

Comparing instrumental and deliberative approaches to the valuation of social values for cultural ecosystem services: Time for a new paradigm?

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Summary

Despite rapid advancements in the development of non-monetary techniques for the assessment of cultural ecosystem services, little research attention has been devoted to the evaluation of their underpinning paradigms. This paper presents two approaches for assessing social and cultural values for ecosystem services using an instrumental paradigm, involving an objective assessment of the distribution, type and/or intensity of values; and two approaches using a deliberative paradigm, involving the exploration of desired end states through group discussion. Each approach makes different assumptions about: the underlying rationale for values assessment; the process through which values are elicited; the type of representativeness sought, and; the degree of involvement of decision-makers. However, case examples demonstrate that the boundaries between instrumental and deliberative paradigms are often not concrete. To accommodate this fluidity, a third pragmatic paradigm is offered that integrates some of the qualities of both.

Extended Abstract

Cultural ecosystem services produce a range of physical, emotional, and mental benefits that support human well-being (Kenter et al. 2011). These services are tightly linked to specific features of the material environment, as well as cultural practices and experiences (Bieling et al., 2014). Despite the importance of cultural ecosystem services being consistently recognized (e.g., Chan et al., 2012a,b; MEA, 2005; Plieninger and Bieling, 2012), existing monetary frameworks for representing or assessing them: 1) do not allow for a sufficient consideration of multiple dimensions and types of value (Chan et al., 2012b; Hernandez-Morcillo et al., 2013; Kenter et al., 2014; Norgaard, 2010); 2) over-rely on standardization and empirical valuation (Milcu et al., 2013); 3) ignore the wealth of cultural values research in the landscape planning literature (Schaich et al., 2010); 4) do not cater for multiple understandings of human-environment relationships which are tied to different cultural or industrial practices (Church et al., 2014; Flint et al., 2013; Kenter et al., under review; Raymond et al., 2013); and 5) do not usually consider subtle and implicit cultural benefits of the environment that nonetheless can have substantial value (Kenter et al., 2011).

Despite the recent growth of non-economic assessments of ecosystem services, the usefulness of these approaches has been little scrutinized. We are particularly concerned that assessments employ different methods of valuation without evaluating the perspective on rationality that underpins them. Most non-economic assessments of social values for ecosystems services follow an instrumental paradigm where the emphasis is on rating, ranking and spatially identifying social values (e.g., Brown et al., 2012; Raymond et al., 2009; Sherrouse et al., 2011, 2014); however, an equally important rationality is the ‘deliberative’ paradigm of knowledge and action (Forrester, 1999) which places emphasis on communication and argumentation, and combining lay and expert perspectives on the decision-making process (Stein and Harper, 2003). In this study, four approaches which explicitly or implicitly underpin most assessments of social values for ecosystem services are compared.

Approach 1: Instrumental valuation which assumes no heterogeneity in the survey population

In this approach, the subjects (study participants) are asked to independently self-report or map their social values for ecosystem services, among other landscape attributes, using a range of techniques including mail-based surveys, electronic surveys or individual-based workshop assignments (Raymond and Brown, 2011; Raymond et al., 2009). Survey or interview responses or spatial markers of value (points, lines or polygons) are statistically aggregated to a regional, national or global scale with limited or no sub-group comparison (Figure 1).

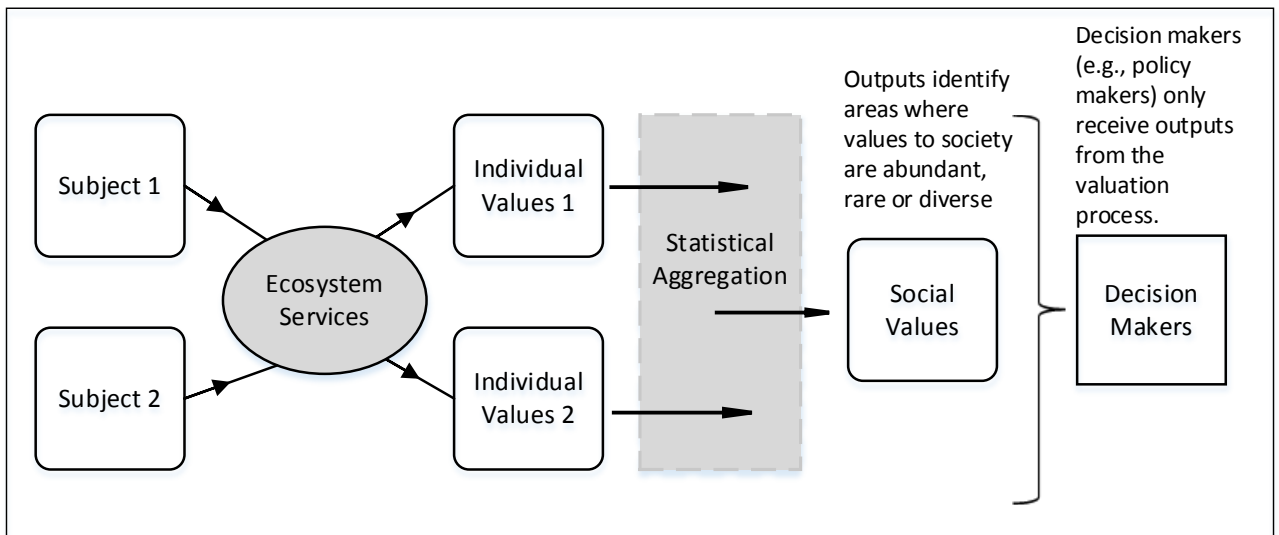


Figure 1 Instrumental valuation involving a single social representation (assumes a homogenous regional population).

Approach 2: Instrumental valuation which assumes heterogeneity in the survey population

The instrumental paradigm also provides for sub-group comparisons (Figure 2), such as comparing the distribution and type of social values assigned by conservation and development interests. These social representations are likely to have differences in their values for, knowledge of and interests in ecosystem services and their management. When statistically compared or spatially overlaid, there is the potential for overlapping, but also potentially conflicting contextual values.

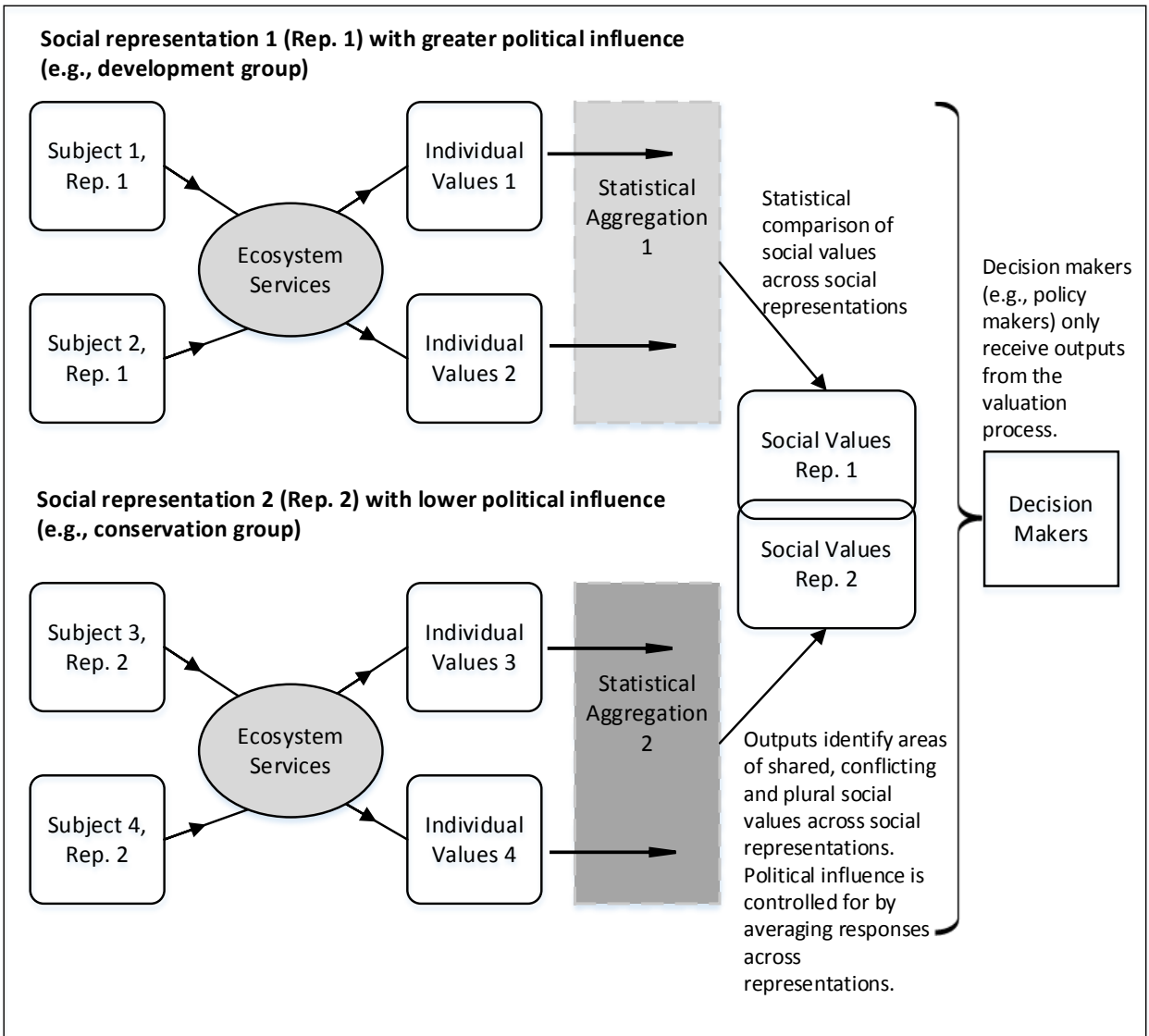


Figure 2 Instrumental valuation involving dual or multiple social representations

Approach 3: Deliberative valuation of social values within a social representation

In this approach, individuals from a similar representation (e.g., multiple agencies representing conservation interests) are invited to share their values or preferences in a group-based environment, such as through a workshop or focus group (Figure 3). The deliberative process could include scientists, end users and decision makers, either to inform valuation, or even as participants (as in case example 3, below). Discussions often do not just focus on contextual values, but may also consider questions around transcendental values, including process values such as fairness and responsibility, and around uncertainty and risk.

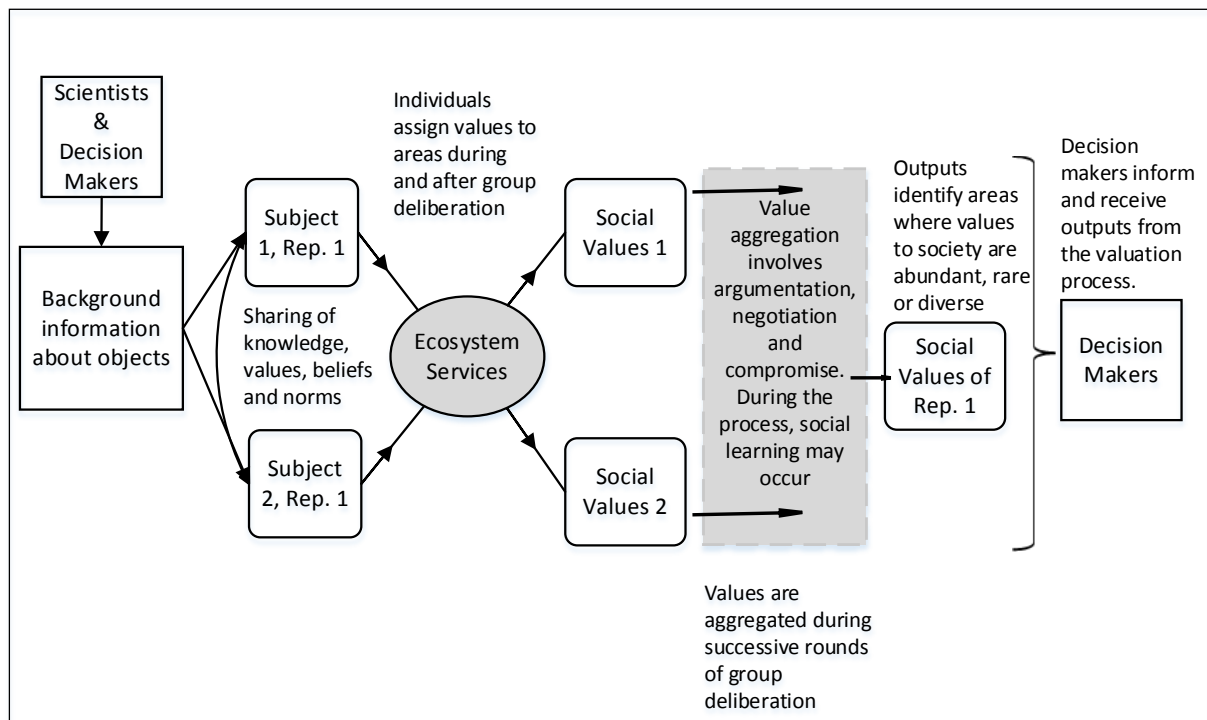


Figure 3 Deliberative valuation involving individuals (subjects) from a single representation

Approach 4: Deliberative valuation of social values across social representations

A fourth approach is where individuals representing multiple social representations express their values in a group environment (Figure 4). In this context, the vested interests of different social representations are likely to heavily influence the valuation process. Bauer and Gaskell (2008) expanded social representation theory to show that representation is also a function of the intergroup context. Representations are formed in relation to other communities that are potentially competing groups, possibly of unequal power. The valuation of ecosystem services therefore depends on the intersection of these different social representations. More complex deliberative valuation techniques attempt to understand how these different social groups interlock and create a future of no one's particular design.

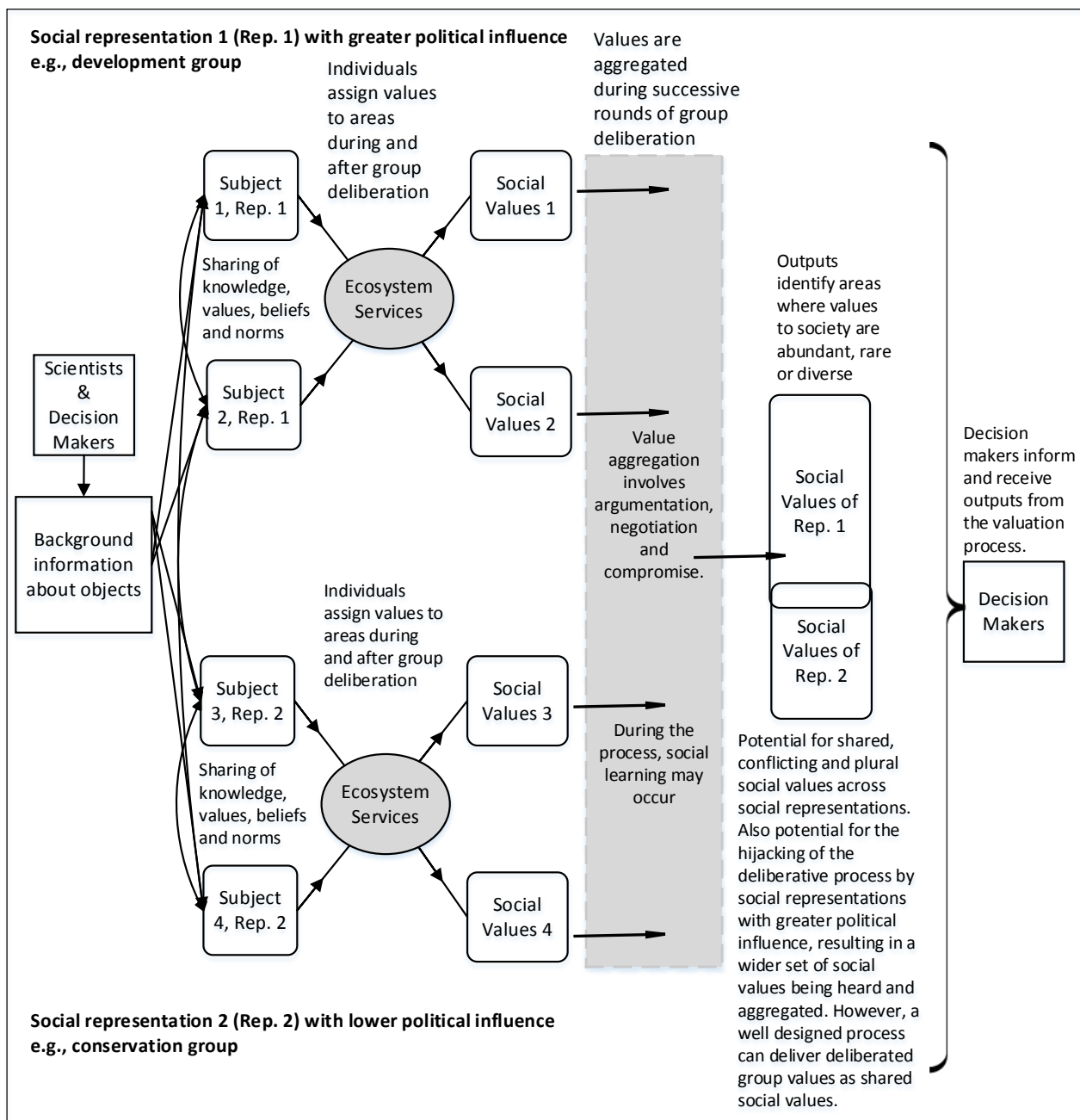


Figure 4 Deliberative valuation involving individuals (subjects) across dual or multiple social representations

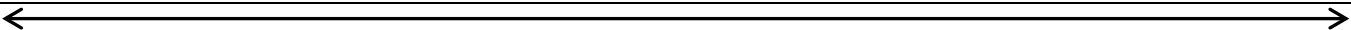
A pragmatic paradigm for the assessment of social values for cultural ecosystem services

While the approaches presented above clearly illustrate different rationalities, valuation processes, types of representation and degrees of involvement of decision-makers, they also indicate that in reality the boundaries between them are more fluid than might be apparent. These fluid boundaries indicate a need for a pragmatic valuation paradigm that can theoretically ground how to integrate qualities of both instrumental and deliberative valuation approaches (Table 1). In simple terms, it appears that pragmatic approaches either undertake instrumental assessments that are then aggregated; integrated and/or appraised through deliberation (*Instrumental* → *Deliberative*), or that, conversely, deliberation is used for

aspects of data gathering, but where aggregation and appraisal follows an instrumental approach (*Deliberative → Instrumental*). However, without a clear theoretical foundation of how deliberative and instrumental approaches might be integrated, it is unclear what criteria can be used to evaluate validity and legitimacy of these approaches. A pragmatic approach thus risks incoherence and haphazardness.

A pragmatic paradigm is proposed to address these concerns. The order of consideration of each rationality (i.e., *Instrumental → Deliberative* or *Deliberative → Instrumental*) will in turn influence the process of value elicitation, type of representation, and the degree of involvement of the decision-maker.

Table 1. A continuum of valuation approaches to be considered when assessing cultural ecosystem services

Continuum of Approaches				
				
Paradigm	Instrumental	Pragmatic		Deliberative
		<i>Instrumental → Deliberative</i>	<i>Deliberative → Instrumental</i>	
Rationality	Instrumental, focus on contextual values	Pluralistic. Instrumental assessments used for deliberation based on communicative rationality. Focus on contextual values initially and transcendental values latter.	Pluralistic. Deliberated understanding of social value verified through instrumental assessment. Focus on both contextual and transcendental values.	Communicative, focus on contextual and transcendental values
Process of value elicitation	Statistical aggregation of individual value into social value	<i>Explanation → Exploration</i> ‘Objective’ maps and survey results or measures inform group deliberation; negotiation is used to establish social values	<i>Exploration → Explanation</i> Social values elicited and negotiated using deliberative approach, then cross-checked through individual survey instruments.	<i>Subjective.</i> Social representations agree, disagree and negotiate social values.
Type of representation	<i>Statistical</i>	Aggregation of values from a statistically representative set of individual values informs a politically representative, deliberative process.	Political representativeness of social values collated during a deliberative process is validated using instrumental statistically representative approach.	<i>Political</i>
Degree of involvement of the decision-maker	Little to no involvement	Little initial involvement in eliciting values, potentially high involvement in deliberating and negotiating social values.	Potentially high initial involvement in deliberating and negotiating social values, low latter involvement in follow-up validity check using instrumental approach.	High involvement

Conclusions

This paper outlined how the non-economic assessments of social values for cultural ecosystem services are underpinned by different paradigms, articulated as *instrumental* and *deliberative*. Reflexive analysis reveals that, despite distinctly different rationalities, the boundaries between instrumental and deliberative paradigms are, in practice, fluid. However, pragmatic approaches as applied often lack a cohesive theoretical framing. To address this, we highlighted the salience of a third, pragmatic paradigm that integrates both deliberative and instrumental qualities. The pragmatic paradigm can underpin both *Instrumental* → *Deliberative* and *Deliberative* → *Instrumental* assessments

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