
Sustainable Service in the Social Realm: What Can We Learn From Natural Service?

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Löbler has extended service thought to the realm of nature, that is the study of nature-nature, human-nature, and nature-human interactions. As the origin of sustainability thought lies in the way human beings interact with nature, natural service is linked to sustainability. The common denominators of natural service and service in the social realm inform the understanding of the concept of sustainability. From the service-dominant perspective, sustainability has to be rooted in service thought. The study of service in the social realm requires reference to the actors' values and valuations. Sustainability as a leitmotif provides orientation for the families of values that actually do, or can, or should guide value creation. Human-nature or nature-human interactions lead to a discussion of the status of nature as a resource or as an actor. That nature is not the passive environment for human activities has ethical consequences that have to be explored in future investigations.

Introduction

“The modern experience of nature is increasingly stripped of aspects that establish continuities or connections between the human spirit and the things of the natural world. To the extent that modern societies realize this ontology in their mentalities and institutions, they undermine their own basis in the natural world” (Feenberg 2014, p. 280).

Service provision of human beings for other human beings is a common topic in today's marketing discipline. Service is provided through activities that have been related to exchange (Bagozzi 1975; see Chandler and Vargo 2011: 35), resource integration (Löbler 2013a; Kleinaltenkamp et al. 2012), or value creation (Grönroos and Voima 2013; Grönroos 2011; Gummesson and Mele 2010). Löbler has extended service thought to the realm of nature,¹ that is the study of nature-nature, human-nature, and nature-human interactions. As the origin of sustainability thought lies in the way human beings interact with nature, natural service is linked to sustainability. In addition, the common denominators of natural service and service in the social realm (SSR), in particular transformation and change, can inform the understanding of the concept of sustainability itself.

¹ See Birnbacher (2006) for a discussion of the distinction between natural and artificial, as well as of the many overlappings of these categories.

This paper argues that the extended service-dominant (S-D) perspective, that is the identification of common denominators of natural service and SSR and the enhanced interaction framework, can improve our understanding of SSR and, with it, of sustainable SSR or sustainable value creation, respectively. In contrast to the study of natural service, the study of SSR requires reference to the actors' values and valuations. Sustainability as a leitmotif provides orientation for the families of values that actually do, or can, or should guide value creation. Sustainability, however, is not the sole source of ideas and values that guides value creation. Economic values such as efficiency and effectiveness play a part as well. They are implicitly addressed in connection with the distinction between instrumental and intrinsic values.

The paper begins with a short introduction to the concept of sustainability. Its approach to sustainability draws on transformation and change rather than on the reconciliation of the economy, the society, and the environment. The latter category is related to Hans Carl von Carlowitz, who invented the sustainability triangle in 1713: ecologic balance, economic security, and social justice (Grober 2010). As mentioned above, the former category, transformation and change, is one of the common denominators of service thought. The following section entails a brief introduction to and discussion of Löbler's approach. His typology of interactions, the common denominators of natural service and SSR, and what can be drawn from their study for SSR and sustainability studies is in the foreground of the discussion. After that, value creation is discussed with respect to value-in-context (for the discussion of value-in-context, see Chandler and Vargo 2011; Löbler and Hahn 2013), values, valuations, and their objects. The paper ends with discussion and conclusions.

Two approaches to sustainability

The idea of sustainability has been developed as a "child of crisis" (Grober 2010) in the social realm. The concept of sustainability is vague; it applies to a multiplicity of things: behaviors, action consequences, states, processes, systems, policies. One core understanding of "sustainability" sees it related to a particular attribute, that is the continuity of what is designated by it: "After all, sustainability means that what is sustainable may last, may go on and on" (Raatzsch 2012, p. 361). This aspect of the meaning of the concept of sustainability can be traced back to the concept's history. The idea to put "sustainability" on par with "something that should go on or continue," namely an undestroyed state of nature, has accrued from the historical background of the concept.² As Grober (2010) has noted, the ideas that have been related to "sustainability" in the 20th century are age-old: "On a regular basis, old words are uploaded with meanings from the past" (Alte Wörter sind in der Regel mit vergangenen Bedeutungen aufgeladen, own translation). For one example, the German humanist Paulus Niavis (1492) used the Latin concepts "sustentare" (to sustain) and "conservare" (to conserve) in a small allegoric volume in which he criticized the destruction and plundering of nature by humans through the silver mining business in Saxony. Grober (2010) assumes that Niavis has influenced other thinkers of sustainability, among them Carl von Carlowitz whose name is usually associated with

² Grober (2010, p. 166) refers to Joachim Heinrich Campe's (1809) definition of the German word "nachhaltig" (sustainable) in the Wörterbuch der deutschen Sprache (German dictionary): "Einen Nachhalt haben, später noch anhaltend, dauernd."

the origin of the term “sustainability” and to whom we owe the famous triangle that relates the economy, the social realm, and the environment.

Historical meanings of concepts might not necessarily be “wrong” or inadequate. However, new ideas (as the ones contained in service thought) can influence the connotation of a concept as well or inform or substantiate available views.

The transformation and change approach

The (often inflationary) use of the word “sustainability” to denote that something is (or should be) ongoing (e.g., a development) or lasting (e.g., profit, see Carbo II et al. 2014) does not seem to refer to the same meaning of “sustainability” as does the transformation and change approach. According to Raatzsch (2012), that something can go on and on does not imply standing still or the perpetuation of the same but transformation and change. Raatzsch (2012, p. 371 f.) uses “transformation and change” not in reference to S-D thought, but it is interesting to see how he uses it to characterize a proper economy:

“Yet, this does not mean that a proper economy has a form which, provided there is a certain environment, never changes. Indeed, the form may change all the time. Often it has done just that, more or less slowly and sometimes back and forth. To the extent to which this is an essential feature, to the extent, that is, to which the concept of economy is the concept of something that might take on different forms, each of these forms already points beyond itself. Also the last form, if there is one, by being the last one points beyond itself, although in a different sense. So, for every form, except the last one, there is one kind of leaving its world: transformation into another form. The last form, however, just ends. Therefore, every form of a sustainable economy may either transform itself into another form or it will be the last one, i.e., the one that marks the end of sustainable economy as such.”

Transformation and change are preconditions that help to avoid that something cannot continue. However, both in nature and society, transformation and change do not make a system immune against demise and downfall. Demise and downfall are not generally avoidable. Sustainable natural systems can come to an end, as can sustainable economies. Transformations can also go wrong and sometimes systems that are considered as pathological survive or thrive.³

Sustainability is no attribute that can simply be added to the description of conversant phenomena or analytical categories. Rather, it is what comes into view because of our interest in the way we frame the pursuit of activities required for the solution of particular problems or, with reference to Löbler’s wording, the creation of change. To get closer to an adequate understanding of a proper economy requires a change of thinking about the economy. It requires a change of the framework within which we think about the economy, and not a change within the framework. As Raatzsch (2012, p. 371) has argued, “(a) proper economy is a sustainable economy, and here ‘proper’ does not apply in addition to ‘economy’.”

Sustainability is a category of the social, and from this perspective one could also argue that not everything in the social realm or in the way humans interact with nature should go on. A

³ There are cases in which incest works very well, bringing about close to genetically identical and healthy individuals (the Chillingham cattle in England, *Süddeutsche Zeitung* 2014a). In other (perhaps most) cases, incest leads to unhealthy individuals.

non-sustainable economy is a pathological case of an economy, and it should not go on. As a leitmotif, sustainability can guide the design and performance of processes (or procedures) and has been ascribed to states or systems as well (Grunwald/Kopfmüller 2012).

The reconciliation approach

The reconciliation approach accrues from a vague but general agreement unfolding since the 2005 world summit of the World Commission on Environment and Development (WCDE). This agreement says that sustainability requires the reconciliation of environmental, social, and economic demands, expressed as the “three pillars” of sustainability: “This view has been illustrated as three overlapping ellipses indicating that the three pillars of sustainability are not mutually exclusive and can be mutually reinforcing” (Thomsen 2013, p. 2358). According to this view, sustainability is what is in the intersection of the three ellipses (sets). Not much is said (or known) about the manner in which the economy, the society, and the environment are or could be connected. Thomsen’s (2013, p. 2358) word use is “managing in the middle.” This view has invited scholarly thinking from several perspectives and disciplines; thus, the approach has “stimulated critical reflections on the relations between humans and the environment and a growing number of scholars have stressed the need for a ‘paradigm change’ from the current ecologically damaging growth-focused economic model to one that is ecologically sensitive or environmentally friendly” (Gomes 2013, p. 363).

The WCDE approach seems to substantiate the view that the proper economy and the proper domain of the social are disconnected and unsustainable. The economic is not embedded in the social and one is not informed about the characteristics or attributes of the environment. This view subsumes ecosystems under environment but also animate and inanimate non-human beings such as animals, forests, rocks, rivers, etc. In addition, this approach to sustainability is characterized by the division of realms (the social, the economic, and the environment), and it contains no clue about how these previously separated realms could be linked by sustainability, or what is the integrating force of sustainability, respectively. As sustainability is something unspecified of what is assumed the miraculous faculty to “reconcile” realms that have previously been separated according to principles that are left unspecified as well, the paper calls this approach the “reconciliation approach.”

If the reconciliation approach is compared with the transformation and change approach with respect to the understanding of nature, the most important difference is that in the latter, non-human beings or nature are not understood as the passive environment to human activity in the social or economic realm. Activity is a characteristic that applies to nature as well.⁴

Löbler’s extension of the range-of-service provision

Löbler’s analysis enhances the range of application of service thought from the social to the natural realm. Of particular interest for this paper is what can be gained from this analysis for the study of human-nature and nature-human interactions.

⁴ Note that this understanding of activity does not presuppose a social-scientific concept of intentional action.

Four types of interactions

Löbler has identified four basic denominators of service that connect the social realm and nature as well as four types of interactions. “Service” applies to all types of interactions of human beings and non-human beings (or nature) that are characterized by the basic denominators (see the next subsection). The benefits generated from interactions, or the change that shall be brought about by interactions, provide the source or (especially in the social sphere) motive or reason for the activities in question (related to the provision of service).

Löbler (2013b) distinguishes four types of interactions or realms of service, respectively:

- (i) interactions between non-human beings: service of nature for nature;
- (ii) interactions between non-human beings and human beings: service of nature for human beings;
- (iii) interactions between human beings: service of human beings for human beings;
- (iv) interactions between human beings and non-human beings: service of human beings for nature.

As more than two entities can be involved in interactions, the range of interaction is not limited to dyadic interaction. (ii) and (iv) are distinguished because it makes a difference if nature serves humans or humans serve nature, and because of the non-symmetry of the relation. Nature can provide service for human beings (e.g., bees pollinate crops), but human beings don’t need to provide service for the bees. The crops are not grown to serve the bees but human beings. On the other hand, a beekeeper who takes the honey from the bees provides them with a home and protection. It is a possible empirical phenomenon if human beings served by nature serve nature as well and vice versa, no matter of definition or logic.

An extension strategy of service thought could be pursued by presenting new successful applications of the available conceptual framework or by proving that there are entities stemming from other, non-social realms whose understanding can be improved or whose behavior can be explained by the application of the service logic to them. Löbler does not proceed in this way; instead, he seems to pursue a different strategy that might be characterized in terms of “reduction” or “adaptation” of meaning stemming from the analysis of SSR. He argues that some important aspects of service thought can be “translated into” more “basic” categories that apply to the natural realm as well. Extension is thus reached on the basis of “reduction.” However, the “reduction” is not complete. Not all concepts of the service-dominant logic are “reduced” to the more basic categories. In particular, there are categories of the social realm that cannot be subsumed under categories of the natural realm such as ethics and morals and values and valuations. In the next subsection, the paper briefly describes and discusses the four common denominators of natural service.

Four common denominators of natural service and SSR

Human beings can identify only those traits or structures in nature that have already found expression in or are connected to their shared belief systems. The study of nature draws on conceptual frameworks, theories, language, ideas, etc. that all originate in the social sphere. The

identification of common denominators of natural service and SSR shall not obscure that all systematizations have their origin in the social world. The common denominators belong to the conceptual frameworks of social-scientific theories; they got their syntax, semantics, and pragmatics from these frameworks that are applied, interpreted, and further developed by scholars. Self-reference cannot be avoided; thus, Löbner's (2013b) extension of the meaning of "service" beyond the social realm is done from the viewpoint of the social realm. This paper introduces the term "SNS turn" (with "S" for "social" and "N" for "nature") as shorthand for two aspects that are mentioned in this regard: Self-reference is expressed by "SN," and "SNS" stands for the re-transfer or application of self-referring terms (adopted to study natural service) to the study of SSR.

The historical development of the meaning of concepts such as "exchange" or "resource" took place within the historical development of theoretical frameworks or theories that, from the contemporary perspective, belong to anthropology, sociology, economics, or marketing. In addition, all scientific knowledge is value-laden (Doppelt 2007). The conceptual frameworks of theories that are developed to solve problems or improve the understanding of what is going on in a domain mirror these value-ladenness issues, and are discussed with respect to the concept of resource (as well as other concepts) below.

Use or integration of resources

Service provision requires the use of resources. The bird sitting on the back of a rhino picking insects from the rhino's skin can integrate resources (insects) provided by the rhino while the rhino can integrate the resources of the bird (the bird's pecking or search for food, respectively).

The concept of resource implies instrumentality or usefulness and, with it, valuations. This instrumentality did not fall from heaven; in this case, the language mirrors a change (or appearance) of practice. As Grober (2010, p. 185 f., own translation) explains: "With the beginning of the fossil era a new wording appeared. The 'gift' of god or – optional – of nature changed into 'resources.' The change of the vocabulary mirrors a new perspective. The word stems from the Latin 'resurgere' – to stand up, to arise. (...) With the word 'resource' a shift of focus to the bringing up of aged matter or the exploitation of deposits has taken place." The value-ladenness of the concept of resource cannot be avoided or erased. There were several ways to deal with this problem: "neutralizing" the concept of resource in the study of natural service with respect to value or valuations, thus granting that the concept of resource is value-laden in the social realm and limiting discussions of value and valuations to this area. Another option is assuming that the term "resource" means in the natural realm something different than in the social realm but something that is functionally equivalent.

Exchange or transfer of resources

Exchange is the object of study of the marketing discipline (Shapiro 1993, p. 61). As Chandler and Vargo (2011, p. 35) point out: "Most contemporary marketing scholars (e.g. Bagozzi, 1975; Hunt 1991; Vargo and Lusch, 2004) consider the study of marketing and, by implication, markets to be concerned with exchange." For Löbner, the meaning of concept of

exchange is not limited to the social domain. Transformation requires the transfer of resources, and exchange is what precedes integration and transformation. The bird and the rhino exchange food for skin care. In the social realm, exchange is the exchange of property rights; in the case of natural service, it is what precedes or determines the various means or procedures that bring resources to their “operational area.”

Transformation and change of the receiver's state by use of resources

“Transformation” is a word that designates a process as well as a result. As a process, “transformation” characterizes what happens to or what is done with the resources that are used or integrated. From a teleological point of view, the result of (a process of) transformation is the transformation or the change that is brought about. In the social realm, service provision begins with the interest in or the desire for change. Note that the service-dominant perspective is non-Smithian. Adam Smith holds both a materialist and a sensualist view on value creation (Shapiro 1993, ch. 2). He assumed that objects produce satisfaction because of their materiality. From this perspective, transformation has to create material objects able to cause sensual impressions (satisfaction) in human beings.

The intentionality of human beings aims at service provision; service provision, however, is no end in itself. It is a means to the achievement of other ends. Intentionality and motives are categories that apply to human beings. If they apply to the animate nature as well, or if there are at least borderline cases in the animate nature, is subject to debate (Menzel and Fischer 2011).

Benefit and contextuality

Value results from assessments and not all non-human beings are able to make (conscious or unconscious) assessments. Compared with value, benefit is a concept that does not require the beneficiary to make conscious or unconscious assessments. Both receiver and provider of service don't have to reflect on the benefit of the other party.

In contrast to nature-nature interactions, the social-theoretical category of the other (Bedorf 2011) is relevant for the provision of SSR. For its understanding, it is constitutive that service is provided for the own benefit and the benefit of the other party (Vargo and Lusch 2004). As in the social realm, interactions between non-human beings are not always to the benefit of both parties; in some interactions, the category of benefit may play no part at all or only for one party to the interaction (a river bed taking shape in millions of years results from the interactions of river and rocks). What is called cheating in the social realm (or a functional equivalent of it) is found in nature as well: There are for example orchids that are deceiving male orchid flies (male orchid flies that are heading for the blossoms of the orchids are cheated by the orchids that are mocking female orchid flies).⁵

In the social realm, contextuality accrues from culture, history, locality, etc. – aspects that can be of importance for the study of the natural realm as well. The impact of culture is restricted to sentient non-human beings: “Gorillas, orangutans and chimpanzees pass down traditions and

⁵ The examples are taken from a German newspaper (see Wedlich 2014).

follow fads” (Marris 2006), whereas history and locality are of relevance for the nature-for-nature service of non-sentient non-human beings as well, granting the impact of the situation for the benefit that can be generated.

SSR presupposes at minimum dyadic interaction, values and valuations that determine the benefits, and thinking or mind-reading skills that are not available in the inanimate nature and debated with respect to parts of animate nature (Lurz 2011; Menzel and Fischer 2011).

The next section is devoted to SSR, in particular to value creation. The implementation of sustainability as a leitmotif or family of values requires no change in the S-D analytical framework. Quite the contrary, values and valuations characterize the value creation process.

Value creation from a S-D and non-Smithian perspective

The service-dominant logic has spent effort on the elimination of G-D concepts such as “production” and “consumption.”⁶ “Value creation,” although not synonymous with “production” and “consumption,” has taken their place. The term “creation” designates a process as well as its results, and value creation is the social-scientific pendant to transformation and change. “Value” in the expression “value creation” designates the results of a particular process, namely a value creation process. It does not designate the economic or ethical values to which human beings refer at the point of valuation. Change is created as a consequence of a transformation process into which resources are invested, in the course of which activities and interactions are performed and interpretations and valuations are made.

Centuries of objective and subjective theories of value (in what is called economics, philosophy, and ethics from the contemporary perspective) have contributed to the discussion and understanding of value (Beinhocker 2006; Rescher 2004; Stavenhagen 1969). As Shapiro (1993, p. 64) has observed, “(t)he Smithian subject or body faces things alone, alone in the sense that there is no linguistic or cultural intermediation between a person and the satisfaction of value.” And there are no processes of interpretation and assessment. Thus, for Smith, the sensualist and objectivist, value is the consequence of the impression that physical objects make on the sensual apparatus of individuals. As mentioned above, a non-Smithian view does not see in objects or their attributes the source of value. Shapiro’s (1993, p. 64) formulation seems to harmonize with the S-D view: “Interpretation produces value”⁷ (Shapiro 1993, p. 47; Shapiro quotes Arkady Plotnitsky at this place); it is “a function of the context of the exchange, especially the intersubjective bond it reinforces or creates” (Shapiro 1993, p. 64). Shapiro (1993, p. 65; italics in the original) adds that in order “to disrupt the Smithian view more thoroughly, it is necessary not only to shift the locus of value production away from objects but also to note how they become valued within a syntax that relates them to other things.”

According to the S-D perspective, value is nothing that the individual passively “receives;” furthermore, it is a consequence of a context-sensitive, culturally impacted and

⁶ From the good-dominant perspective, “consumption” means “destruction.” The S-D logic has not gotten rid of the term “consumption” but changed its meaning.

⁷ In this paper’s terms: Interpretation produces change.

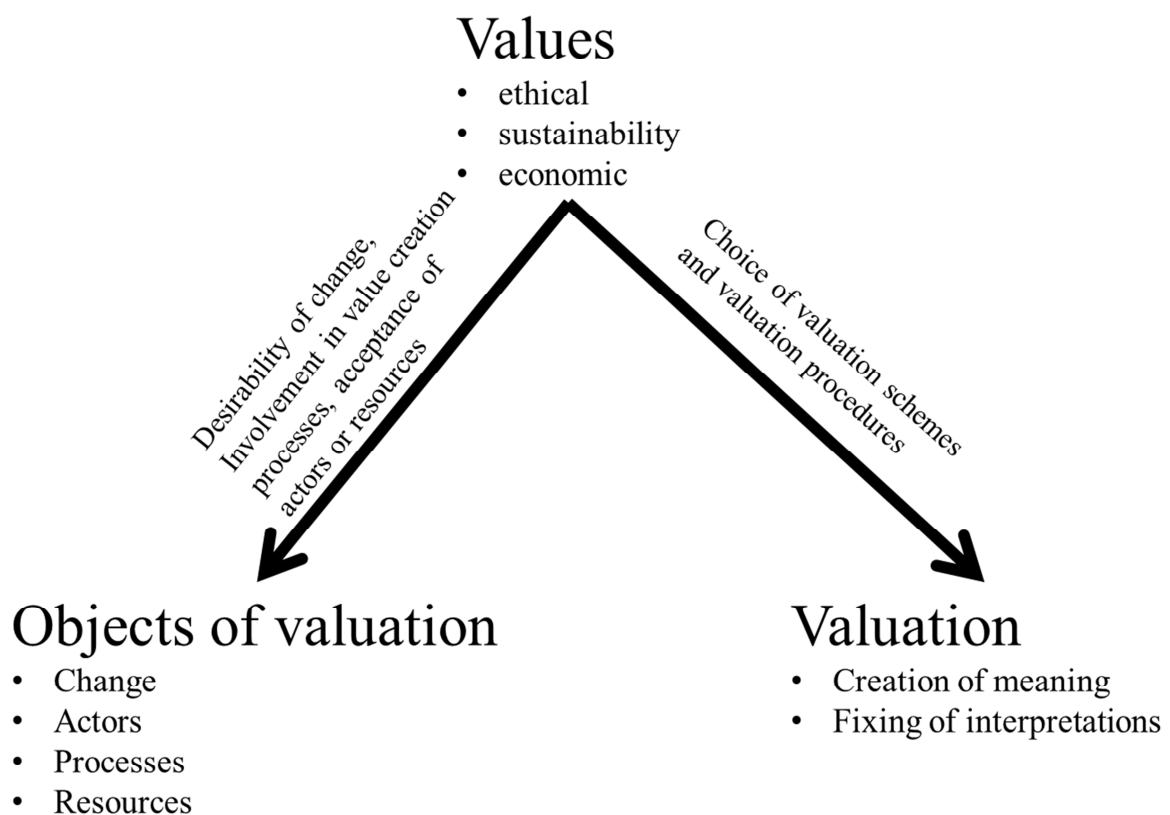
actively elaborated interpretations or valuations, that is value-in-context. This harmonizes with S-D logic’s fundamental principle number 10, which says that “value is always and uniquely and phenomenologically determined by the beneficiary” (quoted by Löbler and Hahn 2013, p. 257). Value-in-context cannot abstract away the specific situation in which the value-creation process or the activities related to it, respectively, takes place (Löbler and Hahn 2013).

Value creation is not among the common denominators of service. Value creation processes are the transformation processes directed at the creation of change in the social realm. Among other things or entities that can be made the subject of valuations, the created change is perhaps the most relevant reference for valuations. However, all optional references are valued by actors through valuations on the basis of their values.

Value creation in the social realm

Figure 1 represents the relationships between objects of valuation, values, and valuations. Against the backdrop of service thought, SSR can be understood on the basis of, first, value creation as process and change as its intended or expected result; second, the valuations that initiate, guide, and accompany value creation processes; third, the values that guide these processes.

Figure 1. Values, objects of valuation, and valuation



Objects of valuation

Value-in-context is the origin of the potential infinity of objects of valuation. It is the lens of concrete theories or approaches that sheds light on particular objects. The S-D logic's distinction between actors and resources (Kleinaltenkamp et al. 2012) is fundamental for this paper's selection: Actors are the ones who value, and resources are assessed with respect to their value. In addition, the basic denominator transformation and change has to be considered. The paper follows up and combines these two strands of argumentation in the next subsection.

Values

In marketing theory, several categories of values (economic, ethic) have been distinguished, for example, in the constructs consumption value or shopping value utilitarian, hedonic, or social values (for references, see Löbler and Hahn 2013, pp. 256 ff.). Values influence the decisions for and against value creation. Values, such as the family of sustainability values, can become motives and a reference for justifications. A person who intrinsically values the existence of rain forests on Earth will probably not cover the floor of his or her home with wood made from rain forests. Anti-consumption, consumer boycotts, etc., are indicative of the fact that consumers decide about their involvement in value creation processes, or accept or reject the "investment" of certain resources into value creation processes (Chatzidakis and Lee 2012). Activities can be performed in various ways, and the experiences that consumers make in the course of value creation processes with particular actors (co-creators of value), or the activities of these actors, or the resources that they themselves or the co-creators "invest" in the value-creation process may change their values as well.

As to the classification of values, one important distinction is that between instrumental and intrinsic values. As Löbler and Hahn (2013) have argued, the means-end scheme is one optional framework for the understanding and analysis of valuations but probably not the only one. Economic values such as efficiency and effectiveness are usually understood as instrumental values. Intrinsic values play a part in the characterization of non-pathological, i.e., sustainable SSR as well. According to Singer (2011, p. 246) "(s)omething is of intrinsic value if it is good or desirable in itself, in contrast to something having only 'instrumental value' as a means to some other end or purpose." A phenomenon, a state, or an entity has instrumental value for a human being or a non-human being (e.g., a primate) if it, or the one who does the valuation, leads or contributes to the achievement of the end for that it counts as a means. On the other hand, intrinsic value is unconditioned value or assumes that something has a value in itself.

In case of sustainable value creation, values related or identical to the family of values named "sustainability values" are among the set of values that plays a part for each value creation process. Each actor has to determine what "sustainability" means for him or her in the course of value creation. However, that sustainability values are recognized or even put into practice by an actor is not sufficient for sustainable value creation to take place. The ascription of the attribute "sustainable" has been restricted to "higher-level" entities such as social systems, service networks, or economies.

Valuations

From the service-dominant perspective, “valuation” designates the indeterminate number and intensity⁸ of assessments of actors, resources, or activities, wished-for and undesired action consequences, etc. That something is valuable is a result of interpretations that come to a temporary standstill after a series of valuations. As Shapiro (1993, p. 47) has remarked, “the achievement of value requires the fixing of interpretation, and consequently, the arrest of the process of creating meaning.” “Point of valuation” designates the small interval of time at which the process of interpretation has come to a standstill. The analysis of valuations requires the previous identification of objects of valuations such as “usage process quality” (Macdonald 2011, quoted by Löbler and Hahn 2013, p. 256).

“Fixed interpretations” require reference to values based on which these valuations take place. Value or valuations play a part in only some of the interactions that can arise from the “realms of service” (Löbler 2013b, Figure 1). In three of the four above-mentioned realms of service, human beings are involved, who are able to value the respective object of valuation.

Valuations, objects of valuation, and the valuing subject

Valuations require the activity of a valuing subject. In this vein, the valuing subject is the origin of value.⁹ Valuation is an endeavor in the generation, assessment, negotiation, or justification of value. There are multiple entities or phenomena that can be valued by human beings, and there are different origins and justifications of these values. For limitations of space, the paper cannot provide a complete discussion of all aspects that it considers as relevant. It restricts itself to the discussion of two types of dyadic interactions with respect to the service provided by humans for humans and natural service. According to the selection in the previous subsection, the paper addresses transformation and change (T, C), resources (R), and two actors (Ai, Aj). In the first case, Ai and Aj are human beings and nature is conceived as a resource. The analysis of the transformation process is focused on joint value creation of Ai and Aj. Nature is of instrumental value, but it is not excluded that it is of intrinsic value for Ai or Aj as well. The same holds true for Ai and Aj in their characteristic as cooperation partners. If the joint value creation process (T) is guided by economic values, then the instrumental value of Ai for Aj (and vice versa) for the pursuing of the value creation process is in the foreground: Ai is valuable for Aj (and vice versa) if his or her respective cooperation is helpful for the achievement of C. In case of the inclusion of ethical values in the “value portfolio” of Ai or Aj, the intrinsic value of Ai for Aj (and vice versa) can be addressed. In case I, the perspective of Aj as beneficiary of the service provision is adopted:

⁸ Not all subject matters of valuation may be equally important.

⁹ That the valuing subject is the origin of value does not imply that it is the origin of values. Subjectivist positions in meta-ethics assume that all values accrue basically from human assessments. Objectivists are convinced that values are independent from valuations or that values exist as part of – to the human – pre-given structures.

I

- (i) C or Ai or R or T is valued by Aj;
- (ii) C or Ai or R or T is valuable for Aj;
- (iii) C or Ai or R or T is valuable for Aj because of G (grounds, reasons, motives).

That Aj does value C or Ai or R or T does not imply that Aj values C or Ai or R or T. Accordingly, that Aj thinks that C or Ai or R or T is valuable does not imply that Aj is aware of the reasons, etc., for this judgment or that the reasons are justified or justifiable.

Western ethics has ascribed to nature instrumental value only. As Singer (2011, p. 241) points out, “(a)ccording to the dominant western tradition, the natural world exists for the benefit of human beings. Human beings are the only morally important members of this world. Nature itself is of no intrinsic value, and the destruction of plants and animals cannot be sinful, unless by this destruction we harm human beings.” Human beings can be interested in maintaining and protecting nature only because of the instrumental value it has for them. In this case nature is valued by human beings or is of value for human beings for instrumental reasons only.

From a Kantian perspective, human beings have intrinsic value (one formulation of Kant’s categorical imperative). Can non-human beings have intrinsic value as well? Singer (2011, p. 245) rejects the idea that only human beings have intrinsic value. He is convinced “that it is wrong to limit ourselves to a human-centered ethic.” For him, the question is, “(i)s there value beyond sentient beings?” (ibid.) Although “in any serious exploration of environmental values a central issue will be the question of intrinsic value,” Singer is skeptical of the view that intrinsic value can be ascribed to non-sentient beings such as rivers, rocks, or mountains. The paper does not delve into these issues. It suffices to say that, from Singer’s point of view, the arguments in favor of the existence of intrinsic value of non-sentient beings are in the stage of development.

In the case discussed above, a human actor (Aj) has valued a human actor (Ai). If Aj and Ai are sentient non-human beings, the fundamental denominator “benefit” replaces “value.” The paper limits its discussion to the variables selected above (included in formulation I) and the common denominator benefit. In the same vein as in formulation I, formulation II takes the perspective of Aj as that of the beneficiary:

II

- (i) C or Ai or R or T benefits Aj;
- (ii) Aj demonstrates “revealed preference” toward C or Ai or R or T;
- (iii) A reason (ground, motive) for Aj’s behavior can be found.

According to Löbner’s basic denominators, the change realized by natural service provision benefits Aj (i). A rhino accepting birds sitting on its back and picking insects shows preference in the sense of (ii). Prima facie, it is obvious that the activities of the birds are beneficial for the rhino. (iii) allows inclusion of the knowledge gained from scientific analyses that have identified reasons for the behavior of the entities involved in the service process. Neither Aj nor Ai have to be aware of them.

Discussion and conclusions

The paper shares Raatzsch's (2012) conviction that an unsustainable economy is a pathological case of an economy. From this assumption it concludes for the study of service provision that unsustainable service is a pathological case of service. For sustainable SSR, this means the same as for the sustainable economy: Sustainability is no quality that can be added to an otherwise proper service provision. Sustainability has to be rooted in service thought, and service thought comprises service provision by humans and nature and their respective interactions as well. For all four types of interactions, a change is or should be brought about by the exchange of service. In the social realm, a transformation process is undertaken for the wished-for consequences of the process (although not all consequences of a transformation process are intended ones), and the change has a factual and a normative dimension. The factual dimension is related to the problems that shall be solved through a transformation process; the normative dimension is related to the values that influence problem identification, the wished-for change and the way it is brought about. The transformation process and the resources as well as the actor's particular skills, knowledge, or competences affect the way the change is realized. In case of sustainable service provision, sustainability as a leitmotif plays a part in the initiation and the realization of transformation processes and the assessment of their results. However, sustainable SSR draws not only on values; it draws also on the knowledge and ideas gained from the study of service provision in the social and natural realms.

How human beings interact with nature figures prominently in most approaches to sustainability. As a "child of crisis" (Grober 2010), sustainability is a problem-driven concept, and the problems that made sustainability a dominant category in daily academic and everyday discourses are human-made problems (Moran 2010, p. 1). Nature's service provision has been studied within the categories of environment or resource (Sandmo 2014). Human-nature and nature-human interactions might give reason to include the social-theoretical category of the other into the study of service provision.

It can be doubted that "pure" human-human interactions exist at all or stated that human-nature interactions are always involved in value creation, respectively. In case of value creation, pure human-human interaction is possible only if nature is conceived of as a resource. The terms "human-nature interaction" and "nature-human interaction" put "human" and "nature" syntactically on a par, but it is still to explore what this balance means with respect to semantics and pragmatics. Nature is no actor in the sense of the understanding of "actorship" in ethics and economics that presupposes categories of Western ethics such as freedom and intentionality. These presuppositions don't apply to non-sentient non-human beings and to sentient human beings, at least not to a full degree. Some sentient non-human beings (e.g., primates, birds, rats, etc.) show purposive behavior. Like human beings, they build expectations¹⁰ and apply instruments. A proposal could be developed with respect to the functional equivalence of human

¹⁰ While cycling through a small street in Berlin, a crow threw a walnut toward the front wheel of my bicycle – a typical behavior of crows toward cars that crush the nuts for them. Obviously, this crow had wrong expectations of the power of my wheels.

beings and non-human beings within the framework of the four types of interactions but clearly not on the synonymy of the meaning of “human actor” and “non-human actor.”

If nature is conceived as an actor, then it cannot be conceived as a resource at the same time. This has implications for the analysis of service provision and value creation. As is well-known in business ethics, to be an actor is no guarantee to be involved in fair or powerless relationships only. That sentient non-human beings don't have the status of actors can have negative consequences for them: They don't act, but human beings act upon them according to their values or consider them as resources, respectively. However, that something is treated as a resource is not necessarily bad for the resource. Even if it is accepted that the concept of resource implies instrumental value, the limitation of access to resources, the reduction of resource uses, and the termination of resource uses can be discussed (Campbell et al. 2013). To be a resource for an actor can be bad if the actor has only his or her own benefit in mind and does not ascribe intrinsic value to the resource.

That nature is not a passive environment for human activities has ethical consequences as well. The service of nature for human beings might be seen as a source of obligations of human beings toward nature. Is it, for example, justifiable that humans accept the service of nature but don't serve nature as well? If human beings adopted the extended S-D perspective, they could become aware that they are served by nature and of the service they could provide to non-human beings.

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