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Bumping against the boundary: IPBES and the knowledge divide

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ABSTRACT

Founded in 2012, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is one of the most ambitious attempts to date to bridge the divide between scientific knowledge and indigenous and local knowledge. Doing so requires overcoming participatory, epistemological and ontological challenges, including different communicative forms, diverging criteria for knowledge validation, and conflicting views of nature. Central IPBES documents are analyzed to see how the platform deals with these challenges. While IPBES constitutes an unprecedented, innovative and ambitious institutional design for the cross-fertilization of knowledge, the results show that IPBES (i) struggles to reconcile an open, collaborative atmosphere with the demands for structure set by the scientific format, (ii) tends to shy away from potentially conflict-laden issues and disagreements, (iii) often treats scientific knowledge and indigenous or local knowledge as easily distinguishable entities, and (iv) has yet to solve the epistemological challenges of knowledge generation and validation when working across knowledge-systems. Taken together, these features seem to hinder the cross-fertilization of knowledge. The case of IPBES thus holds important lessons for future efforts to transform both knowledge production and the overall framing of challenges within global environmental governance.

1. Introduction

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is one of the most recent attempts within global environmental governance to bridge the divide between the knowledge system of science and systems of indigenous local knowledge (ILK). This endeavor has several motifs, but the realization that valuable biodiversity knowledge rests outside the scientific realm along with the need to uphold legitimacy among stakeholders are particularly important. Working across knowledge-systems involves significant practical and philosophical challenges, and IPBES thus holds important lessons for future efforts to transform knowledge production and the overall framing of environmental challenges. It raises practical issues related to power, participation and communication, but also ontological and epistemological issues, such as conflicting notions of nature and diverging criteria for knowledge validation (Cornell et al., 2013: 61, Díaz et al., 2015a).

IPBES constitutes a rich case for studying boundary work (Gieryn, 1983), i.e. attempts by actors to create, shape, and disrupt boundaries between knowledge systems. Drawing on central documents this paper analyzes how boundaries between knowledge systems are constructed and handled. In particular it investigates to what extent and in what respects IPBES is an example of “a third knowledge space” as envisioned by Turnbull (2000, 2007), see also Tambiah (1990). In such a space, different knowledge systems with contrasting rationalities work together on an equal footing, implying that the boundaries between them are more or less fully dissolved. Even if this is neither the aim nor the reality of IPBES, employing the notion of a third space makes it possible to identify enduring difficulties related to bridging the knowledge divide. In particular, three challenges are analyzed. These concern participatory forms, ontological claims and epistemological issues.[1]

The paper is structured in four parts, including this introduction, which continues by briefly introducing the work and aims of IPBES. The second part summarizes the concepts and methods used. Following a description of the analyzed documents, the third

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[1] Obviously, power and communication are also important challenges, but not the primary focus of this paper. It had required another research design (including interviews and participant observations). Also, at the time of writing this, it is not finally decided how ILK-holders should be selected for IPBES assessments (for current procedures, see IPBES/4/INF/6, 2016). This does not mean that power and communication are totally excluded from our analysis, only that they are not discussed as separate challenges but as part of the here selected challenges.

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part presents the results under the headings of participation, ontology and epistemology. The fourth and final part concludes the paper by discussing the implications of our findings for future attempts to transform knowledge production within global environmental governance.

1.1. The intergovernmental science-policy platform for ecosystem services

The overall aim of IPBES is to provide policy-makers with relevant knowledge on how to tackle biodiversity loss and degrading ecosystem services. IPBES has four primary functions directed toward fulfilling this aim (IPBES-2/4): (i) to catalyze the generation of new knowledge, (ii) to produce assessments of existing knowledge, (iii) to support policy formulation and implementation, and (iv) to build capacities relevant for achieving its goals. These are all interconnected and in various ways highlight the challenge of bridging the gap between ILK and scientific knowledge.

IPBES is often described as an IPCC for biodiversity, but it differs from IPCC in its stress on stakeholder involvement and knowledge inclusion (Beck et al., 2014; Vohland et al., 2011). It is a permanent, independent, intergovernmental organization, open to all member states of the United Nations, and organizationally consists of the Plenary, the Bureau and the Multidisciplinary Expert Panel (MEP). As the decision-making body of IPBES, the Plenary has convened five times since 2012. The Bureau is in charge of administrative tasks. The MEP consists of 25 experts on biodiversity from various academic disciplines (five experts from each of the five UN regions). It functions as the scientific backbone of IPBES, providing the Plenary with scientific and technical advice, most notably assessments of biodiversity knowledge within different areas. The first substantial IPBES assessment concerned pollination and pollinators associated with food production. It was approved by the Plenary in February 2016.[2]

How can we understand the IPBES stress on knowledge inclusion? Within contemporary environmental governance, there has been a growing dissatisfaction with historical practices that reinforces a divide between scientific knowledge and indigenous and local knowledge. For example, IPCC has been criticized for treating peer-reviewed science as the only valid form of knowledge, thus excluding potentially valuable contributions and opportunities for innovation that lie outside the scope of scientific validation (cf. Turnhout et al., 2012).

Why, then, have there been relatively few attempts to work across knowledge-systems in the past? Agrawal (1995) points to enduring ideas about inherent differences between science and ILK. ILK is often described as tied to the daily practices of local communities; this results in rich and detailed knowledge about pressing aspects of an issue. Science, on the other hand, produces more general representations of the world that are partly separated from people's daily lives. When methodological and epistemological differences between the two domains are highlighted, science is portrayed as open and objective, clearly separate from dogmatism and popular beliefs, while ILK is more or less equated with popular beliefs and is considered closed and devoid of rigorous analysis. When comparing them in terms of their contexts, ILK is considered to be context dependent, while scientific knowledge is seen as valid regardless of the context. As Agrawal points out, it is quite easy to find exceptions or qualifications to any of these differences. The most important objection is however that *all* knowledge is context-dependent; all knowledge is inseparable from (but not reducible to) the particular social and material context in which it evolves (Jasanoff, 2004). The main difference is that science is presented – staged – as being of de-contextualized character (cf. Hilgartner, 2000). Contextual dependency is therefore a suitable starting point for understanding power relations between knowledge systems.

2. Theoretical framework and material

2.1. Knowledge systems and spaces

There are different definitions of a knowledge system. For the purpose of our analysis we will employ the one used by IPBES, namely "a body of propositions that are adhered to, whether formally or informally, and are routinely used to claim truth" (Díaz et al., 2015a: 13). With Turnbull (2000, 2007) we prefer to speak of knowledge spaces when discussing the material manifestations of such a system. Knowledge spaces are assemblages of linked sites (e.g. scientific laboratories, training centers and ceremonial grounds), local knowledge, people, equipment, practices, etc. Constructing a knowledge space is a social process in which connections are made and equivalences created using social strategies and technical devices. Science has been extremely successful in widening its knowledge space, mainly by shaping technoscientific infrastructures that enable science to travel long distances. A prerequisite for this mobility is that knowledge is not fundamentally changed by traveling from one place to another, and Latour (1986, 1987) has introduced the notion "immutable mobiles" to grasp objects – such as figures, diagrams, equation and maps – that are stable enough to withstand traveling without changing their inherent characteristics. When knowledge is stabilized and mobilized in this way it can be gathered in centers of calculation (e.g. a university or an expert organization) and easily be combined with previously gathered knowledge. This is a huge advantage, as it allows for action at a distance, for a center to dominate places far away (e.g. cartography was an important part of imperial rule). These immutable mobiles consists of inscriptions, i.e. information about an entity that is condensed and inscribed by scientific instruments. Inscriptions are two-dimensional and transform the object of study into a flat, simplified surface (e.g. turn physical fauna into a table representing population diversity and size). A flat surface is always easier to dominate, than the multifarious and complex objects "out there." Thus, the effective creation and employment of immutable mobiles and techoscientific networks for their travels is a central cause of the great divide between science and other knowledge system.

For ILK to feed into the IPBES assessments it has to be mobilized and stabilized; it needs to be found, gathered and made visible. It has to be moved into the centers of calculation tied to IPBES,[3] and it has to be made compatible with scientific knowledge. However this travel also involves a translation, and there is a great risk that ILK (unintentionally) become scientized, i.e. transformed to something else than ILK (cf. Latour, 1999). In a study examining the practice of gathering ILK into databases, Agrawal (2002) warns of a scientization of ILK. This typically occurs in three steps. *Particularization* takes place when bits of ILK deemed useful for the issue at hand are gathered, while pieces deemed irrelevant are

[2] IPBES defines an assessment as "a critical evaluation of the state of knowledge in biodiversity and ecosystem services. It is based on existing peer-reviewed literature, grey literature and other knowledge systems such as indigenous and local knowledge. It does not involve the undertaking of original research" (IPBES-4/9, p. 11).

[3] In the case of IPBES, such centers of calculation include a changing multitude of research centers and universities around the world, e.g. all the various affiliations of the MEP-members and others involved. The IPBES secretariat is located on the UN campus in Bonn, Germany.