Chapter 4

Normativism: **When Natural Variety is Valuable**

Normativism begins with the proposition that "[b]iodiversity is a normatively charged concept" (Norton 2008, p. 369). Norton demands that the term must "express social values." According to him biodiversity "has normative, even honorific status as expressing a widely shared social goal—saving whatever is important in the diversity of life on earth" (p. 369). Biodiversity consists of those aspects of natural variety that are valuable. Embracing some biological feature as a component of biodiversity is to express a goal of protecting it. To avoid misunderstanding: recognizing such a goal of protection does not entail that all components of biodiversity must be protected in all circumstances or that all components merit equal protection (an issue that will be discussed in Chapter 6). Just as the goal of protecting free speech places some obligation to protect unpopular (for instance, hate) speech but does not condone incitement to violence, the goal of protecting biodiversity allows tradeoffs between that goal and other social goals. The point that is being made here is that a recognition of this normative aspect of biodiversity is critical to understanding the way in which the term "biodiversity" was introduced, what it came to mean within the context of conservation, and how it should continue to be interpreted.

To reiterate Norton's point in a different way: what motivates normativism as a strategy for defining biodiversity is a recognition that the preservation of natural variety is a desirable social goal. Norton's views are being given central stage here because, especially among philosophers who were engaged with practical policy formulation, he was probably the first to recognize and explicitly note that the concept of biodiversity had a normative aspect that could not be ignored in discussions of how it should be defined. This goes back to the 1980s.

Now, for more than a generation, environmental ethicists have argued about the proper warrant for the admissibility of the goal of biodiversity conservation but have failed to reach any consensus (Norton 1987; Sarkar 2005). In response, as environmental pragmatists including Norton and others (*e.g.*, Minteer and Manning 1989) have argued, these apparently intractable foundational disputes are beside the point in the practical contexts that determine how a conservation policy is formulated and implemented, and whether it succeeds or fails. What matters in such contexts is to map, evaluate, and critically engage the values of legitimate decision-makers. These values are not determined by scientific inferences drawn from biological data though those data may—and should—inform the values of the decision-makers. What is critical is a community's vision of the future it desires including, but not limited to, it perception of its proper role in the natural world. Natural variety is one of those values and the one that is reflected in *biodiversity*; but biodiversity need not be the only natural value.

Given this motivation, it now becomes our task to develop normativism more systematically. Our discussion will begin by moving beyond mere assertion to formulating arguments designed to establish that biodiversity must be a normative concept. In sympathy with environmental pragmatism, there will be no further attention to foundationalist concerns in this book.

There are three loosely related arguments that aim to show why biodiversity must be a normative concept. To motivate these arguments consider what is perhaps the most general scientistic definition of biodiversity: it is the variety of life at all levels of structural, taxonomic, and functional organization. As Table 1.1 documents, many biologists have defended similar definitions. Is this what *biodiversity* means? If so, it does not seem plausible that biodiversity is the goal of conservation for at least three reasons: (1) There is the venerable ethical principle, *ought implies can*. Can all of biodiversity as defined above be conserved? Clearly not, and not just because there are unavoidable tradeoffs between biodiversity conservation and other social goals. The pertinent question is whether all of biodiversity, so defined, can be conserved even in the absence of such societal tradeoffs. It still cannot. Ecological communities left undisturbed lose species diversity through competitive exclusion. Evolving populations lose genetic (that is, allelic) diversity through natural selection. Conserving all such diversity is in practice impossible; (2) Beyond that, is it even desirable? Effectively, it would require the active suspension (through our intervention) of ordinary biological processes such as natural selection and competitive exclusion. Is that what we want? Or what we *should* want? (3) In other words, is all biological variety in principle a desirable target of conservation? The human skin hosts thousands of microbial species though interpersonal variablility is not as high as in the gut which hosts millions. Should we feel an imperative to conserve all the microbial diversity on the human skin or gut? Bacterial pathogens are rapidly evolving diversity to generate resistance in response to innovation in antibiotics designed to contain them. Other pathogens have shown similar, if less spectacular, responses to drugs. Should such diversity also merit active conservation?

Given this background, the first argument for normativism begins with the assumption that concepts should be understood against the historical context of their introduction and use.[31] As we saw in Chapter 1, for biodiversity that context is the establishment and institutionalization of conservation biology as an academic discipline. Programs for conservation have always accepted the goal-orientation of the project, and the existence of that goal endows biodiversity with an irreducibly normative aspect. Proponents of conservation biology from the 1980s fundamentally disagree about goals with proponents of systematic conservation planning from the 2000s and, especially, the new conservation science from the 2010s (Kloor 2015) but they all agree with the goal-orientation of conservation. The existence of

[31]This claim is open to philosophical dispute: for instance, followers of logical empiricism who espouse a hard distinction between the context of discovery and context of justification may deny this assumption (which was perhaps most famously developed by Mach in his study of physical concepts in the late niineteenth century). According to them, the scope of a concept may be independent of the context in which it first arose. Similarly, who view science through the lens of analytic metaphysics and study concepts through intuition and abstraction may also deny it. These issues will be left for another occasion. Suffice it here to note that core analytic methodologies of concept formation, for example, Carnapian explication, accept the relevance of the pragmatic context of conceptual innovation (Carnap 1950).

such a goal engenders a corresponding norm of evaluating whether an action contributes to that goal and, in many contexts, assaying the extent to which it does (if at all).

The second argument builds on the first. As a result of the goal-orientation of conservation, biodiversity has always been used with a positive connotation. (Recall how Norton referred to the term as "honorific.") It consists of those aspects of biotic variety that should be conserved; the scope of the term thus specified what variety is desirable. In general, though the rhetoric of contemporary political discourse often seems to suggest otherwise, not all diversity has positive value (Sarkar 2010). A society with extreme economic disparities is more diverse than one that is more egalitarian; but it certainly is not better because of that diversity. A population with both healthy and sick individuals is more diverse but less desirable than one that has only healthy individuals. Similarly, not all natural variety may be desirable. In most cultural contexts, pathogen variability is seen as removed from "biodiversity" with its attendant positive connotation. To belabor the obvious: the positive connotation embodies the norm that biodiversity is *desirable* natural variety.

The third argument goes back to the discussion of ecological stability in Chapter 1. To summarize: by the time "biodiversity" was introduced in the 1980s, there had been a generation-long tradition of defining and studying diversity within ecology (Sarkar 2007). Much of this work was spurred by a central theoretical hypothesis of ecology dating back to the 1950s, that diversity begets stability of ecosystems. While both the empirical and theoretical status of this claim continues to be debated today, by the mid-1980s, its exploration had led to the formulation of a large variety of diversity (as well as stability) measures. These measures and the associated concepts they were supposed to quantify, in contrast to biodiversity, did not explicitly invoke norms in their use. However, after biodiversity conservation emerged as a social and political goal, the claim tha diversity begets stability (or, even the stronger one that stability requires diversity) was routinely used (without empirical or theoretical justification) to argue that there was good reason to conserve biodiversity.[32] What is telling that this body of work was entirely ignored by conservation biologists attempting to defined biodiversity in the 1990s and since. The most plausible interpretation of this lack of interest in the existing work on ecological diversity is that they viewed their own normative enterprise of designating aspects of natural variety for protection as distinct from these earlier ecological efforts. Thus, scientism was irrelevant to that enterprise. But, then, what requires explanation is why the explicit statements of definitions of biodiversity from biologists, as recorded by Gaston (1996b) and Takacs (1996), are almost always scientistic. Perhaps the explanation lies in the discomfort scientists often feel about explicit normative discussions—but this is no more than sociological speculation at this point (but see Wolpe 2017).

[32]See Sarkar (2005, pp. 115 -116) for more on this flawed argument.

4.1. **Global Heritage**.

Acknowledging the normative aspect of biodiversity raises a new set of problems—and conflicts. The most fundamental of these is: who should set the relevant norms? In the present context this questions amount to asking who determines what aspects of natural variety should be protected. And to what extent. Here conservation efforts have been marred by serious ethical problems reflecting the structural inequities between the global North and the South. Conservation biology was first academically institutionalized in the United States and its agenda strongly reflected that of what has been forcefully criticized from the South as "radical American environmentalism" (Guha 1989). Conservation biologists in the United States deified wilderness (interpreted as the absence of human influence on landscapes or seascapes) and viewed strict protection through human exclusion as the most preferred management regime—and did so in spite of an embarrassing lack of empirical or theoretical support for this model (Sarkar 1999).

Soulé and his immediate followers had no hesitation in exporting their values to the South, at one point arguing that the U.S. federal legal restrictions be cicumvented to allow purchase of land for conservation in the South (Soulé and Kohm 1989): "Land acquisition is a very specific need. ... The National Science Foundation [of the United States] should view land purchase and maintenance in exactly the same way that it views the purchase of a piece of fancy machinery. ... *If there are legal barriers to direct acquisition of land in other countries by U.S. government agencies, then alternatives such as grants to such countries for the establishment and management of research reserves should be explored*" (p. 89; emphasis added). Thus, according to conservation biologists, available aid money, which has always been limited, would be better spent satisfying the desires of conservation biologists than, for instance, improving livelihoods of local people: "A potential funding source would Public Law 480 programs which are currently operating in many developing countries" (p. 89).

If Soulé's strictures were imperialist proclamation, Janzen (1986) endorsed a missionary position[33] when he urged:

> "If biologists want a tropics in which to biologize, they are going to have to buy it with care, energy, effort, strategy, tactics, time, and cash. ... Within the next 10-30 years (depending on where you are), whatever tropical nature has not become embedded in the cultural consciousness of local and distant societies will be obliterated. ... We are the generation ... [that must] devote [its] life to activities that will bring the world to understand that tropical nature is an integral part of human life" (p. 306).

Meanwile, Wilson (1992 and elsewhere) joined many others in declaring biodiversity to be a global heritage. The efforts of Northern conservationists were codified in various documents

[33]With respect to Northern conservationists in Africa, Nelson (2003) drew and developed the missionary analogy in some detail. But the analogy need not be restricted to Africa; it captures a general feature about Northern conservationists' approach to the South in the late twentieth century.

emerging from global agencies, most notably, the 1992 Rio Convention on Biodiversity. Conservation biologists from the North arrogated to themselves the right to determine what constitutes biodiversity and how it should be protected anywhere on Earth.

Heritage from UNESCO

But claims of global heritage require careful analysis and, when required, systematic deconstruction. Beyond bland assertion, what makes some natural feature or cultural artefact a *world* heritage? As we shall see below, there is no pat comfortable answer. Global heritage claims typically promote intervention by politically powerful external agents on decisions affecting the habitats of local residents who may have no conscious stake in these global concerns. Moreover, these claims may not even be backed by any legitimate tangible material interest of these external agents—think of protecting a historical ruin just because of its age or a tropical rainforest because of its species richness. The material well-being of the preservationists is not affected by the non-conservation of the targeted entities. Rather, what is apparently harmed are their cultural perceptions of what constitutes "a good life." But why should their cultural perceptions have any probative force over others?

The salience of these issues and their difficulty is borne out by looking at some particular cases: Was it wrong for the Taliban to destroy the Buddhas of Bamiyan? If so, why? And who decides? What gives the so-called international community—which is hardly a community of equals—a legitimate basis for questioning what a community in Afghanistan decides to do with some cultural artefacts present in its domain through no choice on its part? There is no reason to doubt that the strong feelings generated by the destruction of these statues probably reflects some defensible trans-cultural values. But what are they? How can they be spelt out and, especially, legitimized? How do these values serve the interest of the international community? Why do these interests override those of the local community? If a community is supposed to preserve some entity because of its value to others, what should the others undertake in return? What should the international community have offered to the Taliban to protect religious relics for which the Taliban had nothing but disdain? These questions have not received the attention they deserve.

To return to the concern of this paper, turn to a biodiversity-related analog (Bevis 1995): Was it wrong for the Malaysians to log the lowland rainforests of Sarawak and Sabah in Borneo? Why? And who decides? And so on. In this case there is an additional level of complexity. By and large, the local communities in Borneo were resistant to logging (Bevis 1995). The Malaysians opting for development were mainly economic and political elites from the mainland with the required power. The so-called international conservation community, largely activists from Europe and Australia, adopted and possibly manipulated the local communities' concerns to advance their own preservationist goals. But no one bothered to spell out whose heritage the great forests of Borneo were. And why. No matter how strongly we feel about these cases, the answers are not obvious.

Historians have persuasively argued that concepts of heritage emerged in Europe in synchrony with the emergence of nation-states. Meskell (2014) puts it: "Intimately connected with the Enlightenment project, the formation of national identity relied on a coherent national heritage that might be marshaled to fend off the counter claims of other groups and

nations" (p. 218). By the nineteenth century, in the late colonial context, the concept of heritage had begun to be applied across national boundaries, especially into colonized territories. However, a concept of supranational cultural heritage only began to be clearly articulated after World War I with the first tentative attempts at its legal codification under the auspices of the League of Nations (Boes 2013; Gfeller and Eisenberg 2016).

Full-fledged self-conscious efforts for global heritage designation and protection began with the post-World War II onset of the decolonization era and the formation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1945 (Gfeller and Eisenberg 2016). Claims and designations of global heritage emerged in tandem for both cultural artefacts and natural features. Arguably, at least in the 1950s and 1960s, especially through the Northern domination of UNESCO and other global agencies, they served to maintain Northern control of these entities in the post-colonial South even after decolonization had brought direct control to an end.

Perhaps the most startling manifestation of the neocolonial imperative is UNESCO's 1961 Huxley (1961) report on wildlife in Africa. On UNESCO's behalf, in 1960, Julian Huxley, a former Director, accompanied by his wife spent all of thirteen weeks touring central and eastern Africa. This safari was enough for him to judge that the newly-emerging African governments were a threat to wildlife and to propose setting up at least fifteen new National Parks and fencing existing ones. Huxley piously asked that benefits from wildlife conservation accrue to local populations (rather than central governments) but there is no evidence that he ever consulted these communities even in the specific areas that he recommended for enclosure as National Parks. Huxley's plan would ensure that the natural values dear to heart of the colonizers continued to be preserved even after transfers of power to Africans.[34]

What is striking is that, beyond implicit appeals to claims of importance for some supranational group of individuals, neither Huxley nor UNESCO advanced any argument to establish why some feature is a global rather than, say, a national heritage; this is a problem that has only recently begun to receive attention (Di Giovine 2015). Instead of being supported by cogent argument, attributions of global heritage status have systematically relied on bold assertions by proponents and demands for acquiescence on the part of those who may otherwise have resisted the globalization of their resources. For instance, throughout the colonial era in Africa and Asia it had been customary for the authorities to expropriate forests and other lands to set up as hunting preserves for the elite, often regions that had been communally owned and traditionally used for centuries. Local populations were excluded if they would compete for game or impede colonial sport in any other way. Many hunters who also became conservationists because their game numbers had declined, often from excessive hunting, demanded the creation of new preserves and expansion of existing ones. In the new jargon, "game" begun to displaced by "wildlife." As Huxley put it: "I recommend that Wild Life (or Wildlife if the American usage is followed) be substituted for Game in general discussions, and in particular in the title of government departments" (Huxley 1961, p. 104). Wildlife was now the cultural heritage of all of humanity, not just the nation in which they lived. Eventually "wildlife" gave way to "biodiversity" in the Northern conservationists' lexicon.

[34]See Adams and McShane (1992) for more discussion of Huxley's role.

The first campaign to draw transnational attention to an ostensibly global heritage feature focused on Egypt, starting in the late 1950s, after Egyptian President Nasser's modernization plan for the country included construction of the Aswan Dam. The project envisioned the submersion of a large number of historic sites and monuments of the Nile Valley, perhaps most notably the Great Temple of Ramses II at Abu Simel. The plan generated vocal opposition from archaeologists and historians, mainly from Europe; their rhetoric suggested that Egyptians were not legitimate stakeholders in decisions about the fate of these sites (Boes 2013). Though his nationalization of the Suez Canal and his neutrality in the Cold War hardly made Nasser a popular figure in the West, conservationists were able to co-opt him to their campaign in the late 1950s. In 1960 UNESCO undertook an ambitious rescue project of relocating the monuments at risk to higher elevations. Nasser was applauded for recognizing a "right to heritage."

Parallel to the developments around Aswan, two German environmentalists, the father and son team of Bernhardt and Michael Grzimek initiated a global campaign for designating the Serengeti Plain of Tanganyika as a global heritage and "saving" it through formal protection and exclusion of local human use. The core component of their campaign was the creation of the documentary, *Serengeti Shall Not Die*, in which they explicitly and controversially drew an analogy between African wildlife and European historical monuments.[35] Immensely successful, the visually stunning documentary transformed discussions of the global staus of the natural heritage of the South. However, modern commentators have been unanimous in regarding the documentary as a piece of propaganda that took undue liberties by denying the history of the Serengeti plain as the traditional home of the Maasai and elaborating an Edenic myth instead; most of these commentaries imply that the documentary was ultimately fraudulent (Adams and McShane 1992; Nelson 2002). To continue with the Aswan parallel in the context of biodiversity, shortly afterwards, and this time in India, conservationists from the North, supported by a local elite consisting largely of hunters, co-opted Prime Minister Indira Gandhi to launch Project Tiger in 1973 (Mountfort 1983) in spite of local problems due to tiger-human conflicts.

The normative claims of conservation biology fall into this tradition of global heritage assertions and are based on the undefended assumption that biodiversity is a global heritage. That is what made it possible for Soulé to demand the acquisition of land in the South for the benefit of Northern conservationists. Janzen is gentler: he only wanted to proselytize and convert the perceived heathens in the name of the global deity that is biodiversity.

Matters of State

Indeed, it is commonplace for Northern conservationists to propose policies for distant lands in the South and to demand action, in particular, setting up reserves to protect wildlife as Huxley had demanded. They often act with the active support of their own governments and in concert with big non-governmental organizations (derisively dubbed BINGOs by Dowie (2009)) that have come to occupy the vanguard of international conservation efforts in the

[35]The German Filmbewertungsstelle Wiesbaden (FMW) dubbed this an "impermissible equation" (*unerlaubte Gleichsetzung*) and its request for the caption's removal captivated op-ed pages in the Federal Republic of Germany with discussions of censorship—see Boes (2013) for more detail.

1990s. These included the World Wildlife Fund (WWF[36]) affiliated to the International Union for the Conservation of Nature (IUCN[37]) which was itself associated with UNESCO. Conservation International (CI) globally and The Nature Conservancy (TNC), mainly in the Americas, emerged as the two other most prominent missionary organizations. The most prominent other BINGO is the Wildlife Conservation Society, also based in the United States. In general environmental NGOs (and not only the BUNGOs) have come to occupy a vacuum in contexts of environmental policy formulation in many regions as governments have receded from direct engagement with these issues (Holmes 2018).

The most important negative effect of these policies was the involuntary displacement of people to set up protected areas, typically without compensation or resettlement. In 2009 Dowie observed: "About half the land selected for protection by the global conservation establishment over the past century was either occupied or regularly used by indigenous peoples. In the Americas that number is over 80 percent" (2009, p. 12). Globally, estimates of the number of people displaced by conservation typically vary between 5 and 10 million; high estimates include 14 million for Africa alone (Agrawal and Redford 2009). Uncertainties about the scale of forced dislocation through conservation are high but the moral problem cannot be ignored.

Displacement was not the only problem protected areas pose. Implementing conservation policy has routinely led to gross violations of human rights in the South, a result of a strategy that has been dubbed Fortress Conservation (Brockington 2002) and has been supported by many biologists such as Oates (1999) and Terborgh (1999). For instance, the 1980s saw serious declines in east Africa's elephant (*Loxodonta africana*) populations even as black rhinoceros (*Diceros bicornis*) populations were on the brink of extinction. Concern for the survival of these species and other wildlife declines prompted international NGOs to make African wildlife conservation a major priority. Several African governments responded to this pressure by militarizing the enforcement of wildlife laws, in particular access to national parks.[38]

Northern NGOs and the media viewed these developments as a "war" for wildlife. In 1985 Zimbabwe began a paramilitary "Operation Stronghold" commanded by former Rhodesian Defense Force officers with a mandate to track down and kill black "poachers." In 1988 Kenya issued a shoot-on-sight order to thousands of police sent into national parks. In 1989, Tanzania launched "Operation Uhai" to remove "poachers," using a military strike force. Virtually all the funding came from the North. The British Parliament debated sending British troops to Kenya, Mozambique, and Tanzania to help protect elephants. Millions of dollars came from the United States. While the official policy of WWF at this time was not to provide funds for guns or ammunition, in practice it disbursed such funds in Tanzania in 1987 and funded the purchase of helicopters in Zimbabwe.

Shoot-on-sight orders to kill "poachers" and "bandits" were also issued in the Central African Republic, Malawi, and Tanzania. In the Central African Republic, Bruce Hayes,

[36]WWF was eventually to be recast as the WorldWide Fund for Nature everywere but North Ameria where it continued to refer to traditional protection of wildlfie.

[37]IUCN eventually had- "and Natural Resources" appended to its name to endorse a resource view of nature emphasized by relevant segments from the South.

[38]The African case studies that follow are from Neumann (2004).

a U.S. citizen and co-founder of Earth First!, hired mercenaries to shoot at "poachers." More than a hundred people were killed in each of Kenya and Zimbabwe. More than three hundred people were killed in Malawi and an even larger number disappeared. Park rangers in Malawi were also routinely accused of systematic rape. Between 20 and 50 people were killed in Tanzania, and between 20 and 96 in Botswana. Not one of those who were killed received a trial. Human rights activists have pointed out that many victims, the alleged "poachers," were reported by credible witnesses to have been unarmed and that many were local residents, some of whom had been evicted to create reserves.

To drive home the point being made here, consider a hypothetical example originally deployed by Sarkar and Montoya (2011). Central Texas is home to a suite of endangered and endemic species including birds, salamanders, and arthropods (Beatley 1994; Beatley *et al.* 1995). In central Texas, attempts to list species under the U.S. Endangered Species Act (ESA), and then to delineate critical habitat and develop habitat conservation plans (as required by law) have long been controversial and have often led to ugly confrontations between landowners and conservationists (Mann and Plummer 1995). Now, imagine that an environmentalist from Mongolia decides to come to Texas, claim expertise on desert landscapes and cave ecology (perhaps justifiably), and demands that prime real estate around the capital city of Austin be converted into a national park. It is intriguing to speculate on the reactions from gun-toting Texans.

But, is there a salient ethical difference between this hypothetical situation and the one in which Oates (1999), Terborgh (1999), and other Northern conservation biologists demand more and better-policed national parks in west Africa? Or is it simply a question of power relations? From an ethical perspective, in both situations either we are denying the legitimacy of local sovereignty over resources or we are not. We choose either to accept the rigthful authority of local residents over their habitat and resources or we do not. The critical normative issue here is that of parity. The point is that the values of any one community, whether it be Northern conservationists or Mongolian desert experts, cannot legitimately be transferred without consent to the habitats of other communities. As the (real and not hypothetical) examples being discussed here show, Northern conservationists routinely claim special standing and until very recently have largely gone unchallenged especially by those who also value conservation though from a Southern or a pluralistic perspective.

Triumph of the Free Market?

In relations between the global North and South, as imperialism fades into its sordid history, and missionaries become objects of mistrust and, often enough well-deserved derision, free markets have emerged out of hiberantion to take their place to govern these relations. Since the 1970s we have been living in the age of dominant neoliberalism. (In what follows, neoliberalism, which remains a contested concept, will be taken to endorse three related policies: free trade, deregulation, and privatization.) Conservation BINGOs have enthusiastically embraced neoliberalism going back at least to the 1990s. It is central to Kareiva and Marvier's (2012) manifesto for conservation science.

Neoliberal imperatives have insinuated themselves into biodiversity conservation strategies in two rather different ways. The first was predictable: biodiversity has not only been

commodified but this has been done in a way the reflects the values of Northern entities that control the relevant market transactions. Biodiversity is supposed to pay its way, for instance, through ecotourism, carbon sequestration, and other ecosystem services. The associated philosophical problems are well-known going back to analyses of attempts to use cost-benefit analyses to provide a market-based justification for biodiversity conservation (Norton 1987). Our focus here wil be on the values promoted by the commodification of biodiversity in a global marketplace rather than on the question whether this kind of economic reasoning demeans the value of biodiversity (for instance, by implicitly denying it has intrinsic value that cannot be traded in a marketplace).[39] We will restrict our attention here to ecotourism since it is most relevant to the question of how globalism tramples over local values in determining what aspect of natural variety should be protected, that is, what biodiversity means.

The focus will be on Costa Rica, enthroned by Northern conservationists as the ultimate "Green Republic" because of its history of biodiversity conservation since the 1970s (Caufield 1984; Ewens 1999). Ecotourism transformed large swathes of the country between 1970 and 2000 during which period the country became one of the world's premier ecotourism destinations (Jones and Spadafora 2017). Several interacting factors contributed to the explosion and, by conventional economic criteria, overwhelming success of ecotourism in Costa Rica: a history of political stability, the existence of biological research outposts largely created by ecologists from the United States, sporadic state support (especially through the creation of a National Park system in the late 1960s and 1970s) and, since the late 1970s, private enterprise, for instance, tour operators and nature reserve and private lodge proprietors (Jones and Spadafora 2017). These entrepreneurs, generally of U.S. or Costa Rican origin, embodied expatriate cultural values of the North including the counterculture of the 1960s.

The second way in which neoliberalism has influenced conservation choices could not be more different. It consists of attempts by wealthy individuals, almost always from the North, using their resources and the free market to acquire land in the South and designate it for preservation. The irony of this kind of land acquisition should be noted: the free market is being used to remove land from the free market. The most striking example is that of Douglas Tompkins, a U. S. citizen and co-founder of The North Face and Esprit corporations, who tried to import Deep Ecology into Chile by buying and restoring to wilderness large swathes of Patagonia (Wakild 2009; Holmes 2014, 2018). Tompkins is just one of many wealthy individuals from the North who have bought chunks of Patagonia (Pearce 2012). His interest in acquiring and rewilding land included large areas in adjacent Argentina (Humes 2009; Pearce 2012). Enthusiastic journalists have dubbed Tompkins and his ilk "eco barons" (Humes 2009); more reflective observers worry about them being land grabbers: "Patagonia is a truly wild land ... But the biggest and the most bizarre monsters here are the wild men from the rich world, determined to stake their claim to the last place on Earth" (Pearce 2012, p. 154).

Tompkins's goal was to purchase undeveloped land or land that could be restored through

[39]Norton (1987) has already been cited as a pioneering analysis of this problem. It is also treated in detail by Sarkar (2005).

a strategy that mimicked land acquisition by foreign developers whose investment was encouraged and fostered by the Chilean government ever since the Pinochet regime adopted an extreme form of neoliberalism in the 1970s to foster what it considered to be worthwhile economic development. The NGOs set up by Tompkins to manage these properties had the goal of restoring the areas and eventually turning them over to the Chilean government as National Parks so long as continued strict protection was guaranteed. Nothing Tompkins proposed was at odds with Chilean law; what was at odds with local practice was that the purchased lands would be preserved rather than developed.

Yet, starting with the land that became the iconic Parque Pumalín, Tompkins' efforts were met with fierce local criticism. Some of these can easily be discounted as being a response to his attempts to prevent environmental harm (especially pollution) by the salmon industry in the region (Humes 2009). But others reflect local values that cannot so easily be morally discounted. First, putting land under protection prevented their development and the economic benefits that, even under private control, may have trickled down to disadvantaged sectors of the population. Would any benefit from protection, including ecotourism (which Tompkins encouraged) outweigh this forgone development? (Answering this question requires the kind of cost-benefit analysis that Deep Ecology eschews. There seems to be no evidence that it was ever attempted for any of Tompkins' projects. Indeed, stakeholder consultation seems never to have had a central role in his agenda.)

Second, there were questions of national identity and patrimony. The scale of Tompkins' ambition generated problems. Parque Pumalín stretched from the Pacific ocean to the Argentinian border, essentially bifurcating the country. In effect, the critics argued, a foreign-owned entity was dividing the country into two disjoint parts. Third, and perhaps most relevant to our context, critics questioned what relevance Deep Ecology, produced and propagated in the North (and, in fact, largely confined to a fragment of the environmental movement in the United States), had for Chile. Though no side of the debate seems to have quite put it in these terms, why is wilderness preservation, implicitly assumed by Tompkins and other Deep Ecologists to be central to biodiversity conservation,[40] relevant to the protection of nature in Chile? Tompkins settled on his own land in Patagonia and became a local resident. Over the years Tompkins won over many of his Chilean skeptics and came to be accepted by parts of the national elite but these questions have never been satisfactorily answered. Tompkins was also different from the other "wild men from the rich world" insofar as he settled to live on his land. The others continued to be absentee landlords.

[40]For arguments to the contrary, see Sarkar (1999).

4.2. **Local Values**.

Recall that normativism views biodiversity as consisting of entities that merit protection. What is most relevant to the present discussion is that, in practice, different groups have made different choices (Margules and Sarkar, 2007). We will begin with governmental agencies and the BINGOs that dominate large-scale biodiversity conservation efforts.[41] In the United States, most governmental agencies embrace endangered and threatened species as targets of conservation but that is because much of conservation policy is set in the context of the legal requirements of the Endangered Species Act (ESA) of 1973. The ESA envisions protection of both animals and plants, includes subspecies under its purview, but excludes "pest" insects. In contrast, the The Nature Conservancy (TNC) uses habitat types defined by characteristic ecological communities.

The most influential transnational BINGO, Conservation International (CI) targets the IUCN Red List species along with endemic species. Internationally, the IUCN Red List is used by most governments to identify species that most deserve conservation. As is to be expected, WWF largely follows IUCN. The European Union, through its Natura 2000 project, targets a mixture of entities: over 1000 listed species and 200 rare habitat types.[42] Countries such as Australia and India follow an analogous mixed strategy.

The relevant point is that some such choice is necessary in order to provide the minimal precision required to devise conservation policy. Each of these choices reflects cultural values. For instance, US governmental agencies, IUCN, and CI implicitly presume that species are the bearers of value. Moreover, they presume that the extinction of every species is equally (normatively) undesirable though th exclusion of pest species qualifies this asumption in the case of entities influenced by the U.S. ESA. TNC implicitly presumes that ecological communities are the bearers of value. The European Union, Australia, and India are more pluralistic in what they assume to be of value. What is most pertinent to our context is that these definitions embody cultural norms even though they are often presented as if they are universal purely scientific definitions (Sarkar 2008). There is some irony here, at least in the case of the BINGOs that have become the missionaries of biodiversity in the South. Like other missionaries of the past, each propagates its own creed as the only Right Way. In fact, BINGOs were discussed in the last section because of their claim to global relevance. Yet, the differences between them contextualizes them to be of no more than local pertinence. When they are largely locally rooted (such as TNC in the United States) the global delusion is most obvious. As we shall argue below, self-acknowledged local values, restricted in space, if not time, are the ones most relevant to the task of exploring what to protect and what biodiversity means.

At local scales, there are many other equally defensible choices that may appear unusual to those steeped only in Northern values. For instance, sacred groves are widespread in

[41]For more detail and documentation of these examples, see Sarkar (2012b).

[42]European Union Habitats Directive: `http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm`; last accessed 31 December 2017.

South Asia, especially among the wet evergreen forests of the Western Ghats in southwestern India as well as in northeastern India in the Eastern Himalayas. Forest communities of the Eastern Himalayas have maintained intact patches of cloud forest amidst an almost completely denuded landscape and have done so in spite of loss of most cultural associations with their sacred groves due to the massive conversion of local populations to various Christian denominations starting in the mid-19th century. In the state of Megahalaya, from many of these sacred groves not even deadwood can be removed (see below). The extant 29 sacred groves occupy over 8580 ha (Malhotra *et al.* 2007, p. 19). These are montane evergreen forests on a landscape dominated by limestone. Much of the ecology of the region continues to be devastated through coal mining and quarrying for limestone besides swidden farming in an increasingly shorter cycle (five years now compared to 30 years in 1900). Traditionally each village had at least one sacred grove but, as noted earlier, local traditions were largely destroyed by Christian missionaries starting in the mid-19th century. Not one of these sacred groves has been systematically inventoried except for major tree species but they are known to be particularly rich in amphibian species with a high degree of microendemism. At least 18 IUCN Red List amphibian species occur in this region. Cave invertebrates in the many caves and fissures under the ground have not been inventoried at all.

Most of the groves are littered with monoliths with presumed relgious signficance and some have remained objects of worship even after the Christianization of the region. The groves have traditionally been managed according to local tradtions of the different ethnic groups of these mountains. For instance, one such group, the Khasis, recognize five management regimes (Malhotra *et al.* 2007, p. 19):

Ki Law Lyngdoh	Forests under the control of traditional religious (now replaced by village councils) with no public use permitted.
Ki Law Kyntang	Forests of sacred value for religious ceremonies including sacrifices.
Ki Law Nyam	Religious forest; this category may not be distinct from the two prior ones.
Ki Law Adong	Forest protected for non-commercial use, for example, water.
Ki Law Shnong	Forest with resources for village use.

The first of these management regimes is the one in which not even deadwood can be removed.

Some of the best-known sacred groves of Meghalaya are in the Khasi Hills near the town of Sohra (formerly known as Cherrapunji) which, with an average annual rainfall of 11 430 mm, is one of the wettest places on Earth. (The honor of being the wettest used to belong to Cherrapunji but now belongs to nearby Mawsynram.) Most groves are small and occur on the top of hills but the larger ones also include valleys and the streams that run through them. The most impressive grove here is at Mawphlong which is protected because it is supposed to be inhabited by the spirit "U Basa."[43] Its 80 ha contains at least 400 tree species; the fauna have never been fully inventoried. The protection regime is Ki Law Lyngdoh. The land around the grove is severely degraded.

In the 2000s, there was a minor restoration project for the region sponsored by an NGO, Community Forest International, and partly funded by the United States Agency for Inter-

[43]This discussion is based on unpublished fieldwork from 2008.

national Development (USAID). It aimed to pay US$ 20 per hectare for the restoration of core forests, US$ 10 per hectare for forest extension, and US$ 2.50 dollars per hectare for watershed management. It was also working towards the closure of mines and quarries in the surrounding area and had begun to focus on alternative job creation.

As is common in the region, the full relgious significance of Mawphlong was lost during the depredations of the missionaries; its current preservation is due to respect for tradition by area residents. What is striking about Mawphlong—and the other sacred groves of Meghalaya—is that the entire ecological community is protected. No part of it is singled out as a resource that is of particular value. This is true of the first four of the five management regimes recognized by the Khasis. There have been no recent public reports of its performance.

The complete protection of entire ecological communities may be uncommon even though sacred groves occur throughout the South, especially in sub-Saharan African countries, most notably Ghana and Kenya. In most African countries, sacred groves target a single species or small set of species. Many cultures around the world value individual species in other ways (*e.g.*, as totemic species) that may be of symbolic value or associated with religious practices. Even in Meghalaya, sacred groves focused on single species, for example, bamboo reserves dedicated to individual deities, are found quite often.

However, with respect to ecological community-wide protection, Meghalaya is not a complete outlier even in the Indian context; there are other communities that value entire forests. Vermuelen and Koziell (2002) report the case of the Irula hunter-gatherers, a semi-nomadic tribe from Tamil Nadu state of southern India. The tribe is well-known for its association with snakes, both in catching them and in treating snakebites. What this community values is reflected in how they choose a site for settlement. First, they assay a forest for medicinal plants, then snakes, then animals hunted for food or money (rats, rabits, mongoose, wild cats, *etc.*). The assessment is complex. The size of animal populations matters and is assessed using the density of footprints. Ecological associations between vegetation and type and animals are taken into account (for example, rabbits with *arumgapul* (*Cynodon dactylon*, that is, Bermuda grass which, despite its name, originated in West Asia). Typically, in a twist opposite to what is typically done in conventional ecology, animals are taken as indicators for plants. The persistence of forests is critical to the survival of the Irula way of life. Again, what matters is the entire ecological community matters though some components are prioritized over others.

4.3. **Implications**.

The sacred groves of Meghalaya provide a striking example of the protection of entire ecological communities based on value systems that in no way intersect with those recognized by the agendas of contemporary biodiversity conservation. It is hard to imagine that these sacred groves do not protect biodiversity no matter how it is defined; it is not the protection of any single resource. In fact, any definition of biodiversity that excludes these groves would appear to be suspect. But the value systems they embody do not incorporate any of the global values evangelized by Northern conservation biologists. The case of the Irula shows that there are other such examples. (Globally, how common such value systems are remains to be tabulated.)

Given the problems of global normativism, these possibilities make it more attractive that any normativism about what biodiversity means should embrace local values. The failure of purely scientific definitions also lends support to this move. After all, scientific constructs generally have global aspirations; the broader its domain of applicability, the more valuable a construct is. A psychological construct relevant to only a small group of individuals would not be deemed an entry into the theory of psychology. Physical constructs that are considered the most fundamental are those that have the largest domain: theories of space-time and of the fundamental constituents of matter. If there were an adequate universal concept of biodiversity, that would have furthered the ambitions of global definition even when its normative aspect is recognized. The failure to find such a definition furthers the agenda of local normativism.

From here on, this book will proceed with a partial endorsement of local normativism. But there are problems. Three families of problems will be distinguished here. The first two are theoretical; the third is more practical. The first problem is that an on local values invites a a vapid cultural relativism in which anything can count as biodiversity. The scientific disagreements alone leave open ample scope for disagreement and acceptable differences. For instance, even within a culture we may debate what we value most, whether we value every endangered species as much as we value selected endemic or charismatic ones (species of symbolic and other cultural value). Moreover, cultural values evolve and there can be cross-cultural dialectics of engagement, disagreement, and change. However, it still is the case that any definition of biodiversity must have some constraints. For instance, it must surely capture biological entities and *only* biological entities. Otherwise, why would it be *bio*diversity? In a similar vein, it must capture natural variety. Otherwise, why would it be bio*diversity*?

Second, as Norton (2008), has emphasized, "biodiversity" plays a role within science. While it can be debated whether or not the term has any theoretical content (beyond ecological diversity or, most often, simply richness), there should be some attempt to recognize that the term is used in scientific communication. Definitions based on local norms can fall afoul of this requirement. Indeed, at least on first sight, it is hard to imagine how a definition relying on sacred groves can be scientifically relevant. Both of these theoretical problems will

be addressed in Chapter 6. The strategy will be to impose adequacy conditions for definitions of biology. These adequacy conditions will allow a partial synthesis of scientific insight and local values. But science will play a subsidiary role: even these adequacy conditions have to be culturally debated

Third, a reliance on local norms invites conflicts between localities. The Khasi Hills of Meghalaya dissipate into the plains of northwest Bangladesh. No sacred groves are found there though they occur elsewhere in that country. Species richness is believed to be high in the plains of Bangladesh though there has been no reliable inventory of the northwest (the region adjacent to the Khasi Hills). There is little cultural affinity with Meghalaya and much potential for conflict. The anatomy of these conflicts and the potential for their resolution will be discussed in the next chapter. Except, perhaps in a handful of cases, the conflicts are not irresolvable.