



The bear minimum: reintroduction and the weaknesses of minimalist conservation

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Abstract

Often, wildlife management and conservation policies gauge the success of conservation initiatives by setting minimum targets for conservation. Investigating the many varieties of this “conservation minimalism” demonstrates that this common approach leaves out several essential theoretical suppositions that inform the conservation conversation. Any minimal standard inevitably excludes some worthwhile conservation targets—values, obligations, and principles that ought to be upheld, or specific ecosystems and species that ought to be protected—by factoring them out as irrelevant to the specified minimum. A discussion of potential California grizzly bear reintroduction and other conservation cases, along with an examination of several theoretical axes of conservation, shows that a more productive approach to conservation would be that of conservation reasonableness. This view, advanced and outlined in this paper, suggests that a focus on the channels through which free and open discourse can occur ensures a flexible, practical, and ethical conservation approach.

Keywords Conservation · Management · Ethics · Minimalism · Grizzly

Seventy-five years of gold prospecting and explosive real estate development were all it took to extirpate the golden grizzly bear from the wildlands of California. While the grizzly bear species (*Ursus arctos*) persists in parts of North America, the California subspecies (*Ursus arctos californicus*) has been extinct in the wild since the 1920s (Storer and Trevis 1955). It is now relegated to a lonely last march across California’s state flag. In response, some conservation advocates have recently taken to promoting the idea of returning the California grizzly to the wild, modeling

their efforts after other successful ecological reintroduction efforts, like the reintroduction of wolves to Yellowstone (Lee et al. 2021).

While many instances of ecological restoration demonstrate that it is possible to restore large mammals to their historic range and that such restoration efforts can serve to rebuild ecosystems and their processes, several varieties of a dominant conceptual orientation to conservation—each of which we spell out below—present hidden obstructions to such programs, keeping bears on the flag, but off the land, in California. Many conservationists often approach the problem of protecting and restoring nature with a policy that sets minimum standards, endeavoring to achieve only an isolated minimal conservation goal. When conservation policy sets minimum standards for the protection of nature, objectives like restoration, novel ecosystem management, rewilding, and other novel issues in intervention ecology become unsupported and underrepresented.

Grizzly conservation efforts, at least so much as they have unfolded so far, reflect this common orientation to conservation, which is the topic of this paper. One question that must be asked is whether it even makes sense to “conserve” the West without grizzly bears. We aim in this paper to address the conceptual orientation that we call “conservation minimalism,” or the idea that we can succeed in conservation by

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correctly setting a minimal standard for the protection of a given ecosystem or subspecies. In this paper, then, we argue two related theses. One thesis is particular to bear conservation: that if we trace out the implications of conservation minimalism, then we are naturally led to the conclusion that bears are unnecessary for successful conservation in California. We find that this view is problematic for reasons related to our second thesis, which is more general. Our second, and arguably more critical thesis, regards the idea of conservation minimalism itself: that conservation minimalism misses several important points about conservation both in effect and in spirit. Instead, we argue that a more productive approach to conservation would be that of conservation reasonabilism, which we roughly outline below.

Returning then to our first concern, we suggest that reasonabilism is not only a more productive approach to conservation, but that it opens a window to make new sense of grizzly reintroduction efforts, and to conceive of them as maybe not necessary, but operating within the spirit of conservation. In other words, conservation minimalism fails to help conservationists achieve their objectives, and when assessed in conceptual terms also fails to accord with the underlying and intuitive “spirit of conservation.” Though it is difficult to articulate concisely what this spirit of conservation might entail, and it is beyond the scope of this paper to spell this out in detail, we suspect that almost all practicing conservationists are currently operating under some conception of what conservation is (much like many judges might operate in the spirit of the constitution, or much like a diplomat might act in the spirit of cooperation). Moreover, we contend that part of the job of philosophy is to clarify matters of this sort and aim to argue below that reasonabilism succeeds at capturing this spirit where minimalism fails. If one agrees that conservation practice operates with some shared or presumed “spirit” guiding the protection of nature, then our efforts here will cohere; if instead one disagrees, then we accept that our paper may not provide a meaningful critique, but we worry then that conservation as an endeavor undertaken by a community of people who call themselves conservationists falls into conceptual tatters. We are willing to wade into these muddy waters nonetheless.

This paper proceeds in six sections. Our “[The axes of conservation](#)” section surveys several historic approaches to conservation, identifying a general tendency toward conservation minimalism. In the “[Varieties of minimalism](#)” section, we elaborate on the many varieties of minimalism, ranging from “mere existence” minimalism to “path of least resistance” minimalism, with the objective of illustrating the shortcomings of the minimalist approach. We then move on to discuss possible alternatives to minimalism, including maximalism, optimalism, and rationalism—each providing their own priorities, challenges, and foci. This discussion leads us to introduce the idea of “reasonabilism,” which we

present as an alternative to all four of the above conservation approaches. Near the end of our paper, in the “[Discussion and objections](#)” section, we briefly analyze the reasonabilist approach and compare it to the above approaches to conservation. Finally, we will address three possible objections.

The axes of conservation

Over the years, the conservation conversation has been shaped by a series of debates that have characterized both periods and approaches to protecting nature. Where early debates were most famously reflected in the classic Muir/Pinchot division (“preservation” vs. “conservation”), later debates developed around other axes: older versus more novel approaches to conservation and whether conservation should be focused on the protection or the promotion of species (Callicott 1990; Callicott et al. 1999; Doak et al. 2014). Though each of these debates has unfolded slowly along the historical timeline of conservation, the ideas remain embedded in and essential to the conservation discourse.

While an exhaustive discussion of these conservation debates is beyond the scope of this project, we introduce these axes to point out that so many conservation debates are rooted in an attempt to make sense of and shape the future of conservation. Such polarities have all tried to get at some deeper conservation spirit by defining a course for conservation practice, but have also failed to forward a coherent and comprehensive conservation vision. It will help to give a brief overview of these ideas and the influence that they have held over conservation policy.

Preservation vs. conservation

In its most traditional invocation, the term “preservation” refers to the setting aside of natural resources, whereas the term “conservation” refers to the wise use of natural resources (Pinchot 1910; Muir 1912). The question, in part, was about how to approach values in nature: whether natural value should be preserved and protected from damage, harm, or trammeling, or instead should be conserved such that access to nature’s value could be tapped and utilized in a way that is most optimally beneficial to human flourishing.

As is well known to almost any student of environmental history, this sharp divide was expressed most classically in the debate over whether to dam Hetch Hetchy Valley in Yosemite National Park. While “conservation” has grown to include both poles in this debate, this axis suggests that conservation practices are either about locking “pristine” nature in a box, never to be touched again, or about bottling up nature for future “wise use.” We can see this polarization still reflected today, for example, in the restrictive

management practices of designated wilderness areas versus the more open management practices of our national forests.

Old vs. new conservation

Over the years, however, the goals of conservation have evolved to reflect more contemporary social, political, and economic considerations. Where the question for Pinchot- and Muir-style “old” conservationists was whether conservation principles ought to be oriented around the preservation or the conservation of value, “new” conservation scientists have sought instead more politically and practically expedient principles by which to guide conservation. In this way, the “wise use” of resources, otherwise advocated primarily by conservationists, was sidelined by more pressing considerations regarding resource triage, political feasibility, and economic efficiency (Pinchot 1910). Do we protect nature for nature’s sake, for human use, or for a variety of complex reasons?

“New conservation science” (NCS) emerged in large part in response to an increasing awareness that human interests are inevitably tied to decisions made with regard to conservation (Kareiva and Marvier 2012). To some degree, NCS tolerates both environmental change and environmental degradation to accommodate human interests. Whereas the older approaches to conservation understood nature as fragile and irreplaceable, NCS acknowledges instead that nature can be resilient and capable of returning to its previous thriving condition (Kareiva and Marvier 2012). Curiously, this concern also dovetails with the “end of nature” and the rise of the Anthropocene discourse emerging more broadly in environmental advocacy over the past 30 years (McKibben 1989, 2006, Crutzen 2006, Marris 2011).

Advocates of the NCS approach emphasize that conservation is now unfolding under a different context than when the conservation movement first emerged. An important reality that conservationists must face today is that the planet now supports seven billion people, most of whom aspire to a better economic life. Old conservation represents a commitment to the conservation movement’s enduring values, like protecting nature for nature’s sake (Doak et al. 2014). This often involves setting and maintaining baselines for nature based on some historic function and composition, which in itself presents a number of challenges (Marris 2011, Lee et al. 2014). We see the polarization between old conservation and new conservation when we contrast hallmark efforts to save endangered species like the bald eagle with more recent proposals to protect novel ecosystems like the Chicago Wilderness (Moskovits et al. 2002; Light 2007; USFWS 2007). Hallmark ESA cases reflect a desire to set a firm natural baseline rooted in ecological history, whereas contemporary efforts like the Chicago Wilderness emphasize an ahistorical goal that is more attuned to novel ecosystems.

Minimalist vs. maximalist

Finally, and most importantly for this paper, we find yet a third polarity emerging out of the conservation literature. That is, some conservationists insist upon a kind of “minimalism” about conservation, which is to say that they insist upon setting, reaching, or maintaining some minimum conditions to meet one narrow conservation goal (Bishop 1978; Shaffer 1981; Berrens 2001; Flather et al. 2011). Minimalist conservation prioritizes one goal or value to the exclusion of others, and in some contexts, it appears to be “satisficing minimalism” (Simon 1956). The problem here is that, in crowding out the multivariate other goals of conservation, minimalism not only leaves these other goals off the table but also opens itself to the criticism that it only just barely achieves the goal that it sets out to achieve. When, for instance, conservationists endeavor to maintain merely a minimum stable population for, say, the Gunnison prairie dog, the species is prone to be denied endangered species protections until it faces a dire threat of extinction (USFWS 2013). In so doing, a minimalist approach may not require measures to provide the assurance that a goal or standard, if achieved, will truly be sustained over a substantial duration of time.

Maximalism, by contrast, is far less well represented in the field, but it implies an unyielding appeal for greater conservation. Whenever there is a question about whether to conserve or not conserve, maximalism may insist on erring on the side of conservation. In this way, maximalism prioritizes conservation above all other interests in all contexts.

Protecting nature to some minimum standard has taken hold of many policies, programs, and conservation pursuits, perhaps because a minimum standard holds practical appeal. Though minimalist approaches appear to dominate many or most conservation endeavors currently in force, there are still voices in the conservation community that favor maximalism.

Though these three polarities may not exhaustively capture the complexity of the debate in the conservation literature, they do suggest that there is some guiding idea that has moved conservationists for decades, all instantiations of which have been in dispute. Each debate reflects an attempt to identify and defend a set of actions that operate within the “spirit” of conservation. The challenge here is that there is considerable disagreement about what this spirit is, and many attempts to delineate or characterize the spirit of conservation are invariably bound by the context in which they are articulated. Most often, various dyads aim at describing value in nature in some way that allows us to promote, protect, or restore that value. In this way, then, conservation theory has been widely built around the idea that one can identify pockets of value in nature and then, by virtue of this value, protect it. This value-based presumption of

conservation is in part to blame, we contend, for hurdles and disagreements in successfully protecting nature.

Part of the objective of this paper, then, is not only to demonstrate that some contemporary variants of conservation do not operate in the so-called “spirit of conservation” but also to shore up the definition of conservation so that we do not run off the rails in the name of expediency. We argue here for forward-thinking, inclusive, multidimensional, and most of all, “reasonable” conservation. Reasonable conservation—or what we will here call “reasonabilism”—gives due consideration to the many motivations, justifications, and dimensions of conservation. To understand just how our approach to conservation differs from alternative approaches, it will help to dive deeper into the varieties of conservation minimalism.

Varieties of minimalism

We can further understand the concept of minimalism by looking at the minimal standards that often appear in real-world conservation cases. More specifically, we estimate there are at least five distinct varieties of minimalism (probably quite a few more), each of which should be readily recognizable. This is not to say that minimalism manifests in these variations as a real-world practical matter, but rather that we can understand five conceptual threads of minimalism as guiding the philosophical approach of real policies and practices. In this section, we try to make sense of the various ways in which minimalism might be understood as placing demands on conservation, with the objective first of clarifying how we see these various conceptual interpretations as manifesting, so that we may later shed light on their significant shortcomings. We briefly identify and explore each variety below, and while we offer some initial analysis and critique in an attempt to clarify their implications, we return to each variety again in the following section, explaining problems emergent from them. These varieties of minimalism hold hostage discourse in cases like California grizzly reintroduction—something we will come back to in later discussion.

Mere existence minimalism

Consider the first cases of “mere existence” minimalism, which commonly appear as attempts to ensure that there is at least one representative of a species “alive” somewhere in the world—in the wild, in a zoo, or perhaps in a genetic bank. Such efforts, presumably, serve as a safeguard against the permanent loss of genetic information and eventual extinction (Hamilton 1994; Ryder et al. 2000; Canessa et al. 2016). While merely protecting a single specimen from extinction (and calling it the preservation of the

whole species) may represent a strong symbolic conservation measure and maybe even serve as a public palliative for those concerned about species extinction, it offers little to promote a substantive conservation agenda. Unfortunately, we do not know how to successfully prevent extinction if we only protect species once they face existential threats (some will be lost). Furthermore, an intractable theoretical challenge emerges from assigning only a narrow scope of value to a species.

By projecting all conservation value onto the final remaining individuals of a species, mere existence minimalism grants final survivors a kind of celebrity or mythical status. Consider the case of Martha, the last remaining passenger pigeon. The passenger pigeon (*Ectopistes migratorius*), once abundant across eastern North America, went extinct in 1914 with Martha’s death at the Cincinnati Zoo.

A “mere existence” perspective would understand the historical abundance of the passenger pigeon as relatively void of value. Though passenger pigeons once flocked in the millions, if the mere existence of the species matters, then only the moment of Martha’s passing would be of concern to the conservation of her species. Martha’s case is a more restrictive example of what others have called the “Museum Piece” analogy, whereby we are curating mere examples of a world gone by (Vucetich and Nelson 2014). Addressing concerns about curation and museum pieces, one might attempt to salvage a form of mere existence minimalism by suggesting that a species is valuable so long as it remains in the wild. Often, however, costly and expansive efforts are made to save the wild presence of a species, knowing full well that those efforts cannot succeed. Such emphasis on mere existence overlooks the obvious fundamental concerns of conservation.

Viability minimalism

A slightly different version of minimalism seeks to conserve up to a minimum population in order to ensure that a given species does not go extinct within some time frame. Gray wolf conservation in the USA, particularly in the Great Lakes and Mountain West, provides a handy example. Attempts by conservationists to maintain or establish wolf populations in limited and controlled places echo a conservation orientation aimed at a minimally viable population of some species within a confined area (USFWS 2003, 2011; Carroll et al. 2006). Examples are not limited to wolves, and this version of minimalism seems to be the dominant approach to endangered species protection in the USA. It is the apparent goal of agencies implementing the ESA, which generally determines that species recovery goals have been achieved once a minimum viable species population has been attained (USFWS 2014, Doak et al. 2015, Wolf et al. 2015). These same agencies are inclined to deny protections

for species that are candidates for an “endangered” listing when drastically reduced remnant populations show some potential for remaining “stable” throughout the “foreseeable future” (USFWS 2013, 2014). Viability minimalism is typically not concerned with a species’ historic numbers, nor is it concerned with downward population trends (unless that suggests something of importance to the last remaining populations).

Like mere existence minimalism, viability minimalism suffers from concerns surrounding its coherence to integrated conservation ends.

Sustainability minimalism

Conservation goals that assess success based on long-term sustainability present a view of sustainability as the minimum standard for our conservation efforts. For example, a recent international treaty has agreed to protect Pacific bluefin tuna with the goal of increasing wild stocks to 20% of historic numbers by capping fishing to build a sustained yield for human consumption (Fifield 2017). Conservation of the bluefin under fishing agreements aims to guarantee future provision of economic benefit and harvest potential. Sustainability, however, overlooks other conservation considerations.

Path of least resistance minimalism

By pursuing conservation measures that are generally easy to achieve, cheap, and not in competition with alternative interests, land conservation efforts in North America have historically followed another form of minimalism we term the “path of least resistance” minimalism. What occurs with the path of least resistance minimalism is the protection of nature that is not under particular threat. We see this kind of approach to conserving the salt flats of Death Valley or the high glaciers of Denali without opposition from the public. Simply put, many of our national parks, wildlife refuges, wilderness areas, and protected places are in the mountains, deserts, glaciers, and remote corners of the country that are most difficult to otherwise develop and exploit. Areas like salty deserts with 130° summer temperatures or icy slopes at 20,000 ft do not offer much in terms of economic value, potential for human settlement, or other incentives for development, and, therefore, the threat of human-induced environmental decline in these areas is not particularly acute. It may seem unproblematic to take solace in the protection of wild places, but pursuing the path of least resistance in conservation fails in the long run—it is a bit like companies that seek to offset their carbon output by protecting forests that otherwise are not under threat. Path of least resistance minimalism provides a vague and meager assurance that something

is being conserved or that conservation of some kind is taking place even though little action is being taken or sacrifices made on behalf of conservation.

Habitat minimalism

Finally, with habitat minimalism, conservation efforts aim to protect only the minimum habitat that is essential for the survival of a species. For instance, the American chestnut is a critically threatened deciduous tree native to the Appalachian region and northeastern USA. The chestnut blight famously devastated the population more than a hundred years ago, and climate change now threatens the chestnut’s survival. Much of the chestnut’s habitat runs through heavily populated communities—private land and development pressure have pushed forest conservation into slivers and islands of once-connected landscapes in these communities. If we focus efforts to save the American chestnut on its occurrence within such slivers, the species is likely not to survive. Current efforts, however, instead seek to assist the tree in migrating to other, novel, suitable habitats, recognizing the failures of habitat minimalism that guided past efforts of the last hundred years (Clark et al. 2022). Habitat minimalism presents both a geographic question of how much habitat to protect and a question of how aggressively to protect that habitat. Again, habitat minimalism is reflected in the prevailing federal US endangered species protection protocol (USFWS 2014). This approach largely ignores the conservation benefits of geographic areas that can become suitable for species once threats to habitat in that area are mitigated. Habitat minimalism generally places emphasis only on the current habitat range as opposed to the historic range (Carroll et al. 2010, USFWS 2014). Habitat minimalism also gives sparse consideration to the fact that massive areas of habitat have been destroyed or altered such that they can no longer support species populations.

These varieties of minimalism are some of the conceptual pressures keeping bears out of California because they are in other places. For example, viability minimalism pushes against expanding or reintroducing the grizzly to additional historic habitat. There is little reasonable expectation that the grizzly species will go extinct any time soon, so there is no need to reintroduce populations into more territory today for the sake of species viability. Looking for value to motivate grizzly reintroduction fails to recognize the suite of reasons at play. Minimalism cannot account for past failures and unjustified poor decisions. The potential value offered by returning bears to the Sierra does not fit neatly into a box of minimalism. There are undoubtedly other ways to cleave the many varieties of minimalism that we have not discussed, but by addressing minimalism more abstractly, we hope to capture these variants as well.

Argument against minimalism

If we give an honest assessment of what minimalism aims to achieve, then several important shortcomings come into view. When assessing the objectives of minimalism, however, it will be helpful to think about what we will be calling here the “spirit of conservation”—which, while somewhat amorphous, we take to reflect a hypothetical view of conservation that a wide community of conservationists would embrace and defend.

First, regarding mere existence minimalism, it is probably safe to assume that most conservationists are not in the conservation game just to ensure that a species exists. A world full of examples of what once existed but no longer does reduces the entities in nature to the kinds of things that one might keep on reserve in a zoo. As the case of the passenger pigeon shows, mere existence minimalism is also unlikely to succeed; when only a minimum number of any given critter is kept, the long-term survival of that thing becomes less certain. As we observe above, though one ought not to take “what most conservationists” do as evidence of what conservation ought to be, we feel confident in suggesting that the spirit of conservation could not be captured by mere existence minimalism. Similarly, maintaining only a minimum baseline of wild existence will often not be enough to support widely agreed-upon conservation goals, like ecological function, genetic biodiversity, and population diversity (Soulé et al. 2005).

Second, it would seem that the spirit of conservation runs against viability minimalism in similar ways. While we clearly do want populations to be viable, we do not want merely viable populations. Rather, conservationists are generally looking to establish something like thriving populations, successful populations, or populations that are useful, tenable, beautiful, secure, or any of many other conceivable values in play. Populations needed to ensure the viability of a species could still fall well below the numbers needed to maintain important species interactions and ecological function (Soulé et al. 2005; McConekey and Drake 2006). Furthermore, inasmuch as viability minimalism offers a stationary management target, it may also impose a constant need for readjusting management efforts. For instance, a viability approach would not preclude culling a population down to its viable minimum. Once a viability threshold is reached, protections are set in, allowing populations to grow and hunting to resume. Such a viability policy would then be open for reevaluation with every turn in a population, leaving managers stuck in a repeated cycle of listing and delisting. While hunting has a long history with conservation, it does not typically include a constant oscillation of this sort—for example, Ducks Unlimited, one of the nation’s oldest hunter-driven

conservation organizations, has protected 15 million acres since 1937, with the explicit vision of “filling the sky with water fowl today, tomorrow, and forever” through consistent and long-term wetland protection. Such efforts are not aimed at viability but at something more akin to flourishing. Finally, given the immense uncertainty surrounding the fate of species in a world of changing climate and environmental upheaval (not to mention the fact that viability analyses are probabilistic in nature), maintaining only trace populations of species by no means guarantees their continued existence (Shaffer 1981; Ludwig 1999; Coulson et al. 2001).

Third, sustainability minimalism suffers from related problems. Conservation, one might argue, is not concerned straightforwardly with sustainability but rather with responsibility. To suggest the former would imply that the key governing principle of conservation ought to be ensuring that uses and/or profits from nature continue into the foreseeable future. For example, if we could sustainably manage a commercial whale hunt, many conservationists would still find such a practice unacceptable, for reasons that have been widely scrutinized through international discourse (Friedheim 2017).

Fourth, supposing instead that we take the approach of “path of least resistance” minimalism, we are again left with an unpalatable option. Taking the path of least resistance demands little but instead asks us to do whatever would be easiest. In principle, ethical obligations place demands and constraints on our actions, and taking the path of least resistance leaves conservation minimally without much guidance, or more worryingly, complicit in degradation.

Fifth, habitat minimalism fares no better. Protecting a minimal habitat as “critical” pushes the envelope of mere existence minimalism further but still only maintains the outdoors essentially as a terrarium disconnected from history, freedom, or spontaneity.

The takeaway here is that no matter the variety of minimalism, there will always be some remainder because, at least in part, minimalism is necessarily reactive rather than proactive. That is, the logic of minimalism seeks to preserve some pre-designated value in the face of a threat rather than to evaluate and juggle the full spectrum of worthy conservation possibilities. By setting a minimum standard against which conservation is judged, conservation becomes, effectively, a game of “whack-a-mole,” a conceptual lens that pushes the practice of conservation toward addressing threats as they pop up. While it is obviously laudable to protect nature from threats, such a position leaves conservation on a defensive footing because threats are circumscribed by a narrow conception of value. Minimalism, as a normative orientation for guiding policy goals, responds to trends only as they threaten a standard, rather than seeking to create trends that support a conservation ideal.

Each of these varieties of minimalism inevitably leaves out worthwhile targets for conservation. Any minimal standard of conservation will always have theoretical remainders (like values or obligations we have taken on) and practical remainders (actual stuff in nature that we want to protect but do not under a minimalist regime). Such theoretical remainders might include ethical obligations to species not represented by a minimal standard. Practical remainders might include actual, real-world animals like the golden grizzly.

Alternatives to minimalism

Three alternative conservation orientations readily present themselves and can help explain the tendency of conservation policies and programs to favor minimalism. For a variety of reasons briefly explored below, each alternative is problematic, thus leaving well-meaning conservationists with few options but to return to minimalism.

Maximalism

If it is true that we ought to protect nature, then it may seem to some that we ought to protect all of nature. Such a “maximalist” approach solves problems concerning the identification of an arbitrary, vulnerable, or ineffective minimum. However, while such expansive environmental concern has intuitive appeal, maximalism fails to provide a theoretically plausible alternative because it demands we conserve everything. There is conceivably a threshold at which the additional benefits of more conservation begin to diminish. For example, we may want to protect large predators, but at a certain point, those predators pose a competing risk to people.

Maximalism is also simply not practical. Limited resources, technology, and knowledge further constrain conservation efforts. The age-old “ought implies can” argument defends us from maximalism outside of such constraints—since we cannot protect everything in nature, it cannot be the case that we ought to protect everything in nature.

Finally, maximalism is unattractive because it will be overly demanding. Even within the constraints of what we can do, we simply do not want to protect everything, and for good reason (more on this to come).

Optimalism

Another thought might be to try to optimize between two or more conflicting values. For example, maybe the best directive for conservation is to optimize between ecosystems and pollutants. One might, for instance, seek not a minimum level of pollution but rather an “optimum” level of pollution. Baxter argues as much in his famous “People or Penguins:

The Case for Optimal Pollution” essay (Baxter 1974), where he suggests that we can understand the protection of nature from an anthropocentric perspective by optimizing the instrumental values of nature. In such optimization cases, one would seek to balance, say, costs and benefits, or beauty and authenticity. Whereas with minimalism, the objectives of conservationists will be to identify the appropriate and minimal target population, so too will the objectives with optimalism depend on identifying an appropriate target. Among the many objections saddling this view, setting an optimal level of conservation implies that some optimal level of degradation is morally and politically permissible. Additionally, optimalism introduces the problem that conservation objectives both simultaneously authorize and prohibit the taking of wildlife. Given all of the pressures on nature, this presents a conundrum similar to the conundrum with minimalism: a search for opportunities to degrade nature.

Rationalism

Given social, political, personal, technological, and economic limitations, we inevitably engage in many types of prioritization. We then run into questions of ecosystem triage or species triage: the idea that we cannot save everything, so we should orient conservation toward the protection of nature that is valuable to us. Rationalism, a third alternative to minimalism, leans strongly toward a self-interested or self-preservationist approach to conservation and follows from a more Hobbesian, contractarian line of thinking (Gauthier 1986; Gaus 1997). It is a perspective that frequently re-emerges in the NCS discourse. Kareiva and Marvier, two prominent figures in the rationalist discussion, tend to highlight scenarios in which conservation provides a discernible benefit for human beings, including, perhaps especially, the provision of ecosystem services (Kareiva and Marvier 2012). However, an immediate problem with the rationalist approach is that there is not a perfect overlap between what is beneficial to human beings and what is beneficial to environments or species. Only taking advantage of those scenarios where environmental protection is also in the interest of the human individual or community leaves a sizeable number of environmental concerns unaddressed. Environmental values, ethical obligations, and practical concerns that fall outside the intersection of human and environmental interests are similarly ignored.

Back to the bear case

Just as it would be a mistake to maximize the number of bears—we do not want bears wandering the streets of San Francisco, for instance—so too would it be a mistake to optimize for bears. Even if optimization is prioritized across spaces—optimizing habitat for humans and habitat

for bears—there is still an open question as to how many bears we should allow and where. These questions cannot be answered by conducting an analysis of costs and benefits, as optimization algorithms seem to entail, but rather must be scrutinized using alternative methods and public discourse. So too with rationalism, self-interest serves as a poor guide to restoration or reintroduction, since these efforts often aim not only to repair damages to environments so that they are more valuable to us but also often to address past wrongdoing. In principle, at least, the aim of restoration need not therefore be benefits alone but could be repairing a past wrong. Fortunately, there is at least another way to justify and steer conservation efforts.

Reasonabilism

Though it may appear that we are limited to the above options—to minimize, maximize, optimize, or rationalize—such thinking betrays an underlying assumption about ethics that often goes unchecked in the conservation literature—that is, an underlying assumption that when one encounters value in the world, one should take steps to promote or preserve that value. If instead one construes the conservation conundrum as a problem not of value but rather of obligations, permissions, and restrictions, then conservationists are in a better position to navigate conservation efforts and avoid complications arising from minimalism, maximalism, optimalism, and rationalism. For instance, O'Neill and others propose that the environmental conservation community should engage in a kind of “agent-centering” or “obligations-based reasoning” (Nagel 1986; Hayward 1994; O'Neill 1997, Lee et al. 2014). Rather than requiring clarity on blurry or contentious concepts of value, such an orientation instead demands clearly articulated reasons for human impacts on the world. “The advantages are, so to speak, structural; they allow one to approach ethical questions, including those of environmental ethics, in full recognition of the unavoidable core of anthropocentrism, namely, that obligations must be held by humans (often working in and through institutions), and without assuming either that there are real values embedded in the environment or that there is some generally valid subjective metric of value” (O'Neill 1997). The thought, in rough contour, is that conservation decisions are better arrived at when a community of rational and reasonable interlocutors comes together to determine what to do about a given conservation concern.

What is needed for “reasonabilism” is some sort of reasonableness test. In this case, we are proposing that just such a reasonableness test can be found in the theorizing of justificatory liberalism, preferably of a Kantian or contractualist sort. This approach requires agent-centered responsibility to be hashed out through the interrogation of reasons, not the definition or defense of value. The mechanism

for identifying ethical obligations or commitments is not the topic of this article, but such identification could be grounded either in actual discourse or in a hypothetical contract (see, for instance, Dryzek 1990a, b; Habermas 1991; Ott 1993; Scanlon 1999).

Reasonableness can be achieved through a system of public justification that considers the full spectrum of relevant ethical, political, economic, and practical concerns that factor into decisions like grizzly bear reintroduction. A broad discussion of what conservation means for environments, species, and people can forward the elucidation of reasons within any particular context. Crafting a reasonable reintroduction policy requires an honest assessment of what proposed measures will truly achieve (in terms of values, outcomes, honoring ethical commitments, etc.).

One upshot of a reasonabilist view is that conservation is less risky because we are not waiting until something is endangered to conserve it. The important conservation imperative can become designing and implementing good institutions—whether they be citizen juries or stakeholder meetings—that will facilitate open and constructive discourse about how to proceed. It is this alternative for which we advocate.

Discussion and objections

As we have suggested, conservation approaches including minimalism, maximalism, optimalism, and rationalism invariably leave a remainder, in part because such orientations depend on an antiquated ethical thesis about what conservationists are doing and why they are doing it. The problem stems from an underlying presupposition within the conservation community: that protecting nature effectively means protecting the value of nature. If this supposition holds, then conservation necessarily becomes a project of discovering, defining, and retaining that value. Such assumptions naturally push conservation toward any of the abovementioned principles, most notably conservation minimalism. Earlier in the paper, we discussed a few axes of conservation that have historically driven the conservation debate, each of which seeks some way of understanding or shaping conservation that resonates with a more abstract idea that we are here calling “the spirit of conservation.” As we have suggested, we find this path fraught. We propose instead that conservation must stand on some sort of deliberative platform, invoking a criterion of reasonableness in order to find a justified path.

The idea, then, is to shift conservation from a reflexive reaction to the loss of value—value, incidentally, that will forever be in contention—to a more proactive pursuit. The focus on environmental value in our current minimalist approach and the possible alternatives of maximalism,

optimism, and rationalism emerge out of the threshold mentality on which such orientations are built. Each of these orientations identifies value (i.e., a minimal number, a biotic community, an interest, and so on) and then sets a threshold by which that value can be maintained. We can, however, avoid the threshold problem by opening up conservation to deliberation, public scrutiny, and greater participation. This is the imperative of reasonabilism.

Such an imperative, broadly speaking, is to provide the channels through which discourse can occur freely and openly. This involves both theoretical considerations about the nature of speech and communicative interaction but also procedural considerations about how to facilitate an open discourse that is not subject to manipulative forces such as the economic market, political factors, or self-interest. Not only will such a discourse be more inclusive in terms of participation, but research has shown that conversations generated through such a discourse tend to offer a wider set of options for conservation (Dryzek 1990a, b). More importantly, using ideal speech conditions as the standard for reasonableness sets a bar for policy conclusions that are all at once rights-respecting and fallibilistic (meaning that they are subject to revision should complicating factors or more information come to light). There is too little space in a paper of this nature to further engage this topic, but the literature on deliberation and reason is fertile.

There are, naturally, a few objections that one may raise in response to our proposal. We only have space to cover two of the most pressing here.

One thought may be that if the value is a metaphysically real property, then conservationists ought to locate that value and protect or promote it. Pragmatically speaking, however, environmental value is a contentious notion, and though some defenders of value may offer compelling arguments in support of this position (Rolston 1999; McShane 2007), the existence and location of this value are far from a settled matter (Norton and Minter 2002). Independently of these somewhat more academic theoretical debates, values in nature are at least disputed fairly heavily in the public sphere. Adopting a reasonabilist approach to conservation avoids this controversy entirely by positing a more pragmatic, fallibilist alternative that is not only in tune with the policy-making practices of the conservation community but also in line with the standards of the natural sciences. That is, the reasonabilist account avoids the value discussion by insisting on input from a community of reasonable and rational interlocutors.

Second, one may object to our characterization of conservation as itself minimalist, since the status quo value-oriented approach has, in practice, protected thousands of species. We contend that the theoretical problems of minimalism we discuss above remain in play, however, because identification of value fails to get at inclusive conservation

goals. Put a little differently, there is little denying the real and major conservation successes over the past several decades, but there have also been many notable setbacks. What we offer here is a theoretical critique of the conceptual backbone of conservation which we hope will help address the ever-increasing challenges facing the natural and social world.

Conclusions

Whereas minimalism is limited by the value theory that informs it and alternatives like maximalism, optimism, and rationalism are limited in their scope, reasonabilism insists upon the inclusion of all affected parties in a decision-making process that, by definition, establishes as reasonable the conclusions that those parties reach. In this way, reasonabilism is considerably more inclusive of varying publics than other approaches. Such a “proceduralist” position forces conservationists and land managers to ask not only about outcomes but also raises new questions about processes. What procedures will make for a fair conclusion that respects the positions of all participants in the discourse? The standard of reasonableness is determined by a participatory, widespread, collaborative process.

Reasonabilism in conservation can lead to a more nimble treatment of conservation issues by being all at once adaptive to shifting circumstances and sensitive to the complex historical context in which conservation issues have arisen. To return to our earlier example, the case of California’s golden grizzly bear is beset with a fairly complicated suite of questions about the reasonableness of reintroducing the grizzly. Answers to questions about the reasonableness of reintroduction are hard to come by without public justificatory engagement. When such policies are put into place, an engaged populace can approximate a path forward. Grizzly reintroduction is reasonable, we conjecture, in part because such reintroduction could embody and serve a larger suite of relevant conservation pursuits, including the welfare of the Sierra ecosystem, support for the species as a whole, its cultural value to the state of California, and possible historic responsibilities stemming from the previous anti-bear policy.

Notably, a reasonabilist approach also leaves space to acknowledge the limitations of reintroduction. Just as we may conjecture that a wide, deliberative public could plausibly find it reasonable to reintroduce the grizzly in some high Sierra locations where the bear would thrive, we can equally well conjecture that it is unreasonable to advocate for the return of bears to the San Francisco Bay area. Such a conclusion could likely be assented to by a properly engaged body. A more reasonabilist conservation agenda not only harmonizes nicely with the spirit of conservation but also

aligns with confounding political circumstances that complicate conservation in practice.

Declarations

Conflict of interest The authors declare no competing interests.

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