Transdisciplinary research approaches for sustainable development

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Social-scientific sustainability research is faced with epistemological and methodological challenges and recent trends towards greater disciplinary integration (Fahy & Rau, 2013). “The call for a more engaging and interdisciplinary sustainability science, which builds upon disciplinary excellence, will need to be a central part of a scientific paradigm that espouses new (and real) models of ecological modernization” (Franklin & Blyton, 2013, p. 298).

Strategies to promote more effective knowledge systems for sustainability require a sufficiently long-term learning from field experience (Cash et al., 2003). This coincides with trends in the mode of knowledge production in contemporary society: transformations occur from traditional knowledge (i.e. Mode 1) generated within a disciplinary context, new knowledge (i.e. Mode 2) is created in broader, transdisciplinary (TD) social and economic contexts (Nowotny, Scott, & Gibbons, 2003).

TD is grounded in a pluralist epistemology (Söderbaum, 2009) that asserts the role of multiple values and ideologies in knowledge creation: knowledge is created through multi-stakeholder debates serving as field validity of the research outcomes (Hessels & van Lente, 2008). Although TD is gaining interest among social sustainability researchers it is often seen as the transfer of knowledge and methods from one discipline to another: as is the goal of interdisciplinarity or pluridisciplinarity. As with any research approach, the application of TD should be done consciously and cautiously to avoid major biases. Firstly, the development of research questions that serve a specific purpose, e.g. competitiveness has ideological consequences (e.g. the choice for the sector or specific companies). Secondly, the role of the different research participants (i.e. academics, students and non-academics) has a direct influence on the independency of the research and critical orientation or interpretative analysis of the research outcomes. This is especially the case when non-academics contribute financially to the project. The objectivity of the researcher and the research results could be in jeopardy when also aiming for meaningful outcomes for practice, re-emphasising the ethical dilemma. Lastly, collaboration across disciplines and stakeholders is resource intensive resulting in TD research being costly. This may create friction, causes transaction costs and requires time (Schaltegger, Beckmann, & Hansen, 2013).

In this special issue, we will explore TD as a research approach for supporting research in the sustainability sciences: an analysis of existing applications in related fields of research will lead to in-depth understanding of philosophical and methodological boundaries when designing and applying TD research approaches. This special issue will emphasise the inherent dilemmas and consequences when doing transdisciplinary research, and relate these to the field of sustainability sciences.

Central questions relevant for this special issues are the following:

- What are typical methodological and philosophical tensions that occur during application of TD approaches?
- How does the role of researcher change in a TD setting compared to a classical research setting?
- How can methodological learnings and reflections from concluded empirical research projects be synthesized with the purpose of informing future TD projects?

We do no not seek traditional empirical research, e.g., case studies, but we welcome higher order reflections on such research projects when it comes to methodological challenges and tensions. Moreover, we encourage synthesized and systematic treatment of lessons learned when conducting TD research, which can contribute to philosophical and theoretical advancement of existing TD frameworks.

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