



Sustainability as a Fair Bequest: An Evaluation Challenge



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ABSTRACT

In contrast to conventional approaches the conceptualisation of sustainability as fair bequest makes it possible to consider a finite time horizon. Valuation is necessary to determine whether the bequest package that is passed on from one generation to the next is fair. Acknowledging the merits as well as the limitations of economic price theory, this paper differentiates between three classes of *valuables*: the *essential*, the *useful* and the *unique*. It is argued that a fair bequest package should contain items from each of the classes. Because the three classes are incommensurable, fairness of the bequest cannot be expressed by a single figure like a non-declining total value of the package. We then discuss which methods are appropriate for describing a bequest package with respect to its fairness.

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1. Introduction

When we borrow, rent or lease something, it is usually expected from us that we return it *in good condition* – or that we replace it if it is, e.g., broken. If we want to avoid having to provide replacement or if replacement (substitution) is not possible, we must handle the object with care. This is, in many respects, at the core of the idea of sustainability – a given human generation is not the owner of what it is endowed with (cf. Fig. 1). Our relationship towards the manifold endowments, including ecosystems, culture, knowledge, institutions, technology, rather has the nature of rental, with the minor difference that there is no identity between those from whom we ‘rent’ our endowments (previous generation) and those to whom they are to be ‘returned’ (next generation). Sustainability implies that what we return is *in good condition*. But what does it mean to return something in good condition? Especially given that this ‘something’ is not one clearly identifiable item but, rather, a multidimensional bundle of items?

In the context of sustainability, returning something in good condition likely implies intergenerational fairness, in line with the Brundtland definition of sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (World Commission on Environment and Development, 1987). One problem with this as well as conventional economic conceptualisations of sustainability is that it implies an infinite time horizon. It is non-trivial to determine how far

into the (uncertain) future our obligations should reach in practice, which renders the infinite-time horizon approach impracticable and not easily operationalisable (Klauer, 1999). An alternative approach, similar in spirit to the economic model of overlapping generations (Howarth, 1991; Samuelson, 1958), would be to focus on the obligations of each generation towards the subsequent generation. A useful notion in this context is that of a ‘fair bequest package’ (Norton, 2005, p. 318), i.e., the bundle of items that a given generation is *morally obligated* to leave for the subsequent generation. There is a correspondence between what a fair bequest is and what it means to return the ‘rental’ in good condition.

In economics, both neoclassical and ecological, it is usually assumed that a fair bequest package to be left to future generations should contain at least as much as the package received by the current generation from its predecessors (Common and Perrings, 1992; Dasgupta and Heal, 1979; Solow, 1974); neoclassically inclined economists speak in this context of a non-diminishing intertemporal welfare function (implying an infinite time horizon). It is unclear, however, what it is that should not diminish and what it means to leave *at least as much* to future generations as originally received. A particularly challenging issue is how to trade-off different items in the ‘fair bequest package’ – neoclassical approaches propose that each capital item (be it artificial, natural, human, social capital) be weighted by its shadow price, so as to make possible comparisons between different capital stocks (Arrow et al., 2004; Hamilton and Clemens, 1999). However, a common criticism of such approaches is that they assume that all types of items of which the ‘fair bequest package’ comprises are substitutable and the related values commensurable (Aldred, 2006; Daly, 1996). This is a problematic assumption which calls for alternative valuation approaches.

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Fig. 1. Picture by Klaus Staeck (1983, Heidelberg, Germany). Translation: The rental property shall be treated with care and returned in good condition.

In this paper, we propose a conceptualisation of sustainability as fair bequest and define what it is that should be bequeathed in a fair manner. We emphasise the necessity of *valuation*, particularly for the identification of items that are to be included in a fair bequest package. Valuation also allows for (limited) comparisons among the items. Acknowledging that the neoclassical approach of assigning shadow prices to all items is problematic, we differentiate between three classes of *valuables*: the *essential*, the *useful* and the *unique*, and show how these categories can be used to define the fair bequest package. We argue that the three classes are incommensurable, so that a fair bequest cannot be expressed as a single figure. Furthermore, we suggest ways and methods that can be used to identify items belonging to each of the three classes.

The paper is structured as follows: in [Section 2](#) we briefly discuss the idea of a fair bequest package, its addressees as well as the limitations of existing approaches to the operationalisation of sustainability, particularly the economic approach. In [Section 3](#) we present the three categories of *valuables* a fair bequest package consists of: the *essential*, the *useful* and the *unique*. In [Section 4](#), we give orientation how elements of each of the three incommensurable categories can be identified. [Section 5](#) concludes and identifies future research needs.

2. Sustainability as Fair Bequest

In discussions of sustainability, the relevant subject – i.e., the actor(s) at whom sustainability demands are directed – is usually, implicitly or explicitly, the ‘current generation’. Given that each generation consists of a number of overlapping age cohorts in different stages of their lives and with different time horizons, grouping them under the ‘generation’ label is an abstraction. This is of particular importance given the inherently dynamic nature of the world we live in – while sustainability

focuses on *preservation*, ecosystems, cultures, values are in constant change. Shortening the time horizon helps to cope with this. Furthermore, a focus on ‘generations’ does not answer the question what is to happen within a generation, i.e., what is the relationship between inter- and intragenerational equity or what are the responsibilities of individuals and collectives (Petersen et al., 2009). Therefore, it appears more sensible to focus in the analysis of sustainability demands on resources, production capacities and institutions (Bromley, 2006; Hartwick, 1977; Klauer et al., 2013, 2017; Solow, 1974; Vatn, 2005a). Together they determine whether a given society behaves sustainably; especially, institutions distribute the responsibilities within generations and they effectively determine the ‘bequest package’ left to future generations.

Now, the design of and agreement on institutions is to a large extent determined by values (Vatn, 2005b). The identification of values and, as a subsequent step, *valuables*, involves the act of valuation. In the present context, this term should by no means be understood as equivalent to the narrow ‘economic valuation’ – as will be argued below, this is only one instance from the broad spectrum of valuation approaches and is helpful only in specific contexts (see also Lienhoop et al., 2015). What is meant here by *valuation* is, rather, the general attempt to identify what is valuable and how it is valuable. Knowledge about values and *valuables* informs the creation and design of institutions that guide our social interactions and help us collectively achieve various goals, including sustainability. Thus, the identification of elements of a fair bequest package requires an act of valuation.

In economics, both neoclassical and ecological, sustainability is often framed in terms of preserving a ‘capital base’:

If ‘sustainability’ is anything more than a slogan or expression of emotion, it must amount to an injunction to preserve production capacity for the indefinite future. That is compatible with the use of non-renewable resources only if society as a whole replaces used-up resources with something else (Solow, 1992, p. 7).

The capital base of a society has many different components, including manufactured capital, natural capital, labour, human capital and social capital (Dasgupta, 2001). Thus, in neoclassical economics sustainability has usually been defined as a non-diminishing capital base, in the sense of the Solow–Hartwick rule (Hartwick, 1977; Solow, 1974). The non-diminishing part is not very controversial. However, the controversies begin when it comes to defining, measuring and valuing capital.

Two general approaches can be identified, albeit it should be noted that this differentiation is highly stylised and ignores the many grey scales in between. These approaches are weak and strong sustainability, in the area of economics usually identified with neoclassical environmental/resource economics and ecological economics, respectively (Neumayer, 2013). The main ‘demarcation criterion’ that helps to pigeonhole sustainability theories according to this differentiation is the assumption of substitutability. Representatives of weak sustainability generally assume that different types of capital, particularly human-made and natural capital, are generally substitutable. Accordingly, they can all be compared to each other and traded off if only we succeed in estimating shadow prices for each of them (Dasgupta, 2001); the shadow prices are an expression of the relative scarcity (and thus substitutability) of different capital goods (Ehrlich and Goulder, 2007).

In contrast, strong sustainability rejects the idea that natural capital can be generally substituted by human-made capital (Daly, 1996; Dedeurwaerdere, 2014; Ekins et al., 2003). Often, reference is made to entropy laws to emphasise that we cannot always make up for losses in natural capital by building up stocks of other capital types (Daly, 1997). The argument is then that there is some minimal amount of natural capital (so-called critical natural capital, CNC) that is essential for human survival and cannot be substituted by any other capital type, which also means that it cannot be assigned a price (Farley, 2008).

The problem with both weak and strong sustainability in their common forms is that they are pre-occupied with the role of natural capital.

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