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## Value pluralism and economic valuation – defensible if well done

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## ARTICLE INFO

## Article history:

Received 4 November 2015

Received in revised form

8 February 2016

Accepted 12 February 2016

Available online 2 March 2016

## Keywords:

Biodiversity

Axiology

Ecosystem services

Internalisation

Policy impact

Conditions for helpful monetisation

## ABSTRACT

Scientists talk of “ecosystem services” and their economic value when arguing for the conservation of biodiversity. The limits to this line of argumentation are analysed based on the philosophy of values (axiology), exploring different kinds of values and discussing which of them can be adequately described with economic methods. The three promises of economic valuation, raising awareness in polity, saving biodiversity by internalising external cost, and contributing to better decisions are assessed and turn out to be more than questionable. Finally, the niche is defined where economic valuation makes sense, taking into account the restrictions from the axiological and the economic analysis.

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## 1. Introduction

For a long time scientists have been alerted and alerting about the loss of biodiversity (the first protected area, the Yellowstone National Park, was set up in 1872, not least due to the lobbying of scientists like Aldo Leopold). Different kinds of arguments have been used at different times, based on different cultural backgrounds and to address different audiences. Whereas sustainable management of (forest) ecosystems initially aimed at a sustained yield in ecological terms (biological productivity: wood and forest products),<sup>1</sup> in its utilitarian version of “wise use” it referred to sustained profits in monetary terms. Already Schlich (1889)<sup>2</sup>, when talking about forest management, defined the basic principles of the ecosystem service approach. According to him, forests (today read: ecosystems) are of direct and indirect usefulness for the economy of man as well as for the economy of nature. The

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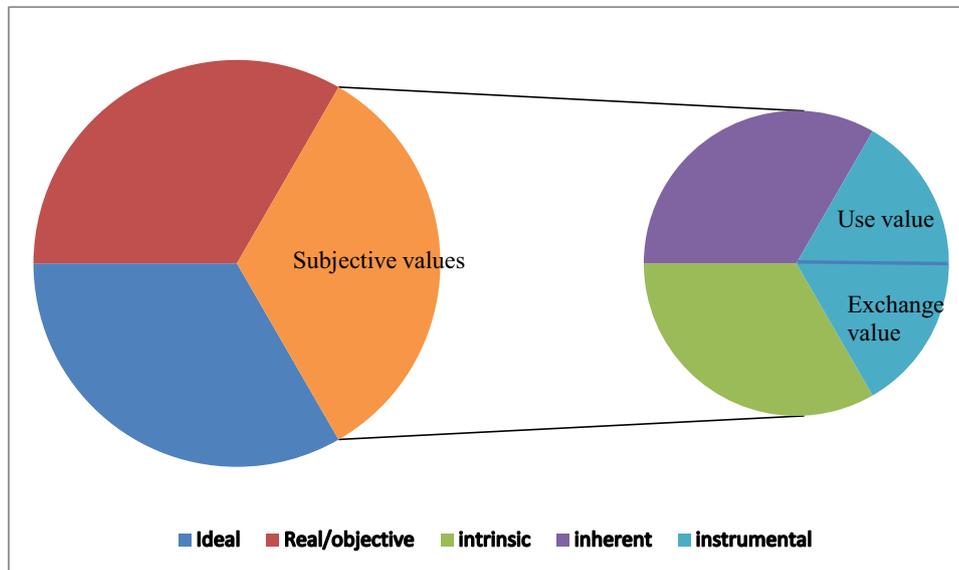
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<sup>1</sup> ESS were known to classical economists as “natural agents” (Ricardo, 1817 according to Parks and Gowdy, 2013) not fetching a price.

<sup>2</sup> W. Schlich was founder of the forestry school of Coopers Hill (later part of Oxford University), inspector of the Indian forests of the British Empire and 1889 ff. author of the “Manual of Forestry”, setting the standard for forestry ecosystem management in the Anglo-Saxon world for decades to come.

former through their produce, the latter through their impact on climate, the regulation of soil water content and soil stability, and through enhancing human health as well as their ethical and aesthetic functions (Grober, 2010). Formulated more than 120 years ago, this is the essence of a concept which was named “ecosystem services” (here for short: ESS) by Ehrlich and Ehrlich (1981). The term was intended to serve as a metaphor communicating the importance and in this sense the value nature and its components have for human societies (as was the term “biodiversity”, coined by Wilson (1988)). Linking biodiversity loss, ecosystem services and human well-being, the Millennium Ecosystem Assessment (MA, 2005) popularised and institutionalised the terminology to highlight the importance of functionally intact ecosystems to the survival of human civilisation. However, while adopting an economic language, it deliberately refrained from any economic valuation of biodiversity (Norgaard, 2010).

Nevertheless, the trend of the last 30 years was to value almost everything in terms of money, applying the concepts of mainstream neoclassical economics to ecological systems. The parts of nature providing goods or services useful to humans were described as natural capital as standard economic attributes values only based on anthropogenic benefits. The resulting substitution of quantity for quality (there is no good or bad money, only more or less) did not stop at the gates of biodiversity. While the UN World Charter for Nature (1982) (<http://www.un.org/documents/ga/res/37/a37r007.htm>) stated that “every form of life is unique, warranting respect regardless of its worth to man, and, to accord other



**Fig. 1.** Although they may be associated to the same object, ideal, objective and subjective values do not overlap, while intrinsic, inherent and instrumental values (the latter subdivided in use and exchange values) are subcategories of the subjective values.

organisms such recognition, man must be guided by a moral code of action”, 15 years later the attitudes had changed. With the much disputed paper of Costanza et al. (1997) on the monetary valuation of the Earth's ESS, the flood of publications and studies valuing nature in monetary terms rose rapidly, as did the critique of such valuations (e.g. Spash, 2008). Atkinson et al. even consider that for economists’ “reticence to aggregate, unease about ‘repeating the Costanza et al. error’ cannot be ruled out” due to “the long shadow over the thinking of the economic community” cast by Costanza et al. (Atkinson et al., 2012: 37).

Despite the broadness of the debate, it is still disputed what is the niche where monetisation can play a positive role, based on an axiological typology of values, on basic economic theory, and on empirical evidence regarding its past performance. This paper is a contribution to filling that gap.

Thus before discussing the value of nature, we will discuss the nature of value, before scrutinising the legitimacy, the adequacy and the limits of pricing from this axiological (value philosophical) basis, providing arguments for a richer understanding, and a plea for value pluralism. Section 2 suggests a systematic typology of different kinds of values, rather comprehensive for subjective values although without claiming to be exhaustive. It is intended to demonstrate that only few of the value types suggest themselves to monetary valuation. For others, doing so implies a series of category errors (using operational tools like quantification methods, more or less well defined for one category of values, on another category where they are not defined and probably not definable at all). Section 3 applies this insight to biodiversity valuation and concludes that monetisation should be restricted to where such category errors do not (or hardly) occur, and Section 4 derives a description of the niche monetisation can legitimately and usefully occupy. Section 5 draws some conclusions.

## 2. Method: Axiology or what is a “value”?

Given the diversity of value definitions and their diverging underlying concepts, when talking about “value” the term should either be specified or be understood as an “umbrella concept”, comprising several incommensurable kinds of values (Holland, 2011).

According to the Encyclopaedia Britannica, axiology, from Greek *axios*, ‘worthy’ and *logos*, ‘science’, is “also called Theory Of Value, the philosophical study of goodness, or value, in the widest sense of these terms” (2015). It is one branch of classical philosophy, encompassing a range of approaches for the understanding of how, why, and to what degree objects have value, whether the object is a physical (a person, a thing) or an abstract one (an idea, an action), or anything else.

In philosophy, value is a property of such objects, representing their *degree of importance*. An object with philosophic value may be termed an ethic or philosophic good. *Valuation* is the process of value attribution; every valuation is based on a specific ethics determining the value system applied, and uses its own ‘language of valuation’ (Centemeri, 2015; Martinez-Alier, 2008). Different kinds of value(s) and value systems can be distinguished, based on different philosophical traditions and approaches (for an illustration see Fig. 1); they can be detached from objects or associated with them, and in the latter case the value can be seen as inherent to the object or as externally attributed by a third party. Therefore, in axiology, usually three different paradigms are distinguished (Ott, 1999):

- *Ideal values* emerge from Platonism, the view that there exist such things (which Plato called forms) as abstract objects, real and objective things that exist independently of us and our thinking, which are entirely non-physical and non-mental, unchanging and eternal realities, independent of the changing things of the material world (Encyclopaedia Britannica, 2015). In addition, they are causally inert – that is, they cannot be involved in cause-and-effect relationships with other objects (Balaguer, 2004). Ideas, including values, are such abstract objects, eternal, unchangeable, perfect types, of which particular objects of sense are imperfect copies. The ideal of ‘integrity of nature’ or ‘naturalness’ may be an example of a contemporary idea, unchangeable with changing manifestations. As these ideas cannot be perceived by human senses, whatever knowledge we derive from that source is unsatisfactory and uncertain. In his “hierarchy of ideas”, including justice, truth, equality and beauty, among many others, Plato identified the idea of the good as the supreme and dominant principle, determining the value of different actions. Valuation then may be described as

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