CHAPTER 1

Culture, Nature, and Environmental Sustainability

In 2015, the member states of the United Nations adopted an ambitious agenda to address peace and prosperity for the planet. At the heart of this agenda is a set of 17 goals, known as the Sustainable Development Goals (or SDGs), which are specific calls to action in a range of areas from poverty reduction and public health improvement to climate change mitigation and biodiversity protection (United Nations 2015). These SDGs build on several decades of work at the international level to promote sustainable development that began with the famed 1992 Earth Summit in Rio. That gathering sparked a hopeful and energetic new focus across the world to address crises in the Earth's natural systems caused by several centuries of industrialization, agricultural expansion, and population growth. It gave rise to a range of new political, economic, and ecological concepts, tools, and actions to promote more environmentally friendly forms of economic development under the banner of "sustainability." Since then, the United Nations has hosted other critical sustainability-related summits and goal-setting efforts, but something feels different about these seventeen SDGs. No doubt, perceptions—if not also objective confirmation—of worsening social and environmental conditions have accelerated in the past couple of decades, making fixes feel all the more urgent. And perhaps these goals appear to be more practical, focused, and achievable than previous efforts. Whatever the case, a wide range of people and organizations, from the global level to individual cities, towns, and villages around the world, have focused their efforts on addressing one or more SDGs (Figure 1.1).

Undergirding all these activities is a great deal of academic research and a wealth of scholarly insights on topics of environmental sustainability. During the past couple

Culture, Nature, and Environmental Sustainability: An Anthropological Introduction, First Edition.
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FIGURE 1.1 United Nations Sustainable Development Goals. *Source*: IAEA Imagebank/ Wikimedia commans/CC BY 2.0.

of decades, traditional academic disciplines have retooled their theories and methods to research social and ecological crises, and newer interdisciplinary fields like sustainability studies, development studies, and environmental studies pull together expertise from different disciplines to engage in problem-centered and solutions-oriented work. Much of that knowledge is drawn from natural and physical sciences, policy studies, and economics. The commitment to objectivism and quantification in sustainability discourse aligns with priorities like setting benchmarks, measuring progress, making financial investments, and assessing the effects of policy changes on a mass scale.

How "culture," and the study of it, fits into all of this is more ambiguous, maybe even bewildering. Since the United Nations passed the Convention on the Protection and Promotion of the Diversity of Cultural Expressions in 2005, the idea that culture plays a role in sustainability has gained ground. In the case of the seventeen SDGs, there is no culture-specific goal, but cultural practices and meanings have powerful implications for all of them. As one recent study concludes, it is clear that cultural values influence uptake and progress on the SDGs' key social priorities like improvements in health, access to justice, and equitable gender relations, as well as environmental sustainability goals such as addressing overconsumption, resource scarcity, climate action, and relationships with land and water (Zheng et al. 2021). Moreover, as anthropologist Henrietta Moore (2015) has written, attention given to the cultural dimensions of the SDGs can provide a more holistic picture of sustainability in context, "to start looking beyond crude measurements like GDP per capita, which tell us little or nothing about people's quality of life and their ability to flourish as individuals and communities."

At the same time, sustainability's proponents have found the culture concept difficult to pin down. Does it refer primarily to humanity's tangible and intangible achievements, symbols, norms, and rules of behavior, or is it more about material and functional phenomena like production, consumption, and social organization? Does culture act as a barrier to (or facilitator of) sustainability because it is rooted in perceptions and meanings, or because of practical activities that create income, growth, and employment? Can culture be measured using quantitative tools or are qualitative and ethnographic forms of inquiry—which many sustainability scientists reportedly find "abstract and obscure"—more appropriate tools for understanding it (Zheng et al. 2021)?

As cultural anthropologists who have spent our careers engaged in research, teaching, and advocacy on themes of human–nature relationships and environmental sustainability, we are familiar with perceptions of culture's intangibility. We also understand that our methods can appear mystical and strange, though claims about them being *abstract* and *obscure* can reveal more about the incapacity of scientific objectification to account for the ambiguity, relational dynamism, and contextual nuance that characterize social belief and action than the actual qualities of ethnographic fieldwork and anthropological ways of knowing.

For better or worse, "culture" does not lend itself to easy solutions. Nor does it prevent them either. Culture is not a thing, formula, or equation to insert into a technical or quantifiable process, which is how many sustainability problems seem to be framed. It is a fluid intellectual category that facilitates the development of nuanced perspectives on complex problems, helping anthropologists to recognize and address relationships and patterns we might not otherwise identify, turning puzzlement into questions for inquiry and analysis. We start this book by exploring what all this means for thinking about environment and sustainability. We will begin in a standardized fashion that you will find in all the chapters of this book, which is by posing the big problem associated with the topic and then exploring the subsidiary questions that will help us answer it. This chapter's central problem is, *What does anthropology bring to addressing the challenges of environmental sustainability?* To answer it, this chapter is organized around the following three questions:

- *What do "culture" and "environment" mean in anthropology?*
- *What is the problem with the nature–culture dichotomy, and is it possible to overcome it?*
- *What is sustainability, and how and why has it become a concern for anthropologists?*

As apprehension over environmental degradation and solutions to it has mushroomed globally, anthropology's historical commitment to cross-cultural study of human–nature relationships has gained new relevance for understanding and addressing contemporary sustainability challenges. Building on a century-long tradition of ethnographic research on the cultural and material entanglements of human communities with their natural environments, **environmental anthropology** offers sophisticated critical theories, case studies, and solutions-oriented practices on the causes,

consequences, and alternatives to social, political, and economic patterns that drive socio-environmental problems in the world today. It is an ever-widening subfield that draws on diverse intellectual genealogies to understand the materialities, relationships, knowledge, and subjectivities involved in human–nature relationships. Responding to calls for engaged scholarship, its practitioners also cultivate opportunities for collaborative intervention and problem-solving across policy, applied, advocacy, and social movement worlds.

Environmental anthropologists approach "sustainability" as a contextual and contested phenomenon. Making a critical, constructive sense of sustainability challenges requires close attention to the material entanglements of nature and people that operate in distinct but interconnected ways at different scales, from local and national to the regional and global. But that is not all. Understanding and approaching sustainability requires an appreciation for the symbolic and historically specific constructions of nature, ecology, and human–nature relations that shape how environmental problems are understood and framed. Anthropologists are adept at uncovering these explanations and exposing authoritative forms of belief, knowledge, power, and control; sharp conflicts around the legitimacy of scientific and nonscientific perspectives and practices; and how these matters run up against different experiences of environmental benefits and depletion, and how these intersect with considerations of social inequality, class, race, ethnicity, gender, age, and other factors. We begin this book's journey into all these matters by exploring what environmental anthropologists mean when they talk about "culture" and "environment."

LOCATING CULTURE AND ENVIRONMENT: WHAT DO "CULTURE" AND "ENVIRONMENT" MEAN IN ANTHROPOLOGY?

In the discipline of anthropology, "culture" has long been a central concept and unit of analysis. English anthropologist E.B. Tylor (1871, p. 1) receives credit for its first use in the late-nineteenth century—"that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society"—a definition he developed to provide support for the scientific and evolutionary study of cultural differences. Most contemporary meanings, however, are traced to German-born Franz Boas (1858–1942), a key figure in the founding of American cultural anthropology. Boas had a doctorate in geophysics and a research interest in the color of seawater. While undertaking fieldwork in Newfoundland during the late-nineteenth century, he found that the local Inuit people made no distinction between green and blue in the color of seawater, a distinction he took for granted as a matter of objective physical fact. Rather than dismiss this situation as a dysfunctional physical condition or characteristic of inferior minds, he wondered if, how, and why their perceptions of the natural world might differ. He identified the emerging field of anthropology as a useful avenue for exploring this and other questions about the obvious differences between their lives and his (King 2019).

At that time, anthropology was heavily influenced by evolutionary theories based on ideas about the superiority of Europeans over other human "races," supplying justifications about who was "naturally" the smartest, ablest, morally upstanding, and

therefore most fit to rule (King 2019). Seeking an alternative to race as a means of describing human diversity, Boas turned to *culture*, tapping into philosophical traditions of German Romanticism that viewed culture as the particular genius or spirit of a people as reflected in their attitudes, values, language, and customs (Stocking 1966). The Boasian culture concept, referred to as **historical particularism**, invited inquiry into how societies develop particular cultural traits based on specific values and attitudes that take shape over time. It was a contrarian view for its era, but Boas was, if nothing else, an energetic and persuasive figure who gathered around him like-minded scholars and the capacity to institutionalize his approach at Columbia University, where in 1902 he founded the first anthropology department in the United States.

Over the next several decades, the discipline of anthropology—and the autonomy of "culture" as an object of academic study in its own right—expanded. Still, a precise definition was never affixed, and by 1952, anthropologists Alfred Kroeber and Clyde Kluckhohn (1952) had identified 164 distinct definitions circulating in the field. Over the second half of the twentieth century, a consensual concept did nevertheless emerge, emphasizing culture as *acquired and learned* (not inborn); *shared collectively* and so not reducible to the individual; rooted in *symbolic meanings* that are relative to a group; a *holistic phenomenon* that encompasses all domains and elements of a society; and as *adaptive and subject to change*. By the 1980s, concerns about ethnographic authority and anthropology's historical relationships with colonialism engendered critiques of the culture concept as essentializing and deterministic, and calls to move "beyond culture" increased as other concepts like "power" gained importance, and as integrative bio-cultural frameworks have emerged in areas like holistic and medical anthropologies (Gupta and Ferguson 1992; Parkin and Ulijaszek 2007). Nevertheless, commitment to the culture concept persists, not necessarily because it provides definitional precision, but because it offers a broad interpretive framework for exploring and contextualizing the plurality and relativity of human meanings, social forms, and practices in a non-reductionist fashion.

This is not to say that all anthropologists agreed with the dominant approach to culture that took shape over the twentieth century. Various strains of anthropological thinking have vigorously rejected its humanistic, idealistic, and relativistic orientations as too unscientific, unrigorous, or convoluted—including, most famously, British social anthropology for much of the twentieth century (Kuper 2000). This is also true of many anthropologists with a special interest in understanding human–nature relations. Many of these scholars embraced concepts and methods drawn from the natural sciences, criticizing the Boasian culture concept as endowing humans with undeserved uniqueness within nature's evolutionary processes, or as too dismissive of the material and biophysical dynamics of ecosystems, plants, and wildlife that shape and constrain human activities. Those approaches have tended to emphasize "nature" as an independent variable—as the largely stable Reality that underlies all social life—contributing to the shape of fundamental "cultural" matters like how humans feed themselves and adjust their lives to the natural conditions of particular geographic locations.

These lines of approach did not necessarily abandon a commitment to "culture" as a relevant concept, nor did they suggest wholly surrendering anthropological inquiry to scientific disciplines like biology or ecology. Take, for example, the work of

influential American anthropologist Julian Steward (1902–1972), whose research and writings on the relationship between environmental resources and subsistence patterns, technologies, and behaviors became known as **cultural ecology** (Figure 1.2). Steward was one of several prominent mid-twentieth-century anthropologists who sought to reintroduce evolutionary theories—stripped of their implications of European racial and civilizational superiority—to make sense of social and cultural change. Central to his approach was the concept of **adaptation**, which is the biological and/or behavioral adjustments that increase a species' chances for survival and reproduction in a specific environment. As an anthropologist, Steward upheld the relevance of "culture" insofar as it was the primary species-level mechanism that mediates the processes of adaptation. Steward (1955) referred to the "culture core" as the basic economic and subsistence activities that helped a group make functional adjustments to the natural environment, while recognizing that "secondary" features like ideology or religion developed historically in ways that also shape and influence those adjustments. In the cultural ecological view, humans were both shapers of, and shaped by, their natural environments through culture. But diverging from the Boasian emphasis on culture as an idealistic phenomenon that takes shape in specific historical contexts, Steward approached culture as a generalized process of material adaptation to nature.

Debates over the relationship between culture and the natural environment, as well as the relative explanatory weight anthropologists should give to the influence of environmental, cultural, political, and historical factors in human affairs, have long been vibrant and unsettled. In Table 1.1, we summarize prominent paradigms within the broader discipline of anthropology and how they have approached that culture–environment relationship. Underlying each is some set of assumptions about causality

FIGURE 1.2 Julian Steward, pictured here while working as an archaeologist at the Smithsonian Institution, was recognized for his work on the "concept and method" of cultural ecology, and as founder of the Anthropology Department at the University of Michigan. *Source*: Harris & Ewing / The Library of Congress / Public Domain.

TABLE 1.1 Prominent approaches to culture–environment relationships.

Theoretical approach	Period	Prominent figures	Relative influence of culture or environment in human affairs
Social evolutionism	1870s–1910s	Henry Morgan, Herbert Spencer, E.B. Tylor	Cultural characteristics reflect the passage of social groups through stages of evolutionary change.
Historical particularism	1910s–1930s	Ruth Benedict, Franz Boas, Margaret Mead, Alfred Kroeber, Edward Sapir	Culture is taught and learned in society; biology is malleable, and nature sets broad conditions of possibility that are filtered through culture and language.
Functionalism/ Structural Functionalism	1910s–1960s	Emile Durkheim, Marcel Mauss, Bronislaw Malinowski, A.R. Radcliffe-Brown	Social institutions and practices develop to regulate (mostly stable and predictable) interactions with the (mostly stable and predictable) natural environment.
Neo-evolutionism and Cultural Ecology	1940s–1970s	Marshall Sahlins, Elman Service, Julian Steward, Leslie White	Cultures make functional adaptations to ecological conditions that provide for the material basis of society. They evolve from simple to complex by harnessing energy through technology and developing more hierarchical socio-political systems.
Ecological Anthropology and Human Ecology	1960s–1980s	Robert McC. Netting, Emilio Moran, Roy Rappaport	Response to cultural ecology, emphasizing stronger use of scientific methodologies to study human populations in ecosystem contexts. Culture, through practices like ritual, is a symbolic tool societies use to regulate relationships with ecosystems.
Ethnoscience, Ethnoecology, and Cognitive Anthropology	1950s–present	Brent Berlin, Roy D'Andrade, Hugh Goodenough, Virginia Nazarea	Societies develop conceptual models that are expressed through classifications of nature, such as animal and plant taxonomies, weather and astronomical knowledge, color schemes, and medical diagnoses.
Cultural materialism	1970s	Marvin Harris	Material dynamics of ecology and economics determine customs and beliefs.

TABLE 1.1 (Continued)

Theoretical approach	Period	Prominent figures	Relative influence of culture or environment in human affairs
Structuralism	1960s–1970s	Claude Lévi-Strauss	Human cognition is based on making sense of binary oppositions, nature versus culture being a central one. The oppositions are expressed in social institutions and cultural practices.
Symbolic anthropology, Interpretive Anthropology, and Symbolic Ecology	1970s–present	Mary Douglas, Clifford Geertz, Victor Turner	Culture is a shared and patterned system of symbolic meaning, often expressed through "models of and for reality" that order all beings, including nature and nonhuman species, within a moral universe.
Post-structuralism and Constructivism	1980s–present	Pierre Bourdieu, Bruno Latour, Aihwa Ong, Renato Rosaldo, Margery Wolf	Reality, that which any group of people accepts as "true" and "natural," is based on the dynamic and collective production of authoritative knowledge and meaning within a given historical and/or social context and power dynamic. "Nature," "environment," and "culture" are co-constructed categories.
Political Ecology and the "New Ecological Anthropology"	1980s–present	Aletta Biersack, Arturo Escobar, Lisa Gezon, Conrad Kottak, Peter Robbins, Sian Sullivan, Eric Wolf	Brings together materialist foci of cultural ecology, ecological anthropology, and Marxist world systems theory to develop politically engaged understandings of how global economic structures and power relations drive environmental destruction, marginality, and socio-ecological change as intertwined processes. Critics have long alleged that it tends to focus more on "power" than either "culture" or "nature."
Entanglements, ontologies, and intersectionalities	2000s–present	Eduardo Viveiros de Castro, Marisol de la Cadena, Phillipe Descola, Donna Haraway, Tim Ingold, Eduardo Kohn, Kim Tallbear, Zoe Todd, Anna Tsing, Paige West	Strives to overcome nature–culture dualisms and decenter humanity by expanding agency to nonhuman beings, recognizing Indigenous ontologies and phenomenologies, and acknowledging diverse intersectional power dynamics that shape "nature" and "culture" as malleable, historically contingent, and entangled phenomena.

and determinism, which in the social sciences is the search for a single or totalizing causal explanation of human phenomena (Lewis-Beck et al. 2004). For example, **environmental determinism** theorizes that the direct determinant of human behavior and social organization, as well as cultural differences between groups, lies in the material environment and biophysical nature. **Cultural determinism** would emphasize that those behaviors and social organization are wholly shaped by cultural factors like beliefs, morality, and norms. However, because determinism of any kind oversimplifies the causes of human phenomena, most of the paradigms described in the table have sought meaningful explanations of culture–nature relationships without resorting to determinism. Most anthropological approaches highlighted contextual factors that support a range of positions, from **possibilism** (nature sets a groundwork of multiple possibilities for cultural expression and development) to **probabilism** (human cultural interactions with nature are characterized by complex coevolutionary or reciprocal relationships).

Anthropology's lack of a single integrative perspective on human–nature relations is reflected in part by the various subspecialties, theories, and methods that have emerged over time to address the relationship, and especially as a consequence of varying interpretations of empirical case studies drawn from ethnographic fieldwork (Brondizio et al. 2017). Reflecting anthropology's historical orientation toward studying small-scale societies, until the 1980s, most ethnographic work focused on non-Western societies of hunter-gatherers, pastoralists, and horticulturists, and their modes of perceiving, classifying, adapting to, and molding their local environments. Assumptions about the stability and "balance" of nature dominated in the natural and social sciences, and these studies often highlighted the long-term sustainability of those societies based on how they adjust to predictable patterns in the material world of nature (Biersack 1999). As awareness and anxiety over environmental disruptions and crises expanded in the public sphere throughout the 1970s and 1980s, however, debates over materialism versus idealism faded and ethnographic foci began to shift toward the social causes and consequences of human impacts on water, biodiversity, landscapes, and climate. All of those distinct threads of human–nature inquiry—cultural ecology, ecological anthropology, cultural constructions of "nature," an orientation toward studying small-scale societies versus mass societies—began to come under a single umbrella during the 1990s, called "environmental anthropology."

Environmental anthropology today is a cutting-edge field within the discipline, its scholars tracking exploding awareness and concerns about the "environment" across all domains of human life, and engaging across many of anthropology's other subfields, including urban, medical, and transnational anthropologies, as well as anthropologies of gender, race, and ethnicity. Some of this energy has been pumped by the recent emergence of a new master concept to explain the global present—the **Anthropocene**, or the "Human Epoch"—a scientific and media construct that focuses attention on unprecedented environmental flux, uncertainty, risk, and depletion across the globe (Figure 1.3). This newish idea, which we cover extensively in Chapter 3, has injected a sense of urgency and eroded the conceit of "nature" as an independent and stable entity separate from humanity. As Norwegian anthropologist Thomas Hylland Eriksen (2022, p. 8) expresses, "This is the kind of world in which anthropological research is now positioning itself. There are no sharp boundaries in such a world, only

FIGURE 1.3 Protesting political inaction on climate change, the prototypical Anthropocenic threat, in Pittsburgh, PA, 2021. *Source*: Matt Dixon/Wikimedia commans/CC BY 2.0.

partial connections and assemblages, some of them of global reach. There is no contrast between 'modern' and 'traditional' societies; there is cultural diversity but no cultures." This situation has intensified criticism of distinctions customarily made between culture and nature and fueled a search for viable alternatives. We turn to this theme in the next section.

For Critical Reflection: Up to this point in your studies of anthropology, we expect that you have been explicitly taught at least one or more definitions of "culture" that resonate with our discussion here. But chances are the concept of "nature" has not received equal definitional attention. Why do you think that might be?

ENTANGLEMENTS: WHAT IS THE PROBLEM WITH THE NATURE–CULTURE DICHOTOMY, AND IS IT POSSIBLE TO OVERCOME IT?

In important respects, the nature–culture dichotomy, rooted in a Western philosophical tradition of **Cartesian dualism**, shaped the rise of anthropology as an academic discipline specializing in "culture" and "society," while other disciplines took on "nature" as their focus. As just noted, even early anthropologists were critically aware that such thinking lends itself to either-or forms of determinism that are counterproductive to explaining the complexity of human lives (Dove and Carpenter 2008). Nevertheless, for much of the discipline's history, there was a pretty persistent blind spot, which is

that anthropologists continued to approach the world anthropocentrically. That is, they placed intrinsic value on human lives and theories that tended to emphasize anything not human as important, largely in terms of its symbolic or economic usefulness to humans.

In recent years, environmental anthropologists have turned their attention to hitting this blind spot head-on, and in the process sought to develop new terminologies, theoretical frameworks, and disciplinary practices to avoid uncritical reproduction of the nature–culture dichotomy. Some are quite literal—such as combining the two words into one like "culturenatures"—but one of the most prominent is **entanglement**, a word that focuses theoretical and ethnographic attention on the ongoing, mutually constitutive interconnectedness and attachments that exist among beings and actors in an environment. Through the lens of entanglement, "people" and "nature" are not independent, passive, essential, or decontextualized entities that come together already fully formed, but are always involved in processes of co-creation and becoming in particular times and places. This perspective emerges out of four claims and findings that we introduce here and will elaborate on considerably in later chapters.

Nature Is Not as "Natural" as Many of Us Like to Think

Think of your favorite patch of forest, meadow, mountain summit, desert landscape, or someplace else you've gone when you want to "get back to nature." While you may encounter other people there, you probably still have a general sense that you and they are temporary visitors. You are likely aware that your presence creates disturbances—like when you veer off the trail and trample some mosses or scare off an animal—but chances are you still assume nature is basically taking its own course when you're not there. This view of the environment is grounded in the nature–culture dichotomy.

There are many possible ways humans are, or were, already there, their activities creating reverberating consequences across time and space that can remain largely invisible unless you know how to read a landscape. Consider a "human" factor like the legal designation of the area as one of limited access or full protection, such as a wilderness area or state park. The objective of such a designation is to prevent certain things, like resource extraction or permanent human settlement, from happening there. Bounding "nature" in such a manner—whether it is expressed only as a line on a map or as a physical fence on the ground—has variable consequences for both humans and nonhuman beings, distributing a complex set of fortunes for some and misfortunes for others (Brockington et al. 2008). On the one hand, it might save a crucial watershed to protect waters of people living down river, or ensure that the habitat of a species on the verge of extinction does not disappear. On the other hand, it can involve the erasure of rural, Indigenous, or poor communities whose historical hunting, gathering, or agricultural activities have actively shaped that landscape and its ecosystemic dynamics over time. Alternatively, it can jeopardize the genetic fitness of certain populations of flora and fauna, particularly migratory species or megafauna that require large spaces in which to move. This often forces those species to move beyond the boundaries constructed by human thought and action, redefining them as pests and threats to human livelihoods. Because natural systems do not operate by the

logics we impose on them, the ideal of a self-contained natural area—an island of nature in a sea of humanity, if you will—doesn't have equal effects for all species involved (McNaughton 1989).

The field of **historical ecology**, which brings together archaeologists, environmental anthropologists, historians, and ecological scientists to document the historical transformations of landscapes and ecosystems through human action, has demonstrated that on a global scale, "nature" as we conventionally think of it—as pristine locations untouched by humans—is rare (Ellis et al. 2021). Even in the deepest wilderness—the Amazon rain forest, let's say—at some or another point over the past 10,000 years or so, there's a strong chance that people have lived there and altered the landscape through their activities of hunting, burning, cultivating plants, extinguishing species, introducing new species and pathogens, moving earth around, managing soils, redirecting waterways, building terraces, digging mines and quarries, and so on (Edgeworth 2021). The effects of these activities have been demonstrated to linger for centuries, often with very subtle effects in the present, and so understanding the unique "nature" of any landscape should not erase the effects of human action in it.

Views of Human–Nature Separation Can Have Damaging Consequences

A key element of the nature–culture dichotomy is that it assumes people are a threat to nature, the consequence of developing cultures of avarice, shortsightedness, uncontrolled population growth, sheer ignorance, or some other set of beliefs or social characteristics that produce hostility to nature. Opposing culture to nature in this way is based on Enlightenment notions that nature is to be subjugated to the will of (generic, white, European) Man, and a misunderstanding—if not outright negative, gendered and racist stereotypes—about non-Western peoples as inferior and backward (Wynter and McKittrick 2015). In contexts of European colonialism, the globalization of commodity capitalism, and international conservation initiatives, such arguments have been used to justify the expulsion and removal of local populations from a landscape to ensure nature's access for the appreciation and economic exploitation of others. This view makes it difficult to conceive of the idea that any local "culture" is anything other than an obstacle to ensuring nature's survival, unless, perhaps, one falls into destructive romantic stereotypes of noble savages living in timeless ecological harmony. More importantly, this view invisibilizes the actions and relationships rooted in non-Western or rural lifeways that sustain, and even enhance and enrich, biodiversity.

One of environmental anthropology's important contributions to environmental policy and politics has been to provide ethnographic insight into situations where the nature–culture dichotomy is not just wrongheaded, but potentially destabilizing to thriving ecosystems that support people, plants, wildlife, and other nonhuman beings. These studies have highlighted what is often invisible to outside eyes: subtle rearrangements of plants and other wildlife to encourage their growth for the both human use and to sustain flora and fauna; practices of hunting, gathering, and cultivation based in values of care and nurturing; growing multipurpose gardens that provide a diversity of foodstuffs and useful products by mimicking the natural structure of forests; and

deliberate practices of maintaining or increasing the diversity of species through the management of waters, soils, and so on. These studies have validated sophisticated forms of environmental knowledge and resource management principles developed by Indigenous groups and rural communities, supporting claims about the authority of local environmental knowledge and land rights (Posey 1998). In the Environmental Anthropology in Action box, we provide an illustration of how one pair of environmental anthropologists has challenged damaging misreadings of landscapes based on human–nature separation.

Environmental Anthropology in Action: Rethinking Forest History in West Africa

Environmental anthropology takes on complex problems and promotes solutions drawn from paradigms of engaged scholarship, including applied, policy-focused, activist, collaborative, and participatory-action research (Figure 1.4). In this and future chapters, we offer this box as a brief case study that demonstrates the variety of approaches and their groundedness in real-world settings. In terms of the problems with nature–culture dichotomy discussed here, we examine the story of

FIGURE 1.4 Griots (storytellers) visiting a forested village in Kissidougou, circa 1900.
Source: Public domain.

Kissidougou [kee-see-**doo**-goo] in the West African country of Guinea, whose landscape is a mosaic of savanna grasslands and forests. For decades, outsiders—among them French colonists, international development aid staff, government ministry officials, and environmental activists—asserted that the local people had mismanaged the landscape, cutting down once expansive forests as their populations grew. What was left was an ever-encroaching sea of grasses surrounding remnant patches of forest. Images of the local farmers cutting and burning trees circulated widely, tapping into broader narratives of rural African farmers as ignorant and destructive. It is a common-sensical story of landscape history because it seems to happen everywhere: forests are on the retreat as soon as humans arrive and want to cut them down to feed themselves.

But as anthropologists often demonstrate, "common sense" is neither common nor sensical. British environmental anthropologists James Fairhead and Melissa Leach (1996) had heard from local villagers that those narratives were wrong, and that the opposite was true: that forests were on the increase, grassland savannas were in retreat, and that all of this was the result of local land management practices. This was counterintuitive because of broader assumptions that rural farmers, especially the African farmer, are narrowly self-interested and devalue nature (Brokensha 1999). Knowing that local farmers were sophisticated, flexible, and productive, however, Fairhead and Leach were not as quick as outsiders to dismiss the locals' claims. So they decided to investigate them.

The anthropologists spent time in several villages with varying proportions of land covered by forest and savanna, asking elders, farmers, gatherers, and other villagers to recount what they knew about the growth of both. The oral histories they recorded told of villages founded in the grasslands where farmers would almost immediately begin the process of creating forest cover, sometimes achieving it within the lifetime of a single individual. They asked villagers to explain that process and had opportunities to observe and document it. After cutting back and burning grass, for example, a farmer commonly plants kola nuts (a useful nut for making cooking oil), whose roots loosen dense grassland soils. After several harvests, a variety of fast-growing tree species were planted, each with its own qualities that enhance shade, improve soil fertility, provide nuts and fruits, etc. Over time, larger and taller trees were planted or grew on their own as forests expanded. Farmers were not necessarily in absolute control of these processes, and sometimes the effects of their land management practices were unintentional. In some areas, forests had grown so successfully that local people had to fight back the forest to create garden plots and no longer had access to useful savanna products, like straw grass for hut roofs. By listening to people and directly working alongside them while they engaged in agricultural activities, Fairhead and Leach came to appreciate the detailed ecological knowledge and collective labor that went into how people manage the land.

Complementing these insider perspectives, the anthropologists also conducted research in government archives. They found colonial records that confirmed what villagers had told them about why forests had been perceived as important in the past, which is that they could serve as protective fortresses for villages hidden inside them. They examined census records to understand how changes in village populations

were related to forest growth and decline. They used old aerial photographs and satellite images to track where settlements were created, measuring the subsequent growth of forests around them as village populations grew. In one time period that was supposed to have experienced the highest levels of forest loss, they showed that forest loss was stable and, in some cases, forests had actually grown. They also found that where villagers abandoned a village to form one elsewhere, the older one could have multiple possible fates, including being overtaken by grasses, or the reverse, the growth of secondary forest whose differences from primary forest were hardly apparent.

It's possible that by themselves, no single method or piece of evidence could have been sufficient: aerial photos can be ambiguous, censuses inaccurate, and oral histories exaggerated. But pulling all these sources together confirmed that the real landscape story was one of grasslands being replaced by human-cultivated forests. An especially remarkable finding is that processes of forest growth intensified *as human populations grew*. Growing communities valued forests for their multidimensional usefulness. Aside from creating protective fortresses around villages as noted above (which is less important today than in the past), they provide hunting grounds by increasing the variety of birds and animals, prevent grassland fires from reaching villages, and improve grassland soils for cultivation. As Fairhead and Leach argued, elite misreadings of that landscape history are neither innocent nor inconsequential. They reinforce biased stereotypes about African farmers and underestimate how much people modify landscapes in ways that can even *enhance* biodiversity. They also justify ill-planned and inappropriate rural development and conservation projects, creating resentment among local farmers who don't feel heard or respected. Thanks to this research project, perceptions of that landscape history are starting to shift to be more in line with local realities.

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Human Language, Knowledge, and Experience Are Also Not "Cultural" in Any Simple Sense

When we think of nature and culture as separate, we fail to recognize how all life forms, including humans, construct and reorganize ecological niches through their metabolism, activities, and behaviors (Odling-Smee et al. 2003). Niche construction creates conditions for multilayered arrangements or coevolutionary processes in which other beings—humans, plants, animals, and microorganisms—mutually shape each other's prospects and conditions of life. When each of us is born, we enter into these dynamic relationships wherever we live, inhabiting socio-ecological histories involving the humans who lived there before us and the labor, technologies, and attitudes that they brought to bear on making a livelihood and interacting with the land and other beings. These patterns affect conventional practices of interaction with other species, and even how some languages might record and recognize those interactions.

For instance, there are well-documented examples of interdependence between local languages and the ecology of a place, as well as a remarkable global correspondence between locations of high biological diversity and high rates of linguistic diversity (Maffi 2001).

Countries in which 200+ languages are spoken (which is a marker of high levels of cultural and linguistic diversity) also tend to have the highest levels of unique or endemic species. And in nine countries with highest linguistic diversity, six had highest number of endemic species. Especially where a group of people have dwelled in a territory for a very long time, a "co-evolutionary" relationship exists between local ecology and language, encoding in that language details about unique species, ecological relationships, and change over time that may not be recognized by other languages (Maffi 2001).

The nature–culture dichotomy also disrupts understanding of how relationships with nonhuman beings are fundamental to the very existence and experience of being human. As anthropologist Anna Tsing (2012) once wrote, *human nature is an interspecies relationship*. In other words, fundamental dispositions and characteristics that we take for granted involve dynamic arrangements of interdependencies between us and other beings. So "entanglement" is not just a theoretical lens; it's an operational aspect of people's lives (Nading 2014). These multispecies entanglements are within us (only 43% of the human body is composed of human cells); in our homes, pantries, and yards (the food we store, our lives with companion pets, and the many other mammals, insects, plants, and microorganisms that survive in our kitchens, basements, walls, attics, and gardens, many of them invisibly and beyond our control); and in the landscapes, we trod through on a daily basis, even the most urban where **synanthropic species** beyond the control of people, like squirrels and crows, thrive by exploiting human-created environments. Moving beyond the anthropocentrism of "culture" and understanding humans as **holobionts** (a plant or animal together with all the microorganisms living on it) requires us to acknowledge that other beings with sentience exercise agency and intentionality in ways that enable our existence, complicate our lives, and decenter the boundaries, even uniqueness, of what it means to be human (Fuentes 2019). As we know, with pandemics like COVID-19, bird flu, Ebola virus, and others, these patterns of interconnectedness, many of which exist beyond daily awareness, can often produce unforeseen consequences when humans seek to control, disrupt, or reorganize nonhuman beings and ecosystems for our own purposes.

The Nature–Culture Dichotomy Reduces Anthropology's Radical Potential to Learn From Its Interlocutors and Reimagine Conditions for Living and Being on the Planet

Anthropological knowledge and theories have always been coproduced via collaborations and knowledge exchange with diverse interlocutors. Among those are social and natural scientists who take for granted that orientations of objectivism, universalism, reductionism, and abstract thinking are the most appropriate avenues for understanding empirical worlds. But anthropology's interlocutors have also included people whose worldviews diverge in some quite fundamental ways from these orientations (Strang 2017, p. 265). This includes groups that make no such distinction between "nature" and "culture," much less recognize these categories as relevant to how they understand and live in the world. It also includes groups for whom, even while they may recognize the categories, "nature" and "culture" are understood to be relational, malleable, and contextual. Anthropology devoid of these understandings has lost its

radical potential as a field of inquiry dedicated to exploring the fundamental plurality and plasticity of living and being in the world.

A compelling illustration of that potential comes from anthropologist Tim Ingold (2000), who has conducted ethnographic fieldwork among caribou hunters in circumpolar regions. He observes that while out hunting, a moment comes when a caribou becomes aware of the hunter's presence, and instead of running away, it stands still and looks at the hunter. Biologists explain this behavior to be an adaptation to predation by wolves. The Cree of northeastern Canada have a different view: the caribou is offering itself up, in a spirit of goodwill, even love, to the hunter. Cree hunters understand the act of killing as one of seduction, even sexual intercourse (Figure 1.5).

To the biologist, these notions might be, as Ingold notes, "patently fanciful." But the biological take is not wholly incompatible with how a cultural anthropologist might make sense of it. To be sure, the anthropologist would be more respectful of the Cree perspective, pointing to their interpretation as rooted in a particular conception of the environment and a cosmology that endows nonhuman beings with agency and intentionality. But caribou behavior being none of anthropology's business, who cares if it is an adaptation to wolf predation? It is the idea that Cree culture constructs and interprets that natural behavior in such a way that matters.

Ingold is not satisfied with these answers, not just because each still assumes a nature–culture dichotomy, but because each is too quick to turn to "the sovereign perspective of abstract reason" to make sense of the situation. For Ingold, Cree relations with animals and other aspects of the environment are not rooted in abstract thinking

FIGURE 1.5 Is this caribou offering itself up to the hunter, or is it responding to its evolutionary history, adapting to wolf predation? Environmental anthropologists would argue that how one answers this question carries implications for sustainable living. *Source*: Andreas Gradin/Adobe Stock Photos.

or a formal type of knowledge or intelligence that can be detached from its practical application. Rather, these relations are based on individual perceptions, feelings, intuitions, skills, sensitivities, and orientations that come from long-term experience of dwelling in that world (Ingold 2000, p. 25). Ingold rejects the idea that the Cree have something like a science or an "indigenous" alternative to Western science; rather, they have a "poetics of dwelling" and a "sentient ecology" that cultivate a deep sense of relationship and reciprocity and produce close attention to the movements, gestures, and patterns of caribou and other beings in their environment. This way of being in the world has important consequences for what we would call the "sustainability" of Cree lives, and it asks us to consider what would happen if we began our discussions of human–nature relations and sustainability here, in that sense of deep relationship and reciprocity? In the next section, we explain why that is such a challenge.

For Critical Reflection: Distancing ourselves from the nature–culture dichotomy is still challenging for environmental anthropologists. Can you identify some specific reasons for that?

DEBATING SUSTAINABILITY: WHAT IS SUSTAINABILITY AND HOW AND WHY HAS IT BECOME A CONCERN FOR ANTHROPOLOGISTS?

It is nearly impossible to get through a day without encountering the word "sustainability," one of its derivatives (e.g., sustainable), or synonyms (e.g., green and renewable). The concept appears everywhere—from product descriptions and rallying cries to catchy slogans (Checker et al. 2014). As anthropologists Melissa Checker et al. (2014, p. 1) note in their writings on the subject, it is "...a seductively ambiguous term that reflects both universalized assumptions and a tangle of disparate, contradictory, paradoxical, and culturally contingent ideas and practices." It is one of those terms that seems to mean everything and nothing at once, all the more elusive as its use expands. An internet search for the term in 2025 yielded about 3,610,000,000 results (that's 3.6 billion)! Given this situation, it's probably hard for young readers today to fathom that the word was virtually absent when we, the authors, were in college ourselves.

The word "**sustainability**" essentially means to avoid depletion, allowing for something to be upheld or supported, maintaining a certain level over time. Historically, its roots can be traced to a 1713 handbook on German forestry that introduced the word "*nachhaltigkeit*," German for "sustained yield," introduced by Hans Carl von Carlowitz, who managed mining operations for the Saxon court in Frieberg. European forests were being harvested at intensive rates for fuel and house construction and to keep pace with growing industrialization of cities, shipbuilding, smelting, and other industries. Silver mines, a major source of wealth for the King of Saxony, also required much wood for their operations. As a diligent and forward-thinking employee, von Carlowitz advocated for a method of forestry that would allow forests to naturally regenerate. He promoted sustained yield, *nachhaltigkeit*, the idea of harvesting only as many trees as the forest could replace, ensuring a continuous supply of timber without depleting resources (Morgenstern 2007; von Carlowitz 1713; see Chapter 10). This

practice, which is based on human–nature separation and the subjugation and control of nature through principles of rational management, laid the foundation for the managerial approach to the natural world that continues to dominate conservation today (Brightman and Lewis 2017, p. 4). And yet while these approaches reach back in history to the seventeenth century, tracing the rise in popular use of "sustainability" forces us to jump to the latter half of the twentieth century.

The international environmental movement began to gain momentum in the 1960s with the publication of Rachel Carson's *Silent Spring* in 1962, a book that raised awareness about the dangers of pesticides. Published in the United States, the book was influential because it identified clear connections between human action and disruptions to natural systems. In addition, the famous 1968 "Earthrise" photo taken by an Apollo 8 astronaut clarified for many the idea of the planet as a bounded and vulnerable sphere floating through space. A few years later, in 1970, the United States held its first Earth Day demonstrations, as a grassroots movement of more than 20 million demonstrators expressing concerns about pollution, contamination, and destruction of ecological systems. All of this energy eventually led to the passage of key environmental laws, including the Clean Air Act, Endangered Species Act, and the establishment of the Environmental Protection Agency.

The word "sustainability" first emerged in the ferment of these times, in two publications published in 1972. One of these, *Blueprint for Survival*, was published as a special edition of *The Ecologist*, a radical environmentalist magazine (Goldsmith and Allen 1972). It was essentially a manifesto calling for a restructuring of society toward smaller, less environmentally disruptive communities. The other, *Limits to Growth*, associated with scholars at the Massachusetts Institute of Technology (MIT), employed cutting-edge (for the time) computer modeling to consider the relationship between growth (e.g., population growth, industrialization, and pollution) and finite resources (e.g., petroleum, zinc, gold, copper, lead, and natural gas). The report predicted that Earth would reach and overshoot its carrying capacity by the year 2100 if humans continued their current path, leading to economic and environmental collapse (Meadows 1972).

Together, these works contributed to a sense of urgency about environmental crises. Nevertheless, the terminology of "sustainability" continued to be almost entirely absent from popular media, business, policy, and educational courses of the time. It was not until after the 1992 Earth Summit in Rio de Janeiro, Brazil, that the term really began to stick. Sponsored by the United Nations World Commission on Environment and Development, the Earth Summit turned global attention toward the problem of sustainability. An influential report titled "Our Common Future" (commonly referred to as the **Brundtland Report** after the Commission's Chairwoman, Gro Harlem Brundtland) introduced the concept of **sustainable development**, defining it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission 1987). The Earth Summit was the largest gathering of world leaders at the time, a turnout that signaled the urgency for a global approach to sustaining the Earth's ecosystems while also focusing on economic development. A key outcome was **Agenda 21**, a comprehensive plan of action to promote sustainable development globally, nationally, and locally. The Summit also led to critical international treaties, including the UN Framework Convention on Climate Change (UNFCCC) and

the Convention on Biological Diversity (CBD), as well as protocols for involving NGOs and civil society in monitoring the implementation of Agenda 21's recommendations (Figure 1.5).

The near-global adoption of the Brundtland Report's definition of sustainable development meant an endorsement of approaches grounded in human–nature separation, the idea of nature as a resource to be controlled and capitalized upon, and economic growth and profitability as global priorities. In international policy circles, this definition was seen as a practical way for non-Western countries to "reconcile the desire for economic development with the necessity of environmental protection" (Macekura 2015, p. 5).

Critical Perspectives on Sustainable Development

In the 35 years since the publication of *Our Common Future,* numerous scholars have highlighted the undeniable link between the accumulation of wealth and environmental degradation. Yet much of what passes as "sustainable development" is about promoting economic growth, the expansion of capitalist markets, and extractivism. For this reason, most critical scholars consider "sustainable development" an oxymoron (Daly 1990), though an oxymoron with powerful real-world consequences. This book tracks many of those consequences, but one we consider here is how sustainability initiatives adopt the guise of "improving" other people's lives even when the results are, at best, ambiguous, and at worst, undermine life conditions in local settings (Escobar 1995; Hirsch 2020). A good example comes from Tania Murray Li's study of sustainable development programs in Indonesia.

In her book *The Will to Improve* (2007), Li explores the creation of the Lore Lindu National Park in Central Sulawesi, which was established by relocating Indigenous peoples from their ancestral lands to less fertile lands outside of the park. The government dispatched development and conservation agencies, including The Nature Conservancy, to help the vulnerable and landless communities cope with the situation by "improving" their lot through economic productivity and social engineering programs aimed at changing their behaviors and mindsets to comply with conservation and development priorities. But these programs consistently failed in meeting their own goals because these efforts, which focused on inculcating a *will to improve* in the community, conflicted with the community's basic priority, which was to *reclaim their rights to sovereignty*. This misalignment led to growing resistance, demonstrations, and occupations of the Dongi-Dongi valley by villagers seeking access to their lost territory (Li 2015). When conservation and development solutions are based on Western ideas about "nature" and its need for protection from people and "sustainable development" as grounded in specific kinds of economic behavior and productivity without regard for different views of the environment among local people, sustainable development can be very disruptive, producing poverty, inequality, and social marginalization. Often, the development and conservation organizations involved suffer no consequences and simply move on to other funded projects elsewhere.

The outcomes here raise a broader critique of common thinking about sustainable development. Basing sustainability on the "needs of the present," as the Brundtland Commission's definition does, is problematic from a cross-cultural perspective,

because "needs" vary within and across cultures and change over time. Defining needs in itself is a highly contentious issue: who has the authority to define a need, and how is consensus developed around societal needs? As Michael Redclift (2005, pp. 213–214) has observed, "If in one society it is agreed that fresh air and open spaces are necessary before development can be sustainable, it will be increasingly difficult to marry this definition of 'needs' with those of other societies seeking more material wealth, even at the cost of increased pollution."

Decades of case studies show that marginalized communities disproportionately experience environmental degradation because they are the ones most likely to live downstream or downwind from polluting sources or in fragile ecosystems (Morito 2002). If the global approach to sustainable development continues to promote growth, it will almost certainly continue to expose some communities to injustice and deepen inequalities between haves and have-nots. This situation has produced cynicism: as environmental philosopher Bruce Morito (2002, p. 213) observed just one decade after the Earth Summit, "sustainable development appears to have just as much to do with protecting marginalized people and justice as it does with protecting ecosystem integrity."

Toward an Anthropology of Sustainability

Anthropology stands out from other academic fields for its holistic approach, breadth, and depth, attending to both the human past and present. It enables comparisons across social groups while also obtaining nuanced, specific empirical evidence about particular contexts. The anthropological perspective encompasses human and nonhuman relationships and addresses power dynamics, societal structures, agency, and change. It views cultural diversity as an opportunity, not an obstacle, and local knowledges and ways of being as important to broader discussions of sustainability. These approaches offer a great deal of value to the broader field of sustainability studies. By thinking anthropologically, we might be able to offer pathways forward "to help pass on a livable earth to future generations" (Brightman and Lewis 2017, p. 2).

In the introduction to their book, *The Anthropology of Sustainability: Beyond Development and Progress*, Brightman and Lewis (2017, p. 1) note that while anthropologists are excellent at pointing out the "contradictions, abuses, and politically-motivated uses of the term 'sustainability'" they are also uniquely situated to apply their knowledge to offer ideas about what sustainability "*should* mean." And there are indeed a range of interpretations of sustainability that emerge out of diverse localized understandings of human–environment relationships, many of which represent a sharp departure from the unilinear, extractive perspective of the Brundtland definition of sustainability. Many of these approaches reflect a point made by Thomas Hylland Eriksen (2022, p. 9): "For the sustainability concept to be useful, it must...be divested of its connection to an impossible idea of development as growth, and should instead be defined as the ability of a system to reproduce itself indefinitely without undermining the conditions for its own existence."

Examples abound of anthropologists working in this vein, and as you read this book, you will be introduced to many of them. Some emphasize the development of holistic practical solutions, such as Virginia Nazarea (2006), who argues for the preservation and continuation of cultural practices, languages, and knowledge systems in

the face of external pressure, arguing that sustainability must involve maintaining the cultural contexts that support biodiversity. Or Fikret Berkes, who holds a PhD in marine ecology but works closely with anthropologists and has influenced many sustainability scholars. He defines sustainable systems as those that are resilient, able to absorb disturbances, and adapt to changing conditions. For him, "environmental governance for sustainability" should adopt principles of common-property regimes such that "local people and institutions have a say in decisions and use their local and traditional knowledge to foster adaptive governance" (Berkes 2017, p. 8).

Other anthropologists are reluctant to reproduce the kinds of "managerial" approaches associated with sustainable development, emphasizing that what is needed is a radical shift in our conceptual frameworks, as suggested by the entanglement approach outlined earlier. Tim Ingold (2024), for example, sees sustainability as "about carrying life on." Reflecting a phenomenological approach, he is attentive to long-term ecological balance and embeddedness of human activities within ecological systems, focusing on the importance of a holistic understanding of human–environment interactions (Ingold 2008). All creatures (human and other-than-human) are emplaced and entangled within their physical surroundings, and as they interact with their surroundings, their actions impact all lives within the system. A sustainable world for Ingold, then, is one that enables the carrying on for everything and everyone, not just some. Approaches that define sustainability "along an axis of progressive development" and with the rationale that the world is "a totality to be managed" are misaligned with sustainability as "carrying on" (Ingold 2024, p. 10). He concludes that the "sustainability of everything...[is] committ[ed] not to progress so much as to the continuity of life" (Ingold 2024, p. 10).

And many anthropologists, among them scholars who are themselves Indigenous, embrace the importance of approaching sustainability through lenses associated with Indigenous values like stewardship and harmony, reciprocal relationships between species, and the overall well-being of all creatures (Kimmerer 2013). Grounded in principles of interdependence, caretaking, gift-giving, trust, and reciprocity, such views assertively counter the utilitarian and managerial approaches typical of mainstream Eurocentric discourses of sustainability (Mazzocchi 2020). This work greatly expands our thinking, encouraging us to identify new forms of life and politics that are not based on nature–culture dichotomies.

There is thus no singular perspective in anthropology on sustainability, which we interpret as a sign of a vibrant field. But there is one theme that does unite all these anthropologists: an abiding commitment to ethnographic fieldwork. Described by Eriksen (2022, p. 9) as "time-consuming, detailed, meticulous mapping of local life-worlds," ethnographic fieldwork is a key tool for making sense of how sustainability is shaped, understood, operationalized, and contested in the contexts of actual lives, communities, institutions, and landscapes. This approach generates powerful insight, reminding us that diversity and plurality are central to all forms that human–nature relations take. It also enables what anthropologist Adriana Petryna (2017, pp. 246–247) refers to as *horizoning* work, "a particular kind of intellectual labor that reconfigures possibilities for knowledge and action," which translates into an openness to thinking of workable and innovative alternatives for addressing complex issues. In the Doing the Anthropology of Sustainability box, you have an opportunity to try some of this out.

Doing the Anthropology of Sustainability: Approaching "Sustainability" in Your Community

A useful way to learn about a topic like sustainability in real-life contexts is to start "close-in," that is, research its meanings, expressions, and contours in your own everyday world. But anthropologists are fond of saying that the fish doesn't see the water it swims in. What we mean is that it can be difficult to identify culturally salient and meaningful social dynamics when one shares the same unstated assumptions and narratives about the world as those held by the people around us. Anthropologists researching their home communities work hard to take the familiar and taken-for-granted and make it seem strange. There is no easy prescription for achieving this, but a key element of the anthropological approach is always asking, "What is it that actually gives substance to the dominant discourses and conventional practices of that world, to its subject positions and its semiosis, its received categories and their unruly undersides, to the manner in which it is perceived and experienced, fabricated, and contested?" (Comaroff 2010, p. 530). In other words, how did such-and-such an idea or practice come to be, and what are the different meanings and relationships that reproduce, uphold, or challenge it?

Here, we invite you to put anthropology to work by investigating a "sustainability"-related discourse, institution, practice, or product that exists on your campus or community. "Sustainability" can have multiple aliases and diverse expressions—it is "seductively ambiguous" as we say elsewhere—and so the goal here is to get at some of the basic assumptions and claims being made in your community about the nature of the problem, who or what is responsible for it, and what is the most appropriate way to do something about it. So you might decide to investigate a formal sustainability vision or mission statement; an office, club, or program that promotes it; a practical activity framed as a sustainability initiative like reducing consumption or managing waste; or a product or service of some kind that identifies itself as promoting sustainability. This project can be done individually or in a group, as a quick-and-dirty in-class activity or as a semester-long project, but it would be helpful to compare and contrast your findings with others and talk through them. In this process, you can interview someone who is involved, participate in a meeting, observe an activity, do a close reading of rhetoric, and take notes on the following kinds of questions:

- How did this vision statement, office, activity, or product come to be? Who put it together, and what were their intentions? How has it changed over time?
- What does it presume the "problem" to be that needs to be addressed and/or corrected? What specifics does it identify about the problem, and how are they framed?
- What is its theory of change, in other words, what does it project as the most positive concrete steps, practices, reforms, etc. to advance or achieve "sustainability?"
- Who or what is this targeted at? How specific is it about the who or what?

- What kinds of actual effects and impacts has it had on community members? What do members of the community think about it?
- Has it been associated with any particular controversies? What are they and why? What are the limitations of its approach or actions? What are they and why?

These questions are just a start to a potentially deep and sustained consideration of the fluid and contextual meanings of "sustainability" and how those meanings relate to beliefs, social practices, economic lives, landscapes and environments, and institutional power in your particular place and time. We hope it also demonstrates the multiple insights and possibilities—and the horizoning work—that can be generated from inquiry and critical estrangement, as active learning boxes similar to this one will appear in future chapters.

For Critical Reflection: If sustainability essentially means to avoid depletion, allowing for something to be upheld or supported, and maintaining a certain level over time, what do you think a "sustainability of everything" can look like in a practical sense?

OVERVIEW OF THE BOOK

From the above, it should be clear that anthropologists try not to take for granted a lot of things, from basic categories like "culture" and "nature" to the substance of contemporary sustainability discourses, especially when they are proxies for capitalist forms of extractive economic development. Yet despite strong evidence that an alternative definition and approach would be better for the planet and its inhabitants, the Brundtland definition remains a cornerstone in policy circles and academic discussions.

The goal of this book is to offer a comprehensive introduction to the field of environmental anthropology that simultaneously critiques and reworks sustainability as a concept, politics, and practice. As university instructors who teach courses on the subject, we are also motivated to address the broader doom-and-gloom discourse surrounding environmental problems and uncertainties about how to navigate sustainability conversations. We believe these attitudes are often rooted in an oversimplified understanding of those problems, the diverse ways human communities have understood and interacted with the natural world over millennia, and the creative strategies local communities and social movements have developed to address those problems. We have found that a certain amount of "unlearning" is necessary to dislodge (apparently) commonsensical ideas—for example, that when populations grow biodiversity inevitably suffers, that climate change is the single most important issue facing the globe, or that more nature conservation will protect the future—in order to cultivate a more sophisticated perspective on sustainability challenges that is empowered by capacity for critical thinking and tools for practical engagement.

Toward these ends, this book is organized into three parts, each building on the prior toward an argument that a sustainable future must prioritize ecological harmony, reciprocity, and belonging among all natural beings, human and nonhuman.

Part 1: The Introduction

In addition to this overview chapter, there are two additional introductory chapters that lay out some of the foundations, as well as our main arguments, about how to think anthropologically about human–nature relations and sustainability. Between these three chapters, you should also gain a general understanding of the historical development of anthropology's involvement in these matters during the past century. Chapter 2 explores how and why environmental anthropology emerged, as well as the main ideas and practices that animate environmental anthropology at the current moment. It is here that we lay the groundwork for an appreciation of cultural diversity of cosmologies, ontologies, perceptions, meanings, and local knowledges of nature, exploring how these matters shape the diverse modes of inquiry and engagement in contemporary environmental anthropology.

Recognizing that it is impossible to talk about sustainability without confronting head-on the role of humans in planetary change, we examine the Anthropocene in Chapter 3. This master concept has become common in recent years to describe a new epoch, one in which humans have become the dominant force in environmental change. We consider the socio-environmental and historical meanings, relationships, and processes that shape Anthropocenic contexts as well as the possibilities for interdisciplinary collaboration, creativity, and speculation about the future enabled by the Anthropocene.

Part 2: Sites of Socio-environmental Complexity

The second part of the book inquires into specific sites of socio-environmental complexity, consisting of seven chapters in which we examine what anthropologists know about specific environmental issues and problems. In each, we place an emphasis on ethnographic studies that have demonstrated the local social complexities of human relationships with the issue, the politics of knowledge surrounding the issue, and frameworks for addressing the issue through an anthropological lens.

Chapter 4 focuses on climate and weather, introducing ethnographic perspectives on local knowledge, adaptation, and resilience related to climate variability, production of (and debates around) scientific knowledge about climate change, and practical anthropological contributions to addressing climate change. We also explore what the archaeological record can teach us about how weather and climate challenged communities throughout human history; the intellectual traditions that shape Western thinking about and approaches to climate change; cross-cultural examples of living with disruptive weather; and an overview of climate science, policy, and activism.

Chapter 5 is an anthropological study of water, tracing how, throughout history, humans have developed diverse meanings, social practices, and power relations around aquatic environments and water scarcity, from "hydraulic despotism" to contemporary freshwater crises. This chapter also covers the impact of industrialization and consumption on access to water globally and social movements in defense of water access.

Chapter 6 engages themes of land and landscape, exploring how humans dwell in, materially shape, and derive meaning from landscapes and terrestrial ecological systems. We cover the evolving ideas and theories about "landscapes" in anthropology,

cross-cultural and Indigenous knowledge and understandings related to land in all its forms (soils, forests, grasslands, deserts, etc.), property regimes, and social mobilizations in defense of land and other territory.

Chapter 7 explores the possibilities for eating sustainably. This chapter begins with an exploration of the relationship between food and culture, including what food systems and preferences communicate about cultural beliefs and social relationships. This chapter also considers the classic anthropological concept of "modes of subsistence" (foraging, horticulture, pastoralism, agriculture) and its relationship with sustainability; the challenges that industrial agriculture has created for the planet; and the alternative food movements that have arisen in response, closing this chapter with speculations about the future of food.

Chapter 8 considers the intersection of health and the environment, exploring nuanced relationships between biocultural dynamics of health, illness, and healing with toxic and unhealthy environments. We introduce theories like ecosyndemics and ecosocial theory, among others, and consider how social interactions and power relationships affect biology and genes in particular environmental contexts. This chapter also explores the relationship between race, class, gender, and exposure to degraded and polluted environments, covering instances of environmental racism and environmental injustice. As in earlier sections, we attend to the unique sustainability challenges presented by the Anthropocene, from the danger of microplastics to the impacts of superstorms on health and the environment.

Chapter 9 is concerned with the "more-than-human," the relationships and possibilities when humans and nonhuman beings come together in multispecies entanglements. Within this chapter, we explore subjectivity and agency of the nonhuman, asking if plants, microbes, and nonhuman animals can be considered ethnographic subjects, and if so, what can studies of nonhumans as subjects teach us about human nature? We consider Indigenous cosmologies that approach nonhumans as kin, and the questions that arise for environmental governance in the search for justice for all species.

Chapter 10 concludes the middle section of the book, exploring diverse models of stewardship globally, and how one version of stewardship, grounded in human–nature separation—contemporary nature conservation and protected areas—developed historically and spread during the twentieth century. It offers a critical analysis of how themes like "fortress conservation" and the wilderness concept have produced legacies of displacement and injustice, and how and why, in the era of sustainable development, conservation priorities were shaped around "community conservation." It ends by examining what more just, equitable, and culturally inclusive forms of conservation stewardship can look like.

Part 3: Horizons

The final section of the book is separated into three unique chapters rooted in a practice of horizoning, or looking at the edges of knowledge to consider possibilities and hopeful opportunities for imagining a sustainable future. Together, the case studies fuse the critical analysis that characterizes so much anthropological and

political-ecological work on environmental problems with action-oriented possibilities and ethnographies of hope, offering readers a guide to develop and articulate their own culturally informed environmental praxis.

Chapter 11 examines what it means to "live sustainably," drawing on anthropological thinking about how sustainable living is measured, and how to counterbalance narratives and data of "running out" alongside perspectives of abundance and justice for all. Topics in this chapter include waste reduction, reuse, recycling, and the potential of socio-ecological practices like bioregionalism, permaculture, and ecovillages.

Chapter 12 considers, through the framework of "ruderal ecologies," the possibilities for life in sites of ruin, including resurgence after disasters and case studies of resilience and recovery. We consider various conceptualizations of vulnerability, stories and critiques of socio-ecological "overshoot," anthropological studies of invasive species, and alternative framings for conservation strategies like mutual ecologies, rewilding, and ruderal ecologies.

The final chapter, Chapter 13, offers an array of culturally informed approaches to planning, educating, and organizing for a just and sustainable future. We begin with a review of how environmental knowledge has been generally conveyed through media, covering mainstream media and the celebrification of nature, as well as alternative approaches like designs for the pluriverse. We wrap up with examples of the potential that environmental education and organizing have for building sustainable futures, especially when grounded in principles of collaboration and justice. Topics include citizen science, environmentalism of the poor, participatory action research, expert witnessing, and kincentric transformative learning.

CHAPTER IN REVIEW

Chapter section	Key findings	Ongoing issues
Culture and environment	Anthropology has long lacked a single integrative perspective on human–nature relations, although numerous subspecialties have emerged over time to address the relationship. Debates and insights on the subject have been driven by varying interpretations of fieldwork findings. The broadening of concerns about environmental flux, uncertainty, risk, and depletion has supported the emergence of environmental anthropology as a cutting-edge area of research and engagement.	Debates over the relationship between culture and the natural environment, as well as the relative explanatory weight anthropologists should give to the influence of environmental, cultural, political, and historical factors in human affairs, have long been unsettled. Contemporary environmental anthropology derives a lot of its energy from working through these issues in contexts of theoretical, ethnographic, and engaged work.

Chapter section	Key findings	Ongoing issues
Nature–culture dichotomy	Through the lens of entanglement, "people" and "nature" are not opposed, independent, passive, essential, or decontextualized entities that come together already fully formed, but are always involved in processes of co-creation and becoming in particular times and places.	Work continues on key themes, including the idea "nature" is not as "natural" as many of us think; the damaging socio-political consequences of human-nature separation; how recognizing interspecies relationships destabilizes notions of what it means to be "human;" and how the nature–culture dichotomy reduces anthropology's potential to learn from its diverse interlocutors.
Sustainability	Contemporary definitions of sustainable development endorse approaches grounded in human–nature separation, the idea of nature as a resource to be controlled and capitalized upon, and economic growth and profitability as global priorities. Anthropologists take a different view on sustainability, one that focuses on the (in)capacity of entangled peoples and natures to reproduce themselves indefinitely without undermining the conditions for their own existence.	Anthropologists continue to document the impacts of sustainable development initiatives around the world. Recognizing that meanings and practices of "sustaining" are fluid and contextual, they also engage in "horizoning" work, or open thinking about workable alternatives for addressing complex issues.

KEEP LEARNING

In his unique book of essays, *The Perception of the Environment: Essays on Livelihood, Dwelling, and Skill* (2000, Routledge), Tim Ingold thoughtfully navigates debates over nature and culture to explore how humans perceive their surroundings through active engagement with it and the development of skills acquired in everyday life.

The 2021 article, "People Have Shaped Most of Terrestrial Nature for At Least 12,000 Years," by Ellis et al. is a powerful piece of historical ecology. Essentially a review article, it provides a comprehensive overview of studies in ecology, anthropology, geography, and other fields that demonstrate that so much of what we think of as untouched natural habitat has histories of human settlement and shaping of the land. It is available in *PNAS* (2021) Vol. 118 No. 17.

Brightman and Lewis' edited book, *The Anthropology of Sustainability: Beyond Development and Progress* (2017, Palgrave Macmillan), has become a touchstone work on anthropological thinking about sustainability and sustainable development. It includes essays by some of environmental anthropology's most influential thinkers.

GLOSSARY

Anthropocene: The "Human Epoch," a scientific and media construct that focuses attention on unprecedented environmental flux, uncertainty, risk, and depletion across the globe.

Adaptation: The biological and/or behavioral adjustments that increase a species' chances for survival and reproduction in a specific environment.

Agenda 21: A comprehensive plan of action that came out of the 1992 Rio Earth Summit to promote sustainable development globally, nationally, and locally.

Brundtland Report: A report submitted to the 1992 United Nations World Commission on Environment and Development's Earth Summit that introduced and defined the concept of sustainable development. It is also known as the "Our Common Future" report.

Cartesian dualism: A philosophical theory associated with Rene Descartes views mind and matter as distinct and separable.

Cultural determinism: The idea that all human actions are the product of culture, which denies the influence of other factors like physical environment and human biology on human action.

Cultural ecology: An anthropological approach to the study of the relationship between environmental resources and subsistence patterns, technologies, and behaviors pioneered by Julian Steward.

Entanglement: A concept that focuses theoretical and ethnographic attention on the ongoing, mutually constitutive interconnectedness and attachments that exist among beings and actors in an environment.

Environmental anthropology: A field of knowledge and practice that draws on critical theories, case studies, and solutions-oriented practices on the causes, consequences, and alternatives to social, political, and economic patterns that drive socio-environmental problems in the world today.

Environmental determinism: A theory that attempts to explain cultural characteristics of a group of people as a consequence of specific ecological conditions or limitations.

Historical ecology: The interdisciplinary field that brings together archaeologists, environmental anthropologists, historians, and ecological scientists to document the historical transformations of landscapes and ecosystems through human action.

Historical particularism: Early twentieth-century anthropological approach focusing on how societies develop particular cultural traits based on specific values and attitudes that take shape over time.

Holobiont: A plant or animal together with all the microorganisms living on it.

Possibilism: A theoretical orientation emphasizing that "nature" sets a groundwork of multiple possibilities for cultural expression and development.

Probabilism: A theoretical orientation emphasizing that human cultural interactions with "nature" are characterized by complex coevolutionary or reciprocal relationships.

Sustainability: To avoid depletion, allowing for something to be upheld or supported while maintaining a certain level over time.

Sustainable development: Defined by the Brundtland Report as development meeting the needs of the present without compromising future generations' ability to meet their own needs.

Synanthropic species: Organisms living among humans, but beyond their control, who have adapted to human-modified environments.

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