Loving the mess: Navigating diversity and conflict in social values for sustainability

Sustainability Science

Special Feature: Theoretical Traditions of Social Values for Sustainability

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Abstract

This paper concludes a special feature of *Sustainability Science* that explores a broad range of social value theoretical traditions, such as religious studies, social psychology, indigenous knowledge, economics, sociology, and philosophy. We introduce the concepts of 'lenses' and 'tensions' to help navigate value diversity. First, we consider the notion of lenses: perspectives on value and valuation along diverse dimensions that describe what values focus on, how their sociality is envisioned, and what epistemic and procedural assumptions are made. We characterise fourteen of such dimensions. This provides a foundation for exploration of seven areas of tension, between: 1) the values of individuals vs collectives; 2) values as discrete and held vs embedded and constructed; 3) value as static or changeable; 4) valuation as positive or normative and transformative; 5) social vs relational values; 6) different rationalities and their relation to value integration; 7) degrees of acknowledgment of the role of power in navigating value conflicts. In doing so, we embrace the 'mess' of diversity, yet also provide a framework to organize this mess and support and encourage active transdisciplinary collaboration. We identify key research areas where such collaborations can be harnessed for sustainability transformation. Here it is crucial to understand how certain social value lenses are privileged over others and build capacity in decision-making for understanding and drawing on multiple value, epistemic and procedural lenses.

Keywords: shared values; relational values; environmental values; knowledge brokering; epistemology; interdisciplinarity; ecosystem services; nature's contributions to people

1 Introduction

Social values enquiry draws upon a rich range and depth of theoretical traditions, each with its own assumptions related to how values are conceptualised, elicited and related to other constructs. This paper concludes a Special Feature of *Sustainability Science* that has brought together a broad range of these traditions. We seek to synthesise across these traditions, considering their diverse social value lenses and areas of tension between them. In this synthesis, we embrace the 'mess' of diversity, yet also frame this mess to support and encourage active transdisciplinary collaboration for social values as a key concern of the environmental social sciences (Chan et al., 2018, Ives and Kendal, 2014; Kenter et al., 2015, 2016a; Kronenberg, 2014; Pascual et al., 2007; Parks and Gowdy, 2013; Rawluk et al., 2017; Raymond et al., 2014; Scholte et al., 2015; van Riper et al., 2017).

Researchers and practitioners conceptualize social values in ways that connect to particular understandings of the world based on history, culture, geography, experience, and embodiment (Williams, 2011). This means that no single internally consistent framework can fully integrate all understandings of social values. We adopt a post-normal view grounded in epistemic pluralism that suggests there is no 'one correct way' of conceptualizing social values; each provides a limited perspective to be scrutinised in democratic debate and decision-making (Ainscough et al., 2018). Post-normal science addresses complex, wicked problems, where facts are uncertain, stakes are high, and decisions are urgent. Today's deeply challenging environmental sustainability issues provide a prime example. Here, the choices about what and how we research are inherently normative, because all problem descriptions partially result from the value lenses through which issues are viewed. Different lenses give rise to competing knowledge claims, which can be addressed through deliberative processes of knowledge co-production that extend peer review from expert-only to a transdisciplinary community also involving practitioners, policy makers and citizens (Funtowicz and Ravetz, 1993; Strand, 2017).

In this paper, we develop a novel framework to help navigate the messy reality of social values research and practice. In the next section, we consider social values as *lenses of worthiness*: lenses of what is considered to matter. Underpinning these lenses sit diverse *meta-lenses*, which explain how values are

conceived and assessed. We highlight two key types of meta-lens; the *epistemic lens* and the *procedural lens* (Figure 1). We identify fourteen dimensions along which the different social value lenses and meta-lenses of diverse theoretical traditions can be discriminated (Table 1). Armed with this framework, in Section 3 we investigate central areas of tension between different social value theoretical traditions as exemplified by papers in this Special Feature, identifying key avenues for future research. These tensions emerged from a deliberative global expert workshop in York, UK, 26-27 June 2018 (Eriksson et al., 2019), to which authors were invited representing each of the papers within this Feature. The papers were submitted in response to an open call for contributions (Raymond et al., 2018). They draw on a wide variety of theoretical bases, highlighting the importance of social values as a boundary concept (Kenter, 2016; Steger et al., 2018).

The exploration of tensions between theoretical traditions is an opportunity for personal and collective growth and a means for advancing scholarship, not least because it highlights different understandings of and approaches to social values that may not be self-evident when those from different backgrounds collaborate. However, tensions and lenses need to be explicitly and rigorously considered if the goal is to incorporate a diversity of worldviews into environmental decision-making, as proposed by, for example, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (Pascual et al., 2017; Díaz et al., 2018; Christie et al., 2019). Through a mutual recognition of differences, viewing sustainability issues through different lenses of social values provides a richer and more comprehensive picture and can offer a more inclusive and more relevant value-evidence basis for sustainability transformation. Thus, we clarify issues at the frontier of social values for sustainability in the light of these tensions, providing a forward-looking and constructive agenda for transdisciplinary engagement with sustainability science.

2 Social value lenses and dimensions of social values

There are many understandings of social values. Central understandings include values as overarching principles, values pertaining to a common good or society as a whole, and values that become shared

through processes of socialization, including deliberation and internalization (Kenter et al., 2015; van Riper et al., 2018; Ishihara, 2018). In this special feature, we have considered specific values that epitomize the importance of particulars (*contextual values*) and broad values that transcend context (*transcendental values*), serving to guide contextual values. Diverse knowledge and appraisal traditions each harbour one or more *social value lenses*. These lenses articulate both what values are focused upon and how their sociality is envisioned. The lenses of diverse traditions can be characterised and differentiated along multiple dimensions of social values, such as the scale of values or the process by which they are elicited (Table 1). For example, a research tradition may focus on values at the societal scale, expressed by a social unit larger than an individual (e.g. a local community) and/or through a social process (e.g. a group workshop). In addition, different traditions harbour *meta-lenses* (Figure 1), comprising specific theories and bodies of scientific or local and indigenous knowledge that articulate different perspectives on social valuation, with their own epistemologies and explicit or implicit *meta-values*: values about values, for example, about how values should be aggregated (Kenter et al., 2016a). Meta-lenses thus frame the social perspective and position of the viewer with respect to how social values and their dynamics are perceived and expressed. We consider social value lenses and meta-lenses to be a dynamic medium of perception, articulation and understanding through which the world is interpreted and evaluated: they are therefore open, reflexive and responsive, and not fixed, unidirectional or unchanging.

Meta-lenses also help us understand how social value lenses are associated with and applied to different purposes, exemplified by the diverse papers in this Special Feature. Some meta-lenses focus on understanding relations between values and behaviour (Raymond and Kenter, 2016; van Riper et al., 2019), others are geared towards value formation and co-construction (Kenter et al., 2016c; Calcagni et al., 2019); lived values (Brear et al. 2019); values embedded in cultural institutions (Gould and Pai, 2019; Ives et al. 2019; Christie et al., 2019); or value-awareness and activation in relation to wellbeing and sustainability (Raymond & Raymond, 2019). Other meta-lenses are critical and emancipatory (O'Connor and Kenter, 2019; Ravenscroft, 2019). Finally, some are themselves associated with studying how meta-lenses are adopted in valuation institutions (Rawluk et al., 2019; Horcea-Milcu et al., 2019).

Although a complete discussion of the knowledge paradigms embedded within different meta-lenses is beyond the scope of this paper, the teleological or purposeful nature of social value lenses can be explained by two key types of meta-lens: the epistemic and procedural meta-lens (Figure 1), or, for brevity, simply *epistemic lens* and *procedural lens*. The epistemic lens considers how we harbour, create and know 'value', as well as the philosophical orientation of the researcher that guides their social value lens. The procedural lens describes the types of processes used to attain and explain social values.

To help understand similarities and tensions between different social value traditions, we consider a range of dimensions of their value, epistemic and procedural lenses (Table 1). Here we build on foundational work by Kenter et al. (2014; 2015), who developed a framework for differentiating between types of social values according to how they have been conceived in different traditions. At the basis of this lies differentiation between broad, transcendental and specific, contextual values and their indicators. This nomenclature extended research by Rokeach (1973) and thereafter Brown (1984) that differentiated 'held' values (i.e., guiding principles and life goals) and 'assigned' values (i.e., opinions on the values of particulars), where the first were thought to predict the latter, both through the process of deduction and a relational realm of felt experiences (Schroeder, 2013). However, Kenter et al. (2015) noted that opinions on the values of particulars could be both held and assigned, and that values might thirdly refer to measures and other indicators. Further, the notion of values as held makes contested epistemic assumptions that they are preformed and discretely observable. In view of these arguments, the authors argued that context-specific and context-transcendent is a more encompassing way to distinguish between value concepts.

Kenter et al. (2015) also discriminated between different types of shared and social values along dimensions of value provider, scale, intention, and elicitation process. Building on the understanding gained through this Feature and other important recent knowledge developments in the field (e.g. Pascual et al., 2017; Chan et al., 2018), we add further dimensions and organise them dimensions in relation to the value, epistemic and procedural lenses (Figure 1; Table 1). We add two further dimensions associated with the value lens: *value frame* and *value justification.* These dimensions categorise values in relation to framings

of how the world matters to people and differentiate between intrinsic, relational and instrumental values. Within the epistemic lens, *abstractness, constructedness, normativity* and *rationality* denote whether values are considered abstract or place-based, pre-formed or constructed, value-neutral or normative, and which conception of rationality justifies them. Associated with the procedural lens, the closely related dimensions of *aggregation*, *integration* and *power* denote differences in the way that value plurality and conflict are perceived and managed.

To illustrate the relations among value, epistemic and procedural lenses, and some of their associated dimensions, in this feature O'Connor and Kenter (2019) investigated a particular type of social values, 'articulated intrinsic values', focusing on marine ecosystems using ethnographic stakeholder interviews. The social value lens was the worthiness of the 'more-than-human' world, reflecting other-regarding values on the dimension of intention, individual and communal values at the level of scale, and intrinsic values in relation to justification (Table 1). The underpinning epistemic lens in this research was interpretivist and perspectivist. This could be characterised as place-based and situationally constructed on the dimensions of abstractness and constructedness, and the dimension of normativity highlights an epistemic lens that seeks to emancipate the more-than-human world. The authors deployed a procedural lens along the dimensions of elicitation and aggregation that highlighted the purpose of the exercise as feeding into a deliberative democratic process that should be used to weigh and aggregate the different values expressed. The procedural lens thus emphasised meta-values of participation, deliberation and, in relation to the power dimension, procedural justice, through which the social value lens of articulated intrinsic values was considered.

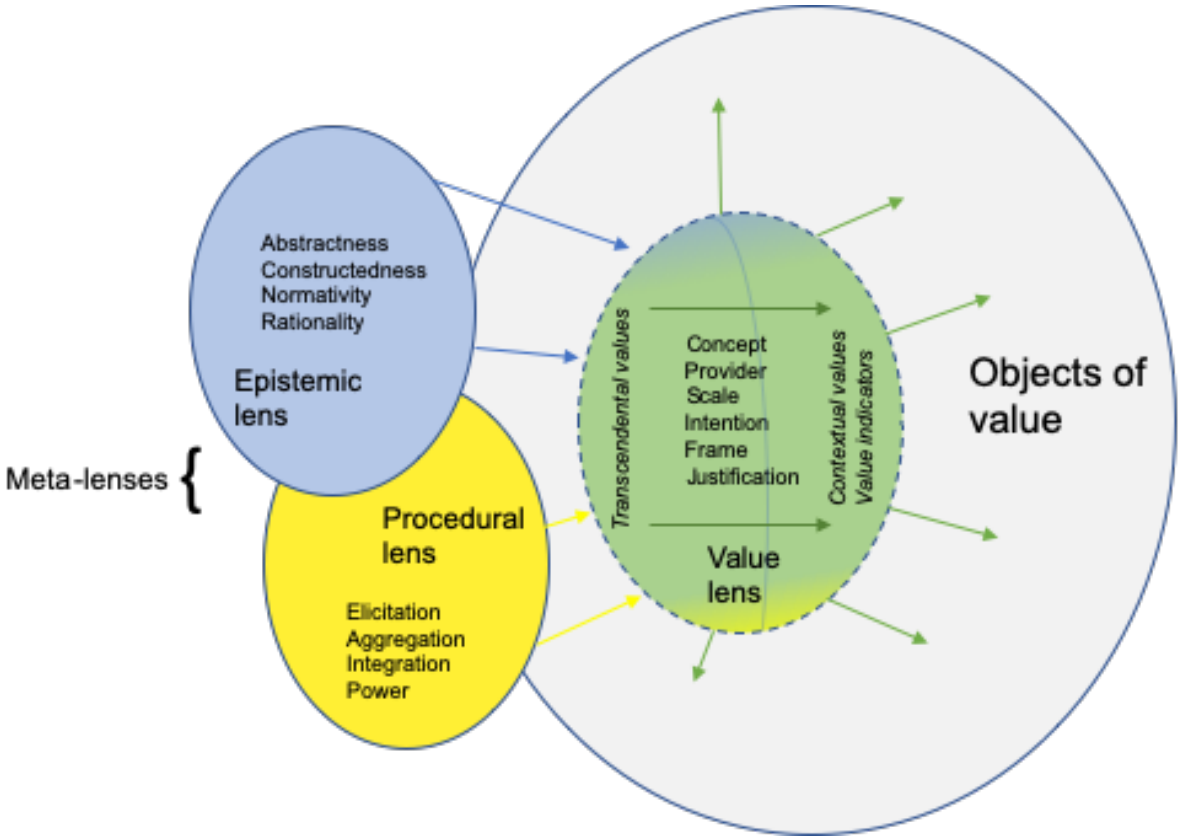

Figure 1: Social values as lenses on what matters: what is or should be important to us as, in, to or about the world, with two types of meta-lenses: the epistemic lens and procedural lens, and the dimensions (Table 1) of value associated with the three types of lenses. The value lens is depicted in two parts, with broad, transcendental values guiding specific, contextual values and their indicators. While value lenses and objects of worthiness are depicted as separate entities, whether they are assumed separable will differ per epistemic lens (hence porous boundary of value lens).

Table 1. Key dimensions of values that serve to differentiate value lenses and meta-lenses of diverse knowledge traditions, with where applicable reference to the Section of this paper where they are further discussed in relation to tensions between different traditions.

Value dimension	**Key question**	**Description and categories**	**Relevance to transcendental and/or contextual values**	**Further discussion in relation to tensions**
Value lens				
Value concept	What does one mean by 'values'?	Transcendental values: life goals and principles that transcend particular contexts Contextual values: opinions about importance, which are dependent on an object of value and hence contextual and attitudinal Value indicators: an indicator of the importance of something (e.g. monetary, non-monetary and biophysical measures, qualitative indicators such as a 'verdict' from a citizens' jury).	N/A	-
(Scale of) value provider	At what scale are values being articulated?	Values are expressed by individuals or by 'social' or collective valuing agents, as groups, communities, cultures or societies as a whole.	Both	Section 3.1
Scale of values	What is the scale of the values being articulated?	Values can be expressed at the individual scale (e.g. how much does something benefit an individual?) or at aggregated or pre-aggregated social scales such as value to society (e.g. how much does something benefit the people of Mato Grosso). Values may also be expressed at different temporal scales (e.g. in economics, the net present value over a 20 year vs 100 year timespan). With regard to transcendental values, people may have different values in relation to different scales, e.g. one might value a varied life for oneself, but in relation to society other values such as fairness or responsibility might be more important.	Both	Section 3.1
Value intention	Who is being regarded with the expression of values?	People may have different values with regard to themselves (i.e. self-regarding values) and others (i.e. other regarding values, society-regarding values, etc.). This dimension can be an observation on interpreting the content of value, or a conceptual assumption (e.g. the assumption that values are self-regarding in neoclassical economics).	Both	-
Value frame	What frame of the (natural) world does the value express?	People live *from* the world in that they gain their existence from it, *in* the world as their home and stage of life, *with* the world as the natural backdrop of life beyond us, and *as* the world in terms of the oneness of being, people as part of nature and vice versa, such as experienced through embodiment and spirituality. These perspectives can relate to the content of values but also whether people-nature relations are conceived of through a subject-object dichotomy, or a nondual or relational perspective.	Both	Section 3.5
Value justification	How are values justified?	The way that values are justified, where objects of value are substitutable means to a	Contextual values	Section 3.5

		human end (instrumental values), constitutive of non-substitutable meaningful relationships to people (relational values), or ends in themselves without reference to people as valuers (intrinsic values).		
Epistemic lens				
Abstractness	What level of abstraction are values conceived of?	Values can be abstract and generalisable (e.g. monetary values, the Schwartz system of transcendental values), or place-based and idiosyncratic.	Both	Section 3.2
Constructedness	Are values pre-formed and stable or situationally constructed and changeable?	Values can be assumed as: 1) entities that are 'held', 'pre-formed' and stable, or 2) partially pre-constructed as 'proto-values' that are activated and become formed in a situation, or 3) fully situationally constructed when manifested in life and in particular valuation contexts, and thus changeable according to situations.	Both	Section 3.2 Section 3.3
Normativity	Is assessment of values seen as objective and value-neutral, or normative?	Whether the understanding of social values is perceived as a critical, emancipatory, and potentially transformative affair or as an objective, empirical exercise, which may nonetheless include the observation of transformative social values.	Both	Section 3.4
Rationality	How is rationality conceived of?	Rather than relating to ethical justification, this dimension points to assumptions around the validity of values with regard to rationality. Examples of different perspectives include instrumental, communicative and bounded rationality.	Contextual values	Section 3.6
Procedural lens				
Elicitation	What process is used to elicit values?	Values may be elicited through a non-deliberative process (stated values) or through an individual, dialectic or social deliberative process (deliberated values), or values may be manifested in / elicited from behaviour (revealed, lived and embodied values).	Both	Section 3.2
Aggregation	How are values aggregated?	To achieve values at the social scale they may be either pre-aggregated or aggregated from individuals. This dimension also points to the meta-values used that inform the aggregation procedure or function.	Contextual values	Section 3.1
Integration	To what degree are values seen as possible to integrate?	Values may be considered: 1) as commensurable and can be aggregated and integrated across different value providers and dimensions in a single measure; 2) as compatible, meaning they cannot be integrated in a single measure but can be meaningfully combined, associated or compared in other ways; 3) as incompatible, with comparison not meaningful (and thus need to considered in parallel).	Contextual values	Section 3.6
Power	How are conflict, power and justice considered in the articulation and	The degree to which researchers and practitioners consider the institutional nature of value conflicts – conflicts between values, as well as concepts of values and their	Both	Section 3.7

	elicitation of value?	underpinning epistemic assumptions - and account for differentials in power associated with multiple values and value lenses and meta-lenses. Values may be treated as power-neutral or as reflecting power differences. This dimensions also highlights the degree to which different forms of justice (distributive, recognition and procedural) are considered in dealing with conflict.		

We do not claim this new set of dimensions fully and finally articulates all possible lenses, meta-lenses across the vast diversity of social values literature. However, it reflects a substantial extension and evolution of understanding from Kenter et al. (2015), which was largely grounded in ecological economics, to the much more comprehensive disciplinary coverage of this Special Feature, which this paper seeks to synthesise.

Combining and comparing social values within or across theoretical traditions can lead to tensions, because these traditions utilise different social value lenses and meta-lenses reflecting differences in the way values are conceived, elicited and applied. Following Goldstein (2015), a commitment to conceptual and theoretical openness in transdisciplinary teams generates *conceptual tension* at various levels, to diverse degrees, and to variable effects. In turn, tension and conflict open up established theories and concepts for dialogue and revision. Lenses and tensions are closely related, because lenses can be seen as a key source of tension, or conversely, are themselves characterised by one's position in areas of tension. Thus, the notions of lenses and tensions across different dimensions provide a useful means of scaffolding to 'frame the mess' of diversity in the broad field of social values. Tensions can thus arise at the level of the content of values, value lenses, and meta-lenses. For example, a typical conflict between pro-development and pro-conservation values is not just a matter of valuing different things, as what values are included will be different depending on the dimensions of the value lens used, such as its scale (e.g. individual, communal, societal), and on the epistemic and procedural meta-lens underpinning it, such as in terms of what value justifications are considered and how questions of value aggregation and power are addressed.

In this synthesis paper, we discuss seven key areas of tension. We focus on the following tension areas, gradually shifting emphasis from ontology of social values to their application: 1) social values as

aggregated from the individual scale vs being pre-aggregated at a social scale (related to the *scale of value provider*, *scale of values*, and *aggregation* dimensions); 2) social values as discrete, preformed and held vs being embedded, implicit, and constructed through their manifestation in deliberation and action and 3) values as static or changeable (both related to the *constructedness* dimension)*;* 4) social values through a positive vs normative lens (*normativity*); 5) the relations between social, shared, relational, intrinsic and instrumental values (*frame* and *justification* dimensions); 6) tensions relating to *value integration*; and 7) tensions in the degree to which power is acknowledged in navigating value conflict (*power* dimension).

3 Tensions in the theory and practice of social values

3.1 Scales and aggregation: the relations between individual and social values

The first area of tension arises from a basic question: what makes social values social? Although interpreted differently, essentially the idea of values being social relates to society. This raises the question of how society and its values are represented, particularly whether societal values are considered an independent construct or an aggregation of individual values (Raymond et al., 2014). Thus far, most lenses have either focused on individualistic or collective indicators, and there is only limited understanding of the relations between them (Kenter et al., 2014).

Some social values cannot be reduced to the individual scale of expression. As an example, take the UK Marine Policy Statement, which formalises a "shared vision" of "clean, healthy, safe, productive and biologically diverse oceans and seas"[1]. This signifies shared social values across value lens dimensions: the statement was made by governments to represent society as a whole and express transcendental values at the social scale, established through a social process. Individuals are socialised: therefore all individual

[1] https://www.gov.uk/government/publications/uk-marine-policy-statement

values reflect social values to a certain degree (Kenter et al., 2015). Individuals may also experience, represent and enact shared values such as expressed by the policy statement above. However, how can individual values be aggregated to form social values?

The relationship between individual values and social values at a societal scale (i.e., as *value to society* in terms of contextual values, and as *values in relation to society* in terms of transcendental values), can be thought of in at least five ways, which inform different social value lenses (Figure 2). In Figure 2a, at the contextual value level, the aggregate of individual and social values are different but may overlap, while at the transcendental level people may express multiple sets of potentially overlapping and clashing values (e.g. consumer values versus citizen values; Kenyon et al., 2001). The second perspective is that of a nested diagram (Figure 2b), which indicates that any method of aggregating values, whether through analytical approaches or deliberative processes, is bound to exclude some, typically because of power relations (Hockley, 2014; Orchard-Webb et al., 2016). Under this model, social values are always a subset of the pool of individual values and rarely approximate the totality of pooled values. The third and fourth figures (2c and d) depict a causal relationship, where either social values predict individual ones or vice versa (e.g. van Riper et al., 2019). This reflects the view that individuals represent their society but consider it through their individual perceptions and experiences. The fifth (Figure 2e) is a dynamic view of causal relationships, whereby individual values and shared social values can be seen as situated within a dynamic interplay where values 'transfer' from various social to individual provider levels and vice versa (Fordham & Robinson, 2019).

Further research on the interrelations between individual and social values is needed within and across each of the five models in Figure 2. Also, comparative research between the overlapping, nested, causal, and dynamic perspectives will be of particular value in considering what factors influence the difference between (aggregate) individual and (pre-aggregated) social values, and how values transfer between these levels. Moreover, the use of more than one model will likely provide added insight into complex and contested issues that are steeped in social conflict and disagreement among interest groups (Kenter et al., 2014b). All of these models are sensitive to the differences between aggregate individual and social values,

and as such, it is important for policy and practice to recognize what might influence degrees of difference, and how these differences relate with associated lenses used to assess values. Greater understanding of the differences between aggregated individual values and social values will also enable researchers to identify appropriate methods for establishing a more comprehensive perspective.

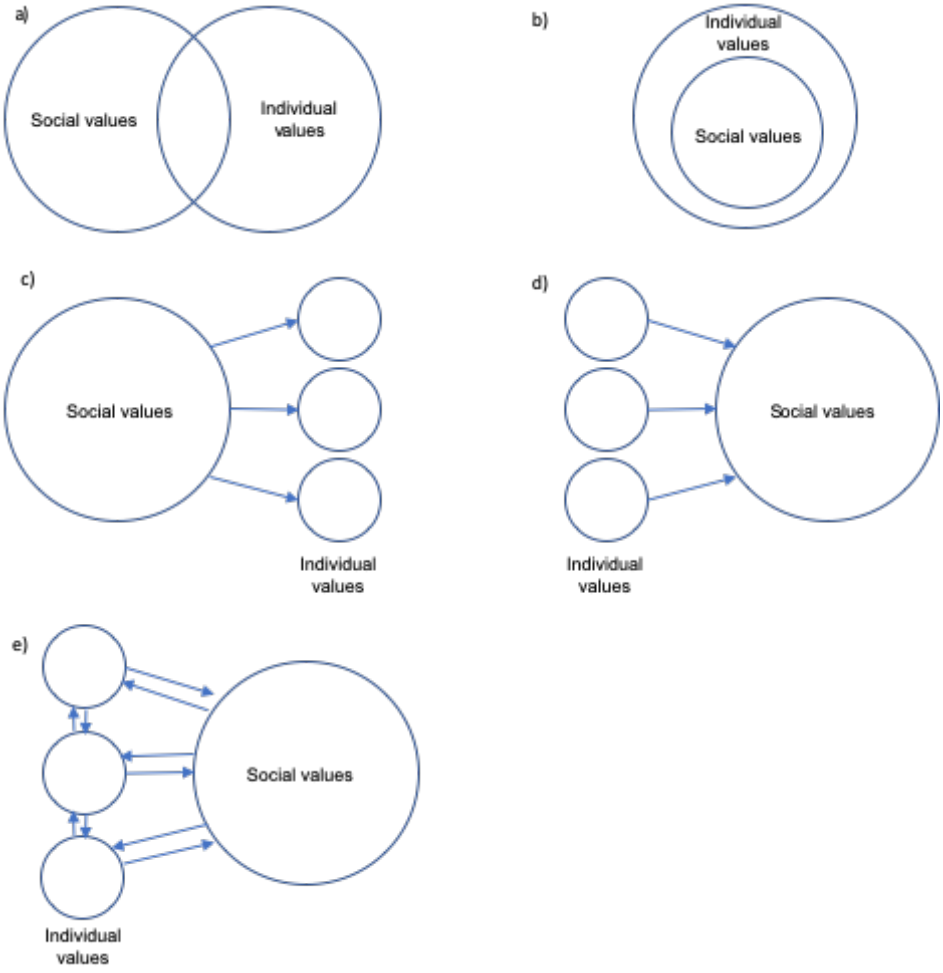

Figure 2 Different ways of conceiving the relation between social values (as value to society in terms of contextual values, and as values in relation to society in terms of transcendental values) and individual values: as (a) distinct but overlapping sets of values; (b) social values as a subset of the aggregate of individual values; (c) social values as (partially) predicting individual values; (d) social values as (partially) predictable by individual values; and (e) social values within a dynamic interplay with individual values.

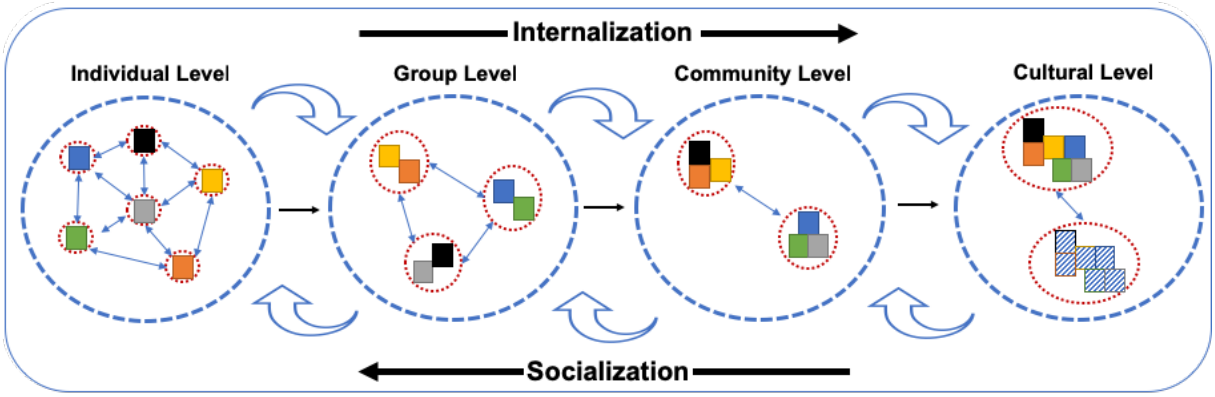

Figure 3 Conceptual model showing there are multiple levels of values–including individual, group, community, and cultural – that have different configurations of individual and aggregated values as reflected by the multi-coloured units within each sphere. The different levels interact through feedbacks that amplify or dampen the relationships of values and boundaries between them are permeable. Internalization and socialization are the key processes that facilitate the scaling up and down of values.

Extending the ontological tension between (aggregated) individual and social values, we further complicate this relationship and distinguish social values across multiple levels. Relationships between individual and social values function within complex systems and can be organized hierarchically (van Riper et al., 2018). Previous research has identified and grouped values provided at the individual, group, (extended) community, and whole culture and society levels (Manfredo et al., 2014; Kenter et al., 2015) that accommodate interactions within these hierarchies. In line with arguments that values 'scale up' to higher levels (Kendal and Raymond, 2019), the values expressed by groups are in part an aggregate of individuals' values but may also be entirely new 'emergent' phenomena (Figure 3). In addition to this ontological tension between individual values and their broader social units, there are practical tensions between values that exist at different provider levels. This tension is generated by value hierarchies in finding sustainability solutions, as well as processes for aligning values across multiple scales such as the need for processes to prioritize between the values of individuals versus a broader collective or social unit. This is further complicated by different procedural lenses on the commensurability and compatibility of values and lenses (Section 3.3), and on how to navigate conflict and address power issues (Section 3.7).

We distinguish two mechanisms by which values are transferred between levels. The first is *socialization*, and it occurs over extended periods of time (Ishihara, 2018) as well as when values are formed in shorter-

term social processes, such as group deliberation (Kenter et al., 2016c; Kendal and Raymond, 2019). The values that emerge from socialization can be solidified through social learning and social norms and that regulate practices within a collective (Irvine et al. 2016). The second is *internalization*. Over time, individuals observe interpersonal dynamics and adjust their orientations to align with a group (Calcagni et al., 2019, van Riper et al., 2018). This is grounded in personal reflections and intra-individual deliberation. Together, these mechanisms can yield changes in systemic understanding of others' values, improved capacity for individuals to recognize their own orientations, and knowledge of why changes in values occur at different levels of social organization (Kenter et al., 2016c).

Future research should explore how values are shifted when moving across different hierarchical levels. This is particularly relevant in light of sustainability transitions because the scaling up and down of values reflects the continuously changing conditions in society and offers an opportunity to ensure the incorporation of multiple values into decision-making (Fordham et al., 2019).

3.2 Abstractness and constructedness: Social values as discrete and pre-formed vs embedded and constructed

Important differences in epistemic lenses are whether values are believed to exist as discrete entities, preformed and held by people, or only coming into existence when manifested, including in deliberation (Ravenscroft, 2019) and as 'lived values' in individual and collective behaviour (Brear et al, 2019, Gould and Pai, 2019, Graham et al. 2013). In terms of contextual values, valuation researchers have pointed out these are frequently poorly formed in often unfamiliar environmental contexts (Jobstvogt et al., 2014; Urama and Hodge, 2006). However, there is also a tension in the conception of transcendental values as: 1) held as, a) relatively singular and stable across a human lifespan, or b) as multiple sets of contextually-activated values; or 2) not held but constructed and manifested in response to individual, group and social-ecological context (Kenter et al., 2016a). This tension also relates to the dimension of abstractness associated with epistemic lenses and discussed in more detail by Rawluk et al. (2019). This dimension clarifies whether values are seen to be: 1) distinctly isolated as an abstract, discrete entity (e.g. in this

feature van Riper, 2019; Christie et al., 2019); or 2) not abstractable from broader cultural constructs such as worldviews, cosmologies or narratives, and, in relation to specific values, places, without losing meaning (e.g. in this feature Gould and Pai et al. 2019, O'Connor and Kenter, 2019; Ives et al. 2019).

The tension between epistemic lenses that see social values as abstract, discrete and held vs embedded, situationally constructed and manifested has important implications for social valuation: from the first perspective, associated with for example social psychology, conventional economics and public participation GIS, values are assumed to be positive and can be isolated and interrogated (Raymond et al., 2009). In other perspectives, associated with humanities and deliberative ecological economics, values are understood as embedded in cultural and institutional contexts, and the language of value 'capture' becomes inappropriate (Ravenscroft, 2019). These perspectives are also less likely to see values within a power vacuum, rather considering them as part of an institutional setup shaped by discursive structures of power and knowledge – we will return to this topic in Section 3.6.

Some synthesis between the two positions is possible through the concept of *proto-values* (Kenter et al., 2016a), where people neither hold fully formed values nor are they an evaluative *tabula rasa*. Proto-values mediate between the transcendental (broad) and contextual (specific) concepts of values, and between the abstract and pre-formed and constructed and situated. They are not fully formed values, but exist as a broad value-inclination or attitude that becomes more moulded by and embedded within context through a key set of institutional and contextual process factors, which can include the meta-lenses of the particular social values tradition. Proto-values provide an avenue for allowing some generalisation, whilst acknowledging valuation as a process of value formation that is highly context-dependent. However, the concept is in need of further development and empirical exploration.

Constructedness and embeddedness also raise questions about the social and spatiotemporal scales within which this embedding is situated. Scales influence how research is conducted and looking through differing spatiotemporal value lenses can yield conflicting perspectives on sustainability solutions (Gunton et al. 2014). Future research should be sensitive to the effects of spatial and temporal variation in values

and focus on mechanisms that can bridge multiple spatiotemporal lenses. Deliberative and interpretive participatory mapping exercises could consider how spatially-explicit social values are culturally and institutionally embedded. This approach could also provide insight on how values map onto the geographies of relevant environmental conditions, evaluate how group deliberation can synthesize values across a range of spatiotemporal scales, and reconcile mismatches between scales of peoples' values and ecosystem processes. Furthermore, the degree to which values are seen as isolatable from the contexts of place, time and culture will influence the types of interventions that are considered: whether it makes sense to develop generalised interventions focused specifically on encouraging pro-environmental values, or whether they should be highly situated and place-based, or focus on a value formation process that is geared towards activation and translation of proto-values to particular contexts.

3.3 Constructedness and value change: Social values as stable vs changeable

A further tension related to the epistemic dimension of constructedness is whether values are perceived as stable or changeable. This is of particular importance and increasing debate within the sustainability field, because the degree to which values are preformed and stable will more generally determine the usefulness of interventions targeting values (e.g. mindfulness, Raymond and Raymond, 2019; targeted deliberations, Dietz et al., 2009, Kenter et al., 2016b, Orchard-Webb et al., 2016) as a strategy for sustainability transformation. This debate within the context of pro-environmental value and behaviour change is most relevant to consideration of transcendental values. These are generally seen as more stable than contextual values (Schwartz et al., 2012), yet they are expressed to different degrees depending on the salience of issues (Trope and Liberman, 2010) and centrality to the evaluator's identity (Stets and Burke, 2000). Both across and within traditions such as social psychology, deliberative ecological economics and sociology, different procedural and epistemic lenses conflict in terms of their perceptions on how easily transcendental values can be changed (e.g. Manfredo et al., 2017; Raymond and Kenter, 2016; Ives & Fischer, 2018). Others argue that a notable gap between transcendental values and actions (Kolmuss & Agyeman, 2002) makes this mission irrelevant. That is, while values may activate certain behavioural

intentions, environmental constraints limit their expression. In contrast, the positive psychology literature (Raymond & Raymond, 2019) does not focus on value change but instead on individuals acting congruently with their values, with congruence associated with higher wellbeing and psychological health. This literature brings a strong focus to how values are operationalised and behaviourally manifested in different contexts and to awareness raising processes to deliberate on and express values within context, including specific decision-making processes. Drawing on Bardi and Goodwin (2011), awareness raising represents a 'priming' process for value change and/or expression. Awareness raising processes can be considered across two pathways: a healthy values pathway whereby certain value types are associated with healthy outcomes for the individual, and a value activation pathway which considers whether self-identified values are congruently expressed (Raymond and Raymond, 2019). Mindfulness, operationalised as (1) awareness ('what is mindfulness'), (2) skill (mindful awareness of values in decision making) and (3) mindset (mindful orientation), is a way to promote well-being and sustainable behaviour through the pathway of value activation. Mindfulness has thus emerged as an important process variable to understand the elicitation and expression of values (Wamsler et al., 2018) with clear relevance for sustainability science. However, thus far the value lens of positive psychology has almost solely focused on internalisation with individual value providers. To act as mediator for value change at the communal, cultural and societal level, mindfulness also needs to be linked to socialisation processes.

Sustainability science is increasingly focused on the causes and effects of change, and values can be conceived of as both a driver and an outcome of that change. Societal values form the foundation of institutional rules and knowledge systems that are part of managing and governing natural resources (Gavin, 2018). At the same time, complex environmental change such as climate change can become a catalyst for changes in values (O'Brien and Wolf, 2010). Crisis triggered by natural hazards shortens even more the feedbacks between values as drivers and outcomes. As such, the opportunity space for responses to risks is delineated and shaped by deliberated, reconciled societal, communal and group values, but at the same time, crisis may be the most rapid trigger for radical changes in our principles and life goals, and this in turn is likely to affect contextual values. When the consequences of environmental changes become evident for people, they may become more aware of the plurality of values of nature, compared to

'normal' times. In other words, crises of natural resources or climate change become opportunities to re-connect to the value of nature if the focus is on how to think and act together towards these re-surfaced shared values.

Further research is needed that considers to what degree and how rapidly transcendental values can change, why a focus on contextual factors and values may not be sufficient (IPBES, 2019), how does value change 'ripple out' (Everard et al., 2016) to the societal and cultural level, what interventions are most effective at achieving such change, and to what degree value change acts as a precursor to or an effect of changing behaviour. There is also a need for inter-disciplinary scholars to reconcile the approaches of value change and value congruence, notably if wellbeing as a construct is considered as much a process as an outcome, and to relate individualistic processes such as mindfulness more strongly to social values, socialization processes and social outcomes.

3.4 Normativity: Valuation as positive vs normative

The next tension relates to whether the formation and understanding of social values is perceived as normative: a critical, emancipatory, and potentially transformative affair (e.g. in this feature O'Connor and Kenter, 2019; Brear et al. 2019; Horcea-Milcu et al., 2019; Ravencroft, 2019), or as positive: an objective, empirical exercise (M. Christie et al., 2019; van Riper et al., 2019; Raymond and Raymond, 2019), which nonetheless may include the observation of transformative social values (e.g. Fordham and Robinson, 2019). Through a critical meta-lens, (shared) social values can be seen as a (shared) understanding of the common good. The ethical and political considerations of this critical meta-lens beg questions about how conclusions are drawn and knowledge might be advanced, and to what degree deliberation should be grounded in democratic ideals (Ravenscroft, 2019) or derived from people's lived experience (Brear et al., 2019). However, this raises important questions of procedural justice, of what, and whose perspectives should be included within consideration of the common good and by what criteria this can be validated. Though the emancipatory tradition typically focuses on maximizing inclusion (Lo and Spash, 2012; Orchard-Webb et al., 2016), this does not mean that all individual values should be included or

aggregated, for example where they do not serve society as a whole, or are incompatible with sustainability (Menzel and Green, 2013).

Interestingly, a similar tension between positive and normative exists with regard to relational values, that can be discussed as a matter for observation (Calcagni et al.,2019; Klain et al., 2017) or an agenda for inclusion and emancipation of non-scientific knowledge (Stålhammar and Thorén, 2019). However, while relational values are rarely put forward as 'better' than instrumental ones (with perhaps the exception of O'Neill et al., 2008), the normative tradition clearly advocates social values as more desirable than individual ones for the purpose of decision making, as long as the condition of procedural justice is reasonably satisfied (Howarth and Wilson, 2006; Irvine et al., 2016; Kenter et al., 2016b; Ravenscroft, 2019; Zografos and Howarth, 2010).

The tension relating to the normativity dimension of epistemic lenses can in part be resolved by recognizing that different positions in this dimension typically correspond to differences at value lens dimensions of scale, provider and concept and the procedural lens dimension of process. Normative meta-lenses are particularly focused on shared and social values in the sense of value to society, formed through a shared social process, and/or expressed by non-individual value-providers. Transcendental values, particularly those relating to environmental sustainability and social justice, are important in the sense that they are seen as an end that needs to feed into such processes, but they are not generally the primary objective of study. There is a goal of providing evidence for interventions, but the social valuation itself can also be seen as an intervention to transform values and/or behaviour or challenge existing institutions. In contrast, positive meta-lenses more typically focus on either social values as aggregated individual values, or social values in the sense of transcendental values, mostly by individual providers, and the relations between transcendental and contextual values and behaviour to provide evidence for exogenous interventions. In a small number of studies, the two approaches have been successfully combined where instrumental approaches inform or are integrated with consequent deliberation on the common good (Kenter, 2016; Kenter et al., 2016b; Raymond et al., 2014; Raymond and Kenter, 2016).

Further research may consider more deeply when positive and normative approaches are most appropriate and when combinations of both add particular value.

There is also a need for more explicit evaluations of recognition and procedural justice in critical social valuation, and to what degree, and under which conditions, the transformative objectives of social valuations are met.

3.5 Value justifications and frames: Shared, social and relational values and our relationship with the natural world

In recent years, the increasing emphasis on social values within the sustainability field has arisen in parallel with increased attention to relational values, particularly with regard to ecosystem assessment (e.g. Chan et al., 2018, 2016; IPBES, 2016; Christie et al., 2019), and several contributions to this Feature have considered relational values and their relation with shared, social, instrumental and intrinsic values (Calcagni et al., 2019; Stålhammar and Thorén, 2019; Gould and Pai, 2019; O'Connor and Kenter, 2019). Both relational and social strands of thinking evolved, at least in relation to ecosystem assessment and valuation, from increasing recognition of the limitations of mainstream economic valuation and its instrumental value assumptions. This opened up a fuzzy field of non-monetary, social, cultural or sociocultural values, largely associated with the study of cultural ecosystem services and to some degree indigenous and local knowledge systems, that used a wide array of methods without much attention to underpinning value, epistemic and procedural lenses (Raymond et al., 2014; Scholte et al., 2015). Two interventions signalled different directions: Kenter et al. (2014, 2015) focused on clarifying the concept, dimensions and types of shared and social values as critiques of the preformed, individualist and self-regarding assumptions of mainstream valuation. While shared and social values were considered largely synonymous, social values tended to emphasise social scales whereas shared values tended to refer to the outcomes of collective value formation. This discourse (further developed in a special issue of *Ecosystem Services*, October 2016, mostly by authors associated with the UK National Ecosystem Assessment) articulates strongly the social nature of values and the long and short-term processes for socialization and internalization of values, with particular regard for integrating deliberative and interpretive approaches as a

preferred methodology for assessing shared values (e.g. Orchard-Webb et al., 2016; Edwards et al., 2016; Ranger et al. 2016). Relational values, in the sense of values pertaining to meaningful, non-substitutable relationships between people and their environment, were considered, but primarily from a perspective of their shared-ness between groups, communities, cultures and societies.

In a different intervention, Chan et al. (2016) defined relational values as preferences, principles, and virtues pertaining to relationships. They focused on the dimension of value justification, pointing out that in practice neither instrumental nor intrinsic value concepts captured what matters most to people, and that a distinct bridging concept was needed. This concept has since been elevated to central importance in IPBES (Pascual et al. 2017; Diaz et al. 2018; Christie et al., 2019). However, as with social values, the scope of relational values is broad and fuzzy (Stalhammar and Thoren, 2019). Relational values can refer to the ethical nature of value as being anthropocentric, yet non-instrumental, in the sense of not open to trade-off (Diaz et al. 2015; Himes and Muraca, 2018); or it can relate to the content of transcendental or contextual values as pertaining to relationships (Gould and Pai, 2019); or it can refer to a 'relational field' as the source of value, rather than the value object or subject (Muraca, 2011). Importantly, while the dichotomy between intrinsic and instrumental is typically conveyed as a major tension in environmental debates, Stalhammar and Thoren (2019) point out that these value types are somewhat caricatured, and that environmental ethics has nuanced interpretations of instrumental and intrinsic values that are inclusive of relational value justifications. As such, the ambition of the relational intervention is perhaps more pragmatic than theoretical, in advancing recognition of how people talk and think about values (Chan et al. 2018).

While this is hugely important, relational values as a boundary concept has almost entirely been focused on the dimension of justification. In contrast, the challenges posed by shared and social values to instrumental values are not resolved by developing a non-instrumental concept, but by pointing to the importance of the collective level, understanding the intersubjectivity of values, and development of pluralistic boundary concepts and processes for sharing, aggregating and integrating values that are inclusive of multiple value justifications. As such, shared and social values, and relational values, are

complementary constructs both essential for inclusive valuation. Furthermore, the two are closely related; as Ishihara (2018) points out, it is hard to imagine any relational values that are not in one dimension or another shared or social.

An altogether different approach to inclusively communicating values is presented by O'Connor and Kenter (2019), who build on O'Neill (2008) to develop the Life Value Framework, which moves beyond value-justifications to consider valuation in terms of different *frames*. Here, values are presented simply as what matters, and in relation to the environment this can be framed as *living from*, *with*, *in* and *as* the world (Figure 4). *Living from* reflects the value of the world as a means to our existence. Living in the world points to its role as the stage for our lives. *Living with* the world points to how we co-exist with non-human nature, with its own patterns and cycles. *Living as* the world points to natural entities as constitutive of our sense of self individually and collectively, through for example kinship, embodiment, and non-dual spiritual experience (O'Connor and Kenter, 2019). Importantly, while relational values may be particularly associated with *living in* and *as* frames, and intrinsic and instrumental values the *with* and *from* frames, the different justifications straddle the frames, pointing to the entwinement of multiple ethical categories in our common experience. For example, a farmer clearing forest for shifting cultivation may be seen through a *living from* frame, but his livelihood is also likely to be the source of meaningful, non-substitutable relational values, and his clearing activities could support the intrinsic good of biodiversity (e.g. Bayliss-Smith et al., 2003). The authors note that "O'Neill's way of phrasing values in relation to 'living' intuitively imbues a sense of egalitarianism between different values" and "its elegance incites a natural inclination towards including each of the categories" (p.x2). Differentiating between value frames is an easier way of communicating to a broad audience than through value justifications.

However, further research and debate is needed to better align the need to communicate values effectively in a way that resonates with citizens and policy makers, such as through the Life framework and relational values, with rigorous explanation of the relationships between different categories. Further, research is needed that builds on discourses and approaches associated with shared and social values to find ways of

resolving practical tensions in sustainability practice between different value justifications and frames, enabling more effective value integration.

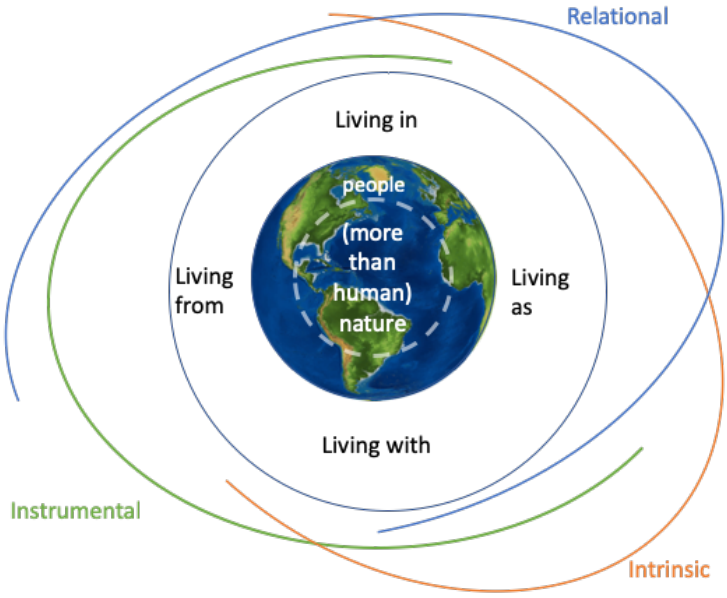

Figure 4 The Life Value Framework, and the relation between its four frames and instrumental, relational and intrinsic value justifications (adapted from O'Connor and Kenter, 2019).

3.6 Value integration and rationalities

Different forms of value integration were presented in this Special Feature. Papers examined the integration of different types of values, including for example across different scales of values (van Riper et al., 2019) and provider (Kendal & Raymond, 2019; Fordham & Robinson, 2019) and across different value justifications (Christie, et al., 2019; O'Connor & Kenter, 2019; Kronenberg & Andersson, 2019). Integration becomes more complex when aligning between epistemic lenses that differ in terms of abstractness and constructedness (Rawluk et al., 2019), for example between values that are lived or embodied, where value is seen as dynamically situated (Raymond et al., 2017) and more objective approaches where values are seen as stable across situations. Such questions point to an urgent need to consider new forms of value integration. Gunton et al. (2017) argued that we need value frameworks that can integrate the place of interest and the scale and subject of interest. They propose a suite of considerations for valuing ecosystems (e.g. social, economic, aesthetic, jural, sensory, symbolic), to be

compared with different stakeholder groups and across different types of places. These frameworks point to the difference between concept and method integration (Kronenberg and Andersson, 2019; Davies et al., 2017; Guerreto et al., 2018), although arguably methodological integration needs to be underpinned by conceptual integration, at least if one wishes to avoid unconscious pragmatism where no attention is given to how tensions along different lenses are resolved (Raymond et al., 2014). Most social values for sustainability papers do not discuss the interface between conceptual and methodological integration, and this is an important avenue for future research.

Value integration can achieve different levels or purposes. Kronenberg and Andersson (2019) outlined the potential for *commensurability*, *compatibility* and *parallel use*, and the methods that can be employed to navigate each. Each integration level can be informed by a different epistemic lens perspective, particularly with regard to rationality. Commensurability is strongly tied to *instrumental rationality* (Lockwood 2005). Values can be treated as commensurable if they are measured according to a common scale and thus aggregated into a single value indicator, for example in monetary approaches and many forms of multi-criteria analysis (Kenter et al., 2014a). In contrast, value compatibility is linked with *bounded rationality*, where doing well enough rather than optimising choices is inevitable in many contexts (Simon, 1984). Here, incommensurable values may be compared ordinally or nominally (e.g. improvement vs degradation). For example, M. Christie *et al.* (2019) compare multiple values of nature's contributions to people across Europe. A third value integration rationality involves communication and deliberative democracy (see *Ecosystem Services, 2016,* Special Issue on shared values and deliberative valuation). Irvine et al. (2016), Kenter (2016) and in this Feature Ravenscroft (2019) point out philosophical challenges around value integration, relating to how much different representations and value criteria count, urging further investigations of how deliberative valuations can act as new democratic spaces for integration based on social learning and *communicative rationality*, where values are weighted on the basis of the force of argument rather than analytical criteria and ideals of non-coercion and inclusivity determine to what degree outcomes are rational.

Given these different value integration rationalities, how can policymakers recognise the diverse values of nature? Here, we need to accept the rationality of 'value pluralism' in that value diversity is an outcome itself. Diverse authors (e.g. Williams, 1982; Larmore, 1987; Kekes, 1993; Stocker, 1997) have argued that conflicts between values can be irresolvable. The notion of moral conflict (Stocker, 1990) suggests that ethics need not always be action guiding. Instead, respecting plurality involves recognition of diverse pathways of policy formation and implementation. This will require a shift in the culture of policy making and associated capacity building to promote awareness of diverse value traditions and practice in grappling with multiple value lenses and meta-lenses.

3.7 Values, conflict and power

The consideration of plural values and the challenges of integrating them with each other and into decisions raises key institutional questions of power in navigating such conflicts. Despite real consequences, the interplay between values and power continue to be neglected, especially in empirical valuation studies. This is in part due to the multifaceted nature of both values and power. Power can be both overt and almost imperceptible and exercised through hegemonically privileging certain lenses and meta-lenses (Foucault, 1980; Lukes, 2001). Power dynamics can influence whose values are expressed or recognised, and which values emerge in contexts, though this is not necessarily transparent. Researchers and practitioners of sustainability science must become attuned to recognising and navigating power as expressed through values and the lenses by which we examine them.

The interplay between social values and power can occur in many ways. A dominant scientific framing of sustainability challenges privileges one way of knowing, which can depoliticise inherently political challenges (Sletto, 2008). Examples include the concepts of the Anthropocene (Haraway, 2015; Davis and Todd, 2017) and sustainability itself (Farreira, 2017), which homogenise social drivers apolitically. Unconsciously privileging one set of social values lenses over others can manifest in social-ecological injustices (Collard et al., 2018). Further, certain values (e.g. economic, moral, religious, scientific etc.) of particular groups (e.g. different social classes) will be considered in policy and decision-making through

the exercise of power, for example through privileging of economic value above all else (Demaria, 2010). In contrast, values associated with indigenous and local knowledge systems are often ignored in decision making (M. Christie et al., 2019). Further, normative meta-lenses, including ideas of social memory and how the future *should* be (Rawluk & Curtis, 2017), can cause people to silence values that don't match expectations, including in deliberative processes (Orchard-Webb et al., 2016; Brear et al., 2019). There are many ways in which power can be exercised in order to direct, control or regulate the conduct of people, in overt and subtle ways. For example, through discursive strategies of power-knowledge embedded in different 'governmentalities', such as Sovereignty, Discipline, Neoliberalism, and, Truth as an art of government (Foucault, 2008). According to different technologies of power exerted in a historical context, these governmentalities affect the values that people are able to adopt in their lives. Given that values are crucial aspects of the choices, decisions, and behaviours of people related to sustainability, the interplay between how power is exercised, the values that people adopt, and the construction of individuals' identities, is key to understand environmental governance and its outcomes (Agrawal, 2005; D'Alisa and Kallis, 2016).

While ontological and epistemological differences can be a source of contestation (Rawluk et al., 2019), tensions around power inevitably arise in relation to any form of social values assessment in practice, though are often not acknowledged. In particular, there is a need for more attention to power relations in diverse processes of value formation, socialisation and internalisation, such as in this Feature by Calcagni et al. (2019) who consider the impact of communication or market strategies influencing value creation on social media. Even in deliberative value formation characterised by ideals of non-coercive communicative rationality, such ideals can only be approximated, as in the real-world, unconscious power relations cannot be fully ironed out (Orchard-Webb et al., 2016). Further, in sustainability practice, an important barrier for realising pro-sustainability social values are people's limited power and control to change their unsustainable practices resulting from unmet well-being related needs (Brear et al., 2019, Huxley and Yiftachel 2000).

Thus, sustainability that manifests social-ecological justice requires centring on both social values and power. If other-regarding transcendental values that underpin the ethos of sustainability, such as equity, generosity and care are to be promoted, there is a precursory need to transparently observe diversities of values and needs alongside privileging mechanisms of power. In the field of valuation, scholars more often engaged with (post-)positivist research may need to become more comfortable with relational and post-structuralist meta-lenses, since power is observed more easily through these (Foucault, 1980). In line with Geels et al. (2017) and Smith and Berkhout (2005), considering values through multiple value, epistemic and procedural lenses is critical because socio-technical transition pathways towards sustainable systems imply necessarily value-oriented governance systems, which are affected by the interplays between technologies of power, the institutional system, and the processes of pro-sustainability value socialization (Everard et al., 2016).

4 Conclusions

In this paper, we have considered key theoretical and practical tensions in the burgeoning field of social values of sustainability. These tensions relate to important dimensions of values that characterise the lenses and epistemic and procedural meta-lenses through which different traditions conceive and perceive these values, exemplified by the diverse contributions to this Special Feature of *Sustainability Science*. Key avenues for future research relating to these tensions include:

1. Exploration of relations between collective and individual values, and the dynamic internalization and socialization processes by which values transfer up and down between individuals and multiple social scales of value provider;
2. Investigation of crisis-triggers for pro-sustainability value-change and levers for 'rippling out' changes;
3. Conceptual development and empirical exploration of proto-values;
4. Application of interventions based on value awareness, activation and congruence within sustainability contexts and their upscaling from individualistic to social;
5. Evaluation of values-based interventions that take a generalised vs place-based perspective;

6. Further development of the Life Framework as a novel way of organising and communicating why the natural world matters;
7. The interface between value, conceptual and methodological pluralism, value integration and comparative and combined use of multiple rationalities for valuation;
8. Deliberative mechanisms to address conflicts between values at different spatiotemporal and social scales, between different value justifications and Life Frames and between different value and epistemic lenses;
9. More explicit evaluations of recognition and procedural justice in critical social valuation, and under which conditions transformative objectives of social valuations are met;
10. The interplay between how power is exercised and the values that people adopt across different institutions and contexts;
11. The development of new languages of nature valuation that are better reflective of relational, constructivist and structuralist epistemic perspectives;
12. Understanding mechanisms whereby certain lenses are privileged over others in different decision-contexts, and capacity building for understanding and drawing on multiple value, epistemic and procedural lenses in decision-making.

The large number of dimensions of values that these questions point to reflect that sustainability issues are by and large complex and wicked problems. Addressing such issues requires us to navigate transcendental and contextual values at multiple spatiotemporal scales, between individuals and collectives, across different potentially conflicting value justifications, frames and rationalities, and with close attention to power relations in such conflicts, both within and between different value articulating institutions. Effective navigation requires charts, beacons and experience. This paper has sought to scout the terrain providing a multidimensional interpretation of the messy social values landscape. Such a map is crucial in communicating with fellow travellers where one is, in the sense of what values one is articulating and from which vantage point. Understanding of tensions provides beacons to shed light on crucial areas of conflict, where we need to pay particular attention in our journeys of sustainability science and practice. At these points, experience of engaging not just with the landscape and its map but with fellow travellers

becomes vital, as the terrain is too challenging for any tradition to tackle on its own. Crucially, all values around sustainability have a social dimension. A juxtaposition between individual instrumental values and social, shared, cultural, non-instrumental or relational values is thus not helpful – rather we must help each other understand what dimensions of the value landscape we are viewing and through what lens. At these junctions, by loving the mess and enjoying the thrill of exploration, conflict can become a space of creative dynamism where new concepts, methods and tools can be born. The mess does not need resolving but engaging with. This requires building capacity with researchers and practitioners: learning to navigate and learning to love, by embracing the plurality of how we conceive and articulate values in research, decision mechanisms and boundary spaces – all are ultimately social processes of valuation.

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