

## Call for Chapter

# Climate Change Adaptation in the Social Sciences – Ontologies, epistemologies, and interdisciplinary research

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Since the beginning of the Fridays for Future movement, climate change has become a topic of societal discourse, underpinned by growing and increasingly differentiated research that now spans several decades. While the first research efforts on the causes and effects of climate change originated primarily from the natural and technical sciences, recently social sciences and humanities have made important contributions as climate change adaptation and mitigation have become pressing issues of societal relevance. There has been an intense debate for the last ten years in social sciences on the effects of climate change and on adaptation options. This extends not only across disciplinary boundaries, but also includes diverse dimensions of social life, economic systems and governance on and between different spatial areas. In this discourse, concepts such as vulnerability, adaptive capacity, resilience and (climate) justice have been transferred from their respective discipline-specific origins and adapted for research into human-environment interactions in the context of climate change. The emerging heterogeneous debate about climate change adaptation is characterized by various developments in the social sciences:

### *(a) Practical relevance of adaptation research*

Many research projects linked to climate change adaptation are financed by public authorities with an explicit application focus in the project design. The main effort in such projects centers on the development of concrete solutions and best practices for selected regions or sectors (Marx 2018; Nagorny-Koring 2018). Social sciences often become the ‘translators’ of climate change for questions like these: ‘The scientific data say x; what does that mean for people?’ (Bulkeley 2019, 6). The social sciences in particular can contribute to solving adaptation problems at different levels of action (Grothmann et al. 2011). However, by focusing solely on the solution of practical problems, a corresponding theorization of the design and implementation of such research is either underrepresented or non-existent. A lack of theorization can be problematic in that important knowledge and experiences from the projects cannot be abstracted and, if necessary, transferred to other phenomena, including to other forms of crises or other social or geographic settings. At the same time, a lack of reflection with regard to central ontological and epistemological questions can lead to forms of social science research that are mere ‘accompaniments’, reduced in terms of design and implementation to supporting narrow forms of problem-solving with social science insights. Such research runs the risk of becoming instrumentalized by application-based approaches.

### *(b) The tension between objectivity and subjectivity*

Climate adaptation research requires social science researchers, on the one hand, to examine scientific findings (e.g. climate data), and, on the other hand, to analyze subjective realities and practices from a social science perspective. While the IPCC and leading climate researchers based in natural sciences have to defend the existence of climate change as evidenced by observation and model data, post-structuralist approaches in the social sciences reject an objective view of social realities. The assumption that reality is constituted by language and that it is subjectively and at most intersubjectively – but never objectively – communicable, raises challenges with regard to epistemology, political implications, and the role of social scientists. Despite early attempts to scientifically work on this area of tension (Passoth 2010), climate change adaptation remains a marginal topic in comparison to other human-environment relationships, such as post-structuralist, performative and *new materialism* approaches. At the same time, these approaches hold the potential to overcome the human-nature dualism (Bulkeley 2019) that is also evident in much climate change adaptation research.

(c) *Research limits in adaptation research*

Uncertainties and conscious or unconscious lack of knowledge are elementary parts of dealing with the consequences of climate change. This poses challenges for social research in this area or even highlights the limits of knowledge (Mehta et al. 2019). After more than ten years of social science research on climate change adaptation, it is necessary to determine key research opportunities for the social sciences, in addition to questions arising from structural uncertainties and knowledge gaps with regard to the manifestations of climate change. Not least due to dynamic activity in the area of (urban) planning and implementing climate change adaptation, it is timely to explore future socio-theoretical research in this field and its relevance. While climate change adaptation has become an integral research focus in disciplines such as urban and spatial planning, such questions referring to emergent research agendas are rarely found in other disciplines and sub-disciplines, such as economic geography (Bulkeley 2019, 10).

(d) *Contributions of climate change adaptation research to social scientific theory building*

Due to a dominant focus on application, potential and actual contributions of climate change adaptation research to social science theory development remain partially unclear. Various disciplines, such as human geography, sociology, psychology, political science, law and economics deal with questions of climate change adaptation. So far, there has been a lack of systematic exploration and consolidation of the potential that climate adaptation research holds for social science theory development in different disciplines and also in interdisciplinary contexts, e.g. with regard to interdisciplinary concepts such as resilience. The integration of social sciences and humanities perspectives, such as in the interdisciplinary field of *environmental humanities*, has so far only rarely been brought to bear on climate change adaptation. In other words: our understanding is limited when it comes to knowing which social sciences and humanities theories and concepts have been or can be fertilized by climate change adaptation research. In the German-speaking context, this also applies to theories and concepts that are emerging in international academic discourses.

Regarding these developments, the editors of the planned edited volume would like to stimulate and further the discussion on the basis of the following questions:

1. What potentials does climate change adaptation research offer for social science theory building in different disciplines?
2. To what extent do interdisciplinary connections exist in climate change adaptation research with regard to social science theory development?
3. What role do questions of justice and perspectives that deal with issues of power and hegemony play in social climate adaptation research?
4. What contributions can critical social science research on climate change adaptation make, and which theoretical approaches are particularly suitable for these?
5. Which ontological and epistemological aspects of social science research on climate change adaptation are unique to the object(s) of study and therefore require special theoretical or methodological approaches? To what extent have social phenomena such as climate change been less researched in the course of post-structuralist approaches and the associated turning away from positivist views of society?
6. To what extent can the outcomes of social scientific climate change adaptation research be transferred to other phenomena (e.g. other crises, other objects of study)?
7. Which international discourses and concepts have the potential to be adopted more effectively in the German-speaking social scientific research on climate change adaptation?

The aim of the edited volume is to discuss these or comparable questions theoretically, complemented with views grounded in empirical research. The publication will thus contribute to deepening theorization and reflection of social science climate change adaptation research. Interested researchers who would like to contribute to one or more of these questions are asked to submit an abstract (500 - 1,000 words) as well as a short CV. Both documents can be submitted by April 30th, 2021 to Anika Zorn ([anika.zorn@uni-jena.de](mailto:anika.zorn@uni-jena.de)) and Dennis Fila ([dennis.fila@geographie.uni-freiburg.de](mailto:dennis.fila@geographie.uni-freiburg.de)). Anika Zorn and Dennis Fila will be happy to answer any open questions you may have.

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