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The Crowding Out of Complex Social Goods

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ABSTRACT

The valuation of ecosystem services to inform natural resource management and development has gained acceptance in many arenas. Yet, contemporary economic valuation is constrained to the appraisal of *simple goods* that generate benefits that accrue to individuals, neglecting *complex goods* that generate benefits that accrue to society more broadly. Methodological barriers to the valuation of *complex social goods* have led to their frequent omission from natural resource management deliberations. The prevailing valuation paradigm that focuses on *simple individual goods* may erode conservation efforts by crowding out the institutions and behaviours that support socially constructed ecosystem service values. Erosion of these values ultimately harms the environment and society as a whole. The institutionalisation of appropriate methods for estimating the value of *complex social goods* alongside existing methods for valuing *simple individual goods* within international conservation, development and policy-making discourses, is therefore an important evolution for sustainable natural resource management.

1. Introduction

Natural resource management and development have long been informed by the economic valuation of various interrelated ecosystem services and over the past two centuries these valuation methods have matured significantly. Putting a 'price' on nature allows decision makers to quantify and elucidate the myriad impacts of development. Efforts to "mainstream" valuation have been successful: non-market valuation is now firmly established in international policy discourses concerning natural resource use and conservation and is actively encouraged by state agencies through the publication of guidelines and handbooks (for example, Commonwealth of Australia, 2006; H.M. Treasury, 2003). There is, however, growing recognition that dominant valuation approaches make only a subset of benefits visible (Kenter et al., 2015) and that by focusing entirely on 'the market' and on market incentives, we may undermine the motivations and thus behaviours we seek to promote (Gneezy et al., 2011).

An emerging body of literature now recognizes a spectrum of value typologies (Vatn, 2009; Schwartz, 2015; Kenter et al., 2015). These typologies vary in complexity, but highlight that (at the simplest level), goods may be thought of as having (at least) two distinct dimensions—depicted as axes in Fig. 1. Along the horizontal axis, goods range from simple, with separable benefits (e.g., food), to complex, with multiple, inter-related and inseparable benefits (e.g., wedding banquet). Along the vertical axis, benefits derived from goods range from those which are individually constructed, reflecting individual motivations and 'utility' (e.g., ambition and success, respectively), to those which are socially constructed, representing communal norms, relations, and expectations (e.g., social cohesion).

The various possible combinations of goods and benefits may be illustrated by different types of fisheries (Panel A, Fig. 1), described in Table 1. As discussed in Section 2 economists' ability to estimate values along these axes is variable. Hence, a limited range of goods has been assessed, with significant policy implications (discussed in Section 3).

2. A Very Brief History of Non-market Valuation

Although contemporary discourse about the 'value' of environmental goods and services is dominated by the concept of price (exchange value), this does not mean that economists believe price reflects value; rather, non-market valuation methods are firmly grounded in the broader idea of *utilitarianism*—i.e., value is a matter of usefulness (ideas largely attributable to Mill and Marshall). For most economists, the term *utility* represents the satisfaction that people gain from the use (or *non-use*) of a good or service; economists are thus concerned about people's satisfaction. For economists, maximizing someone's utility thus implies making that person as satisfied as possible. Many

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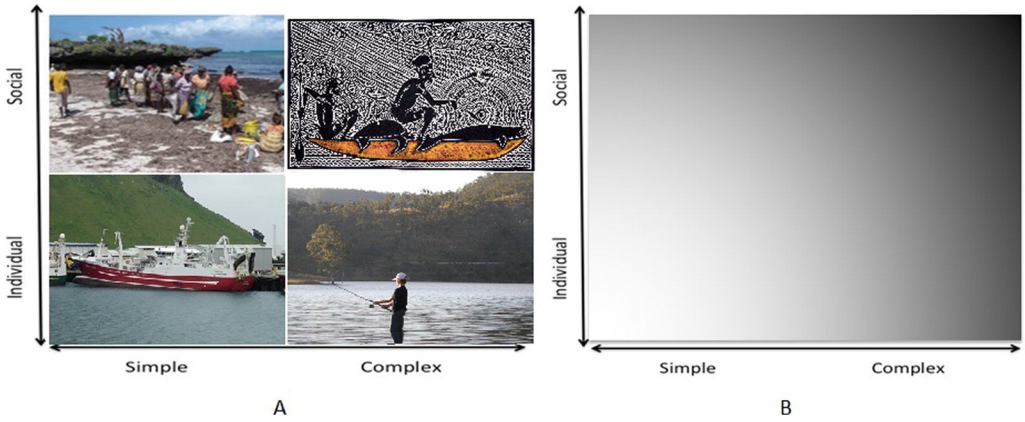

Fig. 1. Panel A: Various ecosystem services and their associated benefits may be visualised in two dimensions. Along one axis, goods range from simple to complex, illustrated here using different types of fisheries. Along the other, benefits range from individual to social constructs. Individually constructed benefits reflect individual 'utility.' Socially constructed benefits relate to social norms, relations, and expectations. Top right image - 'Milungu' by the artist Alick Tipoti. Panel B: Established methodology sheds light on values relating to simple-individual goods (such as commercial fisheries) with other types of goods left mostly in the dark (e.g. recreational fisheries, subsistence fisheries, and in particular, traditional fisheries).

welfare and environmental economists have generalized this notion of utility to the level of society, whereby 'social utility' may be thought of as a measure of social welfare.

Environmental economists often seek to highlight the contribution that environmental goods and services make to individual or social welfare (utility/wellbeing) and have developed numerous methods of doing so. Below, we provide a brief (and non-definitive) summary of key events relevant to the development of these methods and of Cost-Benefit Analysis (CBA), an institutionalised framework for weighing up a variety of market and non-market costs and benefits (see Hanley and Spash, 1993, for a more comprehensive overview). We use Fig. 2 to depict key contributing economists, concepts and policies chronologically, providing a notional measure of the growth in our understanding of values and valuation methods with a red line (with undefined units of 'knowledge' measured on the vertical axis).

- Late 1800s/early 1900s. Mill and Marshall clarify the distinction between value and price, with the notion of *utility* - linked to the idea of individual, and potentially also social 'welfare' (or wellbeing)
- Early 1900s. Economists and social scientists collaborate frequently on research into individual and collective wellbeing (*utility*/welfare).
- 1930′s. Influential economists—namely, Irving Fisher and Vilfredo Pareto—successfully argue that utility cannot be measured in a way that facilitates meaningful interpersonal comparisons (Kristoffersen, 2010). From this point, for almost a century, economists and social scientists largely pursue different research agendas relating to wellbeing/utility/welfare.
- The US Flood Control Act of 1936 (The Act). This act legislated construction of an unprecedented litany of civil infrastructure works and obligated the government to undertake flood control efforts in the interest of the "general welfare," so long as a development project's "benefits to whomever they may accrue are in excess of the estimated costs" (Congress, U.S., 1936, p1570). The Act established a concrete policy imperative for research into the social costs and benefits of natural resource development. Critically, the Act established that the improvement of social welfare necessarily required one to account for a diverse range of potentially competing interests, but it did not specify how this was to be done.
- Late 1930s. Hicks (1939) demonstrated that the welfare gains or losses arising from the addition or removal of goods and services can be articulated in terms of 'income-equivalent' compensations. That is, the cost (or benefit) to an individual of the loss (or gain) in their access to a good can be calculated by determining how much remuneration would be required to compensate them for that loss (formally, to keep their utility constant).
- Late 1930s–early 2000s
- The Total Economic Value (TEV) framework slowly developed, helping to clarify ways in which people benefit from the environment.

Table 1
Simplified typology of goods and benefits (derived from insights provided by Vatn, 2009; Schwartz, 2015; Kenter et al., 2015).

		Type of good	
		Simple	Complex
Type of Benefit	Individual	Commercial fisheries are an example of a simple good bearing individually constructed benefits. Although the identity of commercial fishers is often tied to their occupation (highlighting the importance of cultural values to these fishers) the primary motivation for commercial fishing (particularly incorporated companies) tends to be economic. The benefits associated with this industry (e.g., contribution to GDP) are the sum outcome of individual motivations and incentives to procure income.	Recreational fishing is an example of a complex good that bears individually constructed benefits. Recreational fishing makes a contribution to individual utility – although the contribution comprises complex and intertwined cultural/recreational and economic benefits.
	Social	Small-scale fisheries, exemplify simple goods bearing socially constructed benefits. They often provide an economic safety net for vulnerable members of a community. Such fisheries tend to feature strong norms of fair access (Hicks et al., 2014), reciprocity and taboos concerning trade-offs that promote the fair distribution of benefits (Daw et al., 2015). In many fisheries along the coast of the western Indian Ocean, catch is distributed amongst a range of stakeholders, including fishers, traders and small-scale processors. When the take is plentiful, this arrangement is predominantly financial. However, when catches are low, the most vulnerable in society (often widowed women) are assured subsistence without financial exchange (Hicks et al., 2014; Daw et al., 2015).	Traditional Indigenous fisheries are complex goods bearing socially constructed benefits. While the basic acts of hunting and fishing may generate simple, individual benefits like nutrition and income, the relations and meanings formed through these practices' associated norms, traditions, stories, and ceremonies bear socio-cultural benefits which are often more significant than the individual benefits (Delisle, 2013; Watkin Lui et al., 2016).