with their natural environments” and they “are worlds of cultural product” in which “communities transform physical spaces into meaningful places” not just through physical constructions of the “built environment” but also by means of the ways they perceive and imagine the world (see also Ashmore and Knapp 1999: 20; Jackson 1984: 156). Other significant qualities of landscapes identified by Anschuetz and others (2001: 161) are that they constitute the arenas of activities through which communities sustain and reproduce themselves, and that they are dynamic constructions.

Nevertheless, definitions of landscape that encompass all of its natural, cultural, material, perceptual, conceptual, recursive, and dynamic elements are difficult to construct (Layton and Ucko 1999: 2). Instead, individual researchers tend either to lean toward a definition that emphasizes the material existence of the landscape (e.g., Crumley’s [1994: 6] off-cited “the material representation of the relation between humans and the environment”; see Pérez in this volume) or toward one that portrays landscape as “a cultural image, a pictorial way of representing, structuring, or symbolizing surroundings” (Daniels and Cosgrove 1988: 1; see Layton and Ucko 1999: 1–2). Cosgrove (1993: 8–9) points a way toward the integration of these concepts by observing that landscape refers to “the totality of the external world as mediated through subjective human experience” (A. Smith 2003: 10). In constructing his actor-based “dwelling perspective,” Ingold clarifies that place is not just constructed or represented, but inhabited, and “the landscape, in short, is not a totality that you or anyone else can look at, it is rather the world in which we stand in taking up a point of view on our surroundings” (Ingold 1993: 171; emphasis in original). Similarly, A. Smith (2003: 10) distills from Cosgrove’s observation a definition of landscape as “land transformed by human activity or perception”: that is, “land that humans have modified, built on, traversed or simply gazed on.” What these definitions share is an understanding that, at a fundamental level, “landscape” implies the active engagement of humans. In Knapp and Ashmore’s words (1999: 20–21), “The environment manifests itself as landscape only when people create and experience space as a complex of places.”
In considering economies and the transformation of landscapes, the contributors to this volume lean toward material, social, and political perspectives, as opposed to the purely symbolic. The definitions of landscape they employ are intended less as general theoretical statements than as operationalizations of landscape geared toward the particular studies. Thus, for example, Pérez and Trawick draw on historical ecology and Crumley’s definition of landscape as material representation of human-environmental relationships, while Bolender, Steinberg, and Durrenberger acknowledge the range of meanings from “highly subjective, multifaceted, and transient experience of individuals . . . to the structured products of these individuals in spatial practice and the built environment.” In their varying use of “landscape” the contributors also highlight particular aspects and extend the concept in interesting ways. For example, in operationalizing landscape for the Andean case he analyzes, Trawick includes the productive activities that take place within the irrigated terrain belonging to a community, while Matejowsky refers to a “commercial landscape” consisting of the “linked commercial activities, institutions, and patterns that define trade in a given locale,” both ideas resonating with Hirsch’s characterization of the landscape as “cultural process” (1995: 5). Earle and Doyel remind us that landscape is not just a noun, but also a verb, and that humans have landscaped their environments in various ways throughout history. On the other hand, Hakansson’s observation that “landscape is both the result of human regional interaction and a force that shapes land use over time” resonates with Tsing’s (2001: 5) discussion of “nature’s agency” with respect to the humanly created “environments that then become stubborn or willing agents in human schemes and dreams.” In a different vein, Crothers views the development of an agricultural landscape as “fundamentally an institutional change in the way humans perceive resources, negotiate rights of access or ownership, and organize the social relations of production.” Little pushes the conception of landscape even further by characterizing the Maya street vendors of Antigua not just as observers and creators, but as critical elements of the landscape, valued by tourists for the exotic flavor they impart to the setting and reviled by Ladinos, who associate the vendors’ presence with filth and disorder.

Recent reconceptualizations of landscape open many avenues for analysis of economies, although economic anthropology has not explored them to the extent they merit (Hirsch 2004). Why is it not entirely clear, although A. Smith’s (2003: 73–75) discussion of practical “dimensions of landscape” suggests some possibilities. Building on Lefebvre (1991: 38–46) and Harvey (1989: 220–21), Smith constructs a framework for investigating landscapes that distinguishes spatial experience, spatial perception, and spatial imagination. Although Smith correctly observes that these dimensions “must ultimately be understood in relation to one another,” we think it is fair to say that his dimensions of spatial perception (concerning the sensual interaction between actors and physical spaces) and imagination (revealed in representations of, and discourse about, space) have received the lion’s share of attention in the anthropological literature that presents itself as concerned with space, place, and landscapes (e.g., Appadurai 1992, 1996; Ashmore and Knapp 1999; Gupta and Ferguson 1992; Low 1996, 2000; Tilley 1994). Smith, however, assigns most economic practices to the dimension of spatial experience, described as “the flow of bodies and things through physical space” and “the techniques and technologies” by which spaces are constructed. Thus spatial experience “attends most closely to distribution, transport, communication, . . . land use, resource exploitation,” but also to “property rules . . . and administrative, economic, or cultural divisions in physical space.”

Obviously, such practices are the subject matter of economic anthropology, and they have received a great deal of attention in archaeology, but they are usually discussed in terms of economy or ecology without explicit recourse to landscape as a theoretical concept (cf. Winslow 2002). Moreover, in the course of abstract economic analysis of transactions, commodity flows, or capital accumulation, the particulars of environment and landscape often become “figure” to the “ground” of economic relations with little attention to their mutual connections (Hirsch 2004: 437; see also Hirsch 1995). While we do not disagree with Smith that economic practices are critical to the experience of space, we would also emphasize that exchanges give meaning to the places in which they occur and that those places and exchanges contribute fundamentally to the “sensual interaction between actors and physical spaces” (A. Smith 2003: 73). The sights, smells, and sounds of the market, the wharf, or the trading floor are every bit as evocative as the plaza, the palace, or the cathedral. Moreover, as Helms (1993) convincingly shows in Craft and the Kingly Ideal, the associations of exchanged and crafted items with other places, times, and spiritual realms contribute strongly to their imagining, just as the objects acquire power from those imagined spaces. Further, the definition of rules of territory, property, and usufruct, and their representation via maps, descriptions of meets and bounds, or recounts of historical claims are all conceptualizations, which are negotiated, enacted to varying degrees, and expressed in various ways, on the ground (see, e.g., Erazo, this volume). Thus economic practice is implicated across the material, perceptual, and conceptual dimensions of landscape.

CHRISTOPHER A. POOL AND LISA CLIGGETT
Landscape, Transformation, and Economy
The theme of transformation in this volume springs from the recognition of the recursive relationship between physical and cognized landscapes and the role of economic practice in shaping them. By focusing on transformations we highlight the dynamic qualities of interaction between economic and ecological, sociopolitical, and ideological factors as they are influenced by individual and group decision making played out within and across different temporal spans and geographical scales. Here we expand on the recursive, multiscalar, and historical qualities of landscapes in relation to economies as represented in the various contributions to this volume.

The recursivity of landscapes operates in at least two senses. One involves the interaction between the mental and the material. All landscapes are in some sense imagined, in that they are conceived and debated. For all the academic discourse about imagined landscapes and for all the rhetoric about abstract political and social landscapes, there is nevertheless a fundamental materiality to the idea of landscape, which is what gives the term its metaphorical power. On the one hand, the physical particulars of experienced landscapes shape general conceptualizations of landscape; on the other hand, mental constructions of landscape expressed in custom, law, and policy, and materialized through construction and use, have undeniable effects—which may be both profound and persistent—on the physical landscape. Moreover, the recursive interaction between the material and the mental is generally mediated by culturally filtered perceptions of landscape, which respond to intentional efforts to shape those perceptions (e.g., through the marking of boundaries and the construction of buildings, monuments, and roads) as well as the incidental consequences of particular forms of land use (e.g., the effects of tilling, deforestation, or strip mining). Especially as concerns property rights, this recursivity of the mental (imagined) and the material (experienced) in shaping landscapes is implicated in most of the chapters in this volume. It is especially evident, however, in George M. Crothers’s model of changing property rights among prehistoric hunter-gatherers and the transition to agriculture in eastern North America, in Carol McClenann and Christa Walck’s history of land use in the southwestern United States, and in economist Paul A. Rivera’s analysis of how the abolition of slavery and changing property law transformed the Brazilian landscape.

The other sense in which landscapes are recursive phenomena—closely intertwined with the first sense—concerns the interaction between the physical environment and human society and culture. As Fisher and Feinman (2005: 64) underscore, “Environment and culture change in tandem, and . . . this relationship is continually renegotiated at a variety of temporal and spatial scales” as humans “modify the environment in pursuit of social, political, and economic goals.” By means of their economic focus, all of the chapters in this volume examine the recursive interaction of society with the physical environment in the transformation of landscapes. However they might be imagined, rights and access to land and resources cannot be divorced from their social contexts, as Crothers, Rivera, and McClennn and Walck show in their chapters. For the delicate environmental context of northern Iceland’s grasslands and forests, Bolender, Steinberg, and Durrenberger draw on historical sagas and archaeological settlement patterns to describe how a stratified social system and changing household demographics created a hierarchical propertyed landscape in a series of stages from the initial settlement through the later division of farmsteads. Settlement, in this case of nomadic pastoralists rather than seafaring Vikings, is also a focus of the chapter by Elliot Fratkin, who turns our attention to sedentarization as an unfortunate consequence of population growth, political conflict, and economic encroachment. Fratkin concludes that pastoralist livelihoods may be increasingly unsustainable as grazing territories are lost. Similarly, N. Thomas Håkansson’s examination of the agricultural economy in northern Tanzania emphasizes how the precolonial political economy, geared toward the accumulation of wealth through intensive agriculture, imprinted the landscape with a patchwork of irrigation furrows, fields, marketplaces, and grassland savanna, and how the inception of colonialism initiated a shift toward landscape deterioration and declining resources. Taken together, Fratkin’s and Håkansson’s chapters set in broadly similar environments provide an illustration of how social factors affect the resilience of economies and landscapes (see Redman 2005).

Several chapters in this volume describe engineered landscapes; engineered landscapes is a term used in Tim Earle and David Doyel’s chapter. Among the most spectacular are the terraced mountains of the Andes, like those in the Cotahuasi valley that Paul Trawick discusses. Framed in terms of the “drama of the commons” under the contrasting social organizations and moral economies of indigenous, colonized, and hacienda-dominated communities, Trawick’s analysis of water management systems provides an excellent example of the variable effects of social systems on intensively cultivated landscapes. As Trawick’s example illustrates, even spectacularly engineered landscapes can be successfully constructed and run through cooperation at the local level. Verónica Pérez Rodriguez’s study of ancient lama-bordo terraced irrigation systems in the Mixteca Alta of Oaxaca, Mex-
Wittfogel's managerial argument that extensive irrigation systems required management created an artificial hierarchies of property ownership, and new opportunities for elite control.

In the years leading up to the relocation by municipal fiat, transformative events and processes run the gamut of temporal scales. Walter E. Little examines changes wrought by retail "modernization" in the urban landscape of San Fernando City, the Philippines, and Juliet S. Erazo discusses the negotiation of land titling in the Ecuadorean Amazon. Elliot Fratkin's chapter on sedentarization of pastoralists in Kenya likewise examines a span of decades, while Håkansson provides a historical analysis of intensive agriculture and landscape transformation over the course of more than a century. Temporal scales of one century to several are also employed by McClennen and Walck; Rivera; Trawick; Bolender, Steinberg, and Durrenberger; Earle and Doyel; and Pérez, whereas Crothers's discussion of changing property rights among prehistoric hunter-gatherers extends the scale of analysis to the order of millennia (although the proposed transformation to a delayed return economic system and exclusive property rights itself may have occurred more rapidly). Taken as a whole, the various contributions make a compelling case for the importance of history in the analysis of landscapes, modern as well as ancient.

Just as landscapes operate over a variety of temporal scales, they are also multiscalar in spatial and structural terms. This point is driven home with particular force in the chapters that examine the effects on landscapes of interactions across local, national, and global scales. Erazo's analysis of the development of land-titling systems in a community in the Ecuadorean Amazon offers an excellent example of the negotiation of how landscapes are perceived and property rights are conceived across local and national scales, as well as among traditionalists and others locally. Negotiation of interests between household and state are also implicated in Pérez's analysis of the construction of ancient lama-bordo systems in Mexico's Mixteca Alta, and state intervention in land-use practice is a key component of MacClenan and Walck's chapter. Interaction at scales beyond the national are introduced in Håkansson's discussion of the landscape effects of colonial extraction in Tanzania and Rivera's analysis of colonial and global demands for sugar and coffee and their transformative effects on property rights and slavery in Brazil. In the contemporary setting, international tourism battlegrounds disputes between Maya vendors and Ladino municipal authorities in Little's study, while global commercialism frames Matejowsky's study of the San Fernando cityscape.

Themes and Organization of the Volume

In this collection we have brought together varied timescales and perspectives to create a synthesized understanding of economical-ecological transformations, and what such transformations reveal about human culture. At the core, examining landscape transformation reveals social, political, and economic transformation. Issues of rights, both as practiced and as perceived,
permeate all chapters in the volume, as do issues of landscape definition. As the foundational work of Steward (1955) and more recent ecological and economic anthropologists documents (e.g., Netting 1981, 1993; Wilk 1991; Guyer 1997), societies, communities, kin groups, and individuals negotiate livelihoods and social relations through access to physical and perceived landscapes. Changing access and use have recursive links to changing economies, ecologies, and social worlds, and ultimately, a focus on changing landscapes provides a window on transformations in other aspects of culture.

While each chapter stands on its own, offering detailed insight on particular case studies, the cumulative understanding we gain from this volume challenges us to consider a set of ideas that interlinks economies and ecologies. Foremost is the point that humans imprint the landscape, and those imprints, in turn, influence human action. Ultimately, these imprints reveal the dynamics of social, political, and economic relations. All chapters in the volume agree that landscapes are produced by human action, but the mechanisms of production differ in relation to economic, ecological, and social histories.

It is a daunting task to bring together a body of work that has such rich interlinkages of ideas. The organization of the volume could take shape around any number of factors—varied time and spatial scales are two obvious points that emerge from each chapter. As the previous section indicates, each chapter speaks to a variety of cross-cutting scales and themes, creating valuable resonances with each other, as well as presenting valuable case material on particular places and topics. We wanted to resist the tempting option to group chapters by the subdisciplines of archaeology, cultural anthropology, and history. One of our goals in organizing the conference and subsequently coediting this volume was to demonstrate that theories and concepts can cross the artificial boundaries of disciplines to offer synthesized views of landscape and economic change. In fact, our understanding is enhanced by integrating the varying methodologies and time scales presented through archaeology, cultural anthropology, and history.

Resisting the disciplinary organization, we chose instead to organize the volume around a political-economy framework. Using such an organizational lens highlights the social complexity of landscapes and economic system linkages. Each case illustrates an element of power, politics, and societal linkages on the landscape. Within the broad theme of the political economy of landscape transformation, we address three content areas in particular.

Part I, "Domesticated Landscapes in Historical Frames," provides four unique cases of how humans have left their imprint through "domesticating" or "engineering" landscapes over time. Earle and Doyel's chapter examines Hawaiian and Hohokam irrigation systems, revealing how rights over engineered landscapes provide the base for financing new institutional complexity over extended time frames. Trawick's chapter on the history of irrigation in a Peruvian mountain region explores the ways that the engineering of landscapes can determine sustainability of water use, and ultimately the sustainability and autonomy of those communities. Pérez's discussion of household and community-level construction of terraced landscapes in the Mixteca Alta (Oaxaca, Mexico) indicates that complex agricultural systems can exist without state-level interventions, and that local-level actors can and do effect, in institutional ways, large ecosystems. MacLennan and Walk's chapter documents the transformations in industrial uses and rights over vast expanses of the southwestern United States, ultimately resulting in an overextraction of resources.

Part II brings together a group of chapters highlighting the complexity of "Transformations, Political Strategies, and Decision Making" in landscape change. Crothers's chapter succinctly links the profound shift from hunter-gatherer livelihoods to agricultural production in the U.S. Green River valley region by suggesting instrumental changes in land tenure rights and associated ecological shifts from the Archaic to the Early Woodland period. Fratkin's chapter demonstrates how changing grazing rights and state intervention in Kenyan pastoralists' (Rendille and Ariaal) settlement practices have recursive links to degrading ecology in the region. Erazo's chapter on one community's efforts to establish formal land titling in the Ecuadorian Amazon eloquently captures the complex social maneuverings as a group of Kichwa Indians form an agricultural cooperative, and subsequently negotiate among themselves, and with the government, on what such a cooperative should "look like." Rivera's examination of nineteenth-century Brazilian coffee production persuasively documents how slavery, and its demise, relate to land grabbing as a wave of European immigration brought new tenure systems to the country. Taken together these four chapters provide a multifaceted view of the ways that choice and intentionality have recursive links to ecological and social landscapes.

Part III, "Political Economy and Institutional Interactions," presents four cases from divergent time frames that document the ways local actors, social institutions, and ecosystems produce politically shaped landscapes. The chapter by Bolander, Steinberg, and Durrenberger employs a creative and compelling combination of archaeological and ethnohistorical data to unveil northern Iceland's complex socioeconomic and natural landscape, and the emergence of inequality during the Viking era. Hákansson's thorough
study of political-economic history and landscape transformation in Tanzania prior to colonialism offers detailed evidence for a highly dynamic African landscape, and perhaps more importantly, for highly complex pre-colonial economic systems that thrived on that dynamic landscape. Little's chapter on Maya handicraft vendors takes us from Guatemalan households to the town markets where exchange occurs between local populations and global tourists—while producers and policymakers negotiate what the proper "landscape" for such exchanges should be. Matejowsky's study of a Philippine city documents transformations in the retail economy tied to these interactions produce political-ecological outcomes. This collection of chapters reveals the multifaceted relationships between landscapes, economies, and institutions, and the ways in which these interactions produce political-ecological outcomes.

Conclusion
When anthropologists comment on the value of a landscape perspective, they unfailingly point to its ability to integrate a variety of stubborn oppositions. For anthropology in general and economic anthropology in particular these oppositions include the insidious divide between culture and nature (Häkansson) as well as that between the inhabited settlement or archaeological site and the meaningfully constructed, productively utilized, and historically understudied countryside (Knapp and Ashmore 1999). Similarly, a landscape perspective can help span the gulf between the transience of individual experience and the structure of its persistent products (Bolender, Steinberg, and Durrenberger) and between the "here and there" of local and larger frames of reference (Winslow 2002: 156).

The idea of landscape therefore provides many points of departure for discussions of human society. Focusing the kaleidoscope of landscape on the interactions of economy and society brings us to a common grounding—and the goal of this volume. The twelve cases presented here offer a baseline for understanding the dialectical relationship between economy and landscape transformation. Key aspects of these relationships include the fundamental concern of rights over resources; the power dynamics inherent in the production, perception, and use of landscapes; and the multiscale nature of interactions relating to landscapes. Although the case studies presented here emerge from a variety of academic disciplines and subdisciplines, the volume as a whole, with its focus on landscape, offers a crystal through which to cast our gaze—shedding light from different angles so that the outcome of our vision is more complete than it would be from our individual disciplines. Indeed, it is through our cross-disciplinary conversations that we gain greater ability to synthesize our understanding, and to make sense of our world.

Note
1. This is a near quote from our original proposal. We are grateful to Timothy K. Earle for reminding us of these dimensions of landscape in his remarks as discussant in our session at the American Anthropological Association meetings of 2005. Almost simultaneously with the SEA conference Fisher and Feinman (2005) published an article that similarly highlighted the recursive, historical, multiscale, and dynamic qualities of landscapes.

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