

Sustainability as a fair bequest: An evaluation challenge

Bernd Klauer^a, Bartosz Bartkowski^{a*}, Reiner Manstetten^b, Thomas Petersen^b

^a UFZ – Helmholtz Centre for Environmental Research, Department of Economics, Permoserstraße 15, D-04318 Leipzig, Germany

^b University of Heidelberg, Philosophisches Seminar, Schulgasse 6, D-69117 Heidelberg, Germany

* corresponding author: bartosz.bartkowski@ufz.de

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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.

Keywords

Sustainability, Weak and Strong Sustainability, Valuation, Essentials, Non-substitutability, Uniqueness



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

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.

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. Yet it can well be argued that our obligations towards future generations go well beyond that, i.e., that a ‘fair bequest package’ should not only include stocks of natural and human-made capital, but also less tangible items such as culture, institutions, knowledge, technology etc. As will be argued below, the non-substitutable, critical is not limited to natural capital. Furthermore, even if we agree that the weak sustainability approach is misguided, we still have to solve a problem: how to identify the items that should be preserved for future generations? This implies an exercise in valuation. Neoclassical economics pretends to have solved the problem by assuming that all

relevant items can be valued in the same way, viz., by estimating shadow prices. This is a neat and convenient approach, but as the literature on strong sustainability and much of ecological economics argues, while for some items, including some parts of natural capital, the estimation of shadow prices is justified, for many others it is not sensible. This is because they are non-substitutable and the values attached to them incommensurable (Aldred, 2006; Spangenberg and Settele, 2016). So, another way must be found to identify ‘valuables’ that are to be included in a ‘fair bequest package.’ This is the topic of the next two sections.

3 The essential, the useful and the unique – determining elements of a fair bequest package

In this Section, we would like to introduce a novel perspective on the problem of substitutability and different types of sustainability-relevant goods. Our perspective is based on the differentiation between three types of goods or *valuables*, which we call *the essential*, *the useful* and *the unique*.¹ The useful is the realm of conventional economic approaches and can be understood as what remains when the two other types have been identified. We therefore focus on the essential and the unique in what follows; the useful is only briefly discussed at the end of the section.

3.1 The essential: the *Daseinsvorsorge* analogy

The basis of what we call the essential, which is similar to CNC but broader, is the German concept of ‘*Daseinsvorsorge*,’ which can be loosely translated as ‘subsistence provision’ or ‘public service’. The term was coined in the 1930’s by the jurist Ernst Forsthoff (1938, 1958), who argued that the state is genuinely responsible for providing the public with certain services that are essential for living a decent life, but which individuals cannot be expected to acquire privately. As examples he named the provision of drinking water, energy and other types of what we would call today public infrastructure. It should be noted that the services of *Daseinsvorsorge* may or may not be public goods – as the examples show.

The concept has been effectively adopted by the German state, though not one-to-one – actually, Scandinavian countries are closer to the ideal of state-provided *Daseinsvorsorge* (e.g., Esping-Andersen, 1990; Salamon et al., 2003). Similar approaches can also be found in many other EU countries and at the EU level (cf. Aubin, 2013; Knauff, 2004). Historically, the goods and services falling into the realm of *Daseinsvorsorge* were self-provided by nearly

¹ This distinction is inspired by Aristotle’s differentiation between the necessary, the useful and the just (Politics, 1253a9ff.).

self-subsistent individuals and small communities. Increasing levels of division of labour and, particularly, urbanisation shifted the responsibilities from individuals to larger collectives (Forsthoff, 1938).

The task of *Daseinsvorsorge* is to provide citizens with goods and services on which they are ‘dependent’ due to their ‘social neediness’ – which, importantly, is explicitly independent of income and wealth. Every human being needs access to drinking water and energy for cooking and (at least in higher latitudes) heating. What we call *the essential* in this paper, then, is a broadened and modified version of the concept of *Daseinsvorsorge*. Instead of focusing on public services provided by the state, we conceptualise the essential as all those things that are indispensable for living a decent life², including services provided by nature – an idea closely related to the concept of basic capabilities, which will be discussed in Section 4. The essential does not really allow for making trade-offs. A person or a group cannot have more or less of the essential; they can only have enough or *too little* of it (everything that is ‘more than’ the essential belongs to one of the two other categories discussed here, the useful and the unique). In a certain sense, the essential consists of a fixed amount of goods and services or capabilities. This fixed amount is the indispensable prerequisite of a decent life. The term ‘decent life’ is, of course, ambiguous and fuzzy. It certainly means more than just survival and therefore is culturally contingent. On the other hand, it equally certainly excludes the possession of and access to things that can be considered luxuries of one kind or another (these would belong to the category of *the useful*). We will discuss the difficulties of identifying the essential in Section 4. Suffice it to say at this stage that in the case of nature the essential is very close to CNC, though much more encompassing – for instance, today internet access can well be argued to be indispensable for a decent life.³

Another departure from the original concept of *Daseinsvorsorge*, on top of broadening the concept, consists in abandoning the assumption that the essential *must* be provided by the state. For instance, there are good reasons against its public provision drinking water, given specific circumstances (Gawel and Bretschneider, 2016). Furthermore, even in the case of public goods, in recent decades economic theory has advanced so as to recognise that state

² ‘Decent life’ is, of course, a rather vague category. It is more than just bare survival, but it is definitely not life in luxury. We do not offer a specific definition of decent life because, as will be argued in Section 4.2, we think that this definition should be the result of a (deliberative) societal process; in fact, by defining the scope of the essential one would significantly narrow down what can be understood by decent life, as it is largely (co-)determined by access to items from this category.

³ An archetypal example in this vein was provided by Hegel (1821), who argued that a watch was similarly indispensable in the society he lived in.

provision and privatisation are not the only sustainable options of use in their case (Ostrom, 1991).

3.2 The unique: the heritage analogy

So far, we have ‘cut out’ from the useful, i.e., the realm of things for which prices can properly indicate value, those things that are in a sense more ‘basic.’ We have called them the essential and circumscribed the reach of this category on the basis of the *Daseinsvorsorge* concept. But there are more things that are priceless (Ackerman and Heinzerling, 2005), in the sense of having a different, non-commensurable kind of value. Here, another analogy is helpful: that of the UNESCO World Heritage.⁴ Monuments, be it natural or human-made, are designated World Heritage sites if they are of ‘outstanding universal value’ and fulfil certain criteria including uniqueness, aesthetics, cultural significance, vulnerability to irreversible change.⁵ The World Heritage Convention is supplemented by the Convention for the Safeguarding of the Intangible Cultural Heritage. This convention extends the world heritage beyond monuments and collections of objects to ‘traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.’⁶ World Heritage objects are priceless – their heritage value cannot be expressed in monetary terms, as they are *ex definitione* non-substitutable.⁷ In other words, they are unique. We therefore call this third category of items to be included in a fair bequest package *the unique*.

A caveat is in order here. Even though the focus of UNESCO World Heritage and similar initiatives is on the preservation of things considered unique *today*, future generations might consider things that are *typical* for historical times (from their perspective) as more important and *unique*. A classic example of this phenomenon might be the so-called ‘Ostalgie’ in East Germany (e.g., Berdahl, 1999; Blum, 2000), where everyday items from the communist past have become important and cultural artefacts for many people – even though they definitely were not considered special before the fall of the Iron Curtain.⁸

⁴ A similar concept, which also focuses on the broad concept of heritage, is patrimony/patrimonial value (e.g. Michon et al., 2012).

⁵ <http://whc.unesco.org/en/criteria/> (accessed 2016-08-15)

⁶ <http://www.unesco.org/culture/ich/en/what-is-intangible-heritage-00003> (accessed 2016-11-10)

⁷ In fact, cultural monuments have been considered so important for human civilisation that in October 2016 the International Criminal Court sentenced Ahmad al-Faqi al-Mahdi to nine years prison for his participation in the destruction of shrines in Timbuktu, while interpreting their destruction as a war crime (International New York Times, 2016).

⁸ We are thankful to Sebastian Strunz for pointing this out to us.

The concept of the unique has been known and discussed in environmental ethics for some decades (not under this name, however). The unique is the category of entities which have intrinsic, inherent, eudaimonistic or spiritual value (Chan et al., 2016; Cooper et al., 2016; Eser et al., 2014; McShane, 2017; Muraca, 2011). Similarly to the essential, the main difficulty is identifying the items belonging to the category. While the UNESCO World Heritage lists are of some help, they are hardly exhaustive. For instance, some species (such as the great apes) can well be considered as unique but are not included in any of the UNESCO lists. Moreover, even more than in the essential case, the unique is likely to be highly culturally contingent. In the next section, this and further issues related to the identification of a fair bequest package are discussed in more detail.

3.3 The useful: the legitimate realm of economics

With its paramount concept of utility and preference satisfaction, combined with the (much criticised) agnostic approach of consumer sovereignty, conventional economic theory seems predestined to deal with the *useful*. As should be clear from the preceding discussions of the essential and the unique, the useful is a generic category for items that are substitutable. They contribute to human well-being, but we can more or less easily do without them or at least replace them with other items from the same category. In fact, most manufactured capital is likely to belong into this category; also, much natural capital is ‘useful’, at least as long as its use does not move us close to trespassing critical thresholds, beyond which the resource or ecosystem (function) in question becomes essential. Also, different items can be useful to different degrees, while the essential and the unique can be argued to be more or less ‘binary’ – which is the reason why the useful can be captured by means of economic valuation and estimation of shadow prices (see Section 4.1 below).

4 Identifying fair bequest

In the previous section we identified three types of valuables that should be included in a fair bequest package. The essential is what people definitely need for their subsistence; basic endowments without which a life in dignity is not possible. The essential is non-substitutable; it is a concept close to *Daseinsvorsorge* and CNC. The useful is what people do not need for a life in dignity but still value because it is convenient, practical, nice, pleasant etc. The items in this category are generally substitutable and are usually dealt in markets. They are ‘nice to have.’ The unique is not essential for a decent life and it might not even be useful – yet it might also be valuable. Unique objects are often constitutive of what makes of individual human beings cohesive societies with a collective memory (Halbwachs, 1992). One might say

that while the essential is indispensable for individuals to live a decent life, the unique is crucial for the collective identity of societies.

To judge the fairness of a given bequest package or to determine which items should be included to make it fair, it is necessary to value the items. The question is how this can be done. We already rejected the simple (i.e., easy-to-use) but also simplistic approach of neoclassical economics (shadow prices for all); we also suggested that the conventional CNC approach is only part of the solution and leaves many questions unanswered. It should be noted that by valuation we don't necessarily mean the expression of the items in question in a common unit, not even within each of the three categories. In fact, valuation is the implicit result of informed and reasoned collective or individual choice – in our case it is the decision to include the items in a fair bequest package. The three categories of valuables are used to *delineate* three broad groups which are incommensurable among each other. Therefore, the question actually is: how can the elements belonging into the fair bequest package be identified? We discuss this question for each of the three categories in turn: we start with the useful, then turn to the essential and, last but not least, the unique.

4.1 The useful: shadow prices

In the case of the useful, the identification of items for the fair bequest package is relatively straightforward – instead of reinventing the wheel, we can just draw upon the neoclassical environmental and resource economist's tool box and look at approaches to operationalising sustainability that are to be found there.⁹ The items belonging to the category of the useful are substitutable and commensurable among each other (even though not with items in the other categories). One approach which has gained reasonable attention and is relatively close to the ideas of ecological economics goes by the name of comprehensive wealth (Arrow et al., 2004; Dasgupta, 2001). Following this approach, we would propose that to fulfil the requirements of a fair bequest, the useful should be framed as a non-diminishing intertemporal sum of capital goods weighted by shadow prices. Each capital good belonging to the useful category, including most manufactured capital, many elements of natural capital and possibly some elements of human capital, is part of a stock that generates a (useful) flow of consumer goods and services to humans, now and in the future. To evaluate this stock, one has to calculate shadow prices for each of its components. Here, more or less conventional economic valuation methods can be used, including production function methods, revealed preference

⁹ This reflects our contention, spelt out elsewhere (Strunz et al., 2017), that ecological economics need not throw overboard everything that is 'neoclassical' lest it lose its identity. Rather, it appears more sensible to use the tools provided by mainstream economics *where appropriate* and with proper caution.

methods and stated preference methods (for an overview see Mäler and Vincent, 2005).¹⁰ The main difficulty here is that the comprehensive wealth approach, at least in its formal version, is based on the assumption of an infinite time horizon. However, in practical applications, it has been used to evaluate changes in the comprehensive wealth stock between periods of time and for shorter time horizons (Arrow et al., 2004; Hamilton and Clemens, 1999), which is much less demanding and much more realistic than the anticipation of long-term effects of various policies.

Of course, the task of economic valuation of even ‘only’ the useful is anything but trivial. While national accounts can be drawn upon for manufactured capital, natural capital poses a much larger challenge. Despite attempts at large-scale measurement and valuation of natural capital, such as the Millennium Ecosystem Assessment (MEA), UK National Ecosystem Assessment (UK-NEA), TEEB (The Economics of Ecosystems and Biodiversity) or the ongoing attempts by the UN to create a System of Environmental-Economic Accounts (SEEA), there is still much to be done in terms of identification of the useful at national or supranational levels.

The main difference between the conventional large-scale approaches like comprehensive wealth or SEEA, and the approach advanced here is that we restrict the (e)valuation methods that are proposed there to those items that fall into the category of useful. To determine which they are, it is first necessary to identify the items belonging to the other two categories, to which we turn now.

4.2 The essential: lists

As already mentioned above, the essential includes, in addition to the items of *Daseinsvorsorge*, what is usually called critical natural capital (CNC) in ecological economics (e.g., Ekins et al., 2003; Farley, 2008). Therefore, it is natural to look there for answers to the question how to identify the essential. Alas, it is still an open question how CNC is to be identified.¹¹ For instance, Farley (2008) restricts himself to pointing out that prices (see above) do not work for CNC and that it has to be identified in other ways. Even though the CNC literature emphasises that criticality is dependent on socio-economic and cultural as well

¹⁰ In cases of useful goods which nevertheless are complex and not well-known to people, deliberative monetary valuation (DMV) might be the method type of choice (Lienhoop et al., 2015; MacMillan et al., 2006; Sandorf et al., 2016).

¹¹ The ‘planetary boundaries’ concept (Rockström et al., 2009; Steffen et al., 2015) pursues a similar goal: to describe necessary conditions (side constraints) for the development of humankind. In contrast to CNC it concentrates on observations of certain key variables describing the state of the world, e.g., climate change or biodiversity loss, while CNC focusses on ecosystem services and the related natural capital providing them.

as biophysical factors (Chiesura and de Groot, 2003), the CNC identification method proposed by Ekins et al. (2003; see also Ekins and Simon, 2003) demonstrates how difficult it is to go beyond arbitrarily defined biophysical thresholds. A promising approach has been proposed by Pelenc and Ballet (2015), who combine the concept of CNC with the capability approach (see below). We will follow a similar avenue; however, the essential cannot be restricted to natural capital. Thus, CNC is a good starting point for thinking about the essential, but there is a need to go further and beyond this concept.

Although Martha Nussbaum's list of basic capabilities and Manfred Max-Neef's matrix of needs and satisfiers show considerable general correspondence, they have different structures and cannot be easily compared on the level of individual items. Nussbaum (2003) offers a list of 10 basic capabilities:

1. Life ('human life of normal length')
2. Bodily health (good health, adequate nourishment and shelter)
3. Bodily integrity (freedom from physical coercion)
4. Senses, imagination, and thought (education, cultural experiences, freedom of thought and expression)
5. Emotions (freedom to live one's emotions)
6. Practical reason ('Being able to form a conception of the good and to engage in critical reflection about the planning of one's life')
7. Affiliation (social interactions and self-respect)
8. Other species (relations to non-human natural world)
9. Play ('Being able to laugh, to play, to enjoy recreational activities.')
10. Control over one's environment (political participation and private property rights)

Meanwhile, Max-Neef's (1992) matrix is structured along two axes: 'needs according to existential categories' and 'needs according to axiological categories.' Each combination of categories renders a number of needs. Existential categories are Being (attributes), Having (institutions in the broad sense), Doing (actions), Interacting (locations, milieus). Axiological categories are Subsistence, Protection, Affection, Understanding, Participation, Leisure, Creation, Identity, Freedom.

Box 1: Basic capabilities and 'needs and satisfiers'

Two quite influential concepts that are closely related to the essential are Nussbaum's (2003, 1997) list of 'basic capabilities' and Max-Neef's (1992) 'matrix of needs and satisfiers.'¹² There is significant overlap between the two lists; they both include physiological as well as psychological aspects of a decent human life (see Box 1). However, there also are differences. Since Max-Neef claims that his list of basic human needs is objective in a sense (or, in his terms, subjective-universal), it is quite detailed and contains a large number of items deemed essential for every member of *Homo sapiens*. Also, it focuses on (economic) goods, which he calls 'satisfiers'. Nussbaum's list also has an empirical background, but it is much more general. She calls it a 'working list,' thus restricting somewhat its claim of being 'final' – yet at the same time it 'is supposed to be a focus for political planning, and [...] to select those human capabilities that can be convincingly argued to be of central importance in any human life' (Nussbaum, 1997, p. 286). A significant difference to Max-Neef's approach is that Nussbaum does not focus on goods but on capabilities, i.e., the ability of people to achieve certain *functionings*.¹³ Nevertheless, both authors explicitly or implicitly claim a certain degree of objectivity (i.e., freedom from cultural and historical contingency) at least for the general categories they propose, though not necessarily for their particular expressions. But even the authors of such lists seldom claim that they are definitive – rather, they understand their lists as a starting point for societal debate.¹⁴ Therefore, these lists should not be understood as end-points of the process of defining the essential, but rather as starting points.

Can such lists be a basis for the identification of the essential for the fair bequest package? Indeed, it can be argued that a fair bequest package should contain items necessary to meet the conditions formulated, e.g., by Nussbaum or Max-Neef. However, to identify those items, sufficient understanding of the respective societal, economic and natural circumstances is required. This understanding is difficult to achieve; in fact, full understanding is likely impossible because the uncertainties surrounding both the dynamic processes of relevant systems and future preferences are large. If this is so, the question is what can be decided on the basis of restricted, preliminary, uncertain knowledge. The package will then presumably consist of a confusing variety of different objects: resources, infrastructure, capital goods,

¹² Historically, a particularly influential and inspirational concept was Maslow's hierarchy of needs (Maslow, 1943). Especially Max-Neef's approach can be seen as refining and developing further Maslow's concept.

¹³ There is no definite definition of functioning in the literature on the capability approach. It was first proposed by Amartya Sen and has been used both by himself and by other authors with slightly different meanings. Usually, functionings are conceived of as realisations, the 'beings and doings' (Sen, 1985, p. 8) that are constitutive of a human life.

¹⁴ In fact, within the capability approach literature, there is an ongoing debate on the sensibility and desirability of providing lists of basic capabilities, most notably between the two founders of the approach, Martha Nussbaum and Amartya Sen (e.g., Sen, 2004).

institutions etc. Judgement is necessary when setting up content lists of bequest packages as a first attempt to systemise the variety of essentials.

Because it is impossible to give a definite answer regarding what is essential from the perspective of the next generation (Scholtes, 2010), it seems appropriate to describe here a process for making such a decision on the societal level. In order to approximate the essentials for the next generation, one may start by giving an overview about those objects that are considered as essential for a decent life by the current generation. The specification of today's *Daseinsvorsorge*, CNC and other essentials are – at least in representative democracies – the result of political bargaining processes and condensates in agreements, regulations, laws, public investments and the like. In principle it should be possible – but nevertheless might be difficult and costly¹⁵ – to distil the essentials for the current generation by observing the current societal arrangements. Of course, the legitimacy of such a distillate is limited, as political bargaining is often heavily influenced by vested interests and lobbyism, thus arguably not necessarily reflecting the will/preferences of even the majority of the population. Ideally, such important societal decisions should be based on public deliberation and discourse (Goodin and Dryzek, 2006; Habermas, 1981; Sen, 2010). However, deliberation is hardly a panacea (Arias-Maldonado, 2007; Dryzek, 2013) and not always feasible. Especially, when the goal is behavioural change towards sustainability, deliberation has to be supported by other means such as incentives (Norton, 2015, pp. 134–143). In the context of identifying the items belonging to the essential category, second-best approaches such as decisions made by democratically chosen representatives or by expert panels are indispensable. When deliberation is not an option or too time- and resource-consuming, society needs alternative ways of identifying the essential. Especially, the Kantian concept of 'power of judgement' can be helpful here, which suggests that it might be sufficient that society agrees upon general principles which then can guide the identification of specific essentials (Klauer et al., 2017, 2013). This should also include an attempt to anticipate the possible views of the next generation on what is essential; in other words, it is paramount as far as possible to avoid forcing our own views and preferences upon future generations (Scholtes, 2010). This is, in fact, a very difficult task, as we simply cannot know future people's preferences, needs and wishes. To some extent, this conundrum is alleviated through focusing mainly on the fair bequest to be passed on to the next generation, instead of taking all future generations into

¹⁵ Difficulties could be the disagreements on the level of *Daseinsvorsorge* within societies and discrepancies between the currently realised and the desired level of *Daseinsvorsorge*. Similarly, the already mentioned international differences in this respect might prove problematic, especially given the global nature of many (potential) essentials (Rockström et al., 2009).

account (see Section 1). It is less problematic to at least partly extrapolate the preferences of the current generation to the next. Another strategy is discussed by Scholtes (2010, 2007), who argues that we should attempt to limit what he calls ‘environmental domination’, i.e. making choices that restrict the option space of future generations to live according to their wishes. This means that, while defining a fair bequest package, attention should be paid to the extent to which this bequest package limits the option space of our descendants (e.g. by leading to irreversible changes in an ecosystem). However, because they cannot take part in the deliberative processes advocated here, their possible interests (or, more generally, their interest in having a large option space) have to be represented by those living today.

4.3 The unique: lists, again

Up to now, we found two modes of identifying valuable items that belong into the fair bequest package: the useful can be treated in accordance with more conventional economic theory, i.e., what is to be preserved within this category is the aggregated value of the capital belonging to it; the essential, conversely, is not substitutable, so its elements cannot be traded-off against each other (or against items in one of the other two categories) – thus, its identification would likely result in lists. Is the identification of the unique different? Or is it similar to that suitable for one of the other two categories?

In fact, it can be argued that for the unique, too, we should work with lists. Just as the ‘criticality’ of the essential precludes its elements being traded off against each other, the uniqueness of the unique is a similar restriction. The main difference between the two lies in the starting point of the deliberative or otherwise democratic social choice processes that are supposed to render such lists. Also, relatedly, the criteria for choosing items are different. In the case of the essential, the main criterion is what constitutes a decent human life – thus, concepts such as Maslow’s pyramid of needs, Max-Neef’s ‘matrix of needs and satisfiers’ or Nussbaum’s basic capabilities are a helpful starting point. For the unique, the criterion is much more difficult to grasp and even more culturally contingent. From a global perspective, a useful analogy is the UNESCO World Heritage concept, already introduced in Section 3.2. Decisive are the institutions that rule the selection and the protection of what have been identified as unique. However, each culture and society is likely to have additional items considered worthy of admission in the unique category, without these necessarily fulfilling the criteria of World Heritage. The criteria should be expected to exhibit inherent plurality (Cooper et al., 2016). Thus, while the list of unique items to be included in a fair bequest package can be agreed upon in a process similar to the one suggested for the essential, its

starting point likely requires public deliberation – already the *initial* list of *potential* unique items cannot but be the result of deliberative reasoning. Of course, the lists of World Heritage are helpful here. However, there is no agreement, yet, on how these objects are to be identified. Therefore, again, in this case public deliberation appears even more central and crucial than for the essential.

It should be noted that especially lists of the unique are meant as purely nominal scales. While it may be argued that the elements of the essential can be ranked or prioritised (i.e., expressed on an ordinal scale), as done, for example, by Maslow with his pyramid of needs, we do not see an obvious possibility for a similar approach to the unique. This is a problem, of course. Given resource constraints and a possibly very large list of unique items (especially if one takes into account the point made in Section 3.2 that seemingly ‘everyday’ items might be considered unique by our descendants), some kind of prioritisation might be in order.¹⁶ Especially from an economic point of view, it can be argued that choices have to be made – including, sometimes, hard or even ‘taboo’ choices (Daw et al., 2015; Stikvoort et al., 2016). But there seems not to exist an *a priori* method of deciding upon a generalised prioritisation approach – rather, this insight strengthens the need to deliberatively agree upon the unique elements of the fair bequest package, including, where necessary, a prioritisation.

5 Conclusions

In this paper we have argued that it is helpful to think of sustainability in terms of defining a fair bequest package, as this frees us from the need to invoke an infinite time horizon. The identification of items that are to be included in the fair bequest package involves an exercise in valuation. To guide this exercise, we have proposed three distinct and incommensurable categories of valuables: the essential, the useful and the unique. While the useful can be identified by applying the usual tools of environmental-economic valuation, both the essential and the unique cannot. In both cases, lists appear as a sensible way of ‘aggregating’ items belonging to these two categories. We have argued that these items should be identified by means of public deliberation, though at least in the case of the essential, other democratically legitimised processes and decision-making mechanisms can be invoked to reduce costs in terms of time and effort.

¹⁶ A typical prioritisation approach of this kind is Weitzman’s Noah’s Ark approach to biodiversity conservation (Weitzman, 1998).

By stressing the cultural contingency of both the essential and the unique, we implicitly pointed to a seeming contradiction between the usual emphasis of sustainability concepts on *preservation*, and knowing that the world is a highly dynamic system, where ecosystems, cultures, values and institutions are in a constant change. The focus on our collective responsibility towards the *next* generation (in terms of fairly bequeathing a package to it) alleviates the problem; also, keeping in mind that our choices today have an influence upon the option space of our descendants is helpful. Last but not least, this dynamic nature of the world we live in is a reason to focus on institutions as the determinants of the fairness of the bequest package: the selection of items that belong there are only the first step. A second step, which is beyond the scope of the present paper, would be the identification of institutions that would secure passing on the fair bequest package.

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