

Letter

Have Ecosystem Services Been Oversold? A Response to Silvertown

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Silvertown [1] has addressed an important topic and expresses many concerns, some of which are warranted. The paradigm of ecosystem services (ES) divides researchers and therefore debate is welcome. Since paradigms, by their very nature, constrain the way we view things, critiques of what is gained and lost in taking a particular world view is always valuable. The 'ES paradigm' is no exception. The problem with Silvertown's contribution to this necessary debate is that it is based on a caricature of what the field actually entails and of the literature that underpins it.

Silvertown claims that, by representing the characteristics of ecosystems from which people derive material and non-material benefits as 'ES', the perspective inescapably leads to monetization and the dominance of markets – and that such hegemony leads to unfortunate consequences for individuals, society, and nature. If such a claim was correct, as researchers we would be in dangerous territory indeed. The evidence provided by Silvertown for such a claim is, however, limited and partial, as the reliance on the articles by Costanza and colleagues demonstrates. The opinion piece misrepresents many contemporary disciplinary norms and methods of economics, environmental economics and ecological economics, and economic policy instruments and builds on outdated academic

thinking. The claim, for example, that ecological economics as a discipline 'favors monetization' is simply false, as a reading of the foundations report of The Economics of Ecosystems and Biodiversity (TEEB) project and reviews of economic assessment and its limitations will show [2,3]. The 'ES paradigm' and what Silvertown calls the 'monetized ES (MES) paradigm' are not one and the same thing, and the flaw in Silvertown's thinking is that he conflates the two. While assigning monetary values to ES may be appropriate in some situations, it is widely accepted that it is neither an 'imperative' nor the inevitable outcome of ES thinking. 'Monetization' does not equal 'marketization'.

Few, if any, papers in the research or policy literature argue that there are no limits to monetization and the creation of markets for ES. Indeed, we would argue that clarification of the issues around the question of 'when is it appropriate to monetize?' is a major contribution of the ES paradigm. Economic mechanisms are not simply 'neoliberal' leading to markets. For instance, carbon trading, one of Silvertown's examples, requires a collectively agreed and legally enforced carbon emission cap to function as a climate change mitigating instrument. In other words, the question of 'when is it appropriate to monetize?' opens important issues around governance and the moral and ethical choices that we make about what can be traded. There are a multitude of means of governance beyond payments or economic mechanisms that can shape sustainable ecosystem management and the success of biodiversity conservation [4]. The case against payment for ES (PES) made by Silvertown overlooks the considerable body of literature on economic instruments and the purposes of different mechanisms (e.g., [5]) and the finding that such schemes do not require monetization or commodification. Payments can be designed to generate impact and be evaluated against the (conservation) goals they are targeted to enhance [6].

In practical terms, Silvertown argues that there are few examples where markets for ES have actually yielded 'benefits', by which one assumes he means successful conservation outcomes. Again his reading of the literature is partial, as benefits are widely documented in the recent literature (e.g., [7,8]). Moreover, the examples of 'wildlife trade' and 'Britain's forests', which he uses to illustrate the way in which markets for biodiversity can have negative impacts, in fact have little to do with questions of monetization and financialization but rather regulation and governance arrangements.

Silvertown claims that 'nature is devalued by monetization'. Yet it is also apparent that nature has been, and continues to be, undervalued when the conservation case is made in isolation. The conservation paradigm also restricts our view of the world. Much of the work within the field of ES is directed towards measuring and communicating the importance of nature to people. The attempt to assign monetary values is part of that, but not the only part [9]. There is a rich and growing body of ES literature that is exploring non-monetary values held by individuals and by communities (e.g., [10]) and the moral and ethical choices we face when taking an anthropocentric perspective on nature [11,12]. If the ES paradigm has an imperative it is that we need to find better ways of reconnecting people with nature so that we may conserve and sustain both biodiversity and our well-being [13].

Acknowledgments

Some research leading to these arguments has received funding from the EU's Seventh Programme for research, technological development, and demonstration under the OpenNESS project, grant agreement no 308428.

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<http://dx.doi.org/10.1016/j.tree.2016.03.008>

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