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Surveys

Unraveling the veil of fuzziness: A thick description of sustainability economics



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ABSTRACT

This article provides a thick description (Geertz, 1973) of sustainability economics. Baumgärtner and Quaas (2010a, b) have proposed as an alternative to ecological economics the new field of sustainability economics, which has triggered various replies. The purpose here is to order and to review these contributions. Building upon a literature review of sustainability economics, the paper argues that the concept currently has more of a fuzzy and declamatory character. The rhetoric (McCloskey, 1998) of sustainability economics contains general issues of sustainability economics, externalities and the capability approach. The article argues that it is currently not clear how the solutions for science and policy proposed by sustainability economics differ from those of ecological economics. Efforts should be directed towards further development of the theory and the operationalization of sustainability principles. The systemic view of co-evolutionary development, social learning and sustainability economics' normative underpinning merits more consideration in the debate about sustainability economics.

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1. Introduction

Capability approach

Economists contributing to sustainable development have gathered until now under the "big tent" of ecological economics (Howarth, 2008; Spash and Ryan, 2012). Proposals to build a new tent, known as sustainability economics, are currently under discussion. This article provides a thick description of the construction plan for such sustainability economics and examines what its relationship to ecological economics is.

Ecological economics has been dealing with sustainability and socio-ecological interactions for a quarter of a century. Historically, the roots of ecological economics can be traced back even further (Martinez-Alier, 1990; Røpke, 2004, 2005; Spash, 1999). The institutionalization of ecological economics has contributed to the operationalization of principles of sustainability (Daly, 1990; Howarth, 2007; Sneddon et al., 2006). Its journals, international

and regional societies, professorships and chairs, and degree and study programs evince an active field relevant for both science and policy. Paradoxically, ecological economics "did much better than the object of its study," (Hirschman, 1981, p. 1) the transformation of lifestyle, consumption, and production patterns towards more sustainable, just, and inclusive development.

Despite the establishment of ecological economics over the past 25 years, it is difficult to provide a precise definition; paradoxically, it seems easier to define what is beyond its scope. When taking a closer look at the literature one identifies a scattered field difficult to classify: diverse methodologies, diverse ontologies, diverse topics, and diverse values coexist under a big tent. Inter- and transdisciplinary approaches (Brandt et al., 2013; Jahn et al., 2012; Max-Neef, 2005) as well as "methodological pluralism" (Norgaard, 1989) structure the field. Ecological economics is the confluent of two complementary, consilient streams from the natural science side — thermodynamics, physics,

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 $^{^{1}}$ This is in analogy of Hirschman's analysis of the rise of development economics in the 1940s and 1950s. Hirschman states that the field of development economics was performing well, while the economic development in many countries was not.

ecology, biology, and related disciplines — and from the social sciences — economics, sociology, psychology, political sciences and related disciplines.²

Yet, there have always been debates about what ecological economics is and how it should evolve (see for example Barkin et al., 2012). Many argue, for example, that the social science part of ecological economics should be further developed (Anderson and M'Gonigle, 2012; Funtowicz and Ravetz, 1994; Spash, 2011, 2012).

Most recently a vivid conversation has been triggered by the proposal of Baumgärtner and Quaas (2010a) to build a new tent of "sustainability economics". Their contribution towards a redirection of the field under the new label "sustainability economics" has triggered a debate in the literature. Thus far there has been no review of the debate, its contributions and arguments. This article fills this gap and seeks to better understand the differences between ecological and sustainability economics based on the underlying theory and content behind the labels. The different conceptions of sustainability economics are not consistent with one another. Sustainability economics currently has more of a fuzzy and declamatory character. Here, I take a look behind the veil of fuzziness, which blurs the lines between ecological, sustainability, and environmental and resource economics. Furthermore, it is not clear how the solutions for science and policy proposed by sustainability economics would differ from those proposed by ecological economics. Sustainability economics is promising in many domains and could serve to strengthen the social science contributions (Palsson et al., 2013), but specifications of concepts are currently lacking. The intention of this article is to examine what theoretical field, such as ecological and sustainability economics, can contribute best to achieve sustainable development.

Geertz (1973) has proposed to study science through the work its practitioners do: "If you want to understand what a science is, you should look in the first instance not at its theories or its findings, and certainly not at what its apologists say about it; you should look at what the practitioners of it do." (p. 5) Sustainability economics is a field in development. Since practitioners' results of the proposed sustainability economics are not available yet, we have to content ourselves with an analysis of the discipline's theoretical underpinnings, proposed in the discussion. The aim of this article is thus to provide a thick description (see Geertz, 1973) of the rhetoric (see McCloskey, 1998) of sustainability economics.

The search for the literature review was conducted with the data-bases Scopus and EconLit (search term "sustainability economics"): Eliminated from the results were hits where both terms appeared together consecutively (i.e. "...sustainability: economics..."). Search results of review articles of the book "Understanding sustainability economics" by Söderbaum (2008a) were also excluded. The scope of this review has been limited to publications in English.

The thick description of sustainability economics consists of an overview of the discussion (Section 2). The publications about sustainability economics are analyzed with regard to the relationship between ecological and sustainability economics, the environment as a limiting factor, weak or strong sustainability and the criterion of justice (Section 3). In addition, the analysis of the article with regard to two specific patterns of the discussion, efficiency and externalities, allows to assess the relationship between sustainability and ecological economics (Section 4). Sustainability economics for the moment is a proposal that requires more specifications, while at the same time providing perspectives for a larger inclusion of social sciences, concludes this article (Section 5).

2. Sustainability Economics in Discussion

The discussion on sustainability economics has arisen only very recently, even though the term had previously appeared in earlier contributions. This discussion was triggered by Baumgärtner and Quaas (2010a). According to Baumgärtner and Quaas (2010b) "sustainability economics is defined as aiming towards both justice and efficiency with respect to human–nature relationships over the long-term and inherently uncertain future" (p. 2057). In short: economics is extended by considerations of justice, by long-term thinking and by the acknowledgement of uncertainty. Their proposition has led to a conversation about the nature of sustainability economics. To structure the debate, this review has identified three main topics around which the articles can be clustered: sustainability economics (Section 2.1), externalities (Section 2.2), and the capability approach (Section 2.3) (see Table 1). Contributions in which sustainability economics was mentioned before the article by B&O are also taken into account (Section 2.4).

2.1. General Contributions to Sustainability Economics

Baumgärtner and Quaas (2010a) specify "sustainability economics" through four core areas (p. 446):

- 1. Subject focus on the relationship between humans and nature.
- 2. Orientation towards the long-term and inherently uncertain future.
- 3. Normative foundation in the idea of justice, between humans of present and future generations as well as between humans and nature
- Concern for economic efficiency, understood as non-wastefulness, in the allocation of natural goods and services as well as their humanmade substitutes and complements.

The foundation of this proposed sustainability economics is the normative idea of sustainability, with efficiency as a secondary goal. The authors argue that the efficient use of scarce resources requires a normative justification. They identify as such a normative goal "the satisfaction of the needs and wants of individual humans" in the long and uncertain run (Baumgärtner and Quaas, 2010a, p. 447). In addition, dimensions of justice — within and between generations but also towards nature — are included. However, a further specification of these criteria is missing. Baumgärtner and Quaas (2010a) also provide an ontology ("What is the Human Being? What is Nature? What is the Economy?") and specify research areas for sustainability economics in the last part of their paper.

Following this initial article, two contributions by Bartelmus (2010) and van den Bergh (2010), as well as a reply by Baumgärtner and Quaas (2010b), started the conversation. Bartelmus (2010) argues for the monetarization of ecosystem services in integrated accounting systems. Monetarization is proposed since "only monetary valuation provides the measuring rod for comparing the significance of environmental services with that of economic activity" (p. 2054). Sustainability economics has, for Bartelmus (2010), the potential to bridge normative (sustainability) and positivist (economic)³ perspectives.

Externalities are at the heart of the contribution by van den Bergh (2010) and will be treated in the next section. His contribution nevertheless contains some general remarks on sustainability economics that will be noted here. van den Bergh (2010) correctly remarks that Baumgärtner and Quaas (2010a) have failed to specify sustainability policy. In his view, integrated sustainability policy could serve as a

² I particularly thank one of the anonymous reviewers for her description of ecological economics: "The first stream focuses a lot on the physical limits of the earth and ecosystems (seemingly objective), whereas the second focuses a lot on justice (values, subjective) and human or organizational behavior. Both streams can also be characterized by the methods they tend to use. And both streams need each other in the end because they both have their limits in explaining the ecological sustainability problems on earth and deriving suggestions for solutions to these problems."

³ Friedman (1953), famously argues for economics as a positive science free from any normative content. Its goal is to make accurate predictions. Coase (1995), on the contrary, states: "Faced with a choice between a theory which predicts well but gives us little insight into how the system works and one that gives us this insight but predicts badly, I would choose the latter" (p.17). He argues for realism in assumptions "to analyze the world that exists, not the imaginary one that does not" (p.18).

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