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## GUEST EDITORIAL

## The Multiple Values of Nature

# The multiple values of nature show the lack of a coherent theory of value—In any context

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## Abstract

1. Pathways to sustainability require a broader and fuller representation of the multiple values of nature in policy and practice. In this *People and Nature* special feature entitled 'The Multiple Values of Nature', researchers interpreted all three key words differently: multiple, values and nature. The articles also engaged variously with concepts, theory, practice and data. In the face of this diversity, some see a burgeoning field and others see a mess.
2. In this editorial, we characterize the diversity of these contributions and consider whether the field is poised to become mainstream. Specifically, we ask what might be limiting its efforts to unsettle the dominance of economic valuation.
3. Like the broader field, the articles engage little with theory, and only one paper engaged with a theory of value (the dominant 'utility theory', rejecting a component of it). All articles thus seemed dissatisfied or disengaged with existing theories of value; this suggests that popular theories of value cannot properly account for the diversity of ways that people value and relate to nature. Perhaps there is a *fundamental lack in how we understand value in any context* (not just nature). As this fledgling field matures, we argue that building theory is key. Specifically, there is a need to articulate a theory of value to accommodate the multiple values of nature, which relates the various concepts to empirics, and which serves as a foundation to guide practice.
4. To facilitate this theory development, we outline a set of ways that a new theory of value would need to differ from the dominant economic (utility) theory of value in order to explain what is known about the multiple values of nature.
5. Whether by illustrating and enlivening an existing alternative theory of value or by inspiring a new theory, perhaps this fledgling field of the multiple values

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of nature is poised to disrupt much broader understandings of what matters to people and why.

#### KEYWORDS

economic value, environmental values, plural values, relational theory of value, relational values, utility theory, well-being

## 1 | INTRODUCTION

Understanding the multiple values of nature and reflecting them in practice is crucial to addressing the linked climate and ecological crises. The reasons are many. Mainstream economic approaches to quantifying the value of nature in a monistic, singular way seem insufficient to enable or inform transformative change toward sustainability (Chan et al., 2020; Díaz et al., 2019; IPBES, 2019; Pascual et al., 2023), even though they have an important role to play in addressing current problems (Dasgupta, 2020; TEEB, 2009). It is intuitive to many people across diverse cultural contexts that nature matters beyond the delivery of goods and services of instrumental value, and beyond abstract notions of intrinsic value (Chan et al., 2016). Notions of value beyond the economic are central to understanding many powerful, crucially important phenomena—for instance, how payments for ecosystem services are not simply vehicles for instrumental values, but deeply implicated in cultures of care and stewardship for land and nature (Chapman et al., 2019; Chapman et al., 2020); how overcoming hardship in nature can root who we are and help make life meaningful and desirable (Kaltenborn et al., 2017); and how identity is often intertwined with diverse values that involve nature, such as love, rights and responsibilities (Gould, Morse, et al., 2019; Gould, Pai, et al., 2019). Increasingly, researchers and practitioners are drawn to understand better how we might more effectively articulate the multiple values of nature and better advocate for their incorporation into law, policy and practice.

In the context of a tremendous variety of life on Earth and of human ways of knowing and experiencing nature, we might expect many diverse ways of valuing nature. And with calls for plural understandings of value come recognition of the necessity for broad and inclusive approaches to the valuation of nature (Chan et al., 2018; Kenter et al., 2019; Pascual et al., 2017; Quintas-Soriano et al., 2016; Tadaki et al., 2017). Such approaches are key for the attainment of recognitional and environmental justice, for appropriate and responsible representation, for demonstrating reflexivity and respect, for growing the conservation constituency, and thus for credible policy and practice (Chan et al., 2017; Díaz et al., 2018; Gould et al., 2018; Loos et al., 2023; Muraca, 2016; Schröter et al., 2017).

To match the diversity of ways of valuing nature, the study of environmental values has seen a somewhat bewildering proliferation of concepts and frameworks to understand those values. Values are held within and shared between individuals

and communities, and are also assigned to objects and entities (Brown, 1984). There are at least eight dimensions of value that are relevant for environmental valuation, and corresponding choices of valuation methodology (e.g. preferences vs. principles vs. virtues; other-oriented vs. self-oriented; market-mediated vs. not) (Chan et al., 2011; Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012). There are intrinsic, instrumental and relational values (Chan et al., 2016; Chan et al., 2018; Díaz et al., 2015; Himes & Muraca, 2018). There are contextual versus transcendental values in the context of social values, shared values and shared social values (Ives & Kendal, 2014; Kenter et al., 2015; Kenter et al., 2019). There are felt values, valued attributes, valued assets and valued entities (Jones et al., 2016; Rawluk et al., 2017; Rawluk et al., 2019; Schroeder, 2013). But while this field has long critiqued economic valuation and the utility theory of value that roots it (Adams, 2014; Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012; Gatto & De Leo, 2000; Kallis et al., 2013), it has adopted a wide range of alternative valuation approaches that do not specify a corresponding *theory of value* (in the sense of a theory that enables the identification of which of several outcomes is better, for an individual or a group, or more broadly).

Like the broader field of the 'multiple values of nature', the articles in this special feature work closely with many of the above value concepts, grounding them in a variety of empirical treatments of relevance to wider practice. Yet only occasionally do these efforts relate directly to a 'theory of value' as we have articulated here (Table 1). In this opening editorial, we review those engagements and contributions, which stemmed from the March 2020 symposium on this topic (hosted by *People and Nature* and the UK's *Valuing Nature Programme*). The articles include a great diversity of contributions, with multiple interpretations of 'value', of 'multiple' and of 'nature' (Box 1). As a set, they are a delightful cornucopia, but we also consider the worry that the field's openness to plural approaches might yield an 'anything goes' approach that lacks rigour, encourages relativism or impedes comprehension and intellectual progress. With this critique in mind, we ask what might enable what the field of 'multiple values of nature' seems to be seeking—for a more plural approach to values to become mainstream. We conclude that realizing this outcome may require much more than the necessary conceptual clarification and specificity that has occupied values scholars (Chan et al., 2018; IPBES, 2022; Kenter et al., 2019); it may require the field to be grounded in a theory or theories of value. This would allow for more integration and thus intellectual progress—not in a hegemonic and prescriptive

**TABLE 1** The papers of the special feature, 'The Multiple Values of Nature'. For clarity regarding data, practice, concepts and theory, see [Box 2](#).

Authors	Title	Engaged with	Description
Acott, Willis, Ranger, Cumming, Richardson, O'Neill, Ford	<i>Coastal transformations and connections: Revealing values through the community voice method</i>	Data, Practice	Collected data on relational values related to the coast via a method involving video interviews, in partnership with Natural England
Azzopardi, Kenter, Young, Leakey, O'Connor, Martino, Flannery, Sousa, Mylona, Frangoudes, Béguier, Pafi, da Silva, Ainscough, Koutrakis, da Silva, Pita	<i>What are heritage values? Integrating natural and cultural heritage into environmental valuation</i>	Concepts	Explored conceptually how heritage interacts with values, and presents a framework for that interaction
Bateman, Anderson, Argles, Belcher, Betts, Binner, Brazier, Cho, Collins, Day, Duran-Rojas, Eisenbarth, Gannon, Gatis, Groom, Hails, Harper, Harwood, Hastings, Heard, Hill, Inman, Lee, Luscombe, MacKenzie, Mancini, Morison, Morris, Quine, Snowden, Tyler, Vangelova, Wilkinson, Williamson, Xenakis	<i>A review of planting principles to identify the right place for the right tree for 'net zero plus' woodlands: Applying a place-based natural capital framework for sustainable, efficient and equitable (SEE) decisions</i>	Practice	Reviewed how decision-making about tree-planting could be improved if accounting for multiple benefits associated with ecosystem services
Byg, Novo, Kyle	<i>Caring for Cinderella—Perceptions and experiences of peatland restoration in Scotland</i>	Data, Practice	Collected and analysed data (via interviews) about care of peatbogs
Eastwood, Juárez-Bourke, Herrett, Hague	<i>Connecting young people with greenspaces: The case for participatory video</i>	Data	Collected and analysed qualitative data via participatory video in urban contexts
Fish, Gould, Chan, Gaston, Cox, Willis, Crowley, Hails, Kenter, Maller, Aimé	<i>Multiple values of nature: horizon scan of key research issues</i>	Data, Concepts, Practice	Elicited expert opinions to identify priority research areas, including conceptual advance and implications for practice
Gould	<i>How creativity can help research on the multiple values of nature become more innovative and inclusive</i>	Data	(Perspective) Suggested ways to employ creativity to improve data collection
Isacs, Kenter, Wetterstrand, Katzeff	<i>What does value pluralism mean in practice? An empirical demonstration from a deliberative valuation</i>	Data, Theory, Practice	Collected data (via a deliberative workshop) on how people deal with value conflicts, with implications for value theories, and value-elicitation practice
Inglis, Pascual	<i>On the links between nature's values and language</i>	Data, Concepts	Collected data (via Q-method) about the link between Basque language and relational value concepts, analysing different perspectives among participants
Maller	<i>Turning things around: A discussion of values, practices, and action in the context of social-ecological change</i>	Theory	Summarized multiple theories (related to the more-than-human world and to social practice) to help understand the relationship between values and action
Marquina, Gould, Murdoch	<i>'Hey, tree. You are my friend': Assessing multiple values of nature through letters to trees</i>	Data, Concepts, Practice	Collected data (via participant letter-writing); analysed in reference to value categories and value-elicitation practice
Ono, Chan, Boyd	<i>Acculturation as an ecosystem service? Urban natural space supports evolving relational values and identity in new female migrants</i>	Data, Concepts	Collected and analysed data (via interviews) about migrants' use of urban green space; proposed a new category of ecosystem service
Staddon, Byg, Chapman, Fish, Hague, Horgan	<i>The value of listening and listening for values in conservation</i>	Practice	Reviewed literature regarding listening methodologies to recommend better integration into conservation and research

way, but in a way that celebrates plural approaches and connects each to the whole. In a way that bridges concepts and theory, links evidence and practice, and enables the conceptual/theoretical to

contribute to the empirical/practical and vice versa. We consider why that might help, and offer initial thoughts on what such a theory might include and how it might appear.

### BOX 1 What's meant by 'multiple', 'values' and 'nature'?

The term 'Multiple Values of Nature' intentionally brings into conversation a plethora of approaches to understanding and articulating the diverse ways that nature matters—and is understood to matter—to people (Díaz et al., 2014). Such an integrated conception, spanning apparently disparate strands of literature, is fundamental to both intergovernmental assessment (such as via IPBES) and this journal (Díaz et al., 2015; Gaston et al., 2019). In this context, 'multiple values of nature' was intentionally inclusive of the study of values and valuation in relation to ecosystem services (Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012; Daily et al., 2009; Daniel et al., 2012; Gould, Morse, et al., 2019; Gould, Pai, et al., 2019), nature's contributions to people (Díaz et al., 2018; Pascual et al., 2017), and relational values and social values (Chan et al., 2018; IPBES, 2022; Jacobs et al., 2016; Kenter, 2016).

'Values' and 'nature' are multifaceted and contested terms; their meanings are highly contingent upon context. In the context of nature, 'value' means both 'worth' (or magnitude of preference, including instrumental or assigned values) and priorities or principles (including held values) (Chan et al., 2018; Tadaki et al., 2017). Two other concepts that are notable in this context, both in this special issue and in the wider literature on the values of nature, are 'relational values' and 'social values'. The concept of relational values (Chan et al., 2016) encompasses values that are "preferences, principles, and virtues associated with relationships, both interpersonal and as articulated by policies and social norms" (Chan et al., 2016, p. 1462). Relational values are distinct from—but related to—held values, distinct from—but overlapping with—assigned values (Chan et al., 2018) and provide an important entry point for diverse scholars of humanities and social sciences to engage with values in science-policy circles (Chan et al., 2018; Díaz et al., 2015; Pascual et al., 2017). The concept of social values has been used in many ways, but recent uses tend to include all forms of held, assigned or relational values beyond the individual or self-oriented (Kenter et al., 2015; Kenter et al., 2019). Few articles were explicit about the notion of values they intended. Assigned, held, relational and social values all seem well represented, albeit implicitly.

Though the word 'multiple' is unambiguous, values were understood as multiple in two main ways. One paper, Bateman et al. (2023) follows a tradition of characterizing multiplicity at the level of benefits rather than values (Chan et al., 2011; Haines-Young & Potschin, 2010), in the sense of multiple streams of ecosystem services or nature's contributions to people. This paper is consistent with the assumption common to instrumental-value approaches that values are monistic, in the sense that worth can be reduced to a single metric and therefore compared. The other papers appear to embrace value pluralism (at least implicitly), in the sense that there are multiple irreducible, and often incommensurable, ways that nature matters (Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012; Mason, 2018). Few papers explicitly discuss pluralism; most simply embrace a diverse set of ways that nature matters to people.

What counts as 'nature' was interpreted diversely, in ways that subset the extensive literature on the construct of nature (e.g. Coscieme et al., 2020). In contrast to 20th Century Western (particularly North American) preoccupation with notions of nature as pristine wilderness, external to humans (Cronon, 1995), virtually all papers engage with nature as a space that involves both people and non-human organisms, with varying levels of management or modification. Some papers, for example, report perspectives from urban research participants who experienced nature in highly human-modified landscapes, as long as there was some greenery and/or animals (Angelovski et al., 2020; Eastwood et al., 2023; Ono et al., 2023).

## 2 | POSITIONALITY

As authors, we come at this topic from diverse perspectives and different starting points, but we also have commonalities. We have a great diversity of academic backgrounds. Three of us were trained at the PhD stage as natural scientists (KC, KG, RH), two as social scientists (CM, RF), one as an interdisciplinary environmental scientist (RG) and one minorly in the humanities (ethics: KC). One of us considers himself an economist of some stripe (an ecological economist: KC). We all do some social research now. We are all native English speakers from high-income nations (Australia, Canada, UK, US), and we are mostly White (KC is a person of colour, of mixed white-Asian descent). We are keenly aware that diverse peoples, including Indigenous, Black and People of Colour, have suffered a kind of ontological hegemony at the hands of White scholars (Todd, 2016),

and many of us have been working actively to counteract that in our work on values and nature. We hope that this work can contribute to that collective effort.

## 3 | INDISPENSABLE DIVERSITY (SPECIAL ISSUE PAPERS)

The special issue papers made diverse contributions to concepts, theory, data and practice (Box 2). One paper addresses concepts as its central focus. Azzopardi et al. (2023) present a conceptual framework that describes how heritage interacts with values about the environment. Three papers address concepts as a secondary focus. Inglis and Pascual et al. (2023) argue that language should be conceptualized as intertwined with relational values and claim that

## BOX 2 Engaging with concepts, theory, practice or data

Any individual paper could make several contributions ([Figure 1](#)). Below we explain what we mean by contributing to concepts, theory, practice and data.

### Concepts

By concepts, we mean organizing ideas that transcend contexts, but not ones that are necessarily predictive of or derived from empirical findings. These concepts, including relational values, shared and social values, cultural ecosystem services, and transcendental versus contextual values, help us to categorize what matters and why (Chan et al., [2018](#); Gould, Morse, et al., [2019](#); Gould, Pai, et al., [2019](#); Kenter, [2016](#); Klain et al., [2014](#)). They are thus helpful for inductive processes to make sense of data collected.

### Theory

A theory is a single supposition or set of connected ideas intended to explain a phenomenon or a range of phenomena. Theory enables the investigation of consistency, whether internal to a study or between studies. A comprehensive theory of value would specify what value *is*, and from what it is derived. Such theoretical specification is necessary for deductive reasoning, by which we might make predictions based on theory, before seeing the data. While inductive and abductive reasoning do not depend directly on theory, theory can nevertheless help guide these, or help interpret findings derived from either. In many fields, theory is expected to be verifiable when confronted with empirical data; some fields also expect theory to be falsifiable.

### Data

By data, we mean statistics or observations amassed for the purpose of analysis, with or without experimental manipulation. Unsurprisingly for a pluralistic area of study, the nature of these data varies greatly. They include quantitative modelling and maps of economic valuations of ecosystem services; survey results about relationships and relational values; narrative quotes; representations of nature in art and popular culture; participatory video; and many other permutations of data related to value(s).

### Practice

Contributions to practice explicitly inform applied interventions to foster or better represent ways of valuing, respecting, or caring for nature. These contributions might include programs oriented toward environmental education, local stewardship or introducing urban populations to nature and nature-based activities. They might seek to convey plural values to improve policymaking.

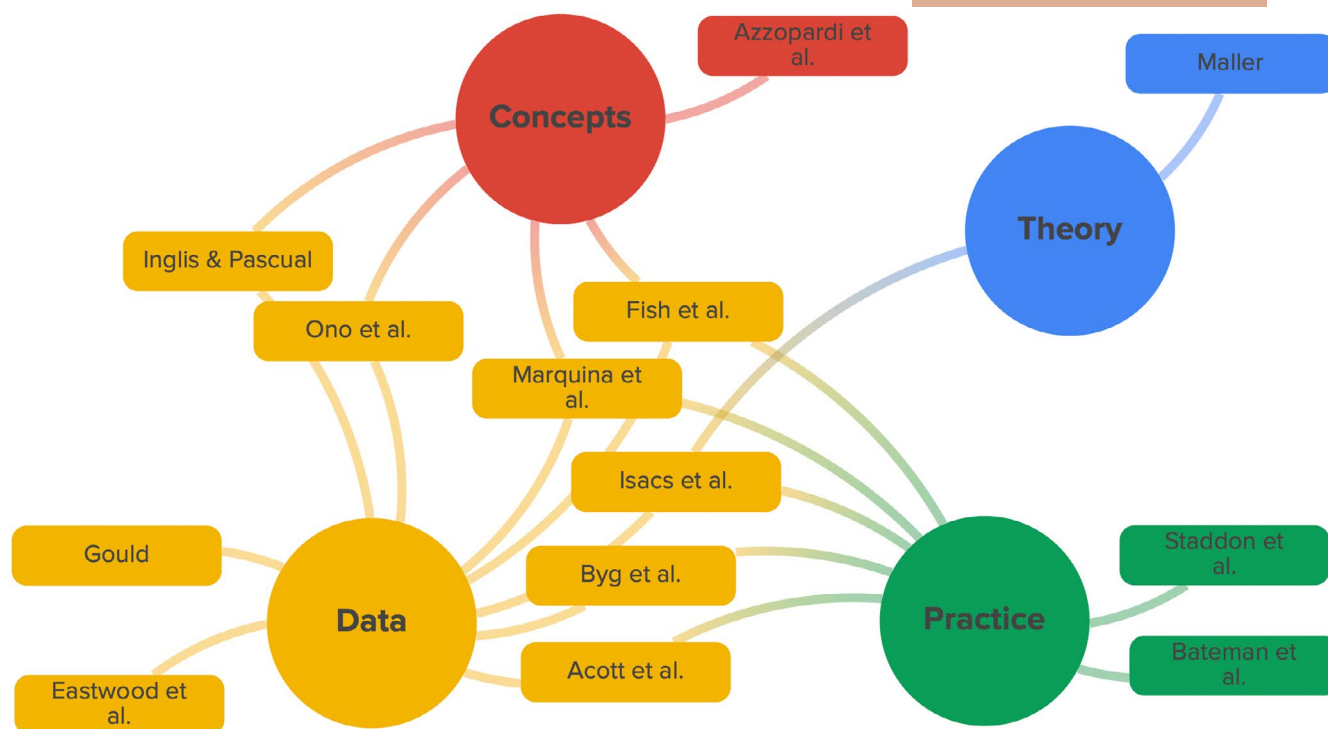
language directly shapes relational values in the Basque country of Spain and France. Marquina et al. ([2023](#)) show that inviting respondents to write letters to trees not only provides data but also encourages people to reflect on their connections to nature, which can both exhibit and foster several concepts of relational values. Ono et al. ([2023](#)) analyse empirical data regarding new migrants' experience of urban nature and make the conceptual suggestion of a new category of cultural ecosystem service intertwined with values (acculturation—enabling the evolution of identity). Fish et al. ([minor revisions](#)) used a horizon-scan approach to identify priority research areas to clarify understanding of key values concepts.

One paper in the special issue focuses on theory. Maller ([2023](#)) summarizes multiple theories related to social practice and the more-than-human world to illuminate the relationship between values and action. Maller argues that we might better consider that action leads to values, rather than the other way around. One paper engages with theory as a secondary focus. Isacs et al. ([2023](#)) explore, within their empirical data, how people deal with value conflicts in deliberation about marine issues in coastal Sweden. They argue that respondents

largely avoid moral conflict using a variety of reasons to reconcile value conflicts, without accepting these actions as rational trade-offs (willing exchanges of gains and losses). These findings thus contest the rational choice model (theory) that is central to neoclassical economics.

The majority of contributions in the special issue (nine of 13 papers) focus primarily on data. These data took many forms and arose from diverse data collection methods: interviews related to peat bogs (Byg et al., [2023](#)), migrants' perceptions of urban greenspace via semi-structured interviews (Ono et al., [2023](#)), the 'Community Voice Method' centered on video interviews (Acott et al., [2023](#)), 'participatory video' with urban youth (Eastwood et al., [2023](#)), deliberative workshops (Isacs et al., [2023](#)), letters that park visitors wrote to trees (Marquina et al., [2023](#)), a modified Delphi expert elicitation process (Fish et al., [minor revisions](#)) and interviews with Q-sorts (Inglis & Pascual, [2023](#)). All but one of these studies analyse qualitative data; some offer numerical summaries of themes addressed. One study (Inglis & Pascual, [2023](#)) analyzes quantitative data—that which resulted from their Q-sort. A further paper, a perspective,





**FIGURE 1** The 13 other papers of the special issue, and their substantial engagements with concepts, theory, data, and practice (connecting lines). Papers are denoted by the first author's surname and coloured according to their primary contribution, as identified by the authors of this editorial.

does not analyse data but rather argues for creativity in data collection approaches (Gould, 2023).

Almost all papers in the special issue at least mention implications of their research for practice, but two papers focused primarily on practice. Staddon et al. (2023) review literature related to the relational practice of listening, broadly construed. They make multiple recommendations about how listening-related methods can be incorporated into conservation research and practice. Bateman et al. (2023) argue that decisions regarding where, when and how to plant trees could be improved by accounting for multiple benefits associated with ecosystem services. Four papers engage with practice as a background focus and audience for their research. Acott et al. (2023) apply the Community Voice Method with Natural England (a UK policy delivery organization), with joint goals of research and engagement; they argue that the videos provided a venue for social learning. Byg et al. (2023) focus their interviews on the care of peat bogs; the issues discussed thus relate closely to conservation and restoration practice. Marquina et al. (2023), whose co-authors include a staff member with the NGO that manages the site, suggest that offering people the opportunity to write letters to trees can aid managers in understanding how people experience parks and offer a novel channel for communication with park staff. Isacs et al. (2023) make multiple suggestions, based on their results, about how conflicting values can be dealt with in practice. Fish et al. (minor revisions)'s horizon scan identified several research priorities that could substantially advance practice in the overlap between values and sustainability, conservation, mental health and well-being, and more.

#### 4 | A DIVERSITY NEED NOT BE A MESS (WHY WE NEED A THEORY OF VALUE)

While this diversity of offerings delights many of us in the field, some scholars worry that openness to plural approaches yields a loose and problematic 'anything goes' approach. This perspective is sometimes coupled with a defence or promotion of unifying approaches to valuation (e.g. economic valuation), apparently because something about economics feels tidy. A mix of unlike things is not a mess if there is an understood structure, order, and harmonious relationships between those things. Indeed, with these elements, what might have been a mess could instead be a compellingly beautiful and functional arrangement. Arguably, for the multiple values of nature, we are not there yet.

The study of the multiple values of nature is arguably defined more by what it is not than by what it is, just as with the subfield of cultural ecosystem services (Fish et al., 2016). That is, the field of multiple values of nature is defined by its rejection of monistic value and the dominance of economic or market values. But it is that rejection of monistic value that puts the field in an unquestioningly pluralistic space and gives the sense that 'anything goes'. We suggest the field need not be defined by what it is not if we have theory to explicitly express what we are for—a normative and evaluative theory of value.

Such a theory of value would enable the judgement of what matters more to different valuers (organisms), what is a better state of the world for a given set of valuers, and how we might

know all that (i.e. which data count, how they count and how they might be combined). It should enable the generation of testable hypotheses. In general terms, theory offers an overarching structure to the mess of concepts and data. This enables comprehension and consistency, including shared terms and understandings of those terms. With theory, we have direction for future investigation, because we have a better sense of what we seek (e.g. in characterizing the multiple values of nature), and how we might achieve those goals.

Without a normative and evaluative theory of value—that is if we only categorize concepts (Kenter et al., 2019; Rawluk et al., 2019; Tadaki et al., 2017)—we cannot determine which outcomes would be better. This impedes the ability to help decision-making. When for instance one person perceives a large intrinsic value at risk due to another's gain of instrumental value, we can only say, "Those are different." And when one person talks about relational values and another about shared social values, we can only say, "Those are related, but not exactly the same." With theory, we can specify how each concept relates to understandings of a better world.

Recognizing that an improved theory of value might defy quantification, consider what a theory of value might nevertheless enable. In the space of plural values, we might know that *Person1* values object *A* and *Person2* values object *B*. Unfortunately, this does not tell us much. Without theory and common measurement, the two findings seem wholly unconnected both from each other and from well-being and human action. In economics, however, a theory of value enables much more. Imagine that *Person1* assigns 2 units of value to object *A*, and *Person2* assigns 1 unit of value to object *B*. Then we know that—all else equal—*A* has more value than does *B* (subject to a wide set of assumptions—including stable and pre-existing preferences, rational choice, equal weighting across individuals and a single commensurate unit of value). We can also say that *Person1* ought to work harder for *A* than *Person2* will for *B*. Also, that if we had a choice between *Person1* getting *A* and *Person2* getting *B*, we should choose *A* for *Person1*. Even though we might reject or even abhor the assumptions that enabled this, we might aspire to make roughly similar claims (more robustly).

Economics largely dominates conversations about policymaking in many contexts at least in part because it enables people to understand, even if implicitly, how they might enable outcomes that are better for people in aggregate. It also uses a recognizable metric of value (money). At least partly for these reasons, economics is broadly (but not universally) thought of and taught as the science of well-being and decision-making. That so many of the assumptions of economics are false in many contexts—as we discuss below—has had no discernible impact on its primacy in many circles of decision making. The predictions of economics about human behaviour may well be wrong, but at least it makes predictions. Arguably, the multiple values of nature literature will always come second in policymaking without theory that achieves a level of prescription and/or prediction.

Although a theory of value is unlikely to include within it a theory of justice, a value theory is necessary to fully apply justice theories. Certainly, a theory of value would likely include the extent to which perceived injustice undermines a person or a group's well-being, via the detriments to life satisfaction associated with resentment or distrust in others and institutions (Helliwell & Putnam, 2004). However, justice theorists and many economists have agreed that addressing justice only through perceptions does not go far enough (Fraser, 2009; Sen, 2011; Stiglitz, 2012). Prominent theories of justice include consideration of the extent to which individuals or groups might be harmed or benefited by a change (Rawls, 1971; Schlosberg, 2007). Without a theory of value, how can we understand the relative magnitude or justice implications of different harms and benefits? (Both Rawls and Schlosberg seem to leave it up to others to determine what counts as a benefit or harm, although both seem to adopt an approach roughly consistent with a capabilities approach of Sen (1999) and Nussbaum (2003).)

Beyond policy and practice, value theory also could offer great gains for research. Both the unified understanding and predictions about human action could present tremendous opportunities for the growth of fundamental understanding through research about who does what, when and why (Eyster et al., 2022). Theory would thus present a key mechanism for the cumulative building of knowledge, such that we can benefit tremendously from research that came before and leave a clear foundation for research to follow.

Many authors, working in contrasting scholarly arenas, have written about theories pertaining to value, but few seem to offer a comprehensive theory that is both normative and evaluative, as we call for here. For example, sociologist Pierre Bourdieu (1984) argued that economic wealth did not sufficiently represent shared conceptions of what is socially desirable. Instead, he argued, social desirability is embedded in what he called 'cultural capital', a kind of cultural value and asset that shapes power and status within societies. More recently, anthropologists David Graeber (2001) and Paige West (2006) wrote about widespread customs such as gifting and ceremonial exchange to theorize about the *kinds* of things that people assign value to, and the meaning-making that happens in the process, all of which goes well beyond market values. Both concluded that market values cannot represent the full range of what matters to people, and West (2006) demonstrated how expanding markets could distort and suppress these other kinds of meaning and value, with broad negative consequences for well-being and social harmony. None of these authors seemed to intend their value theories to be comprehensive and evaluative. On the other hand, philosophers have proposed theories that are comprehensive and normative, like Elizabeth Anderson (1995), who developed a pluralistic 'expressive' theory of value and rational action as an alternative to utility-based theories of value. These philosophical foundations, which do not clearly specify practical application, might nevertheless provide the building blocks for an evaluative theory of value that meshes with the multiple values of nature.



There can never be research or practice without theory. Anyone who claims to 'do without theory', is simply in the grip of a deeper, more powerful theory or set of theories. As human beings, we can only make sense of the terabytes of data available to us by engaging with theories about why things are how they are, even if those theories are largely implicit (Levine et al., 2015). Thus, we cannot even reflect upon our positionality (Milner, 2007), as is increasingly requisite in social research, without critical reflexivity on the theories we hold implicitly. Problems arise when our theories are all implicit, and a field comprises a diversity of offerings founded on conflicting theories, where those conflicts are not apparent because the underlying theories and their assumptions are neither deliberated, disclosed nor discussed.

And we can go further still; perhaps it is not just a theory of value in nature that we need, but a theory of the value of everything....

#### 4.1 | Not just nature: We need a theory of value of everything

Although the special feature papers do not speak explicitly about theories of value, many authors *seem* to agree on one point: existing theories of value cannot capture the diversity of ways that people value and relate to nature. Among environmental scholars, the only prominent normative value theory, which explains and predicts what matters and what people are willing to do for that, is utility theory (see below)—a theory we love to hate. When pressed, even many economists recognize that utility theory is lacking in several respects.

Only by accepting a deeply dualistic separation of humans and nature could we somehow argue that existing value theories are acceptable in general, and only stumble in reference to nature. And—given that *People and Nature* is a relational (not dualistic) journal (Fish et al., 2022; Gaston et al., 2019)—it may be no surprise that we wholeheartedly reject such a dualism. Thus, we conclude that the problem is not just that 'nature' defies valuation: we need a better theory of value that encompasses everything. What began as a set of ideas for how we might advance the study of the multiple values of nature has evolved into an argument for a revolution in how we understand and study value in general. In a world wherein we cannot separate people or society from nature in any meaningful way, an inadequacy in theory for how we value nature is an inadequacy in theory for how we understand value (period).

The problem with authors not engaging with a theory of value is that we cannot even know the premises of their work, nor important implications or limitations. Do we need to accept a dualism of people and nature in order to accept as useful Bateman et al.'s (2023) guidance about tree-planting? Can Isacs et al.'s (2023) deliberative workshops equally address conflicts between participants' dualist and non-dualist value theories? Do Inglis and Pascual's (2023) findings about relational values implicit in the Basque language depend upon the assumption of rationality included in utility theory? Does Staddon et al.'s (2023) listening methodology allow for

non-commensurability between values, and if so, how would it account for this? Because the whole field is engaging so little with value theory, these questions are unresolved, including for many of our own papers.

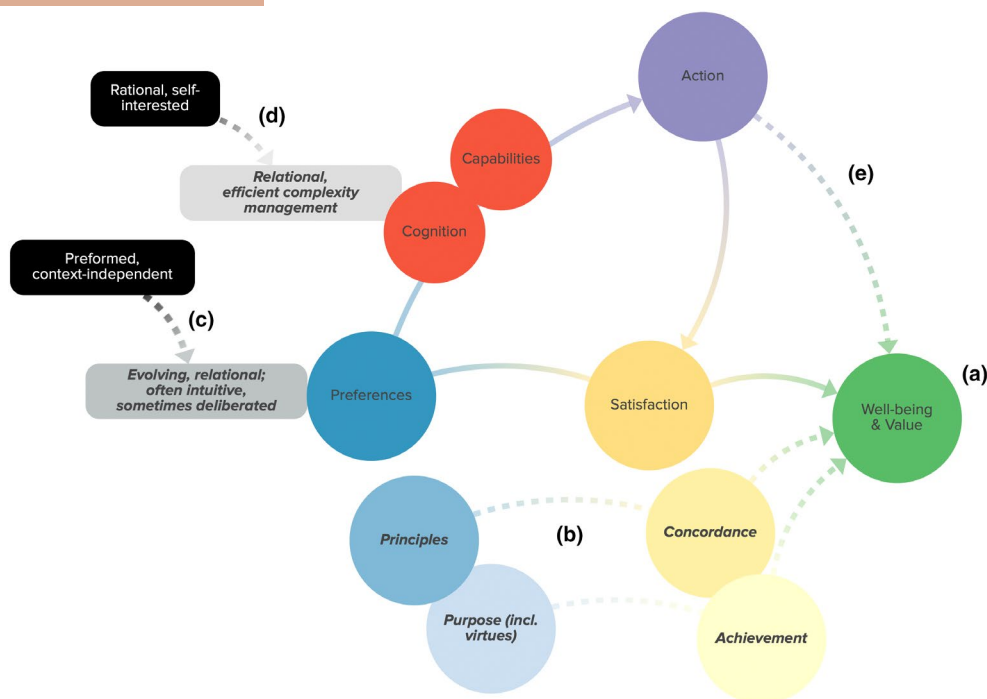
The problems with current agnosticism and disengagement with theory go even deeper, in part because prominent early researchers of environmental value were explicit about value theory, but in ways that might trouble us now. How many readers familiar with Brown's (1984) oft-cited distinction between held and assigned values know which value theory Brown explicitly assumed? It was utility theory. Brown (1984) clearly identified human beings as the originators of value, and preferences as the source of these, noting, "This approach is in keeping with neoclassical economic theory, and it is an underlying assumption of this paper" (p.231). This is problematic, because so much of current research on values builds upon Brown and others, without having been explicit about whether these newer concepts require the assumptions of neoclassical economic theory, or whether they are merely compatible with some of them (there are exceptions—e.g. Muraca, 2011, 2016).

## 5 | WHERE TO FROM HERE?

The topic of values is too grand, too important, and too diverse for an editorial to propose anything substantial or definitive here. This is a provocation. Developing a theory that really works—that addresses and synthesizes even a fraction of the complexity inherent in this topic—will require tremendous teamwork. The articles in this special issue, including this one, we hope, start to inform—or at least offer glimpses of—a possible way forward. It may take years, and it will almost certainly take many people—but we can, together, make sense of 'the mess'.

We—the authors—see several key characteristics of a coherent theory of value, following the discussion of benefits in the section above (*What a theory of value can offer ...*). It must (i) provide guidance on how to characterize the multiple values of nature, (ii) relate them to the value or well-being of humans and non-humans and (iii) specify acceptable options for aggregating and comparing value or well-being across individuals and groups. Even better if it also (iv) explains human action.

Because conversations about theories of value can often seem abstract, we offer an example of what a value theory can look like via reference to the dominant theory of value (utility), which economic theory borrowed from preference utilitarianism (Figure 2). This theory is so dominant that we are hard pressed to identify a theory of value referred to in the context of multiple values of nature that is not utility theory, or a partial amendment of that (e.g. Holland, 2002; as discussed in Isacs et al., 2023). According to this form of utilitarianism (Singer, 1993), which underpins the relationship between economics and public policy, each human being experiences pleasure, pain and satisfaction in ways that matter equally across individuals (the abstract units are sometimes



**FIGURE 2** Some of the ways that a relational theory of value might differ from utility theory (an economic theory of value as well-being), with *new possibilities in bold italic* and denoted by dashed lines. (a) Like utility theory, a relational theory might treat value as synonymous with well-being (it also might not), but it must pertain not only to human beings but to living beings generally (thus addressing the dualism). (b) However, value/well-being might be rooted in not only the satisfaction of preferences, but—for some beings—also the concordance with principles and achievement of purpose that might drive or direct those preferences. (c) Rather than assume that preferences are pre-formed and context-independent, a relational theory might recognize that preferences are evolving, relational and that they are often intuitive, but sometimes deliberated. (d) Such a relational theory of value might also include a relational theory of cognition (rather than rational self-interest), by which individuals sometimes act in accordance with norms among family, friends or broader societies, without those actions necessarily being in direct service of one's purpose, principles or preferences. (e) A relational theory of well-being should probably recognize that well-being is also a direct function of our relationships and action, not only achievement of individual goals or preferences. By assuming that individuals will sometimes act in accordance with their purposes, principles and preferences, a relational theory might maintain the possibility of measuring how much a thing is worth to an individual (but this can only be done in the context of a realistic theory of cognition and assessment of capabilities). Thus, while measurement might be more complex, a relational theory also might be much more accurate.

called 'utiles'). In theory, well-informed individuals free of coercion should generally act to increase their utility, although addictive behaviours and psychological traps are understood to present common exceptions (Platt, 1973). As noted above, utility theory is unsatisfying in many settings. It works best when predicting behaviour in static contexts of marginal change where nothing *really* matters (i.e. when no moral principles are ostensibly at play). In more morally important or sensitive situations, the ones that arguably matter most for societal transformation, utility theory often breaks down. Moreover, it poorly characterizes human well-being (individually and in aggregate) (Layard, 2006), entirely ignores non-human well-being (unless expressed through existence value to humans) (but see, e.g. Chan, 2011; Singer, 1991) and seems to have no explanation for when and how preferences change (Norton et al., 1998). Although these incongruences and limitations have driven many of us to seek other languages and notions of value, there is still something to learn from utility theory.

It seems to us that a relational theory of value would have to differ from utility theory in almost every respect (Figure 2), but that it might share a similar foundation in the preferences and purposes of

living beings. In addition to that depicted and explained in Figure 2, it must soften assumptions of commensurability (that values can be measured by a common standard, and potentially traded-off—Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012), and integrate plural values to explain unexplained phenomena like how preferences change (Norton et al., 1998). It might also apply directly non-dualistically to all living things, although likely not concluding that all living beings merit equal concern (Chan, 2011). Thus, a relational theory of value might also address the anthropocentrism and dualism at the heart of prominent concepts of environmentalism (Muradian & Gómez-Baggethun, 2021). It might, however, retain the assumption that value is synonymous with well-being, although it need not.

We argued above that a theory of value would likely not subsume theories of justice but rather complement and enable them; however, a relational theory of value could and arguably should be *consistent with* theories of justice in ways that utility theory is not. We and others have argued that utility theory inappropriately constrains what matters to the realm of preferences (or what Sagoff (1998) called 'consumer preferences')

Chan, Guerry, et al., 2012; Chan, Satterfield, et al., 2012). By forcing commensurability and fungibility (i.e. substitutability, at least in principle) of these values, utility theory both fails to properly represent what matters to people and also commits a recognitional injustice because it excludes the relational realities of many peoples, including but not limited to many Indigenous Peoples (Chan et al., 2016; Todd, 2014; Whyte, 2018). A value theory that stipulates that valuation must reflect the worldviews of affected peoples would therefore conform to theories of recognitional and procedural justice. Furthermore, if a relational theory of justice extended moral consideration to non-human organisms, this would address a recognitional injustice of utility theory (e.g. because many Indigenous worldviews extend consideration well beyond humanity) and also an ecological injustice (because so many sentient beings are routinely excluded from consideration).

By relating preferences explicitly to more deeply held values such as principles and virtues, including those about relationships with nature, a relational theory of value might offer several advantages. Specifically, it might help to anticipate and predict behaviour in dynamic contexts including transformative change and where morality is at play (Naito et al., 2022). It might characterize human well-being in a eudaimonic (rather than hedonic) sense, as a function not only of utilitarian preferences but also of fundamental relationships, and principles and virtues about relationships (Jax et al., 2013). It could expand from the human-centric concept of eudaimonia to incorporate ideas from other epistemologies that decentre human experience. It could articulate how relationships and relational values might be characterised, and how that characterisation might be refined through empirical exploration. And it might explain how preferences may change as a function of these relationships and other (e.g. relational) values.

## 6 | CONCLUSIONS

Nothing provokes thought like the jarring physical experience of hearing apparently opposite reactions among an audience. This editorial was motivated by the attendees at the Multiple Values of Nature symposium—both the majority who seemed exuberant about the delightful diversity of ways to think about values of nature, and the few who received that diversity as a messy heap of offerings, a “dog’s breakfast” in British slang. This editorial emerged from confronting the contrast between these discordant views. The way forward, we imagine, is to develop a theory of value that accommodates the rich work on the multiple values of nature, and to engage with that theory routinely.

A coherent theory and study of value could transform research and decision-making. It could provide a solid foundation for rigorous empirical work, conceptual cohesion, and interdisciplinary integration. Equally, it could root a compelling framework for considering how alternative decisions and scenarios might unfold with complex reactions, and for estimating the consequences for the quality of people’s lives. It might even enable ways to evaluate

the equitability of distributional outcomes of an action or policy, without interpreting those outcomes in monetary terms (which then must account for the fact that the well-being implications of a dollar varies greatly across people). Adopting a carefully designed theory in practice-oriented fields, like biological conservation, could broaden associated movements (e.g. by making more space for feminist and Indigenous perspectives). If that theory resonated and was taken up sufficiently widely, despite or due to its divergence from dominant anthropocentrism and consumer sovereignty, it might help galvanize societal action to change systems toward sustainable futures.

It seems unlikely that a single theory of value could accommodate all perspectives on the multiple values of nature, but perhaps one could accommodate many perspectives and values. Utility theory has persisted in its pre-eminence, if not domination, despite a set of key critiques. These critiques could potentially be addressed together, in a coherent relational, non-dualist theory of value, as we have hinted at here. There is such palpable animosity towards utility theory that many readers might be highly sceptical of *any* single theory of value that espouses to comprehensively cover many types of value. This aversion to totalizing theory is understandable. However, we invite readers to question what precisely is problematic: is it the effort to aggregate many different notions of what matters that is so problematic, or rather the way that utility theory aggregated, seeking unification through homogenization, as by treating principles as preferences?

Regardless of the details, it would likely take a critical mass to unseat the current dominant theory. Is the field ready to do that?

## AUTHOR CONTRIBUTIONS

Kai M. A. Chan and Rachelle K. Gould conceived the ideas and led the writing of the first draft of the manuscript. All authors contributed critically to the ensuing drafts, including content, structure and style. Kai M. A. Chan managed the process of revision.

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