

In between – from transdisciplinary, transformative science to evidence-based policy making

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Uwe Schneidewind is the mayor of the city of Wuppertal; he was president of the Wuppertal Institute from 2010 to 2020 and member of the WBGU from 2013 to 2020. In both functions he was inspired by the close interaction with Dirk Messner.

In his studies of economics, business and sustainability at the University of Oldenburg, Hans Haake already had the chance to engage with the work of Dirk Messner, later seeing him at various conferences and using his ideas, especially while working at the Wuppertal Institute since 2015. Just before Dirk made his move out of academia, Hans Haake had a chance to work with him as a research analyst of the WBGU.

The need for new forms of knowledge

When dealing with the Great Transformation towards a sustainable world (WBGU 2011), one defining factor is the stark contradiction in the availability of knowledge: While there is almost unlimited knowledge on many technical and economic aspects of the sustainability transformation, while in some way all the tools are available and we, in theory, know exactly how to use them, there is a lack of action at all levels. If we assume that in principle a majority of decision-makers has understood the necessity to act, this ultimately points to a lack of knowledge on how major transformations can be triggered. To use a common distinction, we have solid knowledge of the systems at play, we know the targets society should be heading for, and these targets have been globally and politically agreed to, but our knowledge on transformations, while growing, is obviously lacking. While this is true for all forms of knowledge to some extent, especially transformation knowledge requires more than just disciplinary or interdisciplinary research because it depends on transdisciplinary approaches that integrate the knowledge of practitioners from politics, administration, civil society and business. The reasons why the advice of countless commissions, advisory bodies and international networks has not yet led to sufficient action on climate, biodiversity, inequality and resilience need to be explored, and they ultimately have to be overcome in new forms and constellations of

actors. Power relations are obviously at play, vested interests, inertia in various forms, but history has shown that these can be overcome. This contribution will focus on the role scientists can play at the science-policy interface (including both politics and public administration) by not only working closely with policy makers in advisory roles or initiating transdisciplinary processes of knowledge integration but also crossing the line into the policy world, taking along their expertise and networks back into science and potentially pursuing a different approach. The ever-growing complexity of the world and the pressing “great challenges” have created a necessity for science to expand its role beyond simply advising policy, now embracing transformative science (Schneidewind et al. 2016). But the lines between science and policy have always been much more blurred than is commonly admitted.

Changing faces – roles in science and beyond

Once it is accepted that the role of science is not simply to objectively, from some distance, provide knowledge to be applied (or not) by other parts of society, there are various roles for scientists to play. They have been researched and conceptualised especially within real-world laboratories and other transdisciplinary constructs (e.g. Hilger et al. 2018). Researchers may play a part in triggering some transformation processes, to then observe if they succeed. The potential blurring of the lines between activism and science has led research to intensely scrutinise the roles of researchers and their repeated shifts between the roles of impartial observers and change agents. Interestingly, some advisory bodies and public intellectuals are far less self-reflexive, insisting on a classical role as external advisers while clearly taking an active political role. The latter can be desirable in the sense of transformative science, but it is often not made explicit.

An interesting next step, leading to new forms of interaction and knowledge integration, is the actual formal move between science and policy by individuals with a background in transdisciplinary work. This is a route that has some tradition in sustainability science, including among others Ernst Ulrich von Weizsäcker and recently different members of the German Advisory Council on Global Change (WBGU), including Dirk Messner moving on to lead the German Environmental Agency, but also one of the authors becoming mayor of the city of Wuppertal. There is a possible distinction to be made between scientists who move to the

political sphere¹, taking their specific expertise with them, as was the case with Chancellor Angela Merkel's understanding of the reality of climate change, and scientists that still consider themselves to be at the science-policy nexus, just on the other side. This would require a continued interest in transformation research, continued participation in transdisciplinary work in the new role and maintaining credibility in the science community. Considering the demands, both in workload and in different norms and needs for compromise, these are difficult requirements. At the same time, intimately knowing the realities and limitations of both sides could do much to further knowledge integration.

The background in science should enable policy makers to much more clearly formulate their requirements and limitations, providing their partners in science with a clearer, more honest view of the political process. As a large proportion of policy making takes place outside the publicly visible debates, trust is an essential component for open cooperation in transdisciplinary projects of change. In applying transformation research to real-world issues, an intimate knowledge of the field should be extremely helpful, being able to put seemingly small changes on the ground into a larger context. While it is clear within transdisciplinary science that various roles for researchers are necessary, the same applies to various roles for policy makers in this context. While some might clearly focus on the (party-)political processes and stay within their established sphere, others need to be much closer to science, just as having established businesswomen and -men and civil society representatives in political roles is essential. Ideally, between politically inclined scientists and scientifically inclined politicians, a relatively seamless integration of knowledge can occur. While there have always been scientists that move to the political sphere and into the parliaments, the exchange described here can only function if they retain part of their identity in science and remain firmly connected to it. They also need to be represented at all levels of the political system, where most of the leading positions are currently filled by those clearly focusing on the political aspects. As calls for scientists to be better represented in legislatures and political parties are regularly made (Boyd 2019) and some scientists choose that path, this will provide an interesting opportunity for research into the level to which they remain scientists and are able to fulfil the requirements formulated above.

1 We disregard here the case of politicians who spend some time at universities for research to attain a doctoral degree and then return to their political career.

Cities as spaces for new forms of knowledge integration

If the better integration of knowledge between science and practice is one response to incomplete transformation knowledge, it requires spaces where it can be pushed forward. These are real-world laboratories in various forms, and while they can exist at any level, cities provide an excellent boundary object where science and practice can meet, centred on concrete issues but keeping in mind the larger transformation processes behind. In 2016, the WBGU called for 50 large-scale real-world urban laboratories to be established as cities take the lead in the global transformation. The New Leipzig Charter of 2020, signed by the European ministers responsible for urban development, underlines the transformative power of cities. At the same time, many cities don't have the luxury of high-level scientific advisory bodies. Considering available funding, they need to find different ways of strengthening the cooperation with science. One possibility is that scientists take on active roles in city politics. Another is opening the city as a space for experiments, with policy makers and administrators becoming more open to processes of co-design and co-creation, giving scientists and civil society the maximum possible space to try new forms of development. Opening this space makes cooperation interesting for scientists and can lead to broader insights into transformation processes. But it requires administrators to "let go" in some ways.

Not that far between: different tools, same mission

Ultimately, policy making for sustainability and transformative sustainability science share the same mission. They are working towards the "Great Transformation", only by different paths. The closer they become, both in working together and in individuals crossing the line and acting as translators while maintaining the ability to critically reflect their roles and normative assumptions, the better.

References

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