



Transdisciplinary sustainability research beyond engagement models: Toward adventures in relevance



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ARTICLE INFO

Keywords:

Co-production
Performative analysis
Manifold
Public engagement
Typologies

ABSTRACT

Transdisciplinary models of research are increasingly upheld as the gold standard of collaborative science to solve complex social and environmental problems, promising to ‘close the gap’ between knowledge and action, inject science with greater accountability, democratic participation, and include stakeholders as practitioners of research. Absent in transdisciplinary models are more ‘risky’ questions of relevance, subject positionality, and the lived encounters between researchers and stakeholders. Who are the ‘holders’ and who determines the ‘stakes’? This article examines how notions of roles, typologies, and effectiveness constrain relationships between researchers and stakeholders; and document the ways in which research teams, shot through with these tensions, in turn develop new roles, typologies, and markers of ‘success’. In drawing on recent philosophical scholarship on social science practices, we argue that relevance in transdisciplinary research cannot rest on typologies, logics, and templates of collaboration in which effectiveness is determined in advance. The growing business of team science and its predictive aspirations risk rendering transdisciplinary research irrelevant if its practitioners do not loosen the grip on realist perspectives on stakeholder roles, research outcomes, and metrics of success. Instead, we argue for the development of skills for paying attention to the categories, friction, and tensions that are provoked by collaborative interactions, discourses, and techniques with stakeholders. Environmental researchers must learn to be responsive to the durable existence of stakeholders and seek to develop the means to reveal what matters, and therefore is relevant, to them.

1. Introduction

In a tropical country in Latin America, a team of Fulbright researchers sets out to conduct field surveys with local farmers. Their mission is straightforward: work with project stakeholders to identify and interview key witnesses about climate change impacts, seasonality, and crop failure to coproduce knowledge into ‘use-inspired’ environmental solutions, a hallmark characteristic of ‘transdisciplinary’ models of research. Popular in the health and sustainability sciences, the transdisciplinary model seeks to make science more ‘socially robust’ by engaging stakeholders at every stage of research (Groß and Stauffacher, 2014; Klenk et al., 2015; Mauser et al., 2013; Stilgoe et al., 2014; Talwar et al., 2011). Transdisciplinary research seeks to transform the very practice of science: who participates in defining problems and developing solutions; which knowledge is considered valid, credible, and legitimate; and what constitutes expertise, useful knowledge, and desirable outcomes in research (Felt et al., 2016; Reed, 2008; Lang et al., 2012; Phillipson et al., 2012; Mielke et al., 2016). In short, transdisciplinarity is fundamentally about matters of *relevance*—hence

the imperative to engage non certified experts that have an interest or a concern that scientific research could address.

For this particular group, the field mission quickly unravels. A team member turns out to be “too embedded” in the community, a feature normally expected of stakeholders but not of researchers. Such conflicting subject positions, as the interview participant explains below, is thought to impair a person’s ability to successfully perform research, independent of their entanglement in the social and political orders of the community.

Well, so [country withheld] I would say was our least successful field visits because [name withheld] is too embedded in the community. This person is like one of the stakeholders in a way, rather than a researcher independent from that, so this person knew everybody intimately, was like friends with everybody. They also had a weird hierarchical relationship over this person in some ways and totally like mainly spent all their time talking about the politics, about how much they wanted to get from the organization and we kind of forgot the purpose of our surveys, I mean semi-structured

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interviews and yeah, so that was the culture I guess, the culture slash contact of this person's relationships and *we didn't want to spoil it, you know, because it's life.* (P5; italics added)

Transdisciplinary research, as this story illustrates, is always an experimental exercise in stakeholder (trans)formation, influenced by the “weird hierarchical relationships” that enmesh scientists and stakeholders alike. It is not possible to determine in advance what “stakes” and whose life gets enmeshed in knowledge making practices—the process itself may change assumed roles. Recent research attempts to identify the ideal recipe for successfully producing relevant knowledge through stakeholder engagement (Thompson et al., 2017; Bracken et al., 2015; Mauser et al., 2013; Klenk et al., 2015). The hope is that if transdisciplinary research is done under the ‘right’ conditions and with the ‘correct’ procedures for engaging different types of stakeholders, it will generate relevant knowledge—in short, the ‘realist’ perspective on public involvement in science (Chilvers and Kearnes, 2016). The realist perspective pre-conceives of the roles of stakeholders involved in scientific research and assumes that a better understanding of such roles will lead to more effective technologies of elicitation, coordination and knowledge production (Reed et al., 2009; Wesseling et al., 2011; McNie et al., 2016). However, relevance here is an empty signifier. What relevance means and how we come to know whether transdisciplinary research has achieved it is generalized and anonymous—“a solution whose conditions of success are said to be definable in advance” (Savransky, 2016a: 27).

In this article we develop an argument for changing how we understand and articulate the practices of transdisciplinary environmental and sustainability research agendas from notions of “engagement” to “encounters” with the aim of achieving relevance in a way that is responsive to the obligations that stakeholders pose to us, the researchers. Taking a cue from a pragmatic approach in philosophy and the social sciences, we seek to illustrate how pre-determining the roles of stakeholders and producing typologies risks rendering transdisciplinary research irrelevant if it undermines stakeholders’ ability to resist, dissent, and evolve. We draw on an in-depth study of a transdisciplinary research program—the Fulbright NEXUS—to illustrate how notions of roles, typologies, and effectiveness constrain relationships between researchers and stakeholders, and show how research teams, shot through with tensions, in turn develop new roles, typologies, and markers of ‘success’. We also point to an important caveat in common performative perspectives to avoid overemphasizing relations, which can lead to claims that stakeholders are entirely shaped by the institutions, discursive practices and material apparatus of transdisciplinarity. The notion of ‘encounters’ is helpful in redirecting our attention to the potential for risk, novelty, and relevance to happen if we attend to the durable existence of stakeholders as part of, but also apart from, our collaborations with them.

In the next section, we explain our theoretical perspective, which distinguishes between the ‘realist’ and ‘performative’ perspectives on public engagement in science. Realist perspectives neglect the messy practices of collaborative science with stakeholders, who are necessarily situated within ecologies of relationships, histories and potential trajectories of the future. Instead of situating transdisciplinary science as a regulative ideal, we draw upon recent scholarship on the philosophy of social science that describes social science practices as “adventures in relevance” (Savransky, 2016a).

2. Theoretical perspective

Our theoretical perspective is informed by our previous STS-informed review of the literature on stakeholder engagement in environmental research (Klenk and Meehan, 2015; Klenk et al., 2015), but here we delve into Savransky’s (2016a) philosophy of social science practices, especially his pragmatic approach to understanding ‘relevance’ and ‘encounters’ in the social sciences. Below we interpret his

philosophy within the context of stakeholder engagement in science to shift attention away from taxonomical and formalization work in transdisciplinary scholarship towards understanding transdisciplinary practices in situated contexts. This move helps us articulate and illustrate the productive potential of tension in revealing meanings of relevance in transdisciplinary research. So much of transdisciplinary research practice and theory seeks to tame tension, we argue that these tensions remind us that stakeholders engaged in research are enduring subjects whom we must be responsive to. Attempts to banish tension within transdisciplinary research may obscure who is the stakeholder and what is at stake in these collaborations, not least of which the obligations that the parties involved have towards each other. We describe our perspective as performative in line with recent scholarship on collaborative research (Chilvers and Kearnes, 2016), however we also acknowledge Savransky’s critique of this performative perspective, which we explain below.

A growing body of research on transdisciplinarity has sought to articulate the logics that describe stakeholder engagement in science, with a goal of enlarging and enriching the kinds of knowledges and experiences (i.e., affective and aesthetic) that must be taken into account in knowledge co-production and how such knowledge contributes to world-making. We use the nomenclature of stakeholder-engagement rather than public-engagement in knowledge production, because of the former’s pragmatic connotation: stakeholders are individuals whose interests and/or concerns are the focus of knowledge co-production. They may be community members, policy-makers, politicians, etc. They are invited to co-produce knowledge in the hope that their involvement in every step of the research process will result in the production of knowledge that is relevant to their interests and/or concerns and will be used to inform their decision-making.

According to Barry and Born (2013), collaborative research involving stakeholders is guided by three logics: accountability (value for money in research funding and program evaluations), innovation (in relation to new problems or creating new social or economic opportunities), and ontology. The latter refers to the transformation of scientific practices to address new problems, objects, and relations of research. These logics are said to be performed through three modes of collaboration: “knowledge integration” in which different knowledge systems are treated equally; “subordination-service” in which knowledge systems are unequal and where this hierarchy can lead to social science to represent society while leaving natural science and its framing of problems unquestioned; and “antagonistic-agonistic” in which ontological and epistemological boundaries are revealed, contested and/or transcended. Stakeholder logics and modes of collaboration can be entangled. Of most interest to us is the ontological antagonistic/agonistic pairing, as it opens a space in which friction is not only revealed, but also welcomed because of its potential to unfold into novel material/discursive practices, collaborations, and knowledges.

Transdisciplinary research collaborations are always already constituted by individual and collective patterns of relevance. For our purposes, relevance refers to modes of mattering for one self and for others, to which scientific questions, theoretical frameworks, methodological, epistemological and ontological commitments, in other words, collaborative logics and modes of knowledge-making, become added. As Savransky (2016a: 50) points out:

The challenge of taking both relations and things seriously amounts to inhabiting a world composed both by heterogeneous relations and beings, relations capable of affecting the nature of beings and bringing new ones into existence, and being capable of affecting the modes of relating, of immanently generating obligations and stubbornly affirming the manners in which a situation matters to them.

From the Savransky pragmatic approach, relevance can be achieved only through inquiries into how, to what extent, and in what manner do heterogeneous assemblages of researchers and stakeholders come to matter to each other and with respect to specific situations. The point is

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