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# A Minor Matter of Great Concern: The Different Sustainability Logics of ‘Societal Benefits’ and ‘Socio-economic Profit’

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## Abstract

Sustainability science research is characterized by its high transdisciplinary ambitions. However, despite claims to urgent social change, important sustainability principles—including social complexity issues such as learning and knowledge sharing among stakeholders—are not fully contextualized and understood within the general framework of sustainability science research. To explore possible synergies between sustainability science research and social analysis, this chapter uses a qualitative method to account for the theoretical and practical implementation of a transdisciplinary research process. Through one example of a change in Swedish natural resource management policy, the paper demonstrates how a top-down and bottom-up conflict in natural resource management was dealt with by the creation of an innovative environmental governance constellation. This was done by the mobilization of the theoretical concept of ‘boundary objects’ to develop and maintain coherence over time between stakeholders and social worlds sharing a common sustainability interest but with conflicting stakes. It is concluded that ‘boundary objects’—here, a new communication platform—can facilitate cooperation between stakeholders regarding the complexities of social-ecological systems governance and policy.

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## Keywords

Sustainability epistemologies · Boundary object · Qualitative analysis · Fisheries management

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## 1 Introduction

The realization of the UN sustainable development goals will require modes of planning, cooperation, knowledge sharing and societal change implementation in joint efforts between funding bodies, researchers and educators, policy makers, practitioners, NGOs and citizens (Charlton 2016). Such innovative constellations of actors go beyond traditional academic practice and result dissemination, but within sustainability science a number of examples and efforts of new governance constellations are being documented and analyzed (Polk 2014). This chapter wants to contribute to the discussion by an analysis of a policy change process connected to sustainable development goal 14 (Conserve and sustainably use the oceans, seas and marine resources) where both authors were directly involved in an action research project. This project (Doing sustainability through markets? Coastal communities and economies embedded in place) was designed to understand why stakeholders in Swedish fisheries governance experienced recurring breakdowns in communication, specifically why fishers expressed their inability to make sense of micro-management from central authorities (Säwe and Hultman 2012). The chapter aims to illustrate the pressing issue of what counts as legitimate knowledge in the development of sustainability science as an integrated field, or as Shahadu (2016) calls for: an umbrella science of sustainability. For this explicit purpose, the argument focuses on ontology and epistemology in transdisciplinary research. From this, the chapter outlines implications concerning how epistemologies and what counts as legitimate scientific knowledge potentially affect and shape social reality.

From the understanding that sustainability science is a transdisciplinary field of research with the ambition to genuinely integrate all dimensions of sustainable development, the chapter adopts its definition of transdisciplinary from Polk (2014: 440, emphasis in original), stating that

*...transdisciplinarity* refers to different types of knowledge production for social change which are based not only on the integration of knowledge from different disciplines (interdisciplinary) but also on the inclusion of values, knowledge, know-how and expertise from non-academic sources

This definition is in accord with how Wittmayer and Schöpke (2014) argue for action research as a suitable method for sustainability science, as action research is a ‘collaborative production of scientifically and socially relevant knowledge, transformative action and new social relations through a participatory process’ (p. 484; also Wittmayer et al. 2014).

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## 2 The Epistemological and Ontological Challenge of Transdisciplinary Research

Sustainability science research demands engagement with diverse disciplines and non-academics to work with complexity, uncertainty and under conditions where normative considerations have high priority (Lang et al. 2012). In the literature this

is discussed in terms of the balance for researchers to deal with the tension between scientifically generated problems and real-world problems (Wuelser and Pohl 2016). The challenge can be expressed as giving voice to and include multiple perspectives and kinds of knowledge while at the same time ensuring the validity and legitimacy of research (Lang et al. 2012; Ziegler and Ott 2011).

While results provided by a wide range of scientific disciplines are acknowledged as important (knowledge from different disciplines is needed to understand the range of institutional, social–ecological and technological aspects actualized in the UN development goals), there is not an equal amount of attention given to the need for greater understanding of how legitimate knowledge is produced (epistemology) in relation to understandings of how the world works (ontology) (Fazey et al. 2017). Epistemology and ontology are the lenses through which complexity is researched, but arguably they also limit a full understanding of sustainability problems (Hultman and Säwe 2015; Evely et al. 2008). Sustainability science is in this regard biased towards epistemology and ontology developed within science, with weaker foundations in social science and the humanities (Shahadu 2016; Olsson et al. 2015; Scott 2015).

Epistemology has profound implications for how people understand their own position, the way research and scientific practice are conducted, how sustainability problems are interpreted and how solutions are identified and implemented (Evely et al. 2008; Miller et al. 2008). Acknowledging the implications of epistemological effects on real-world problems is particularly important for sustainability science and research. Understanding complex interactions in the Anthropocene requires engaging with multiple and equally valid perspectives. Fundamental differences in epistemology and ontology can result in different outcomes of change when researchers engage with the political and ideological dimensions of specific problems. This concerns not only real-world political normativity but also the normative claims made by different scientific disciplines (Fourcade et al. 2014; Hultman and Säwe 2013). Sustainability transdisciplinary researchers, therefore, must be aware of how epistemologies of their own research and the research of others reflect how the different actors involved have impacts on the practical outcomes and solutions expressed (Säwe and Hultman 2016).

The analysis in this paper problematizes knowledge claims made with the basis in social sciences (sociology and human geography) and economics respectively. The different epistemologies of these disciplines illustrate different understandings of how a sustainability problem is best solved. It is shown how social science promotes the concept of ‘societal benefits’ for increased natural resource management sustainability, while economics suggests ‘socio-economic profit’ with the same aim.

### 3 The Sustainability Problem of Fisheries Governance: A Transdisciplinary Process

The empirical framing of this paper is a particular instance in Swedish professional fisheries strategy making, regulation and management. It took place during a time period (2015–2016) when Swedish fisheries policy—following a reformed EU Common Fisheries Policy (CFP) in 2013—experienced drastic change. Fisheries are an area of natural resource management where the stakes are high in terms of the potential loss and gain of social, economic, environmental and cultural values. The CFP is legally binding for member states, but this trans-national policy must also be expressed in national legislation. Fisheries are big business embedded within a massive regulatory framework. Fisheries management is a contested area, where governance strategies must encompass conflicting interests. As other environmental conflict areas, fisheries sustainability has so far primarily been discussed from ecological and economic perspectives with a progressing bias towards market-based solutions to environmental problems (Anderson and Libecap 2014; Gómez-Baggethun et al. 2010; Mansfield 2008 for general overviews; Säwe and Hultman 2014; Mansfield 2007 for fisheries examples), often without sufficient consideration of the wider societal consequences. In the case of fisheries management, research is biased towards ecological and resource economics modelling, eventually aiming at an optimized match between the biological status of stocks and profitability for fishing firms (Schreiber et al. 2016; Holm and Nolde Nielsen 2007). It is almost without exception based on a systems approach where parameters expressed in metrics have precedence, a fact that has been criticized for resulting in a limited sustainability understanding (Quinlan et al. 2016).

Such is the setting of this account of a transdisciplinary process where both authors became involved in an action research project. The specific instance of analysis concerns the formulation of a Swedish national strategy for professional fisheries to be operational 2016–2020. Two kinds of knowledge were in play in this sustainability transformation: abstracted modelling competence and social–ecological, place-bound competence. National central authorities drew upon resource economics modelling, while a coalition between parts of the fishing industry, local authorities (county administrative boards, CABs) and coastal municipalities argued from social science sustainability competence. Both kinds of knowledge thus had basis for their claims in different parts of academia.

Since a strategy is one way to express the ambition to shape the future, the differences between the competences in play can also be expressed as different principles for dealing with uncertainty. The economics modelling competence aimed to make the future manageable and predictable by translating a range of sustainability values into measurable parameters. The social science sustainability competence strived to acknowledge real-world contextuality and unpredictability (Hodgson 2013).

## 4 Boundary Objects: Theory for Transdisciplinary Research

The action research outcome of how the national strategy was finally framed and articulated was a new governance constellation between local authorities, coastal municipalities and social science sustainability research (see Sect. 7 in this chapter). The objective of this constellation (ÖF2020, in translation Baltic Fisheries 2020) was the creation of a new communication platform—or ‘boundary object’—in the shape of a national, annual conference. This boundary object aimed to mobilize a wide range of fisheries stakeholders in an ongoing effort to operationalize the concept of ‘societal benefits’ in relation to the national strategy.

A boundary object is a theoretical tool developed within the field of social studies of science to give analytical traction to a conflict and power approach in a multi-stakeholder context (Leigh Star and Griesemer 1989). There are two key characteristics of how the concept was originally conceived (Leigh Star 2010) that makes it applicable to transdisciplinary research: *That boundary objects are actively pursued constructions for a specific purpose, and that they must be managed over a period of time to fulfil this purpose.*

The creation and management of boundary objects aim to develop and maintain coherence between social worlds sharing a common interest but with conflicting stakes. The boundary object—in this case the ÖF2020 annual conference—aimed to give voice to equally legitimate claims in a situation where stakeholders commanded different communicative assets, kinds of knowledge and power. It was designed to be recognizable for all stakeholders and was an arrangement with the ambition to allow different groups to work together without consensus in practice.

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## 5 Methods

Following and participating in the shaping of the fisheries strategy was a process spanning 2015–2016. The discussion in this article draws upon a heterogeneous body of data: strategy drafts, official documents, officially available e-mail correspondence from CABs and personal communication with authorities and practitioners. Undocumented but systematically generated data such as e-mail and communication is not always easily referenced, but is none the less important material in qualitative research (Silverman 2007). The actual analysis uses two documents, a strategy draft that was discussed in a large advisory group and the final version of the strategy. These documents are subjected to a micro-level analysis where discursive elements are examined and compared. To the knowledge of the authors, this is not an established qualitative method in sustainability science but is a form of critical discourse analysis used in qualitative research into real-world problems (van Dijk 2001). It is applied here to illustrate the importance of wording and rhetoric to understand problem formulations and suggested solutions aiming for sustainability. Words are important not only because of what they

denote, but also because of where they come from: what knowledge and logic form the basis for argumentation? Here is an opening for illuminating epistemologies and ontologies and make these issues a subject for reflexion. This kind of qualitative analysis is also proposed as an example of how the micro-level of social interaction can be connected to the macro-level of societal change (Mason 2006).

Transdisciplinary research is fundamentally different from traditional academic work. To engage in real-world problems demands research strategies different from articulating your own research problem and then presenting it as socially relevant. The collection of empirical data is systematic but also opportunistic. The researcher is involved in and affects the process and the results. This has potentially far-reaching consequences for social change. A real-world change process might be messy to account for in terms of cause and effect. One way to handle this while preserving academic credibility is transparency. For the purposes of this study, transparency takes the form of a detailed analysis on the level of individual words, and a chronological narrative of the ongoing process and the creation of a boundary object that was the result of how the fisheries strategy was finally articulated.

The limitations of the argument and analysis are twofold. First, they concern wordings and rhetoric and not, for example, socio-technical innovation or real-time social-ecological causes and effects. Although it is proposed that the analysis is one way of aligning causality between micro- and macro-scales, it obviously must be connected to a range of other disciplinary and transdisciplinary methods and knowledge to attain its full explanatory potential. Second, while the sustainability effects of different epistemologies are problematized, the authors have chosen not to question their own potential influence on the process accounted for. This is not in order to dis-acknowledge it, only a pedagogical manoeuvre to streamline what is arguably an under-researched issue in sustainability science.

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## 6 A National Fishing Strategy: A Diversity of Stakes

Swedish national fisheries governance is divided between two central authorities, the Swedish Agency for Marine and Water Management (SwAM) and the Swedish Board of Agriculture (SBA). SwAM is responsible for fisheries control, environmental monitoring and the allocation of the fish resource. SBA is responsible for the promotion of coastal and small-scale fisheries, and the coordination of fisheries management efforts with those related to rural development. CABs act as the implementing authority in local contexts. During 2015 and the beginning of 2016, the development of a national professional fisheries strategy rested with SBA. The process followed a bottom-up working mode. The organization had SBA as a coordinating body. An advisory group with a large number of fisheries stakeholders, CABs, NGOs, representatives from coastal municipalities and SwAM, and researchers regularly convened and discussed the strategy's text. The authors were involved as researchers, and also because they were chairperson and secretary for a regional coordinating body of professional, recreational and subsistence fishers in

Öresund, southern Sweden. In addition there was a small steering committee with members from SBA, SwAM and CABs.

As the strategy work progressed and a final version was being discussed in the advisory group, the consensus-driven process took a sudden top-down turn. SwAM unexpectedly stepped in and claimed shared ownership for the strategy. This move coincided with a change of wording in the vision and central resource allocation goal for the strategy. It was a change that had neither been discussed in the large advisory group, nor presented for the CABs in the steering committee. The version of the strategy that was sent out for a final round of remittance opinions—and which eventually became the official text—featured this vision and central goal that had been inserted top-down, not previously openly discussed.

So what does the vision proposed by central authorities look like, and how does it compare to the initial vision? In the following sections, we will argue that the initial proposal secures the integration of all three sustainability dimensions in, whereas the final and official proposal fails to do so.

## 6.1 A Change of Wording from Societal Benefits to Socio-economic Profitability

The initial suggestion, put forward by CABs, coastal municipalities and social science action researchers, had been agreed upon in the advisory group. This proposal focused on the concept of ‘societal benefits’ (The Swedish national strategy for professional fisheries, draft February 2016, authors’ emphasis and translation):

Swedish fish resources are allocated and utilized in an environmentally sustainable way that creates *the greatest total societal benefits* from social and economic perspectives.

Attached to this proposal, members of CABs, the coastal communities and social scientists articulated the following definition of societal benefits:

A well balanced fishing fleet with daily landings, which as far as possible strive to attain profitability from the quality of the catch rather than the prioritization of quantity, creates conditions for long-term regionalized management; a growing national service sector; rural development; consumer access to fresh fish; values associated with tourism and recreation; and a balance in the respective strengths offered by smaller and larger vessels. Such a fleet ensures continuous environmental monitoring as well as national food security. Societal benefits can thus be understood as the way in which different activities in an industry become mutually reinforcing for the benefit of surrounding communities.

The SBA and SwAM, disregarding previous discussions in the advisory group, substituted this consensual proposal for the following wording in the strategy’s vision and central resource allocation goal (Swedish Board of Agriculture and Swedish Agency for Marine and Water Management 2016), authors’ emphasis and translation):

Swedish fish resources are managed, allocated and utilized in an environmentally sustainable way, and in a way that within these limits strive to attain *the highest possible socio-economic profit*.

Both proposals prioritized environmental sustainability, fully in accord with the reformed CFP. However, what is noticeable is that the SBA/SwAM version embedded social and economic dimensions within a concept that was new to the context of shaping the strategy. These two dimensions became combined in ‘socio-economic profit’. A definition of ‘socio-economic profit’ was attached, implying a specific interpretation of social and economic sustainability, one that was conditional upon measurable parameters:

A socio-economic profitability assessment means the attempt to measure welfare effects resulting from changes in the management of the fish resource, its distribution, and other measures. In other words, it is a socio-economic calculation that also includes assessments of relevant effects that has not been possible to quantify or valued in monetary terms.

This definition implied an economic logic. The focus was put upon measurability and calculability. As explained by research in economic sociology, in traditional economic theory functioning markets presume that the range of values important to society and individuals must be made commensurable. This is done through assigning a monetary value to the different kinds of value that have to be weighted against each other in any situation where resources are limited (Aspers and Beckert 2011).

During the discussions that followed the insertion of the top-down vision, it became clear that SwAM found the concept of ‘societal benefits’ too vague and too political in the sense that it pointed towards the need for future judgements between different societal and social values and goals. The central authority did not interpret their instructions to include such political considerations. Instead they preferred to rely on their resource economics competence. Paradoxically and interestingly this definition of socio-economic profit includes both measurable and non-measurable effects in its calculations: ‘...also includes assessments of relevant effects that has not been possible to quantify or valued in monetary terms’. The definition seemed to predict that effects that until now had not been possible to value in monetary terms would soon become calculable. From the discussions, this can be interpreted as an institutional ambition to de-politicize a complex issue by making incommensurable values commensurable.

## 6.2 The Proposal that Secures the Integration of All Three Sustainability Dimensions

What are the differences between the two visions that from a first glance might seem quite similar? In the version put forward by central authorities the word *managed* has been added: ‘Swedish fish resources are allocated and utilized in an environmentally sustainable way...’ was changed to: ‘Swedish fish resources are *managed*, allocated and utilized in an environmentally sustainable way, ...’ (authors’ emphasis).

The word *managed* is positioned as significant. The word indicates that something has to be governed by a managerial body. The original bottom-up version did



not invest in this particular dimension, instead indicating a more heuristic process: ‘...that creates the greatest total societal benefits...’. The formulation ‘that creates’ has connotations different from that which has to be managed. Instead this wording proposes an open-minded process towards something negotiated and future-oriented. Compare this formulation to the one preferred by the authorities: ‘..., and in a way that within *these limits* strive to attain the highest possible socio-economic profit’ (authors’ emphasis).

These limits refer to the former passage ‘in an environmentally sustainable way’. In other words, this way of wording indicates that the environmentally sustainable way is already defined and carefully delimited. Compared to the original suggestion that was future-oriented, inclusive and open-ended, this wording is more grounded in the past in an agreement upon parameters already defined and positioned to be maximized through the ‘strive to attain the highest possible...’.

The wording ‘strive to attain the highest possible...’ can be understood as an estimation, something that can be more or less obtained, while the formulation ‘that creates the greatest total’ is indicative of an intention combined with the judgement ‘the greatest’. What is valued as ‘the greatest’ is directed to something yet to come and a definition that is conditional upon an agreement between stakeholders; nothing that can be estimated or foreseen a priori, without contextualization.

‘The greatest total’ is referring to the concept ‘societal benefits’—a way of wording that can be understood as an ambition to secure the integration of all three sustainability dimensions, including present and future ecosystem services. The official proposal instead ended with ‘the highest possible socio-economic profit’, while the initial proposal connected ‘the greatest total societal benefits’ to other values embedded in a surrounding community. The text by the authorities was restricted to values only associated with the management of the fish resource itself.

Words in the initial proposal were ‘the quality of the catch’, ‘creates conditions’, ‘and a balance’, ‘ensures a continuous environmental monitoring’, ‘food security’, ‘mutually reinforcing’, ‘the benefit of surrounding communities’. The proposal that eventually became official in the national strategy instead used the words ‘socio-economic profitability’. This embodies a different kind of connection and understanding between social and economic sustainability dimensions, one that relies upon measurable parameters: ‘the attempt to measure’, ‘changes in the management’, ‘calculation’, ‘also includes’, ‘that has not been possible to quantify or valued in monetary terms’.

If the economics principle of profitability is the strategic direction for future resource management, allocation and access, central authorities must—to be able to function—discard other kinds of knowledge and logic. The final strategy text itself repeatedly states the intention to manage and allocate the resource according to the three acknowledged sustainability dimensions: environmental, social and economic. However, the final national strategy version—embedded in ecological sustainability—favours a maximized economic growth criterion. Social sustainability is implicitly expected to follow from this. This is arguably in contradiction to European fisheries policy (EC 2013, authors’ emphasis)

When allocating the fishing opportunities available to them ... Member States shall use transparent and objective criteria including those of an environmental, social and economic nature. The criteria to be used may include, inter alia, the impact of fishing on the environment, the history of compliance, *the contribution to the local economy* and historic catch levels.

The CFP is explicit in its legal and normative policies that fisheries management should implement and develop principles of inclusion, future orientation and openness for a multitude of perspectives and knowledges.

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## 7 Connecting Science to Real-World Problems

From a social science sustainability understanding, the outcome of the strategy work was unsatisfactory. One of the sustainability science objectives is the integration of social, economic and environmental dimensions of real-world sustainability problems. The final strategy text did not fulfil this ambition. For this reason, CABs, coastal municipalities and social science created a boundary object, ÖF2020 (Baltic Fisheries 2020), to allow for reflexions and potential knowledge sharing among all interested fisheries stakeholders. Considering the lack of consensus over central issues in Swedish fisheries management, this boundary object had to be designed as an open but structured situation. It was also important that it became an arena for accountability on part of the central authorities whose decisions and regulations often appear opaque and under-explained to other stakeholders. The main purpose was to create an opportunity over an extended period of time to communicate and make sense out of a contested solution to a sustainability problem. The boundary object conference was built around different perspectives on how to allocate and utilize the fish resource towards an environmentally sustainable way that creates the greatest total societal benefits. Thus, it was a self-created pathway by the ÖF2020 coalition to further pursue the concept of societal benefits that had, in fact, been rejected by central authorities. Since these authorities had made it clear that this concept was too political for them to handle, the major point of the first annual conference in 2016 was to get national politicians on stage to assure their authorities that the goal of societal benefits had, in fact, political support.

By initiating the conference CABs, coastal municipalities and social scientists created a space to communicate that political support was explicit. ÖF2020 also used the space to articulate the tension between a bottom-up perspective to empower local economics and the top-down economics paradigm within central authorities prioritizing profitable fishing firms on a macro-level of abstraction. The conference ended by stating a process goal: that the preparation of and participation in future conferences were open for anyone bearing a professional stake and interest in Swedish fisheries policy. The ambition was an annual, pragmatic and action-driven process circulating around the operationalization of the national fisheries strategy, and to make it a practical tool towards a more sustainable future

for fish as a limited and common resource restricted by ecological concerns and at the same time as an important issue of food security.

By framing the conference as a boundary object, the interplay between science and policy was activated and problematized. Social science, science and economics were potentially aligned to ensure a robust connection between research and real-world sustainability challenges. It also worked to create a transdisciplinary environment by knowledge sharing and mutual reflexion among researchers, authorities, policy makers, NGOs and practitioners—giving space to different views of what constitutes reliable or useful knowledge.

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## 8 Conclusion

The analysis in this paper demonstrated how the ontological and epistemological perspective taken to both develop knowledge and find solutions implicitly shaped social reality and the nature of the outcomes. It also serves as a reminder of how research and decision-making are closely intertwined with politics, norms, values and organizational cultures. This involves juxtaposing and possibly linking different approaches to make use of different kinds of knowledge and to increase awareness of the range of complexities and normative considerations involved in doing research and shaping change.

As the analysis and account of the creation of a boundary object have aimed to illustrate, different academic epistemologies create different social realities. For central authorities, knowledge derived from economics counted as legitimate. A social science sustainability argument acknowledging the politics of natural resource allocation was rejected. The real-world consequences of what counts as legitimate scientific knowledge are in this case potentially dramatic. Returning to an economic sociological understanding of traditional economics, Fourcade et al. (2014: 21–22) show that:

Economists do not simply depict a reality out there, they also make it happen by disseminating their advice and tools./.../ By changing the nature of economic processes from within, economics then has the power to make economic theories truer.

The reason why central authorities in the Swedish national fisheries strategy chose to rely on economics modelling was that the concept of ‘societal benefits’ was interpreted as too political. But as the analysis has indicated, there is a need to recognize that engaging with social change will inherently be political and that this demands high transdisciplinary ambitions to facilitate dialogue over important concepts such as value, ideology, knowledge and power. Otherwise, there is a danger of sustainability science unintentionally helping to de-politicize issues of social equality and democracy or, reproducing exploitive market settings and institutional relations (Fazey et al. 2017).

This epistemological challenge illustrates one obstacle that has to be dealt with in a transdisciplinary process: the views held by authorities, policy makers and practitioners about what legitimate research looks like and how it should be generated and used. This might well lead to resistance. It is what Rayner (2012) calls ‘the social construction of ignorance’, an institutional strategy to keep knowledge at bay that threatens the self-consistent world organizations have to maintain in order to function and fulfil what they interpret as their instructions.

In conclusion, action research gives the opportunity for academics to fuel and challenge a democratic process by reflecting on the meaning of concepts such as ‘societal benefits’. In the case accounted for here, institutional norms and beliefs were challenged during the work with the national fisheries strategy. A boundary object was created to maintain and develop a reflexive process over time. It was a way to theoretically and pragmatically allow a sustainability issue keep on being a focal point for different epistemologies, knowledge and perspectives, and to act as an arena for the uncertain synergies between policy and science.

This was done by literally putting issues on stage that otherwise possibly would have remained back stage. Epistemologies were made into subjects for reflexion instead of black-boxed argumentative foundations. In a sense, this entails placing the social dimension of sustainability on the same level of importance as ecological and economic ones.

While ecological and economic sustainability parameters are often considered quantitatively measurable, social sustainability comes to life through dialogue and knowledge sharing over uncertainty in ever-changing circumstances. This might be a key future issue for sustainability science: to bring forward the political and normative challenges of sustainability by giving them ideological meaning in transparent and democratic processes. Translating such a principle into a generalized sustainability science goal will demand innovative ways of knowledge dissemination that validate transdisciplinary research both inside and outside of academia, and knowledge sharing methods that create trust between researchers, practitioners and the public.

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