

Timely Assets

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Introduction

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Oil is running out. What's more, its final depletion, once relegated to a misty future, now seems imminent. A report commissioned by the United States Department of Energy's National Energy Technology Laboratory in February 2005 states, "The world has never faced a problem like this.... Previous energy transitions (wood to coal and coal to oil) were gradual and evolutionary; oil peaking will be abrupt and revolutionary."¹ Such apocalyptic predictions, as well as denials and pragmatic mechanisms for managing the anticipated shortfall, reverberate from the pages of the *New York Times*, numerous books and articles, and environmental and oil industry conferences and publications.² Despite their differences, in all these discussions, nature, labor, and time converge, as people and states create and contest *resources*—objects and substances produced from "nature" for human enrichment and use. This volume focuses on how resources, resource-making, and resource-claiming are entangled with experiences of time. Although individual studies have long noted the temporal aspects of resources, few have brought resources and time together with the explicit goal of comparing and theorizing their relationships.

This was the aim of the fall 2005 seminar at the School for Advanced Research in Santa Fe from which this volume emerges. The anthropologists who participated in that seminar and whose work forms the basis of

this volume had encountered objects, substances, people, and ideas that were seen as “resources” by our subjects: silver in Mexico, “diversity” in the United States, and historical documents in Indonesia, to name but three examples. Yet for many of us, thinking explicitly about a range of resources raised a set of new questions: Under what conditions and with what consequences do people find something to be a resource? What kinds of temporal experiences, concepts, or narratives does thinking of things as resources entail? How do the making and imagining of resources assume or condition particular understandings of past, present, and future? How do understandings of time shape the ways resources are named, managed, or allocated?

We began with the premise that nothing is essentially or self-evidently a resource. Resource-making is a social and political process, and resources are concepts as much as objects or substances. Indeed, to call something a resource is to make certain claims about it, and those claims participate in an ideational system (not always a completely coherent system, but a system nonetheless) that has a history, perhaps multiple histories. To call something a resource is to presuppose a set of interactions between “nature” and “society” that creates goods, products, and values. Moreover, particular expressions of this ideational system, what we might call resource imaginations, often have a strongly temporal aspect: they frame the past, present, and future in certain ways; they propose or preclude certain kinds of time reckoning; they inscribe teleologies; and they are imbued with affects of time, such as nostalgia, hope, dread, and spontaneity.

Two issues have arisen to make our task more difficult and more intriguing. First, the connections between resources and time can go in either direction: we can think about how resources affect time and about how time affects resources. Rather than seek causal relationships (for instance, through identifying either given resources or time as independent or dependent variables), we hope to trace multiple paths between the two domains. Second, although many of us noted an expansion in the kinds of things that could plausibly be called resources, we do not want to conclude that everything is or can be called a resource. Our impulse was toward specifying the conditions under which people make and think about resources—including those moments when they claim new things as resources—rather than generalizing the category itself.

In most of the cases in this volume (those studied by Ferry; Childs, Nguyen, and Handler; Limbert; Lowe; and Nadasdy), certain people or objects are explicitly described by our informants as resources (or the equivalent), although some of these may not be things normally thought

of as such (Childs, Nguyen, and Handler; Lowe). The range of cases reflects our recognition that the kinds of “things” that are called resources include not only land, plants, and oil but also people, knowledge, and history itself.

However, in several of the cases we examined (Eiss; Mueggler; Strassler), people did not use an explicit language of resources. We were therefore faced with the question of whether and how the concept of resources was relevant, given that our informants were not framing the question explicitly in those terms. In these cases, it seemed either that processes taking place mirrored or paralleled processes of resource-making (Strassler) or that participants deployed alternative views of nature, society, knowledge, and property, helping us clarify what resource-making is and what it does (Eiss; Mueggler). The presence of these cases clarifies one of the central claims of the volume: our concern is not simply resources as things, but the practices of making and imagining resources. We argue that the concept of resources engages particular constellations of nature, society, and economy, with far-reaching implications for how collectivities (such as nations) conceive of their possessions and how relations between past, present, and future are understood. Often, these implications frame understandings and practices, even when participants do not use the word *resources* or its equivalent. In this introduction, we trace a few genealogies of the concept of resources.

“THE STONE UNQUARRIED”

The first definition of *resource* in the *Oxford English Dictionary (OED)* is “a means of supplying some want or deficiency; a stock or reserve upon which one can draw when necessary.” The first part of this definition emphasizes a forward movement toward some purpose or destination; the second emphasizes a backward or prior movement. As John Yeats, author of *The Natural History of the Raw Materials of Commerce* wrote:

in describing the natural resources of any country we refer to the ore in the mine, the stone unquarried, the timber unfilled, the native plants and animals—to all those latent elements of wealth only awaiting the labour of man to become of use, and therefore of value. (Yeats 1887:2)

The word *resource* is related to the French word *source*, meaning a spring of water, and like a spring of water, the concept implies dynamism. It suggests both the continuous generation of something from an originary point, as water emerges from a spring, and the potential for creating something else, as water nourishes growing plants.³ Making this potential actual, however,

creates another potential, for resources are commonly used to make or do something else (as oil is used to make things go, silver is used for coin and plate, or “diversity” in the university is used to make a just society). It is as if to define something as a resource is to suspend it between a past “source” and a future “product.”⁴

Thus it appears that the concept of resource is intimately connected to notions of generativity, which we can divide into three moments. First is the moment of conception, when the original source generates the resource. This moment often occupies the misty realms of the past or is seen as an “always already” condition from the perspective of those engaged in the recognition, classification, and exploitation of resources. Descriptions of the formation of petroleum, coal, diamond, and other mineral deposits that emphasize the serendipitous confluence of forces ages ago are good examples. Such descriptions emphasize the primordial moment of resource generation. In Erik Mueggler’s chapter, the romance of the primordial source becomes a point of encounter between two very different “archival regimes” concerned with the origins of rhododendrons.

The second generative moment is the human, cultural act of naming or appropriation that constitutes the “birth” of the resource. This act is a kind of midwifery, as the resource becomes available for use within the human, cultural world and is often intimately tied to naming practices.⁵ For instance, Paul Nadasdy’s chapter demonstrates the ways in which designating wildlife as “renewable resources” immediately creates a set of social relations and bureaucratic practices within a new temporal frame.

The third generative moment is the future orientation of resources themselves. Their quality as potential wealth generates a possible future or futures, as well as the futures of those collectivities that lay claim to them or grapple with their limits and scarcity. In Elizabeth Ferry’s chapter, silver producers in Guanajuato, Mexico, attempt to avoid a dismal, depleted future by resuscitating the glorious past, whereas mineral collectors follow their specimens to a future that seems limitless. In discussing oil-based prosperity in Oman, Mandana Limbert demonstrates that the temporality created through resource-making is not always teleological: it may appear as a prosperous interregnum between an impoverished past and a threatening or redemptive future.

To speak of the generation of possible futures is to raise the question of resource scarcity. The link between resource-making endeavors and the idea of scarcity is by no means simple, however. To begin with, although scarcity often appears to be an essential quality of things, it may be more profitably seen as an expression of a social relationship, culturally defined.

As David Harvey notes, “It is often erroneously accepted that scarcity is something inherent in nature, when its definition is inextricably social and cultural in origin” (1974:272; see also Sahlins 1972). Furthermore, in some cases people deny scarcity of those resources or postpone their anxiety by displacing resource exhaustion to a far-enough-distant future.⁶

Nevertheless, the moment when something (water, air, virgin forest) becomes conceptualized as a resource, the issue of its finitude is raised (or perhaps the converse: only those things for which scarcity is at issue are conceptualized as resources in the first place). Although resources such as mines are implicitly (or explicitly) recognized as scarce, even renewable resources such as agricultural land and forests are also understood as limited. Resources seem to have a natural life span, which threatens the life span of the collectivities dependent on them. And bonanzas and the busts that succeed them come to define particular epochs, such that a prosperous past often contrasts with a straitened present, or a prosperous present with a straitened future. The projected depletion of resources often frames people’s everyday experiences of their past, present, and future and conditions the state’s representation of national time and the temporal trajectories of development initiatives.

Faced with the fear that a resource might run out, people often try to counter with plans for renewal or replacement by another resource. People regularly uphold technology and “human ingenuity” as the resolution to scarcity, as Julian Simon does in his popular business text *The Ultimate Resource* (1981). Indeed, technocratic high-modern states, as described by James Scott (1998), specialize in the use of planning to override or bracket questions of scarcity. A tension emerges here, however, between technological innovation and human obsolescence: like the old couple whose house is razed by Faust (Berman 1982), the scarcity of resources is death to some people and some places but also feeds the relentless future of a generalized resource-based economy. Neo- and anti-Malthusian debates also reveal this tension—between resource scarcity and the presumed limitlessness of growth (Meadows et al. 1972; Simon 1981; see Harvey 1974). Invoking the language of resources, therefore, entails the question of their future exhaustion and thus their temporality.

THE MEETING PLACE OF THE NATURAL AND THE SOCIAL

The path of a resource from origin to future needs an external agent, something outside of “nature” to appropriate and exploit it. Thus the idea of “resource” implies a distinction—perhaps even confrontation—between

the human and nonhuman world. In this sense, the generative movement by which nature becomes “natural resources” is seen to be a movement from the realm of nature to the realm of culture. The object or substance in question changes from something external and even alien to the human social world into something that takes its meaning from its interaction with and utility for humans. Resource-making, indeed, might be said to refer to those transformations in which active human labor converts the passive ground of nature into usable, productive wealth. In this view, resources appear as those natural materials and objects that are available for transformation through labor. However, the fact that resources themselves participate in the organic process of generation suggests that the divide is not as strict as it appears, that the boundaries between the natural and the social are continually being crossed and, like national borders, must also continuously be policed.

In John Locke’s discussion of the origin of property, he expressed the centrality of labor to this process:

Though the earth, and all inferior creatures, be common to all men, yet every man has a property in his own person: this nobody has a right to but himself. The labor of his body and the work of his hands, we may say, are properly his. Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labor with, and joined to it something that is his own, and thereby makes it his property. (Locke 2003 [1690]:111–112)

This moment of appropriation, of “remov[al] out of the state that nature hath provided,” is also the actualization of nature in a form useful to humans—thus the moment in which it becomes possible for “nature” to be claimed as a “natural resource.” Although property, not resources, was Locke’s primary concern, ideas of the world as available for human use, and of that use as the basis of proper human society, underwrite the concept of resources.⁷

Marx refines the concept of labor as appropriation, saying, “We see, then, that labour is not the only source of material wealth, of use-values produced by labor. As William Petty puts it, labor is its father and the earth its mother” (1967[1867]:50). This captures the generative (and often gendered) quality of the movement from nature to natural resources, for natural resources, as we have argued, are values in potential form. The inseminating power of labor makes it possible for the earth to produce value in the form of resources. Put another way, the point at which labor and nature are brought together is the domain of the resource.⁸

As should be clear, not all acts of appropriation (and thus not all encounters between labor and nature) make resources; rather, the creation and imagination of resources are products of particular ways of organizing labor and nature. For instance, the fact that under capitalism the labor power of workers is sold as a commodity seems aligned with a frame of mind that objectifies the products of labor and nature as resources. As Marx stated in *The Grundrisse*, capitalism entails not only the alienation of the worker from his own labor, which he now sells as a commodity, but also “the negation of the situation in which the working individual relates to land, the soil, to the earth itself, as his own” (Marx 1993[1857]:498). Under such conditions, nature appears as the nonhuman ground on which alienated human labor is expended to make resources. Just as the Lockean view of appropriation makes thinking about resources possible, so too does the objectification of labor and nature that helps to define capitalism.⁹

Furthermore, the fact that labor’s commodification often takes a temporal mode has significant effects on resource-making. As E. P. Thompson (1967) argued, the constitution of abstract categories of time and space is necessary for industrial capitalism to function smoothly. In capitalist contexts, abstract and homogenous time often frames the production and distribution of resources as well. In these contexts, the “homogenous empty time” of the nation-state (Anderson 1991; W. Benjamin 1968) can become the temporal foundation for creating resources. Yet, as the chapters by Nadasdy, Lowe, Limbert, and Strassler point out, the multiple forms of time that coexist in projects of constituting and maintaining collectivities also affect practices of making resources.

If resources are produced by labor, they are also tightly linked to nature. Conceiving of something as a resource underscores its “naturalness,” even while bringing it into a cultural domain. Indeed, synonyms for *resources* among economists include both *natural capital* and *natural commodity*. Recently, the idea of nature as the self-evident source of value has been the object of many discussions within social theory.¹⁰ Such discussions often begin with an ambiguity in the concept of nature noticed by Raymond Williams (1976): the universe of nature may include or exclude humans, depending on the context. Indeed, as Williams noted, ambivalence over whether the natural world includes or is external to humanity is fundamental to many of the complexities in the way the concept of nature is deployed.

These discussions tend to take one of two directions. One approach dedicates itself to exploring the social qualities of apparently natural things. The basic premise, as the ecological historian William Cronon has

neatly expressed it, is that “‘nature’ is not nearly as natural as it seems. Indeed, it is a profoundly human construction” (1995:25). Anthropologists, environmental historians, and geographers have been especially effective in demonstrating the social production of nature in various contexts (Cronon 1983, 1991; Eder 1996; Harvey 1974, 1996; D. Mitchell 1996; N. Smith 1984; Spirn 1995; Worster 1993).¹¹

Bruce Braun and Noel Castree describe this “production of nature” approach as “captur[ing]...the way in which ‘first nature’ is replaced by an entirely different produced ‘natural’ landscape. The competitive and accumulative imperatives of capitalism bring all manner of natural environments and concrete labor processes upon them together in an abstract framework of market exchange which, literally, produces nature[s] anew” (Braun and Castree 1998). Resource-making and resource imaginations are central to this process.

A second approach is inspired by science studies (Callon, Law, and Rip 1986; Haraway 1991; Latour 1987; Shapin and Schaffer 1989). Rather than commit itself either to the socialness of the seemingly natural or to the naturalness of the seemingly social,¹² this approach treats the agency of non-human and human actors together and assumes that neither is reducible to the other (compare Callon 1979; Latour 1988; T. Mitchell 2002). This approach aims to transcend the (human) subject and (nonhuman) object distinction entailed within the “modern Constitution” (Latour 1993).¹³

Recently, we have seen the emergence of a field within political ecology that draws on science studies, as well as other critical work on knowledge, society, and agency. Scholars working within this arena combine the two approaches above by focusing on the political and social dimensions of nature and its uses and at the same time interrogating the epistemological bases of the nature–society relation (see, among others, Brosius 1999; Escobar 1999; Nadasdy 2003; Raffles 2002; Watts 1998).¹⁴ This volume aims to contribute to these discussions in two ways. First, by focusing on the temporal dimension of making and imagining resources, we illuminate further the politics of such practices and their epistemological underpinnings. Second, we bring together discussions of the concept of resources and temporality so as to examine time’s material, affective presence in the world.

(MODERN) NATION-STATES AND “NATURAL” RESOURCES

The OED’s second definition of the word *resource*, which came into use in English in the eighteenth century, is “the collective means possessed by

any country for its own support or defence.”¹⁵ Here, the stress falls not on a material product but on a national collectivity, defined and maintained though the existence of resources and the wealth they generate.¹⁶ It is not surprising that resources come to be associated with “support of a country” at the end of the eighteenth century, for resources, especially “natural resources,” are intimately tied to the history of the nation-state as a modern political form.¹⁷ This is certainly why we often see pictures of waterfalls, forests, mines, and indeed “native peoples” on national currencies.¹⁸ These natural resources ground the political body of the nation by demonstrating its emergence or growth from that territory and its “natural” endowments (Anderson 1991; Coronil 1997; Delaney 1995). The seemingly essential relationship between a people and a territory, with all its potential wealth, became, in principle at least, a taken-for-granted frame for ownership.

As states name and appropriate resources in order to define national communities, they often rely on “expert” techniques to insert their practices into multiple realms. In chapter 5, Celia Lowe shows how debates among Indonesian and foreign conservation biologists help produce a popular sense of biodiversity and ethnic diversity as “national resources” while also aligning Darwinian and nationalist temporalities.¹⁹ Such expertise often underscores the notion that the efficient use of resources is what enables and maintains political legitimacy.²⁰ Within national and international policy circles, for example, states are judged as “strong” or “weak” based on their perceived ability to manage natural resources. This is why resource management is so deeply embedded in ideas of sovereignty and why contemporary protests against the United States, the World Trade Organization, and the International Monetary Fund so often focus on the question of whether resources should be privatized or nationalized.²¹

Nevertheless, the connection between nation-state and resources often seems “natural.” It is often tied not only to claims for sovereignty but also to claims about economic (and social) hardship. Identifying a nation with its natural resources allows states to portray economic problems solely as problems of resources, natural rather than social in origin, drawing attention away from the social and political causes of poverty (Alonso 1994; Gupta 2004; T. Mitchell 2002; A. Sen 1983).

The processes of making and managing resources also regularly shape the ways in which “modernity” is experienced and projected. Nations often base claims to modernity on their abilities to manage their resources appropriately. In classic modernization theory, the trajectory to modernity begins with takeoff, fueled in part by the efficient exploitation of natural

resources (Rostow 1960). If these expectations are not realized, however, development and modernization can come to be “experienced not as a liberation but as a betrayal” (Ferguson 1999:249). Furthermore, the modern management of resources requires not only expertise and efficiency but also planning, an orientation to the future that, as Koselleck argues, projects a temporal frame of the “new” or “unique” (Koselleck 2002). Modernity is also often an explicit concern for actors and institutions engaged in creating resources.²² In Strassler’s chapter in this volume, for example, the ways in which history is documented and archived for future generations are understood to reaffirm Indonesia’s place as a modern nation. These futures are also anything but morally neutral; indeed, the nation-state, its temporalities, and its resource-making projects tend to be suffused with senses of morality and propriety. Thus practices of resource-making and managing often serve national ideologies of efficiency, progress, development, and morality.

However, just as there is no one “modernity” (Gaonkar 2001; Özyürek 2006; Rofel 1999), there are also multiple temporal experiences of nature and resources. Although a linear, teleological path of national modernization is often associated with the proper management of resources, other temporal understandings of nature use and nature relationships also exist and clash in the contemporary world. For instance, in chapter 8, Eiss’s discussion of the multiple resources that have underwritten *el pueblo* (the people) in Hunucmá demonstrates how successive claims to “communal resources” are best seen as moments in an ongoing narrative of dispossession and repossession. This narrative, and the notion of *el pueblo* constituted through it, continues to be salient, even as the “resources” in question have changed completely. This volume foregrounds the tensions between multiple and overlapping temporalities that suffuse the making and imagining of resources, as well as those between and within national projects and everyday life.

AFFECT, FUTURE, AND MATERIALITY

The chapters in this volume contribute to the venerable anthropology of time, with its focus on the ways in which temporal experience is embedded in culture (Bourdieu 1963; Durkheim 1994[1912]; Geertz 1973; Gell 1992; Munn 1992; Thompson 1967) and its exploration of multiple temporal modalities (Birth 1999; Bloch 1977; Evans-Pritchard 1940; Traweek 1988). At the same time, our attention to resource-making and resource imaginations also allows us to explore aspects of time that have been less extensively theorized: the affective qualities of and moral sentiments asso-

ciated with temporal experiences, the future as it is produced and imagined in the present, and the materiality of time.²³ Many of the contributors to this volume analyze how senses of time—of speed and direction, of time’s motion as slow, fast, unilinear, or cyclical—are entangled in how people perceive, relate to, and understand “resources.” These senses are often extremely subtle, however, and are made apparent not in direct statements but in the ways in which people convey feelings and sentiments of fate, surprise, hope, optimism, pessimism, pride of origin, nostalgia, or the aesthetic pleasure taken in the rationality of homogenous empty time.²⁴ Thus we often focus on subtle temporal assumptions, senses, and feelings that saturate understandings about resources and the ways that such affective qualities may be tied to particular historical conditions.

We found that senses of time associated with the appropriation of nature often take the form of moral and/or aesthetic norms. For instance, in Locke’s chapter “On Property,” discussed above, the proper mode of interaction with the natural world is its appropriation for human use.²⁵ In some contexts, this approach is framed in religious terms; as Locke says, “God, who hath given the world to men in common, hath also given them reason to make use of it to the best advantage of life and convenience” (Locke 2003[1690]:18). The double meaning of the word *waste* as unusable and polluting dross and as those parts of nature that are not made use of underscores this normative aspect of the concept of resources.²⁶

For Locke, it is the moral dimension that comes out most strongly, but ideas of proper use also have their aesthetic expression. Drawing on this Lockean tradition, two characters in Jane Austen’s novel *Sense and Sensibility*, Marianne Dashwood and Edward Ferrars, dispute alternative notions of beauty with respect to landscape. Marianne champions a picturesque notion of the landscape arranged for visual contemplation, whereas Edward praises the woods “full of fine timber” and “rich meadows” and says, “It exactly answers my idea of a fine country, because it unites beauty with utility” (Austen 1992[1811]:71–72). Edward’s perspective on the landscape as beautiful and useful (or perhaps beautiful *because* useful) aptly demonstrates the notion of nature as the repository of resources *in potentia*, as well as the moral injunction for humans to exploit those resources (compare Handler and Segal 1990:20–22).²⁷ The scripts laid out by Locke and Austen have a decided future orientation, for they locate morality and beauty in the realization of nature’s potential, which can be seen even before the land is harvested and the timber is felled. “Waste” refers to those parts of nature where the proper issue in the form of usable human products has been abortively cut off and therefore the proper

future has been foreclosed. Thus these moral and aesthetic prescriptions are themselves temporal affects.

In addition to these rather positive, future-oriented perspectives on resources, there are, of course, explicit critiques of the ways in which nature has become constituted as resource, often founded on nostalgia. There is certainly a long history of this nostalgia for untouched nature (Adler 2006; Glacken 1967; Merchant 1980). Indeed, as Raymond Williams (1973) describes in *The Country and the City*, as soon as one imagines that he or she has found the origins of the emergence of this form of nostalgia for the countryside as exemplary nature, one need only look at the literature of a previous generation to find that such images of the country, and the city, persist.

Martin Heidegger's essay "The Question Concerning Technology" provides a good example of this nostalgic mode, this time in a modernist idiom. Heidegger (1977:17) laments how modern technology transforms nature into what he calls a "standing-reserve." Nature is no longer, in Heidegger's terms, brought forth (or revealed) through *techne* as *poiesis*. It is revealed as "a challenging." He writes: "The revealing that rules in modern technology is a challenging, which puts to nature the unreasonable demand that it supply energy that can be stored as such.... The earth now reveals itself as a coal mining district, the soil as a mineral deposit" (14–15). Such critiques of the exploitation of nature often rely on a romantic longing for the past and a sense of the present as a point of decline. Nearly all the chapters in this volume explore the moral implications of resource-making projects and their connection to the affective dimensions of temporal experience, particularly the time of the nation-state (chapters 5 and 9), the university (chapter 7), and the pueblo and other collective entities (chapter 8).

Another aspect of the temporality of resource-making and resource-thinking is the production of "other times," both past and future, in the present. The past, both as an object of study and an object of political fixation, has been the focus of much anthropological attention (among many others, Bloch 1977; Hill 1988; Peel 1984; Sahlins 1985; Trouillot 1995),²⁸ and much of the work in this volume builds on these insights. For instance, many resource-making acts entail a sense of social and political origins as emerging from the land and natural endowments on which and through which people live. Origin myths that incorporate the earth and its resources may be inextricably tied, in complicated ways, to how societies and people frame and enact their modes of belonging. Such claims to origins are always objects of contention, in the form of a monarch with a vexed dynastic history (as in developmentalist Oman) or doubts about evidentiary

truth (as in Indonesia) or racial diversity (as in a university in the southern United States). Nevertheless, tensions over the past are imbricated in confrontations and understandings of “resources.”

Anthropological attention to the past has, in recent years, been complemented by a growing interest in futures. Daniel Rosenberg and Susan Harding remark in the introduction to their recent edited volume *Histories of the Future*, “We live in a world saturated by future-consciousness as rich and full as our consciousness of the past” (Rosenberg and Harding 2005:9). Similar to and in conversation with recent interest in the future (see, for example, Crapanzano 2003; Douglas and Wildavsky 1982; Guyer 2007; Koselleck 2002; Lupton 1999; Mason 2007; Maurer 2002; Miyazaki 2003b, 2006), several contributors to our volume (particularly Childs, Nguyen, and Handler; Ferry; Limbert; and Strassler) explore “the presence of the future in the present” and its implications.²⁹ At the same time, because the future “has not yet happened,” its materiality has been relatively ignored in scholarly discussions. We hope to take Rosenberg and Harding’s call seriously by attending to not only the conceptual richness of the future but also its material presence in the world. Accordingly, many of the chapters explore concepts and sensibilities of risk, hope, dread, fate, and life span as they are grounded in resource-making projects.

Indeed, we explore how resources make time material. The concept of resources, we suggest, tends to objectify and make tangible those “things” understood as such, even incorporeal ones such as a memory of dispossession, as in Paul Eiss’s chapter, or biological diversity, as in Celia Lowe’s. In paying attention to the experience of time as mediated through and constituted by resources, we hope to emphasize the material aspects of past and future consciousnesses and sensibilities. Several chapters in the book are explicitly concerned with the materiality of the resources they discuss. Even when the resource is removed from the view of those who use and rely on it (such as oil in the Omani state, in Mandana Limbert’s chapter), that absence has its own materiality in the golden doors of banks and the smooth asphalt of new roads. Our explorations of materiality aim to ground the study of time and the future in the lived world. An attention to the materiality of resources and its links to time also allows us to unpack the perceived distinction between human subjective action and the passive nature from which resources are produced. Recent literature that examines the agency of objects to overcome or at least call into question the subject/object divide informs our efforts in this respect (Latour 2005; Law and Hassard 1999; see also Miller 2005 for an informative discussion of this issue).

The chapters in this volume thus allow for new purchase on the mutual entanglements of resources and time as they work together to constitute everyday social being.

SUMMARY OF CHAPTERS

The sequence of chapters in this volume traces a movement from objects most commonly understood as “resources,” such as oil, minerals, and lumber, to national “biodiversity,” which includes fish species, humans, plants, and forms of knowledge about plants, to shifting understandings of social collectivities and historical documents. Simultaneously, this movement considers the various ways in which sources and pasts, as well as hopes, fears, and expectations for the future, are experienced, understood, and contested on the ground of resource-making and management.

In chapter 2, Mandana Limbert explores the place of oil in Oman’s national teleology, for both the origins of the modern state and its future. She argues that although oil enabled the massive transformations in infrastructure that marked the emergence of the modern state, oil—and the conflicts that its discovery and export imply—disappears from national discourses on the nation’s origins. At the same time, she argues that Oman, unlike most developmentalist states, does not project a hopeful future. Rather, the future, which is expected to be oil-less, appears to be bleak, potentially redemptive, or unknown. This is not, in other words, a story of a progressive modernization that the state projects into the future and about which people become disillusioned. Instead, this “natural resource” becomes a source for a history structured around disappearances, miracles, and surprises.

Elizabeth Emma Ferry’s chapter begins by asking why one substance mined in Guanajuato, Mexico—silver—is generally considered to be a non-renewable natural resource but another—mineral specimens, often quite similar in a mineralogical sense—is rarely talked about as such. The chapter examines the different temporal experiences and frames associated with each substance as a way of looking at how the concept of resources emerges within a particular political and social context (with certain consequences for the experience and structuring of time) and how the act of resource-making (and -unmaking) also produces certain temporal effects. It explores a counterpoint between two “bodies”—the organic, corporeal, and mortal body of the mine and the corporate, self-renewing, and seemingly immortal body of the collection—which provide alternative temporal frames for the substances of silver ore and mineral specimens. These temporal frames both constitute and are constituted through the classification

of silver as a resource and of minerals as objects that do not engage the same obligations—to provide the “raw material” and “energy” for a so-called modern collectivity.

In chapter 4, Paul Nadasdy focuses on ideas and debates about nature’s “renewability” in the Yukon. Although everyone in the Yukon agrees that fish and wildlife populations are renewable, there is a fundamental disagreement over the concept of renewability itself and the spatiotemporal order it implies. Wildlife biologists view animal populations and human–animal relations as embedded in cyclical time, characterized by the periodic recurrence of similar events of the same type. First Nation people, by contrast, are more likely to view them as embedded in circular time, a temporal framework within which the same event recurs over and over again. This difference has significant implications for how each group conceives of the animal as resource, the proper role of human agency vis-à-vis animals, and what constitutes appropriate management. Although First Nation people can and do assert some control over space and time within the bureaucratic context of wildlife management in the territory, that very context takes for granted the cyclical topology of bureaucratic space-time and is therefore incompatible with their view of proper human–animal relations. To some extent, then, First Nation people’s participation in the bureaucratic co-management process (and acquiescence to the spatiotemporal assumptions underlying it) makes it increasingly difficult for them to challenge dominant Euro-Canadian views of wildlife management and human–animal relations.

Whereas chapters 2–4 focus on substances commonly thought of as resources (although the limits of resource-making are also explored), the following chapters explore substances not typically described as resources, such as knowledge, human and animal diversity, and documents, and confront resource-making practices and imaginations.³⁰ Once we recognize how participants claim these as resources or how the concept of resources sharpens our understanding of the case, temporal processes strikingly similar to those discussed in chapters 2–4 become immediately evident.

In her chapter, Celia Lowe traces connections and tensions between claims about bio- and human diversity as they become defined as national resources and as they are embedded in Darwinian and nationalist temporalities. Debates and tensions between Indonesian and foreign scientists about the discovery of biological species overlap with representations of human diversity, both serving as sources of national pride and origins. Similarly, Lowe draws parallels between the “event” of speciation and the “event” of nationalist awakening. Such a temporality, Lowe argues, is not

structured by the fulfillment of a messianic plan but enables an “open and contingent” future. This temporality, however, is not one of official nationalism, with its planned teleology, but of a popular nationalism. Thus evolutionary biology seems not to reinforce official nationalist trajectories, but popular ones.

In chapter 6, Erik Mueggler compares two regimes of gathering and making knowledge focused on the origin and growth of rhododendron plants in Yunnan. The first, carried out by British botanical explorers employed in collecting plant specimens for the British Museum and for various botanical companies, involved mapping, surveying, and cataloging the earth and its products. The second, carried out by Naxi ritual practitioners and evidenced in ritual writings and drawings in the dongba script, took the earth as something to be palpated to its depths, pored over in search of hidden origins. The chapter complicates an understanding of imperial practices as imposing (or failing to impose) a modern sensibility about the earth and its proper relationship with humans by suggesting how the British explorers and their Naxi guides came to be engaged in a mutual search for the origin of the rhododendron in “the vast mountain of Shílo.” Although these participants most certainly misrecognized each other’s aims and motives at almost every turn, they ended up making an interleaving set of relations with the earth that cannot be reduced either to acts of resource-making or to resistance to those acts. Nor can they be easily reduced only to competing, conflicting, or consensual relations among humans, for the nonhuman actors (plants, mountains, the earth itself) in the story also exert their influence. Although a modernist frame of mind might seem to deny this possibility, a closer look shows multiple contexts in which the human and nonhuman participate in establishing overlapping and hybrid engagements. The modernist settlement thus gives a context for alternative engagements with the earth that both contrast and intersect with a concept of resources.

In chapter 7, Courtney Childs, Huong Nguyen, and Richard Handler—the former two recent graduates (2005) and the latter an anthropology professor and administrator at the University of Virginia (UVA)—connect the politics of “diversity” as a covering term for race, race relations, and racial discrimination to the temporality of the American university, with its model of progress through enlightenment principles of reason and learning. They draw on the work of anthropologist Bonnie Urciuoli on the corporatization of the university and the role of “diversity” within that process. The spatial and temporal dispositions of race are articulated through a language of “diversity as a resource” that helps to place race in a progressive

temporal framework that alternately recognizes the links between UVA and slavery and racism in the South and works to erase that history. The concept of resources thus allows for certain ways of framing the university's history, future, and relation to the future lives of the students. Such a framing appears to address the eradication of racism and segregation and at the same time allow for their continuing reproduction.

Paul Eiss's chapter explores the place of resources in the construction of *el pueblo* in Hunucmá, Yucatán, Mexico. More than simply "the people," *el pueblo* defies easy definition as it transcends (and unites) place-based, communal, and political identity. Eiss argues that resources are central to the construction of *el pueblo* in all its senses via a rhetoric of possession. Paradigms of possession, dispossession, and repossession have long been and continue to be critical to *el pueblo* as a framework of collective belonging, loss, and possible future redemption. A wide variety of resources, in different historical moments, have been substrata for the definition of *el pueblo*. In recent decades, after the decline of commercial and subsistence agriculture that had made woodlands the most valued communal resource, history itself—whether in the form of historic buildings, the experience and narration of labor struggles, language, tradition, or tales of a virgin's miraculous deeds—has come to be the preeminent resource. Within this context, residents contemplate the manifold possibilities of *el pueblo*'s material, spiritual, and political repossession and of their own re-possession by *el pueblo*.

In her chapter, Karen Strassler examines the debates about history that took place in Indonesia in the aftermath of President Suharto's resignation in 1998. Focusing on public debates about history rather than on professional historical practice, Strassler argues that documents were conceived as resources to be conserved for the benefit of future generations and mined for the production of new, more "modern" histories based on "authentic" evidence. From the fetishization of Supersemar—the missing founding document of the Suharto regime—to the search for authentic documents that might prove Suharto's manipulations of history, documents were imagined to anchor historical interpretation to authentic, originary sources. At the same time, the production of "public archives" through popular practices of documentation and the "art" of newspaper clipping would generate a more participatory, pluralistic history. As resources of the post-Suharto historical imagination, documents seemed to promise a means to secure the temporal, progressive continuity of the nation by establishing more credible narratives about the past and a more democratic future history.

Resources engage questions of generativity, progress, modernity, risk,

hope, and decline; they are saturated with time. Our assumptions about and management of time, meanwhile, inflect how we perceive and govern resources. On the one hand, senses of temporality are often embodied and materialized in and through resources. On the other hand, resources are experienced through assumptions about temporality. Studying these interconnections shows us the ways in which temporal affects, teleologies, and experiences of the past, the future, and “modernity” imbue resource-making and resource imaginations, as well as the ways in which these temporal qualities are immanent in the material world. At a moment when the complacency of unfettered resource-making projects itself is becoming the object of nostalgia and fear of a future defined by the lack of resources grows more immediate every day, understanding the ways in which resources and time bleed into each other becomes urgent indeed.

Notes

1. Quoted in Maass 2005.
2. See, for example, ASPO USA 2007; Goodstein 2004; Lovins et al. 2005; Maass 2005; Roberts 2004.
3. The word *resource* derives from the Latin *resurgere* (to rise again).
4. At the same time, of course, resources are often valued as forms of wealth in and for themselves. For instance, it is true that oil derives its value from the fact that it makes other things go, but it has come to have its own value (of which one expression is price per barrel) that is, or at least appears to be, independent of its ultimate uses. The futures markets that develop around the expected prices for particular commodities exemplify this process (Miyazaki 2003b).
5. Describing Kalimantan, Indonesia, in the 1990s, where loggers, miners, and others spearheaded a new “resource frontier” in the rain forest, Anna Tsing tells how “the wild loggers had introduced the new practice in the area of writing one’s name on trees—to claim the tree to hold it or sell it to a logger with a chain saw before somebody else did” (Tsing 2005:61).
6. The current debates over the future of the oil economy are a good example. Many seek to downplay or negate the present or future depletion of petroleum resources.
7. This aspect of our genealogy raises the question of how resources are different from property. It could be argued that in the case of resources, there is always an implied movement beyond appropriation. Resources come from somewhere, but they are also *for* something, thus engaging a sense of (spatio)temporal movement. Property,

in contrast, seems to halt at the moment of appropriation. Furthermore, the argumentative weight of property lies more in its relation to the production of persons and society than in its ability to provide engine or energy for future productive processes (Hann 1998; Maine 1986[1864]; McPherson 1962; Pocock 1985; Strathern 1999). These ideas are also engaged in resource-making projects but may be less clearly emphasized.

8. One issue that arises here is whether Marx intended to describe the production of wealth through the mixing of labor and nature as a particular feature of capitalism (and the resource imaginations and resource-making that go along with it) or whether he saw this interaction of labor and nature as operating transhistorically (Postone 1993). This issue is also connected to discussions within anthropology about noncapitalist “labor theories of value,” often focused especially on social reproduction in various forms (Fajans 1997; Graeber 2001; T. Turner 1995).

9. Arturo Escobar (1999) has described arrangements such as these, as well as their visible manifestations on the landscape, as “regimes of nature.”

10. Of course, this idea has its own complex genealogy. For instance, in the mid-eighteenth century, the French Physiocrats based their economic system on the premise that agricultural development of land was the only true source of wealth. Their version of *laissez-faire* depended on the idea that the economy should be organized so as not to interfere with this basic given. Here we see an example of the idea that nature exists as the *a priori* ground from which wealth is produced. David Ricardo brought to the table an understanding of production as emerging from the triumvirate of land, labor, and capital. His theory of rent—the profits from the ownership of land—writes nature into the economic process from the beginning but does not treat the production of wealth from nature as a self-evident process. At the same time, as Coronil points out, “[classical political economists] came to distinguish between natural riches as invariable givens and labor as a value-creating force. For them, while the wealth of nations results from the combination of nature and labor, only productive labor could expand its existing magnitude” (Coronil 1997:31).

11. Political ecologists drawing on this tradition focus on struggles over resource use and conservation primarily in the global South (Blaikie and Brookfield 1987; Brosius 1999; Cruz-Torres 2004; Gezon 2006; Guha 1990; Peluso 1991; Stonich 1993; Squatriti 2007; Watts 1998).

12. One area where these two philosophical options get played out is in debates between social constructionists and sociobiologists/essentialists (compare Hacking 1999).

13. Emily Martin and others have critiqued this approach on the grounds that it reduces all possible forms of agency, human and nonhuman, to that of a self-maximizing

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economic individual and thus “allows room for only one kind of being, who resembles all too closely a Western businessman” (Martin 1995:272).

Other ecologically minded scholars have taken a markedly different approach, rejecting the “anthropocentrism” of both capitalist and socialist exploitation of nature and arguing for nature’s “intrinsic value,” outside of its uses for humans (Dobson 1990; Eckersley 1992; Gorz 1982). Ecofeminists have argued for the development of more “womanly” engagements with the nonhuman world, because they are more egalitarian and participatory (Plumwood 1986).

14. Paulson, Gezon, and Watts 2003 provides a useful overview of genealogies and recent developments in the field of political ecology.

15. The OED attributes this use of *resource* to the 1770 correspondence of Edmund Burke.

16. The potential quality of resources is evident here as well, for the more completely resources are exhausted, the less security and legitimacy they furnish for the collectivity itself.

17. The process of claiming resources, it should be noted, has been integral to constituting the political for a long time, although what counts as politically constitutive wealth has changed over the years. For instance, we might see the royal treasury, tribute, the right of coinage, and other fiscal practices as integral to the medieval European state. This category expanded to include substances “in the ground” and land as sources of wealth, emerging more clearly by the eighteenth century (the arguments of the Physiocrats being an expression of this shift). Taken together, these helped to create the domain of “nature” as a source of wealth, which both needed to be managed by and helped constitute the state. It is at this point that the word *resource* is linked to “the support of a country.”

18. The appellations *indigenous* and *native* place some people and not others as mediators between the natural and the social, with clearly political implications (Conklin and Graham 1995; Krech 1999; Nadasdy 2005b). As Tania Li has discussed the process or constitution—and self-constitution—as indigenous can be intimately involved with claims over resources. She describes how particular Indonesian communities come to be “positioned” and “articulated” as “indigenous people” and others do not. Li argues that the competition and contestation over resources, and their potential benefits, are what help motivate others to define and communities to consider themselves “indigenous” (Li 2000). In this volume, chapters by Eiss, Lowe, and Nadasdy touch on these questions.

19. Timothy Mitchell’s discussion (2002) of expertise as a tool for state formation and management in nineteenth- and twentieth-century Egypt provides a good example of the ways in which states deploy expert techniques to arrange particular forms of

activity into a “national economy.” Central to this notion of the economy is that of the progressively more expert exploitation of natural resources.

20. For a fine example of the role of “efficiency” in the forging of political legitimacy, see Hays 1959.

21. Nation-states, we note, are not the only polities to be evaluated this way. As Childs, Nguyen, and Handler show in chapter 7, the contemporary American university is judged, in part, on its ability to manage the resource of “diversity.”

22. See Marshall Berman’s account of Faust the developer, who harnesses the profitless energy of the earth in the interest of production, as a modern protagonist (Berman 1982:60–71).

23. To a great extent, the anthropological literature on time can be traced to Durkheim’s discussions of the cultural embeddedness of temporality (Durkheim 1994[1912]; Gell 1992; Munn 1992). It has examined how the experience and perception of time has been nestled in and produced through ecological conditions (Bourdieu 1963; Evans-Pritchard 1940), modes of production (Bloch 1977; Thompson 1967), ritual (Geertz 1973), and linguistic practices and ideologies (Irvine 2004; Parmentier 1985, 2007; Whorf 1956). As the field developed, it moved beyond an assumption that the absence of a linear, progressive sense of time signaled atemporality or detemporalization, to a richer analysis of multiple and overlapping temporalities both “within” and “between” particular cultural contexts.

24. Indeed, Kevin Birth describes the difficulties in studying time in everyday life: “Cultural conceptions of time do not lie by the side of the road waiting for an ethnographer to wander by and pick them up” (2004:70).

25. This tendency exists in productive tension with a conservationist tradition that values the protection of “wilderness” from human use. Leo Marx traces this idea brilliantly in his essay on the counterpoint between industrialism and the pastoral ideal in nineteenth-century America (2000[1964]). Indeed, in nostalgic appeals to an Edenic nature that is outside humankind, the temporality of nostalgia is linked to that of planning and progress, just as conservation (Bugbee 1974; Cronon 1995; Slater 1995) is linked to resource-making.

26. James Tully has pointed out how Locke’s arguments were used in the New World to justify the European appropriation of native lands: because nature was given to humans for their use (defined especially as agricultural cultivation), Indians had not established a right to their lands, for they were not actualizing them as resources in a proper manner (Tully 1993).

27. Leo Marx describes Joseph Addison’s papers on the “pleasures of the imagination” as “in effect an aesthetic corollary to Locke’s system.” Addison prefigures the attitude taken by Edward Ferrars in finding most beautiful a landscape with “frequent

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plantations, that may turn as much to the profit as to the pleasure of the owner” (L. Marx 2000[1964]:94).

28. This tradition emerged to some extent as anthropology began to take seriously not only the politics of its own past but also the implications of colonialism and capitalism as social formations (Asad 1987; Cooper 2005; Cooper and Stoler 1997; Dirks 1993, 2001; Mintz 1985; Stoler 1985, 2002; Wolf 1982).

29. In the lead article for the forum “Futures We Envision” in *American Ethnologist*, Jane Guyer (2007) points to similarities in monetarist and evangelical views of the future, in particular, the evacuation of the domain of the “near future,” which Guyer identifies as the domain of planning and reasoned expectation. The linking of these separate epistemological traditions is especially fascinating, bringing together economic anthropology and anthropologists of evangelism and prophecy. In a different vein, Reinhart Koselleck describes shifts in visions of the future within the Church through the seventeenth century, when interpretations of the future became persecuted and when, with the rise of “modernity,” “prognosis became the counterconcept of contemporary prophecy” (2002:18). Anthropological reflections on how views of the future are entailed in prophecy and eschatology include Florida 1995; Harding 2005; and Robbins 2004.

30. For this reason, the labor of bringing nature into the social world is more evident in the first three chapters, for instance, through theories of prediction (as with oil), through the presumed life span of substances (as with silver and minerals), or through bureaucratic practices (as with wildlife). In the following chapters, the labor entailed in resource-making is less immediately evident because it takes other forms: walking through the landscape, discovering new species, the labor of documenting and determining racial “diversity” as a resource, or preserving, archiving, and manufacturing significant documents. Seeing these activities as forms of labor at the meeting point of the natural and the social allows us to see making and imagining resources in new ways.