

Call for Papers

## **Explanation and Causality in the Social Sciences**

Special issue of *Kölner Zeitschrift für Soziologie und Sozialpsychologie*

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### **Outline**

The special issue explores and advances foundations and methodological challenges related to explanation and causality in sociology, and in the social sciences in general. Thus, it addresses an enduring topic in the social sciences that benefits from being revisited and updated from time to time in the light of new discussions, developments, and challenges in social science theories, methods, and data. Such an update of established approaches and more recent debates is the concern of the volume.

First, contributions will deal with the multitude of explanatory approaches in the social sciences. The Hempel-Oppenheim scheme conceptualized explanations by focusing on deduction of explananda from general laws and antecedent conditions. While this “received view” was dominant in the post-war decades, it is less often referred to in research practice today. Instead, we find different conceptions and practices of explanation. They range from general laws at the macro or micro level, the use of middle-range theories, social mechanisms, structural models, and conceptions of a situational logic up to necessary and sufficient conditions, process tracing as well as the notion of “Verstehen.” This diversity is due, on the one hand, to different methodological premises and, on the other, to the variety of objects of investigation in the social sciences. The chapters will include explanations on the macro and micro level of the social, in quantitative and qualitative research, and in different (sub-) disciplines. For example, we would like to examine approaches in historical social research and history, in comparative social research as well as commonalities and differences with other social sciences such as political science, economics, and psychology.

Second, explanations are often conceived as causal explanations. It is therefore straightforward to also delve into issues related to approaches toward causality in the social sciences. Contributions to causality and causal inference in the social sciences, therefore, are likewise welcome. The volume will address the question whether prominent conceptions, such as the potential outcomes framework or the notion of counterfactuals more generally, might serve as unifying concepts of causality. At the same time, chapters might critically examine if pleas for a unified conception of causality are misconceived, especially from an interdisciplinary perspective. The volume will also shed light on the actual practice of causal reasoning in the social sciences: What kinds of concepts are invoked, and are they predominantly related to empirical statements or to theoretical arguments? Moreover, based on the idea of causal structural models, directed acyclic graphs (DAGs) have proven to be useful tools in applied research, but there are open questions on the useful construction of DAGs in various circumstances.

Third, we seek contributions that focus on new opportunities and challenges for causal explanation. Such chapters will offer perspectives on emerging topics and approaches in the relevant field. The aim of developing theories with causal explanatory power is affected by the availability of large digital data sets (“big data”) and the emergence of computational methods of data analysis. Algorithms identify social regularities inductively and are often used to predict rather

than explain social phenomena. Are explanations in the social sciences therefore losing out to statistical descriptions and predictions? What relevance do principles of inductive and abductive reasoning have compared to the principle of deduction that underlies many classical explanatory models? Respective contributions will tackle these questions and address the opportunities that “big data” and computational methods provide for causal explanation. Moreover, they may explore the utilization of agent-based models, Bayesian causal inference, the role of meta-analysis in synthesizing findings, and the significance of replication in strengthening causal claims.

The special issue aims to foster interdisciplinary collaboration, promotes theoretical advancements, and addresses crucial methodological challenges in social science research. The inclusion of contributions to foundations alongside specific applications will allow for a broad examination of explanation and causality in the field of sociology and other social sciences.

### **Suggestions for chapters**

The following is a sample of questions that the editors would like to see addressed in the volume. This list is of course not exhaustive. Other contributions that fit the theme of the special issue are likewise welcome.

#### **Explanation in the social sciences**

- What are the most important varieties of explanations in the social sciences today? What are their strengths and weaknesses? Which theoretical tools should explanations use: variables, mechanisms, structural models, situational logic, middle range theories?
- The “model of sociological explanation”: How is it used in research practice and how should it be used?
- What are middle range theories and which ones have proven themselves empirically?
- What is the right degree of abstraction and realism in sociological explanations?
- How well does the methodology of necessary and sufficient conditions in comparative research? How can the methodology of process tracing and narrative explanation be substantiated?
- How do explanations look like in history and historical sociology? Why do theories of social change have such a hard time in sociology?
- Do explanation and understanding require different methodologies and how can they be integrated?
- How can culture and meaning be accounted for in sociological explanations? What can new theoretical approaches and methods on the intersection of the social and life sciences contribute in this respect?
- How important are evolutionary explanations for the social sciences?

#### **Causality and causal inference in the social sciences**

- Does the conception of causality vary between scientific disciplines? What are the most important varieties of causal thinking in the social sciences today? What are their strengths and weaknesses? Can counterfactual causality serve as a unifying concept in causal analysis?
- What is the relationship between theoretical causal laws and causal inference?

- Are explanations in the social sciences always causal?
- Are functional explanations compatible with causal analysis?
- How are causal arguments employed in (quantitative and qualitative) research in sociology? The perspective of empirical sociology of science
- How can we conceptualize and incorporate causal attributes such as gender or race—considered “non-manipulable” from an experimentalist perspective—into causal explanations?
- How can treatment effect heterogeneity be theoretically justified, conceptualized and analytically implemented?
- Should DAGs be implemented as a standard tool in causal research – and how might this look like?
- Which challenges does the estimands approach face in applied research and how can they be overcome?

### **New opportunities and challenges for causal explanation**

- How can agent-based models (ABM) be empirically calibrated and tested? Is there a special role of digital process data in the calibration of ABM? Under what conditions can causal inferences about real world phenomena be drawn from ABM results?
- What possibilities does replicative and meta-analytical research open up for obtaining reliable explanations?
- Is prediction replacing explanation in the age of big data and algorithms? What is the relationship between prediction and explanation from an epistemological perspective? Is a good explanatory model also a good prediction model and vice versa? What is the role of theory in prediction modeling, in particular for out-of-sample predictions? Is theory ignorable for prediction with big data?
- What is the potential of causal machine learning for causal inference in sociology? What are the data requirements regarding size and structure? How can social mechanisms be captured by machine learning models?
- How can research designs be established for big/digital data to enhance the validity of causal inferences?
- How can Bayesian modeling be best combined with theory-guided research? How can prior distributions be derived theoretically?
- How can we utilize big social media data, the respective meta data and machine learning-based text models (e.g., topic modeling, natural language processing) to investigate causal social processes?

## Organization and contributions

The *Kölner Zeitschrift für Soziologie und Sozialpsychologie* (Cologne Journal of Sociology and Social Psychology) was founded in 1948. It is a flagship general sociology journal in the German-speaking world. In fact, it is often considered as the leading journal in terms of scope and distribution (see for more information: <https://link.springer.com/journal/11577>). The journal is included in many Abstracting & Indexing databases such as the Social Science Citation Index and SCOPUS. We plan a **fully English-language volume** to reach a wide audience. The special issue will be **open access** within the framework of the institutions participating in the DEAL agreement (<https://www.springernature.com/gp/open-research/oa-agreements>).

The special issue “Explanation and Causality in the Social Sciences” is an initiative of the working group “Methodology of the Social Sciences”, established by the Akademie für Soziologie (Academy of Sociology-AS) in 2023 to help exploring methodological foundations of theory building and empirical research in the social sciences. Contributors to the special issue are by no means limited to members of the Academy of Sociology. Moreover, the call for papers aims to address national and international researchers from a **wide range of scientific disciplines**, including, among others, sociology, philosophy of science, history, anthropology, psychology, political science, economics, and computer science.

We envisage a volume with 17-20 chapters. We will employ an internal peer review procedure. Each contributor will be requested to review two other chapters. In spring 2025, a contributors’ workshop will be organized in which draft versions of all chapters will be discussed in detail. As many of the chapters will be closely related to each other, we expect the workshop to bring great added value for all authors. The reviews and discussions at the workshop will be incorporated into revision notes for each chapter that will be provided by the editors following the workshop. The revised chapters will again be reviewed by the editors in fall 2025. The final chapters are due in winter 2025/26.

The editors will only consider submissions written in acceptable English. It will be the responsibility of the authors to ensure good linguistic quality. For authors whose native language is not English, it might be advisable to have the text reviewed by a native speaker or to seek the assistance of a professional language editing service prior to submission.

## Timetable

- **Call for papers:** Please send a proposal for your contribution that is as specific as possible and two to three pages in length by **May 31, 2024** to [as-methodologie@uni-mainz.de](mailto:as-methodologie@uni-mainz.de).
- June/July 2024: Decision on proposals by the guest editors
- End of February 2025: First written draft versions of the papers due
- Spring 2025: Contributors’ workshop
- Fall 2025: Revised versions due
- Winter 2025/26: Final versions due
- Spring/Summer 2026: Publication