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Navigating the two worlds of academic and public communication: the case of sociologists in Germany during the COVID-19 pandemic

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This article examines how German-speaking sociologists communicated their knowledge in the context of the COVID-19 pandemic. Considering the pandemic as a textbook case of post-normal science, where uncertainty and urgency challenge science and its communication in an unprecedented way, it focuses on the relationship between sociologists' contributions across public and academic spheres. Methodologically, the study employs an exploratory design based on two comprehensive datasets containing 1083 media contributions (2020–2021) and 1505 research contributions (2020–2023). Conceptually, the research distinguishes between public communication—through interviews, guest articles, citations, and mentions in the press—and academic communication—via journal articles, edited volumes, and monographs. The findings suggest that these forms of communication constitute two largely distinct and only loosely connected spheres. While their temporal misalignment is not unexpected, the investigation sheds light on socio-structural differences in the populations of both worlds. Moreover, statistical analysis confirms a strong negative correlation between the extent of media engagement and scholarly publishing. Sociologists visible in the public sphere during the first two years of the pandemic mostly have not published academically on COVID-19 related issues between 2020 and 2023. Conversely, sociologists with certified research publications within this time frame usually did not comment publicly on the pandemic at the outset. These findings challenge the linear model of science communication, which assumes that public dissemination naturally builds upon former research contributions. As the context of COVID-19 represents a lack of such established academic knowledge, post-normal conditions may loosen traditional norms linking public communication and research experience. As the results raise certain questions regarding the division of sociological labor and its relation to sociological expertise, the study highlights the need for more nuanced understandings of sociological expertise in view of the interplay between sociologists' contributions to the public and the academic sphere.

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Introduction: the COVID-19 pandemic as an unprecedented challenge for science communication

The COVID-19 pandemic that emerged in early 2020 was an unprecedented situation—particularly if seen not only as a new disease spreading around the globe, but as a genuinely social phenomenon, an event that impacted “the way we live” (Christakis 2020) and the key institutions of modern society (Rosa 2020; Stichweh 2020). Facing the immediate threat of an unknown infectious disease, societies, institutions, and individuals were confronted with an extreme level of uncertainty (Harambam 2020; Berger et al. 2021; Evans 2022; Kraemer 2022). In an interview in April 2020, Jürgen Habermas summarized that back then there was no expert who could have assessed the social and economic consequences of what was happening. Following Habermas, the only thing one could have said with certainty was that there “has never been so much knowledge about our unknowingness” (Habermas, cited in Schwering 2020). That notwithstanding, political decisions had to be taken, and there was a high level of public interest in the course of the pandemic. In this situation, both politics and the media rightfully referred to multiple sources of academic expertise in order to get the best knowledge available (Weingart et al. 2022).

However, the availability of experts varied strongly depending on the field of disciplinary knowledge. Furthermore, given the complex nature of the problem, it was not easy to determine who the relevant experts were and what kind of expertise was helpful in terms of public communication. In most countries, the highly visible scientists in the early phase of the pandemic had a background in health sciences or natural sciences (Ioannidis et al. 2021; Lohse and Canali 2021; Ziegler et al. 2021; Leidecker-Sandmann et al. 2022; Joubert et al. 2023; Rödder et al. 2025). In Germany, for example, the most prominent scientist and science communicator in the pandemic was a virologist who had already played a crucial role in the discovery of the coronavirus that caused the first SARS pandemic in 2002/2003.¹ It is evident that such reputable medical scientists could be very helpful in explaining the new virus and the medical aspects of the new disease to a broader public. At the same time, they could not serve as experts on the political, economic, social, and psychological dimensions of the emerging pandemic. And it was precisely these aspects that represented uncharted territory—as Habermas correctly indicated. Societies had seen many viruses and pandemics before (Thieß 2021), but it was the first time in human history that most nations implemented relatively similar policy measures—“nonpharmaceutical interventions” such as “lockdowns”—in a largely synchronized manner (Caduff 2020; Sebhatu et al. 2020). In this situation, social scientists practically had to start from scratch when they were asked to make sense of what was happening and assess the social impact of both the pandemic itself and the pandemic policies. Conceptually and methodologically, however, the social sciences were well equipped to take on this challenge (Lessenich 2020; Ward 2020; Lohse and Canali 2021; Deflem 2022; Kaldewey 2022).

Against this background, this article focuses on sociological expertise as one of the disciplinary fields that have been neglected in science communication research, particularly in the COVID-19 context (Lohse and Canali 2021; Knobloch 2023). More specifically, the paper examines how German-speaking sociologists have communicated knowledge related to the COVID-19 pandemic. We have chosen the case of sociology for three reasons. First, sociology can be considered an archetypal social science and its relevance with regard to public issues such as the COVID-19 pandemic is beyond doubt. Understanding the role of sociology in a global crisis situation therefore contributes to an emerging strand of science communication research that moves beyond the traditional public understanding of ‘science’ (mostly identified

with ‘natural science’) and includes the public communication of the social sciences and humanities (Cassidy 2014; Scheu and Volpers 2017; Lewis et al. 2023; Korte 2024). Second, in the German context the case of sociology is particularly instructive because sociologists have been quite successful in gaining public visibility—as exemplified by the headline of a German magazine article in October 2020: “The return of the taxi drivers—why are sociologists sitting everywhere today explaining the world?” (Becker 2020). Finally, seen from the discipline of sociology itself, the case of sociologists communicating in the pandemic crisis represents an opportunity to revisit debates on public sociology and the “division of sociological labor” (Burawoy 2005; 2021).

This study adopts an exploratory research design. It began with the collection of data on sociologists’ public communication in the first two years of the pandemic (2020–2021), and was later supplemented by a documentation of thematically relevant academic publications by sociologists based in Germany over a four-year period (2020–2023). The analysis of these two corpora revealed that there is only a weak overlap between them. In other words, sociological communication about the COVID-19 pandemic appears to occur in two largely separate worlds: On the one hand, a public sphere, populated by a few highly visible sociologists as well as numerous others with occasional media appearances; and on the other hand, an academic sphere, populated mainly by less publicly prominent sociologists doing “normal science” and publishing their research contributions in academic journals and edited volumes. This divide, we argue, opens an opportunity to investigate how different modes of communication relate to the character and perception of sociological expertise. Our research is guided by the following three questions:

RQ1: In what venues and forms have sociologists communicated their knowledge about the COVID-19 pandemic—externally (via media contributions) and internally (through academic publications)?

RQ2: Who are the sociologists engaging in public and academic communication about the pandemic, and do their social-structural characteristics differ across these two spheres?

RQ3: To what extent do sociologists’ public communication activities correlate with their contributions to academic publications?

The following section reviews the literature and elaborates on the background and motivation of our research. We particularly refer to the assumption that the COVID-19 pandemic is a textbook case of post-normal science and highlight a dual communication challenge that arises in this context. Building on this literature review, we develop our conceptual framework, proposing a distinction between two modes of sociological science communication and examining how these relate to the public sociology debate. In the next step, we outline our data collection and methods, followed by the main part, which presents the results of our analysis and addresses the three research questions. Finally, in the discussion section, we interpret our findings in light of the question of whether a division of labor exists between internal and external science communication—and what this implies for different forms of sociological expertise.

State of the literature: post-normal science communication, trust and expertise

The COVID-19 pandemic has often and correctly been described as a textbook case for the “post-normal science” concept (Funtowicz and Ravetz 1993; Rainey et al. 2021; Saltelli 2024). In essence, this concept assumes that “normal science” is not adequate in situations

“where facts are uncertain, values conflicting, stakes high, and decisions urgent” (Saltelli 2024, 945). It has further been noted that post-normal situations pose particular challenges for science communication (Brüggenmann et al. 2020; Berger and Kaldeyew 2024): How can uncertain knowledge, and how can the actual lack of knowledge be communicated? This challenge affects both internal and external science communication.

At the outset of the COVID-19 pandemic, a first challenge was that the traditional academic publication system was perceived as inadequately slow and inflexible (Miller and Tsai 2020; Sloane and Zimmerman 2021). In particular, time-consuming peer review procedures of academic journals contrasted the urgency of the situation (Horbach 2020; Fraser et al. 2021). Although a prioritization of research on COVID-19 reduced the duration of such processes, many researchers shared their findings as pre-prints without a peer review certification to maintain fast dissemination of knowledge (Gianola et al. 2020; Horbach 2020; Fraser et al. 2021; Berger and Kaldeyew 2024). Despite the acceleration of research related to the pandemic, however, academic journals were lacking original research publications at the beginning of the outbreak. As a compensation, they published a high number of commentaries, short reports or letters to the editor (Gianola et al. 2020). This dilemma is particularly acute in the social sciences and humanities, where the peer review and publication process takes even more time than in medicine, public health, and the natural sciences (Huisman and Smits 2017). As a result, many relevant contributions from the social sciences on the pandemic did not appear until 2022 or 2023, at a time when many observers considered the pandemic to be over (see below, Fig. 2 for more details).

A second challenge arises in connection with the sphere of external science communication, i.e., communication with various audiences, including policy-makers, journalists, and the general public. During the early pandemic, there was an obvious gap between supply and demand: on the supply side, academic knowledge and experience were lacking—not only with respect to the new disease and its epidemiological aspects, but also regarding the psychological, social, and political dimensions of measures to tackle the pandemic. While knowledge about the virus itself was generated very rapidly and became available already in early 2020, knowledge about the social aspects remained far more difficult to assess, not least because many side-effects of pandemic policies could only be studied in hindsight. At the same time, for both kinds of expertise there was an extremely high demand, driven by policymakers, the media, and the public (Holmdahl and Buckee 2020; Berger et al. 2021; Weingart et al. 2022). This situation calls into question the long-standing, albeit much-criticized, linear model of science communication: According to this idealized model, the dissemination of reliable scientific knowledge is preceded by actual research work and its formal academic peer review and publication (Garvey 1979). Criticizing this model, many scholars have argued that science communication should not be conceived as a one-way knowledge transfer. The debate has thus been shifting towards more dialogic and inclusive understandings of science communication (Schäfer 2009; Schmid-Petri and Bürger 2019; Bauer and Falade 2021; Lewenstein 2022). However, one assumption of the old linear model has largely escaped critique: namely, that scientists should possess actual research experience—or “contributory expertise”, not only “interactional expertise”, to use Collins and Evans’ (2007) terminology.² This aspect is documented, for example, in recent science communication guidelines published in Germany, which recommend that researchers limit their public communication to original research contributed by themselves (Priese-mann et al. 2024; Wissenschaft im Dialog and Bundesverband Hochschulkommunikation 2025).

In line with this recommendation, various studies have examined the relationship between scientists’ public communication and their actual expertise—typically qualified as “scientific expertise.” However, alternative notions such as “academic,” “disciplinary,” “subject-matter,” or “domain-specific” expertise are widely used as well and align with a number of partly conflicting definitions of “expertise” from various disciplines. Eyal and Medvetz consider this vast heterogeneity “an enduring feature of the phenomenon of expertise itself” and expertise as essentially contested concept (Eyal and Medvetz 2023, 4). Generally, earlier studies suggest a rather weak correlation between scientists’ expertise and their public communication activities (Goodell 1977; Shepherd 1981; Boyce 2006). However, in the context of the COVID-19 pandemic, the empirical evidence is mixed: Leidecker-Sandmann et al. (2022) show that—compared to previous pandemics—journalists tended to feature academics with a higher level of scientific expertise. They also emphasize a considerable diversity of expert voices. In contrast, other studies point to the dominance of a few highly visible “media experts” in the news coverage (Ioannidis et al. 2021; Joubert et al. 2023; Neresini et al. 2023). With regard to the relationship between media visibility and academic performance, Joubert et al. (2023) as well as Neresini et al. (2023) conclude that highly visible scientists during COVID-19 can indeed be considered as experts within their respective fields. Ioannidis et al. (2021, 1) arrive at the opposite conclusion and diagnose a “worrisome disconnect between COVID-19 claimed media expertise and scholarship”.

The recommendation that researchers limit their public communication to topics within their own subject domain aligns with the broader idea that public commentary and, last but not least, scientific advice should be delivered by experts from the relevant academic fields. This expectation reflects the central role of scientific expertise when it comes to trust in science and in academic actors more generally (Hendriks et al. 2015). Regarding the German context, panel surveys show that public trust in science increased from around 50% in the years 2017–2019 to 74% in April 2020. Although this number fell back to 55–60% in the following years, the level of trust in science remained higher than before the pandemic (Wissenschaft im Dialog 2024). Accordingly, almost three of four participants perceived COVID-19 related claims made by scientists as trustworthy (Wissenschaft im Dialog 2021). Scientists’ expertise in their respective field is the most frequently cited reason for trust in science with over two-thirds of the respondents mentioning it (Wissenschaft im Dialog 2024). The observation that scientists’ competence plays a central role when it comes to judgments of their trustworthiness is also confirmed by Seyd et al. (2025). While Weingart et al. (2022) argue that references to scientific experts increase the legitimacy of political decisions (rather than fostering trust in politicians themselves), previous research also suggests positive effects regarding the credibility of respective journalistic publications (Winter and Krämer 2014; Thiebach et al. 2015).

To summarize, science communication research as well as practical science communication guidelines mostly assume that there is—and should be!—a systematic connection between the actual subject-specific expertise of scientists and their public legitimization, credibility, and trustworthiness with regard to the respective issues. However, in real world crisis situations it often is not immediately clear how specific the expertise of a scientist must be in order to make him a legitimate public communicator on a given issue. For example, while it is evidently not convincing if an astrophysicist comments on the effectiveness of vaccines, it is not equally evident that a virologist specialized in HIV can or cannot contribute to our understanding of SARS-CoV-2. With regard to the social sciences, and more specifically, with regard to sociology, there is obviously some leeway as to which aspects of a

Table 1 The division of sociological labor (adapted from Burawoy 2021, 36).

		KNOWLEDGE FOR WHOM?	
		Academic audience	Extra-academic audience
KNOWLEDGE FOR WHAT?	Instrumental Knowledge	Professional Sociology	Policy Sociology
	Reflexive Knowledge	Critical Sociology	Public Sociology

pandemic are within the scope of the discipline. Time and again, reality turns out more complicated than assumed by the linear model. Against this background, we suggest a more open and explorative approach to understand the dual communication challenge in a post-normal science situation. In the next section, we develop a conceptual framework that distinguishes two modes of communicating sociological knowledge without presupposing a linear relationship between them. To put it simply: On the one hand, there is academic communication via the traditional academic publication system, on the other hand there is public communication via various media platforms. While the linear model of science communication presupposes that the first type of communication is the foundation for the second, we assume that the relation between these two modes is not settled and has not been systematically investigated in science communication research. The main goal of our study is therefore to explore the two modes and to empirically determine if and to what degree they are interconnected. In the discussion part, we will reflect whether these two forms may be understood as two dimensions of sociological expertise.

Conceptual framework: communicating sociologists

At first glance, sociologists' appearances in media coverage on the pandemic may be interpreted through one of three established conceptual lenses: as instances of "visible scientists" (Olesk 2021; Joubert et al. 2023; Rödder et al. 2025), as "scientific experts" communicating with the public about their specific field of knowledge (Ioannidis et al. 2021; Leidecker-Sandmann et al. 2022; Seyd et al. 2025), or—given the disciplinary context—as cases of "public sociology" (Burawoy 2005). However, we refrain from adopting any of these frameworks, as each carries specific implications and conceptual boundaries that would limit the openness of our exploratory approach.

The *visible scientist*, according to the seminal work of Rae Goodell, is publicly acknowledged "not for discoveries, for popularizing, or for leading the scientific community, but for activities in the tumultuous world of politics and controversy" (Goodell 1977, 4). Although visible scientists rely on a credible reputation, they are primarily characterized by being controversial, articulate, and colorful (Goodell 1977). Their visibility therefore results from media related rationalities. Furthermore, this characterization of visible scientists implies an exceptional level of public visibility that goes beyond appearing in the media just once or occasionally from time to time (Goodell 1977; Olesk 2021; Joubert et al. 2023; Rödder et al. 2025). Since our study includes a broad range of sociologists, including those who only sporadically appear in the media, using the concept of "visible scientists" would impose an inappropriate benchmark for case selection.

In contrast, *scientific experts* are typically conceptualized in terms of the function they perform in the media: According to Peters (2021; 1994), a scientific expert provides subject-specific knowledge to a client in a problem-solving context. Consequently, a scientist who appears in the media is not necessarily acting in the role of an expert—they may simply present their research unrelated to particular problems, comment in general terms, or communicate non-specialist disciplinary textbook knowledge. For

example, if sociologists are simply invited to offer a broad "sociological perspective" on issues such as the COVID-19 pandemic, this raises questions about whether they can be considered experts in such settings. Conversely, a scientific expert cannot automatically be classified as a visible scientist—although they may become so, such as the virologist mentioned in the introduction, who came to dominate public communication about the pandemic in Germany.

The relationship between the concept of *public sociology* and the aforementioned categories remains somewhat ambiguous, not least because these terms are rarely discussed in relation to one another (Neun 2017). While Burawoy does relate his notion of public sociology to the expertise delivered by professional sociological research, it remains unclear whether sociologists who engage with the public necessarily do so in the role of experts (Burawoy 2005; 2021). An alternative and less ambiguous conceptualization is suggested by Gans, who understands the public sociologist as a specific form of the public intellectual: "Public intellectuals comment on whatever issues show up on the public agenda; public sociologists do so only on issues to which they can apply their sociological insights and findings" (Gans 2002, 8). While that obviously includes one aspect of Peters' characterization of an expert in problem-solving contexts, the public sociologist does not appear to be limited to this expert role as they might communicate more general sociological perspectives. Compared to the concept of the visible scientist, Gans' understanding of the public sociologist is less demanding as he suggests that sociologists teaching undergraduate students can be regarded as public sociologists, as students can be seen as future members of the general public (Gans 2002).

The missing link between the idea of public sociology and the two other conceptual frameworks might be explained by Burawoy's emphasis on *organic* public sociology and the corresponding neglect of *traditional* public sociology (Burawoy 2005, 7). Organic public sociology maintains "an intimate, organic connection between sociologists and their constituency" (Burawoy 2021, 6) beyond passive mainstream publics as reached by large dissemination media (Burawoy 2005; 2021). This focus on dialog and engagement raises doubts as to whether the term "public sociologist" is useful as an a priori category, since it implies that sociologists who appear in the media primarily adopt a dialogical stance towards the public. A further difficulty, in the context of our research, arises from Burawoy's distinction between "public sociology" and "policy sociology" as two forms of sociological labor grounded in different types of knowledge (Table 1). While this distinction makes sense analytically, it does not do justice to the fact that in situations of post-normal science communication the "public" and the "policy-makers" often are intentionally or unintentionally addressed at the same time: For example, a scientist may formally address the public in a television interview while implicitly speaking to policy-makers—or vice versa (Schrögel and Humm 2019; Cassidy 2021). Burawoy's concept therefore is only of limited value to our exploratory investigation, which is not designed to analyze either the specific style of sociologists' communication or the type of knowledge they employ, as both aims would require an in-depth qualitative analysis.

Given that none of the three frameworks provides a satisfactory fit, we use the conceptually less demanding and empirically more inclusive term *communicating sociologist* for all sociologists who appear in the media, either actively (e.g., writing guest articles or acting as interview partners) or passively (e.g., being cited or referred to by journalists).

In another respect, however, our conceptual framework is very close to Burawoy's reflection of the "division of sociological labor" (Burawoy 2005, 9; Table 1, cf. Burawoy 2021). Our differentiation between a world of *academic communication* (via the traditional channels of the academic publication system) and a world of *public communication* (via various media platforms) resonates with the distinction of an academic and an extra-academic audience. However, while the division and categorization of sociological labor are obviously relevant aspects of Burawoy's work, they are not empirically examined. Rather, Burawoy takes a normative stand and invites professional sociologists, in particular, to also engage in public sociology, underlining that "professional sociology depends for its vitality upon the continual challenge of public issues through the vehicle of public sociology" (Burawoy 2005, 15). He also emphasizes that "[p]rofessional sociology is not the enemy of policy and public sociology but the *sine qua non* of their existence—providing both legitimacy and expertise for policy and public sociology" (Burawoy 2005, 10). However, his argument does not extend beyond the anecdotal whenever it comes to the question of how sociologists actually combine the different modes of research and communication. Burawoy does not, in other words, indicate whether the same sociologist would ideally conduct both "professional", "critical", "policy", and "public" work—and how these activities relate to each other in the everyday life and identity work of an empirical individual.

Data and methods

In order to analyze the relation between the public and the academic mode of communication of German-speaking sociologists in the COVID-19 context, we use two different types of data: *media contributions* and *research contributions*. Because we are particularly interested in those sociologists who communicate in both spheres, we have based our study on a comprehensive body of publicly available data sources. Using detailed search queries, we created one corpus that includes sociological contributions to public communication in a two-year period (2020–2021), and another corpus that includes the thematically relevant academic publications by sociologists in a four-year period (2020–2023).

For the first corpus, media contributions related to the pandemic showing an explicit reference to a German-speaking sociologist, e.g. in the form of guest authors, interview partners, or cited or mentioned as experts, were manually retrieved from German press reviews, newspaper archives, and radio transcripts. The selection of media sources was based on the objective to ensure a comprehensive representation of German media outlets with diverse political orientations and a substantial national reach. To start, we included all articles and radio contributions listed in the German Sociological Association's (DGS) pandemic-related press review (383 items). The corpus was then supplemented by an extensive search for news articles from the full text archives of three German daily newspapers: *Die Tageszeitung* (194 items), *Die Welt* (125 items), and *Frankfurter Allgemeine Zeitung* (106 items). Finally, we searched transcripts of radio contributions from the German public radio channel Deutschlandfunk (275 items). There were overlaps between the DGS corpus and the other news sources, which were removed manually. We also manually removed mentions of canonical sociologists like Bourdieu, Luhmann or Foucault who had passed away

before 2020. All media contributions were manually classified into 'active' (interviews and guest contributions) and 'passive' (quotations and mentions) forms of communication. The final dataset encompasses 1083 media contributions by German-speaking sociologists between February 2020 and December 2021.

For the second corpus, we used various academic publication databases. In a first step, Web of Science (core collection) was searched for articles related to the pandemic and published between January 2020 and December 2023, authored by one or more sociologists with a German affiliation.³ However, bibliometric databases such as Web of Science are characterized by an underrepresentation of non-English contributions and publications other than journal articles, especially from the social sciences (Mongeon and Paul-Hus 2016; Vera-Baceta et al. 2019). Since in relevant parts of the German sociological field it is still common to publish in German and in the form of books and contributions to edited volumes (Schmidt-Wellenburg and Schmitz 2023), we incorporated anthologies and monographs as well as contributions to edited volumes into the dataset. We retrieved them from the databases of the most relevant German publishing companies, such as Beltz Juventa, Campus, Springer VS, and Transcript. Additional sources included publications from the journal SOZIOLOGIE (not listed in web of science/SSCI) and conference reports from the German Sociological Association (DGS), as these are key venues for the academic sociological communication in Germany. Subsequently, the individual contributions to publications in the form of authorships were extracted from the research publications and transferred to a dedicated data format. Thus, our units of analysis are not publications, but individual authorship contributions. For example, an article with three co-authors would be integrated into our corpus in the form of three individual sociologists, each contributing to the sphere of academic publishing.⁴ The final dataset contains 1505 research contributions from 1224 authors retrieved from 669 publications.

Data collection was conducted between March 2023 and May 2024. In order to ensure the validity of the data, a thorough review process was implemented. Data quality checks include manual review of all abstracts and content descriptions to confirm thematic alignment with the COVID-19 context, a manual deduplication procedure to eliminate duplicates, and a manual disambiguation procedure to assign unique person-Ids which we used to integrate both datasets. The final dataset contains information on the types of media and research contributions as well as the number of research and media contributions of the communicating sociologists. Finally, the dataset was enriched with socio-structural context information of all authors: gender, academic degrees, and professional positions were manually collected and integrated into the existing dataset.

To address RQ1 and RQ2, we will first examine the location and form of sociological communication on the topic of the COVID-19 pandemic by analyzing media and research contributions with respect to their type and temporal distribution. Subsequently, the analysis turns to the sociologists responsible for these contributions, focusing on their socio-structural characteristics, including academic degree and gender. We then continue by addressing RQ3 by testing the correlation between the number of research contributions and the number of media contributions. In particular, we use Kendall's rank correlation coefficient Tau b (Kendall 1938; 1945). In contrast to Pearson's correlation coefficient and Spearman's rank correlation coefficient, Kendall's Tau b is particularly suitable for our data: Firstly, it can deal with the highly skewed distribution of both variables due to its non-parametric property. Secondly, it is robust against the existing outliers in our data by considering only the rank/order of the values. Thirdly, it can deal with the high number of zero values in

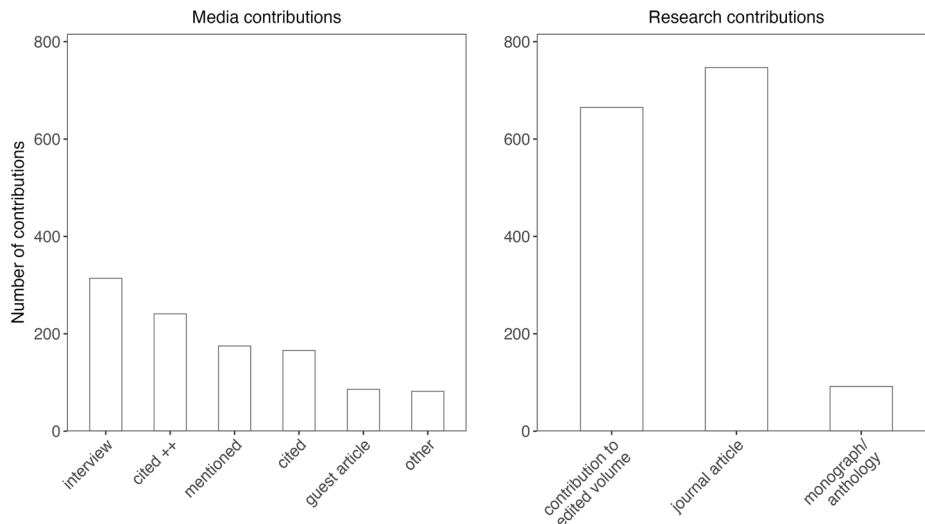


Fig. 1 Types of media and research contributions.

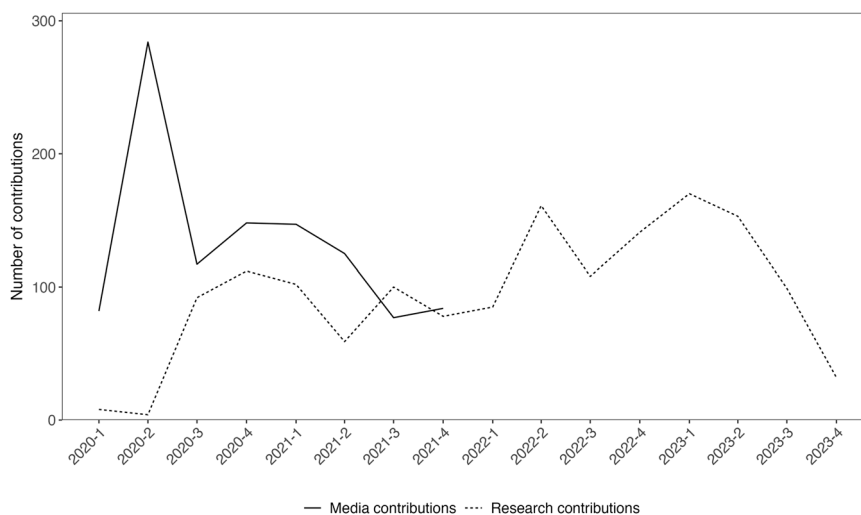


Fig. 2 Number of media and research contributions over time (2020–2023).

the data by taking ties (equal ranks) into account and correcting the parameter accordingly.

Results

In order to examine the venues and forms of public and academic communication of German-speaking sociologists during the COVID-19 pandemic, we will first describe the media and research contributions in a comparative and descriptive manner (RQ1). Second, we will characterize the sociologists communicating in both spheres using socio-structural indicators (RQ2).

Figure 1 shows a comparison of the types of media and research contributions. The predominant format through which German-speaking sociologists communicated with external publics was the interview ($n = 314$). While the number of guest articles is comparatively low ($n = 86$), it should be noted that these often were particularly visible forms of communication—which also could be cited as academic literature by peers. In between these two ‘active’ forms of communication we find different types of ‘passive’ forms: single and multiple citations ($n = 166 + 241$) and mentions ($n = 175$). Typically, citations refer to publications (both scholarly and popular), interviews, or background conversations with sociologists whose statements are then selectively quoted in journalistic articles. Mentions, by

contrast, refer only to the researcher’s name, sometimes in association with theoretical concepts or ideas in a more abstract way. When comparing the forms of active and passive communication, the latter account for the larger share of media contributions. With regard to academic communication, Fig. 1 (right side) shows that research contributions during the COVID-19 pandemic took place predominantly in the form of journal articles ($n = 747$) and contributions to edited volumes ($n = 665$). Not surprisingly, monographs and editorships of anthologies account only for a small proportion of the corpus ($n = 92$)—however, as these formats are more time-consuming for the authors, they indicate a particularly high academic engagement.

Figure 2 illustrates the number of media and research contributions over time. Media contributions increased sharply during the initial phase of the pandemic and peaked in the second quarter of 2020 ($n = 284$), before declining from the second half of 2020 through 2021. Conversely, research contributions were virtually non-existent at the onset of 2020. It was not before the third quarter of 2020 that a substantive number of articles and edited volumes had been published ($n = 112$). Academic output increased slightly and reached its peak in the first quarter of 2023, after which it declined until the end of the observation period.⁵ This temporal discrepancy suggests that German-speaking

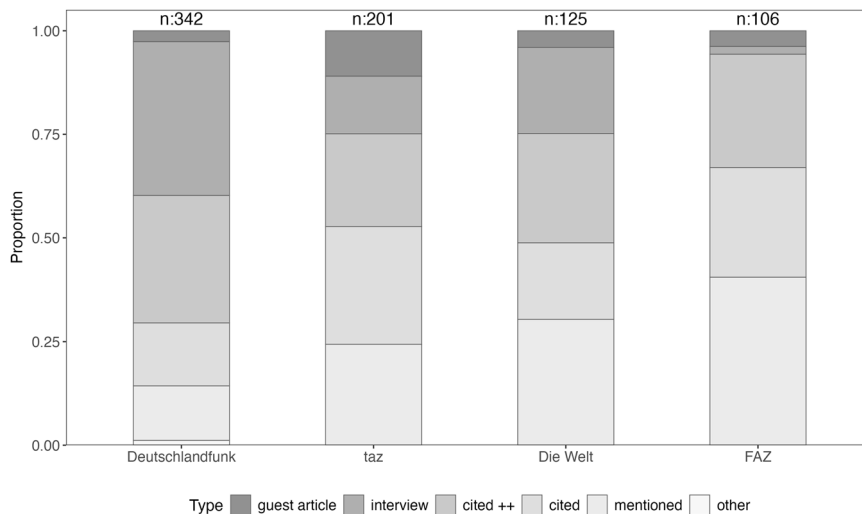


Fig. 3 Top media outlets by type of media contribution.

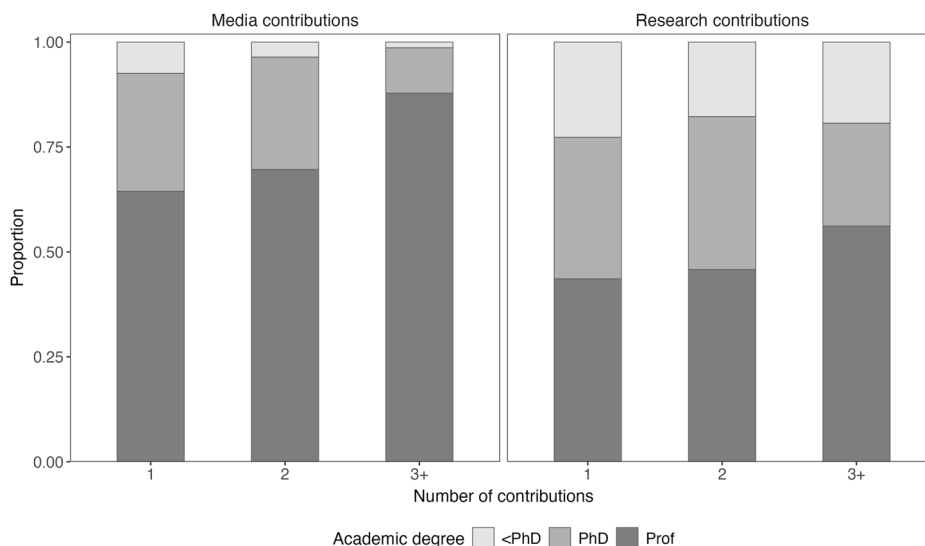


Fig. 4 Academic degree by media contribution and research contribution.

sociologists initially communicated mainly through the media, while academic communication gained momentum only with a delay, particularly since the second half of 2020. While this pattern is not surprising, however, it raises the question of whether the authors of these latecoming publications had already publicly communicated about their respective subjects during the first phase of the pandemic. As we will discuss later, this does not seem to be the case.

Figure 3 shows that there is a divergence in the distribution of types of media contributions within the three German-language daily newspapers Tageszeitung (taz), Die Welt, and Frankfurter Allgemeine Zeitung (FAZ), as well as the public radio channel (Deutschlandfunk). Interviews, specifically, dominate the Deutschlandfunk, constituting 37% of its sociological media contributions. In contrast, the daily newspapers typically do not print complete interviews with sociologists. Rather, around 80% of the contributions are citations and mentions of sociologists in news articles written by journalists. The guest article type of communication exhibits a remarkably high frequency in the politically left-leaning taz ($n = 22$). Die Welt, which is politically more right-leaning, as well as the conservative FAZ publish a significantly lower number of sociological guest articles ($n = 5$ and $n = 4$). In

contrast to other media outlets, the FAZ is distinguished by a very low share of ‘active’ sociological media contributions (6%), whereas 94% of the contributions are ‘passive’, comprising citations and mentions.

So far, we have examined the venues and forms of media and research contributions. In the following, we focus on the authors behind these contributions, examining some basic socio-structural patterns in order to answer the question of who are the sociologists engaging in public and academic communication about the pandemic. Figure 4 illustrates the distribution of academic degrees across the subsets of sociologists with one, two, or more media or research contributions. If we first look at those sociologists who engage in academic communication via traditional research publications (right side), we can see a balanced relation between those who hold a professorship (46%) and those who do not (<PhDs: 18%; PhD: 36%). In the group of sociologists with three or more research contributions, the proportion of professors increases slightly to 56%. If we now compare the proportion of professors among sociologists who communicated publicly via media contributions during the COVID-19 pandemic, their relative number is considerably higher. Thus, among those with one or two media contributions, over 69% hold a

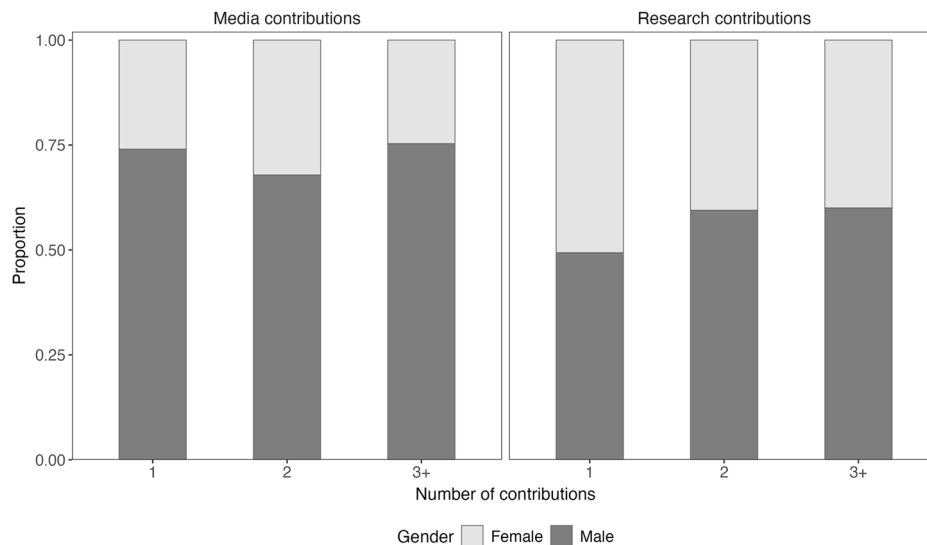


Fig. 5 Distribution of gender by media contribution and research contribution.

professorship, while among those with three or more contributions, over 87% hold a professorship. The high proportion of professors can also be attributed to the selectivity exercised by the media, which tend to prioritize scientific credibility, such as academic titles, when choosing their sources and interviewees.

Figure 5 shows the distribution of gender within the groups of sociologists with one, two, or more media or research contributions. Sociologists who have contributed to one research publication regarding the COVID-19 pandemic are roughly equally male (50.6%) or female (49.4%). However, this relation becomes more unequal among sociologists with two or more research contributions: in this subset of the corpus, the proportion of female authors decreases to approximately 40%. The unequal distribution is strikingly stronger among publicly communicating sociologists. Here, between 68% and 75% of contributors are male.

So far, we analyzed the two complete corpora of German-speaking sociologists who communicated about the COVID-19 pandemic either in the public or in the academic sphere. However, the majority of these sociologists appeared only once either in the public sphere or in the academic sphere and thus cannot be readily classified as ‘public experts’ or ‘academic experts’. Rather, they are occasional visitors in one of the two worlds. Therefore, it makes sense to take a closer look at a subset of particularly productive contributors in both worlds. To do so, for each corpus we selected the 10 sociologists with the highest number of contributions.

Figure 6 shows the ‘Top 10’ sociologists in the public sphere, as well as the types of their media contributions. All of them hold a professorship, 8 of 10 are male, and most of them are between 60 and 70 years old. What is not shown in the figure is their contribution to the research corpus: 6 of 10 show zero research publications, 2 of 10 show one research publication, and another 2 of 10 show three research publications. We also analyzed the research profile of this Top 10 subset. It seems that most of the publicly visible sociologists have some background in macrosociology and/or sociological theory.

In comparison, Fig. 7 shows the Top 10 sociologists with the highest number of *research contributions*. Within this group, only 4 of 10 hold a professorship, 3 from the remaining 6 have a PhD, 7 of 10 are male, and on average, they are between 30 and 50 years old. In terms of subdisciplinary specialization, they cover a wide range of research areas: macrosociology, social theory,

economics, family studies, and empirical research in contexts such as education, social inequality, and political sociology. When looking at the distribution of the number of research contributions, the difference between the first rank and the subsequent ranks is striking. Furthermore, rank one stands out due to its relatively high number of five media contributions. In contrast, ranks 2 to 9 show no media contributions at all. In terms of publication types, book publications (including contributions to edited volumes) predominate. Only one sociologist in this Top 10 subset shows more contributions to journal articles than book publications. An explanation of this case could be the quantitative empirical focus.

A comparison of sociologists who communicate most frequently externally in the form of media contributions with those who communicate most frequently internally in the form of research contributions can highlight similarities as well as differences. Both groups share a large proportion of men and the steep difference between rank one and the subsequent ranks in terms of contributions. Furthermore, sociologists with a high number of media or research contributions tend to have few, if any, contributions in the respective other world. However, a few stand out because they communicate in both spheres, combining internal and external modes of communication. Both groups differ in terms of their average age, academic degree, and research focus. The Top 10 media contributors are older on average, consist exclusively of professors, and are primarily oriented towards macro sociological topics and sociological theory. In contrast, the Top 10 research contributors are younger, mostly without professorial titles, and conduct research on a more heterogeneous range of research topics, particularly empirical research.

After examining research and media contributions separately, our final research question (RQ3) deals with the interconnectedness of the two worlds: To answer this question, we investigate possible correlations between public and academic communication activities. Table 2 and Fig. 8 illustrate the relationship between the number of media contributions and the number of research contributions using a cross-tabulation table and a graphical representation using a Sankey diagram. These representations show for both variables a highly uneven and skewed distribution. The number of *media contributions* ranges from 0 to 73 (mean = 0.67; standard deviation = 3.01; median = 0). The majority of sociologists in our data have no media

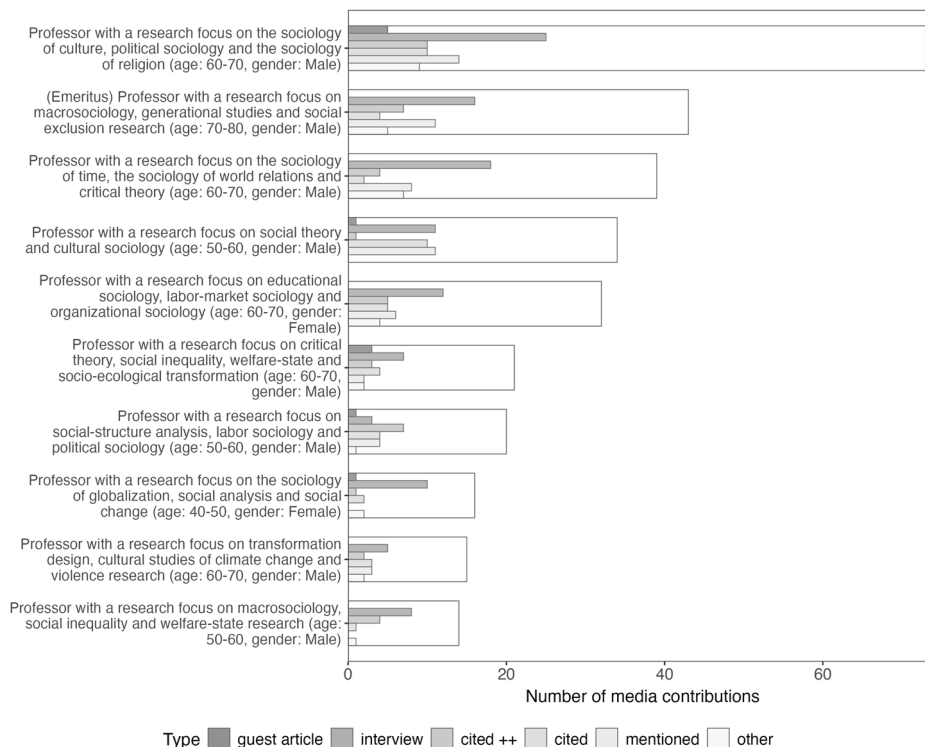


Fig. 6 Top sociologists by number of media contributions.

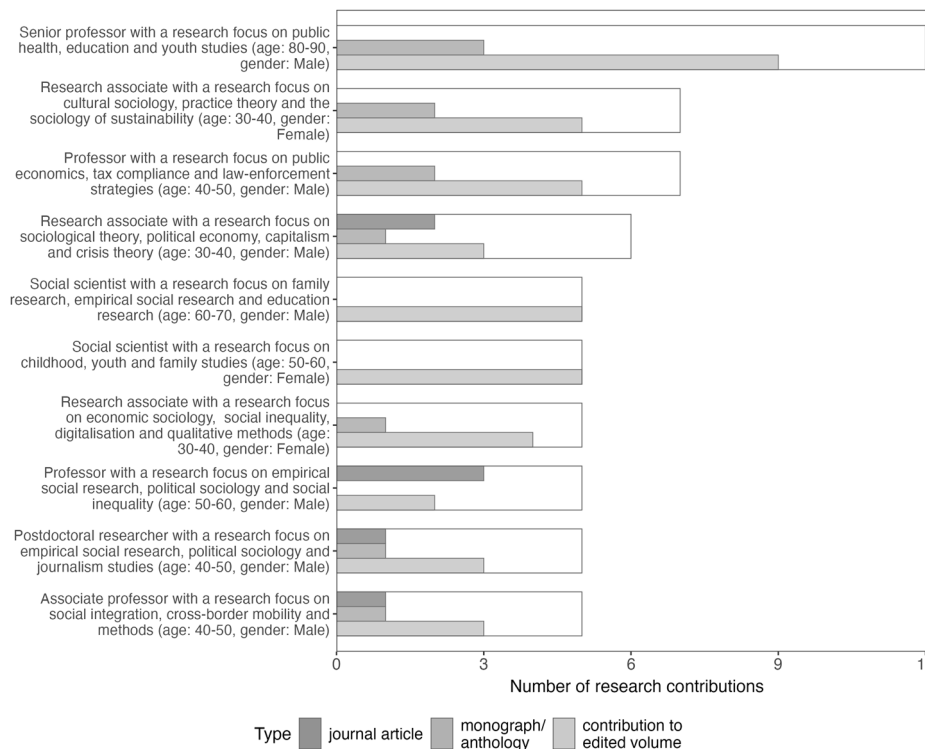


Fig. 7 Top sociologists by number of research contributions.

appearance (72.9%). However, there are still a lot of sociologists who actually contributed to public communication in the pandemic context: 300 (18.9%) appeared in the media once, 56 (3.5%) twice, and 77 (4.8%) three or more times during the study period. The number of *research contributions* ranges from 0 to 12 (mean = 0.95, standard deviation = 0.82, median = 1). 367

sociologists in the dataset (23%) show no contribution to a publication related to the pandemic, 1053 are involved in one (66.2%), 111 in two (7%), and 60 (3.8%) in three or more publications. A comparison of the marginal distributions of both variables suggests that a considerable proportion of sociologists who received little or no media coverage are contrasted with a

Table 2 Crosstable number of persons by media and research contributions.

		Research contributions				Total
		0	1	2	3+	
Media contributions	0	0 (0%)	1009 (87.21%)	99 (8.56%)	49 (4.24%)	1157 (72.77%)
	1	271 (90.33%)	21 (7.00%)	5 (1.67%)	3 (1.00%)	300 (18.87%)
	2	43 (76.79%)	9 (16.07%)	3 (5.36%)	1 (1.79%)	56 (3.52%)
	3+	53 (68.83%)	13 (16.88%)	4 (5.19%)	7 (9.09%)	77 (4.84%)
	Total	367 (23.08%)	1052 (66.16%)	111 (6.98%)	60 (3.77%)	1590 (100%)

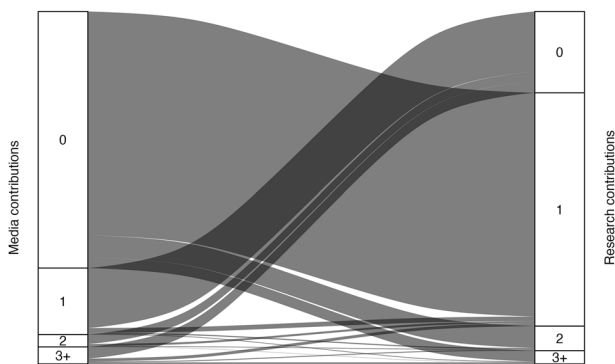


Fig. 8 Relationship between media and research contributions.

Table 3 Correlation between number of media contributions and number of research contributions.

Variable 1	Number of media contributions
Variable 2	Number of research contributions
Correlation parameter Kendall's	-0.676
Tau-b	
z-Value	-29.013
p value	<0.001

smaller group of individual sociologists who were frequently featured in the media. In contrast, publication behavior on the topic of the COVID-19 pandemic is less strongly characterized by a dichotomy between a small group of ‘stars’ and the rest of the field, which suggests a scientific debate characterized by a wider range of research contributions.

Furthermore, Fig. 8 and Table 2 illustrate the overlap between the group of sociologists contributing to media debates on the COVID-19 pandemic and those contributing to the academic discourse via publications. In the light of the old linear model, which assumes a knowledge transfer from scientific publications to the public sphere, it is particularly noteworthy that a large proportion of sociologists who appear in the media in the context of the pandemic do not show any research contributions. Among those who appear once in the media corpus, 90.3% did not publish a COVID-19 related research paper in the period 2020–2023. However, for those with more media appearances, the likelihood that they also published academically, increases: Of those who appear twice in the media corpus, 23.2% have research contributions, of those who appear three times or more, 31.2% contributed to academic research. In contrast, 87.2% of those who do not appear in the media have published academically once, 8.6% twice, and 4.2% three or more times. On the whole, a rather small number of 66 sociologists (4.1%) in the dataset have one or more media contributions *as well as* one or more research contributions—this is a subgroup that actually navigates both worlds.

Finally, we performed a statistical test to determine the correlation between media and research contributions. The relationship between the two variables (in the full range of values) is tested by the rank correlation parameter Kendall's tau b (see Table 3). The correlation parameter between the number of media contributions and number of research contributions has a value of -0.676 and shows a high significance. This indicates a strong negative correlation between the number of media contributions and the number of research contributions and therefore (a) a correspondence between a high number of media contributions and a low number of research contributions and (b) a correspondence between a high number of research contributions and a low number of media contributions.

Discussion, limitations and further research

Our results strongly suggest that in Germany, the communication of sociological knowledge regarding the COVID-19 pandemic took place in *two largely separate worlds*, populated by two disjunctive groups of sociologists. However, the study also points to a subset of 66 sociologists navigating *both* worlds. We have characterized these two worlds as the *public sphere* on the one hand and the *academic sphere* on the other. Certainly, this distinction of two modes of communicating sociological knowledge comes as no surprise as it relates to the traditional distinction between external and internal science communication (Schäfer et al. 2015; Dogruel and Beck 2017; Leßmöllmann and Gloning 2019). However, science communication researchers have rarely studied the actual relationship of the modes of communication in the context of acute crisis situations. Against this background, a key insight of our study is the significant divide between the public and the academic sphere. Thus, we present further evidence for questioning the adequacy of the linear model of science communication (Horst 2011; Lewenstein 2022).

To contextualize our findings about sociologists' media contributions we first have to consider the problem of journalistic selectivity. Which sociologists contributed to the media coverage and in what form depends not only on the sociologists' engagement, but more so on journalistic decisions—which do not necessarily align with scientific criteria (Weingart and Pansegrau 1999). Nevertheless, our findings indicate that media selection in the context of COVID-19 did prefer sociologists holding a professorship. This confirms previous findings indicating that journalistic selection of communicating sociologists somehow is oriented towards those holding reputable positions within academia (Goodell 1977; Boyce 2006; Albæk 2011). Since our study does not focus the journalistic selection process, we cannot say whether selection is driven by reputation itself or rather by sociologists' prior media appearances, which may correlate with their reputation (Lehmkuhl and Leidecker-Sandmann 2019). Regarding the perspective of the sociologists featured in the media, the prevalence of professors suggests that communicating sociologists tend to build their public communication upon sound scientific work in accordance with the scientific ethos (Rödter 2012). This may also apply to the considerable number of postdoc sociologists and even to

some sociologists without a PhD who contribute to the public sphere once or twice. This also raises questions about the pre-conditions that shape sociologists' willingness to engage with journalists and the wider public (Besley et al. 2018), particularly in relation to their institutional background (Entradas et al. 2020; Bucchi et al. 2022). However, our investigation cannot provide empirical insights on those aspects.

Looking at those sociologists with a particularly high number of media contributions, our findings confirm insights of previous research on the characteristics of "visible scientists" for the field of sociology. While most of them did not contribute to the academic sphere regarding COVID-19 within the four years following the outbreak of the pandemic, their reputation appears to be primarily founded upon their institutional position and from previous contributions within the academic sphere with a more general sociological relevance. With regard to these visible sociologists, it is furthermore noticeable that their socio-structural characteristics broadly correspond to what Joubert et al. (2023) have identified as the attributes of "most visible scientists" or "pandem-icons" from their respective country: Most of them are older than 50, male, and hold reputational positions. However, we cannot assess the majority of the qualified attributes investigated by Joubert et al., such as their public image, communication style, or whether they contributed outside their expertise. Subsequent studies on sociologists' contributions to the public sphere should therefore work with more qualitative approaches than our exploration does. For example, our preliminary analysis of the Top 10 most visible sociologists' specializations and denominations suggests one striking commonality that could be examined further: they mostly relate to broad fields of general sociology, macrosociology, or sociological theory. In other words: they are well prepared to provide broader sociological perspectives and diagnoses—but less prepared to communicate insights from the various sociological subfields dealing with more specific empirical questions.

Viewing the number of contributions to the separate worlds of the public and the academic sphere, our findings indicate a situation of "post-normal sociology" (Townsend 2015; Thorpe 2022)—particularly in the first three months after the onset of the pandemic as the numbers of contributions in the public sphere exceed those for the academic sphere by far. The observation that contributions to the academic sphere come into play with a certain time lag supports the perception of the traditional academic publication system being too slow and inflexible facing the urgency of the situation. That raises the question whether communicating sociological knowledge within the public sphere can be considered a substitute with regard to the time-consuming procedure of communicating in the academic sphere. In other words: To what extent do sociologists direct their communication in the public sphere also to their colleagues within the academic field and how is this communication perceived by their peers? An example for such a case is the interview with Habermas that we mentioned in the introduction of this paper (Schwering 2020) and which has been cited in several academic publications⁶.

The temporal gap between media contributions and research contributions also points to a follow-up question that has not yet been systematically addressed in the literature: Do sociologists who publicly comment on acute crises in 'real time' later elaborate and publish their reflections in academic formats? If so, this would amount to an inversion of the linear model of science communication: instead of academic research informing public communication, publicly articulated, practice-oriented reflections would stimulate academic research questions and projects. Although such a trajectory might appear plausible, our data provide no evidence for it: In the COVID-19 pandemic it was unlikely that German-speaking sociologists who spoke out

publicly in the early phase went on to publish academic research on the topic within the subsequent four years.

As indicated above, public communication by sociologists may, at least in part, also be directed toward academic peers. This brings to mind earlier diagnoses that media transformations have blurred the demarcation line between public and academic communication (Trench 2008; Neuberger and Jarren 2017). Most research on this topic has focused the role of social media and academic network sites (Jordan 2014; Kapidzic 2018; Díaz-Faes et al. 2019; Biermann and Taddicken 2025). By contrast, Wagenknecht (2012) analyzes an instructive case in which academic debate had been relocated to the public sphere: a fierce controversy among German historians and archeologists about some contested findings and interpretations in Troy research, conducted in national newspapers through interviews and guest articles. While our findings show that interviews are the most common form of media contributions, guest articles account for the smallest share. Considering both of them to be 'active' forms of public communication, they are most likely used for academic communication within the public sphere. Whether such instances are included in our dataset, however, remains unclear, as answering this would require further qualitative and bibliometric analysis of the contributions in the public sphere; but that lies beyond the scope of our exploratory research design. Further research could therefore examine the interconnection of communication in the public and the academic sphere more systematically—for example, by analyzing to what extent public contributions become cited in academic publications or function as initial presentations of novel research findings.

When interpreting our findings through the lens of Burawoy's notion of public sociology, the key question is whether a systematic *division of sociological labor* exists between internal and external forms of science communication. At first sight, our findings confirm Burawoy's idea of such a division—at least with regard to the different audiences addressed: professional and critical sociology primarily target academic audiences, whereas policy and public sociology speak to extra-academic audiences. However, our data do not allow us to evaluate qualitative aspects of the kind of "labor" performed in the two separate worlds. With regard to Burawoy's distinction of "instrumental knowledge" and "reflexive knowledge", for example, we have no insights whether the COVID-19 related knowledge communicated by the sociologists in our data can be considered as either instrumental or reflexive. In other words: Our study confirms a division of labor in terms of *where* communication occurs—in the public or academic sphere—but cannot determine *what kind* of sociology is being practiced. Further research is needed to analyze the public contributions of sociologists and their relation to "normal" sociological research or "professional sociology".

In view of this division of sociological labor, our diagnosis of a significant separation between communication in the public and the academic sphere brings us back to a longstanding problem in science communication research: how to qualify the link between public communication and underlying scientific expertise. This concerns, in particular, the traditional operationalization and evaluation of scientific expertise of researchers who communicate in the public sphere. The common assumption is that expertise is documented through publications and citations within the academic sphere (Ioannidis et al. 2021; Leidecker-Sandmann et al. 2022). At first glance, this seems convincing, since academic publications—especially when being cited—clearly indicate what Collins and Evans (2007) would consider as "contributory expertise" within a given subject domain. However, we argue that this representation of scientific expertise is too narrow and remains caught up in a simplified linear model. In our case of communicating sociologists in the COVID-19 pandemic, the

limitations of such an operationalization are evident. If we consider sociological expertise on COVID-19 to be held only by those who have published on the topic within the academic sphere, our findings would lead to a devastating conclusion: the substantial disconnect between the public and the academic sphere would amount to a worrisome, if not alarming, disconnect between public communication and sociological expertise.

The presence of 367 sociologists in our dataset who contributed to the public but not to the academic sphere in the COVID-19 context challenges the assumption that expertise must first be validated within the academic sphere before entering the public realm. To make sense of this finding, both the specificity of sociology as a discipline and the post-normal context of the pandemic need to be considered. The COVID-19 pandemic represented an unprecedented global crisis characterized by uncertainty, incomplete knowledge in all disciplines, and the urgent need for action. We argue that this context constitutes a textbook case for “post-normal science communication” (Brüggemann et al. 2020), characterized by a departure from the linear model in which scientific knowledge must first be developed and legitimized academically before being communicated publicly. This shift may also affect the normative structure of the scientific field. Rödder’s work on human genome research, for example, suggests that public visibility traditionally presupposes “sound scientific work” (Rödder 2012, 8, cf. Rödder 2009). From this perspective, public engagement without prior contributions to academic publications might be perceived as a violation of scientific norms and values (Merton 1973; Bucchi 2015). However, the urgency and uncertainty of the pandemic may have lowered the thresholds for legitimate public communication.

In other words, we may have witnessed the emergence of a post-normal type of expertise—developed by engaged sociologists in vivo within the public sphere, bypassing traditional channels of academic communication. Whether this is a positive development that enables innovative and “fast” forms of knowledge production cannot be answered by our study. Further research is needed to assess the quality, originality, fruitfulness, and robustness of this post-normal sociological knowledge production in the public sphere.

Data availability

The datasets generated during and analysed during the current study are not publicly available due to the inclusion of information about individual persons and the potential to draw conclusions about individual persons based on the anonymised data. Datasets are available from the corresponding author on reasonable request.

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Notes

- 1 Against this background, Christian Drosten was very well prepared for the new situation. In January 2020, he was a central actor in an international network that developed a PCR diagnostic test for the new virus. Furthermore, as director of the institute of virology at the Charité in Berlin he held a key institutional position in the medical research landscape.
- 2 In this brief reference to Collins and Evans, we cannot do justice to the ongoing debate about their concepts of expertise. For example, there is a discussion about different “types of immersion” that need to be taken into account when assessing expertise (Ribeiro and Lima 2016). Our point here is simply that most theories of expertise—as well as media discourse—share the assumption that academic experts are defined by their actual research experience, which may involve varying degrees of practical “immersion”.

- 3 The search via Web of Science was carried out using the following search string: “Corona” OR “Covid-19” OR “Pandemic” OR “Pandemie” OR “Corona-Pandemie”. Internal database filters were also used: The document type ‘Article’, the Web-of-Science category ‘Sociology’, Country/Region ‘Germany’ or ‘Austria’ or ‘Switzerland’ and the Publication Year 2020–2023.
- 4 As a result, not only the contributions to publications from German sociologists are integrated into our dataset, but also the contributions of their co-authors. Therefore, it should be noted that a few individuals who may not meet the search criteria of the media dataset are also taken into account. This caveat must be taken into account when analyzing the data.
- 5 As these data were collected in early 2024, the picture might look slightly different today due to delays in entries being made to the databases.
- 6 As of the writing of this article, google scholar indexes 81 citations of this interview.

References

- Albæk E (2011) The interaction between experts and journalists in news journalism. *Journalism* 12(3):335–348. <https://doi.org/10.1177/1464884910392851>
- Bauer MW, Falade BA (2021) Public understanding of science: survey research around the world. In: Bucchi, M, Trench, B (eds.) *Routledge handbook of public communication of science and technology*, 3rd ed. Routledge, London/New York, pp. 238–266
- Becker T (2020) Soziologen-Hype: Die Rückkehr der Taxifahrer. *Der Spiegel*. October 1
- Berger L, Berger N, Bosetti V et al (2021) Rational policymaking during a pandemic. *PNAS* 118(4):e2012704118. <https://doi.org/10.1073/pnas.2012704118>
- Berger P, Kaldewey D (2024) Fast evidence’ in Zeiten post-normaler Wissenschaftskommunikation – die Berliner Viruslaststudie. In: Honnacker, A, Prugger, J, Reder, M (eds.) *Welches Wissen (und welche Wissenschaft) braucht die Politik? Herausforderungen wissenschaftsbasierter Demokratie*. De Gruyter, Berlin/Boston, pp. 157–200
- Besley JC, Dudo A, Yuan S, Lawrence F (2018) Understanding Scientists’ Willingness to Engage. *Sci Commun* 40(5):559–590. <https://doi.org/10.1177/1075547018786561>
- Biermann K, Taddicken M (2025) Visible scientists in digital communication environments: an analysis of their role performance as public experts on twitter/x during the covid-19 pandemic. *Public Underst Sci* 34(1):38–58. <https://doi.org/10.1177/09636625241249389>
- Boyce T (2006) Journalism and expertise. *Journalism Stud* 7(6):889–906. <https://doi.org/10.1080/14616700600980652>
- Brüggemann M, Lörcher I, Walter S (2020) Post-normal science communication: exploring the blurring boundaries of science and journalism. *JCOM* 19(3):A02. <https://doi.org/10.22323/2.19030202>
- Bucchi M (2015) Norms, competition and visibility in contemporary science: the legacy of robert k. merton. *J Classical Socio* 15(3):233–252. <https://doi.org/10.1177/1468795X14558766>
- Bucchi M, Fattorini E, Saracino B (2022) Public Perception of COVID-19 Vaccination in Italy: The Role of Trust and Experts’ Communication. *Int J Public Health* 67:1604222. <https://doi.org/10.3389/ijph.2022.1604222> Mar 16
- Burawoy M (2005) For public sociology. *Am Socio Rev* 70(1):4–28. <https://doi.org/10.1177/000312240507000102>
- Burawoy M (2021) *Public sociology: between utopia and anti-utopia*. Polity press, Cambridge Medford (Mass.)
- Caduff C (2020) What went wrong: corona and the world after the full stop. *Med Anthropol Q* 34(4):467–487. <https://doi.org/10.1111/maq.12599>
- Cassidy A (2014) Communicating the social sciences: a specific challenge? In: Bucchi, M, Trench, B (eds.) *Routledge handbook of public communication of science and technology*, 2nd ed., 2nd ed. Routledge international handbooks, Routledge, London/New York, pp. 186–197
- Cassidy A (2021) Communicating the social sciences and humanities: challenges and insights for research communication. In: Bucchi, M, Trench, Brian (eds.) *Routledge handbook of public communication of science and technology*, 3rd ed. Routledge, London/New York, pp. 198–213
- Christakis NA (2020) *Apollo’s Arrow: The Profound and Enduring Impact of Coronavirus on the Way We Live*. Hachette UK
- Collins H, Evans R (2007) *Rethinking expertise*. University of Chicago Press, Chicago
- Deflem M (2022) The continuity of the social sciences during covid-19: sociology and interdisciplinarity in pandemic times. *Soc* 59(6):735–746. <https://doi.org/10.1007/s12115-022-00763-3>
- Diaz-Faes AA, Bowman TD, Costas R (2019) Towards a second generation of ‘social media metrics’: characterizing twitter communities of attention around science. *PLOS ONE* 14(5):e0216408. <https://doi.org/10.1371/journal.pone.0216408>
- Dogruel L, Beck K (2017) Social Media als Alternative der Wissenschaftskommunikation? Eine medienökonomische Analyse. In: Weingart, P, Wormer, H, Wenninger, A, Hüttl, RF (eds.) *Perspektiven der Wissenschaftskommunikation im digitalen Zeitalter*. Velbrück Wissenschaft, Weilerswist, pp. 121–187. <https://doi.org/10.5771/9783748926672-121>

- Entradas M, Bauer MW, O’Muircheartaigh C, Marcinkowski F, Okamura A, Pellegrini G et al (2020) Public communication by research institutes compared across countries and sciences: Building capacity for engagement or competing for visibility?. *PLoS ONE* 15(7):e0235191. <https://doi.org/10.1371/journal.pone.0235191>
- Evans R (2022) SAGE advice and political decision-making: “Following the science” in times of epistemic uncertainty. *Soc Stud Sci* 52(1):53–78. <https://doi.org/10.1177/03063127211062586>
- Eyal G, Medvetz T (2023) Introduction. In: Eyal, G, Medvetz, T (eds.) *The oxford handbook of expertise and democratic politics*. Oxford University Press, New York, pp. 1–26. <https://doi.org/10.1093/oxfordhb/9780190848927.013.1>
- Fraser N, Brierley L, Dey G et al (2021) The evolving role of preprints in the dissemination of covid-19 research and their impact on the science communication landscape. *PLOS Biol* 19(4):e3000959. <https://doi.org/10.1371/journal.pbio.3000959>
- Funtowicz SO, Ravetz JR (1993) Science for the post-normal age. *Futures* 25(7):739–755. [https://doi.org/10.1016/0016-3287\(93\)90022-L](https://doi.org/10.1016/0016-3287(93)90022-L)
- Gans HJ (2002) More of us should become public sociologists. *Footnotes* 30(6):8
- Garvey WD (1979) Communication, the essence of science: facilitating information exchange among librarians, scientists, engineers, and students. Pergamon Press, Oxford/New York
- Gianola S, Jesus TS, Barger S et al (2020) Characteristics of academic publications, preprints, and registered clinical trials on the covid-19 pandemic. *PLOS ONE* 15(10):e0240123. <https://doi.org/10.1371/journal.pone.0240123>
- Goodell R (1977) *The visible scientists*. Little, Brown and Co., Boston
- Harambam J (2020) The corona truth wars: where have all the st’sers gone when we need them most? *Sci Technol Stud* 33(4):60–67. <https://doi.org/10.23987/sts.99550>
- Hendriks F, Kienhues D, Bromme R (2015) Measuring laypeople’s trust in experts in a digital age: the muenster epistemic trustworthiness inventory (meti). *PLoS one* 10(10):e0139309. <https://doi.org/10.1371/journal.pone.0139309>
- Holmdahl I, Buckee C (2020) Wrong but useful — what covid-19 epidemiologic models can and cannot tell us. *N Engl J Med* 383(4):303–305. <https://doi.org/10.1056/NEJMp2016822>
- Horbach SPJM (2020) Pandemic publishing: medical journals strongly speed up their publication process for covid-19. *Quant Sci Stud* 1(3):1056–1067. https://doi.org/10.1162/qss_a_00076
- Horst M (2011) Taking our own medicine: on an experiment in science communication. *Sci Eng Ethics* 17(4):801–815. <https://doi.org/10.1007/s11948-011-9306-y>
- Huisman J, Smits J (2017) Duration and quality of the peer review process: the author’s perspective. *Scientometrics* 113(1):633–650. <https://doi.org/10.1007/s11192-017-2310-5>
- Ioannidis JP, Tezel A, Jaggi R (2021) Overall and covid-19-specific citation impact of highly visible covid-19 media experts: bibliometric analysis. *BMJ open*. 11(10). <https://doi.org/10.1136/bmjopen-2021-052856>
- Jordan K (2014) Academics and their online networks: exploring the role of academic social networking sites. *First monday*. <https://doi.org/10.5210/fm.v19i11.4937>
- Joubert M, Guenther L, Metcalfe J et al. (2023) “Pandem-icons”: exploring the characteristics of highly visible scientists during the covid-19 pandemic. *JCOM*. 22(1). <https://doi.org/10.22323/2.22010204>
- Kaldewey D (2022) Was bedeutet Systemrelevanz in Zeiten der Pandemie?. *Berl J Soziol* 32(1):7–33. <https://doi.org/10.1007/s11609-022-00464-y>
- Kapadzic S (2018) Personal Branding on Social Media. *Nomos, Baden-Baden*. <https://doi.org/10.5771/9783845285665>
- Kendall MG (1938) A new measure of rank correlation. *Biometrika* 30(1–2):81–93. <https://doi.org/10.1093/biomet/30.1-2.81>
- Kendall MG (1945) The treatment of ties in ranking problems. *Biometrika* 33(3):239–251. <https://doi.org/10.1093/biomet/33.3.239>
- Knobloch J (2023) Die voreingenommene Deutung des Unbekannten. *Das Nichtwissensregime der Pandemieberatung und der Ausschluss der Sozialwissenschaften*. *Berl J Soziol* 33:387–421. <https://doi.org/10.1007/s11609-023-00506-z>
- Korte J (2024) Differences in social science reporting. *Serendipities J Socio Hist Soc Sci* 9(1):16–36. <https://doi.org/10.7146/serendipities.v9i1.139666>
- Kraemer K (2022) How do state authorities act under existential uncertainty? hypotheses on the social logic of political decision-making processes during the coronavirus pandemic. *Cult Pr Europeanization* 7(1):5–36. <https://doi.org/10.5771/2566-7742-2022-1-5>
- Lehmkuhl M, Leidecker-Sandmann M (2019) Visible scientists revisited: Zum Zusammenhang von wissenschaftlicher Reputation und der Präsenz wissenschaftlicher Experten in der Medienberichterstattung über Infektionskrankheiten. *Publizistik* 4(64):479–502. <https://doi.org/10.1007/s11616-019-00530-1>
- Leidecker-Sandmann M, Attar P, Schütz A et al (2022) Selected by expertise? scientific experts in german news coverage of covid-19 compared to other pandemics. *Public Underst Sci* 31(7):847–866. <https://doi.org/10.1177/09636625221095740>
- Lessenich S (2020) Soziologie – Corona – Kritik. *Berl J Soziol* 30(2):215–230. <https://doi.org/10.1007/s11609-020-00417-3>
- Leßmöllmann A, Gloning T (2019) Introduction to the volume. In: Leßmöllmann, A, Dascal, M, Gloning, T (eds.) *Science communication*. De Gruyter, Boston/Berlin, p. XI–XX. <https://doi.org/10.1515/9783110255522-033>
- Lewenstein B (2022) What is “science communication”? *JCOM* 21(7):C02. <https://doi.org/10.22323/2.21070302>
- Lewis J, Bartlett A, Riesch H et al (2023) Why we need a public understanding of social science. *Public Underst Sci* 32(5):658–672. <https://doi.org/10.1177/09636625221141862>
- Lohse S, Canali S (2021) Follow *the* science? on the marginal role of the social sciences in the covid-19 pandemic. *Eur Jnl Philos Sci* 11(4):99. <https://doi.org/10.1007/s13194-021-00416-y>
- Merton RK (1973) *The sociology of science: theoretical and empirical investigations*. Univ. of Chicago Pr
- Miller RC, Tsai CJ (2020) Scholarly publishing in the wake of covid-19. *Int J Radiat Oncol*Bio*Phys* 108(2):491–495. <https://doi.org/10.1016/j.ijrobp.2020.06.048>
- Mongeon P, Paul-Hus A (2016) The journal coverage of web of science and scopus: a comparative analysis. *Scientometrics* 106(1):213–228. <https://doi.org/10.1007/s11192-015-1765-5>
- Neresini F, Giardullo P, Buccio ED et al (2023) When scientific experts come to be media stars: an evolutionary model tested by analysing coronavirus media coverage across italian newspapers. *PLOS ONE* 18(4):e0284841. <https://doi.org/10.1371/journal.pone.0284841>
- Neuberger C, Jarren O (2017) Thesen zum Wandel der Wissenschaftsöffentlichkeit und zur Wissenschaftsvermittlung im Internet. In: Weingart, P, Wormer, H, Wenninger, A, Hüttl, RF (eds.) *Perspektiven der Wissenschaftskommunikation im digitalen Zeitalter*. Velbrück Wissenschaft, Weilerswist, pp. 65–77. <https://doi.org/10.5771/9783748926672-65>
- Neun O (2017) Public sociology“ und, public understanding of science“ (pus) bzw., medialisierung“ der wissenschaft. In: *Knowledge in action*. Springer Fachmedien, Wiesbaden, pp. 3–19. https://doi.org/10.1007/978-3-658-18337-0_1
- Olesk A (2021) The types of visible scientists. *JCOM* 20(2):A06. <https://doi.org/10.22323/2.20020206>
- Peters HP (1994) *Wissenschaftliche Experten in der öffentlichen Kommunikation über Technik, Umwelt und Risiken*. *Kölner Z für Soziologie und Sozialpsychologie / Sonderheft* 34(34) (1994):162
- Peters HP (2021) Scientists as public experts: expectations and responsibilities. In: *Routledge handbook of public communication of science and technology*, 3rd ed. Routledge, London/New York
- Priesemann V, Bartels C, Gereke J et al. (2024) Wissen kommunizieren: Leitpunkte aus der jungen Akademie
- Rainey S, Mormina M, Lignou S et al (2021) The post-normal challenges of covid-19: constructing effective and legitimate responses. *Sci Public Policy* 48(4):592–601. <https://doi.org/10.1093/scipol/scab037>
- Ribeiro R, Lima FPA (2016) The value of practice: A critique of interactional expertise. *Soc Stud Sci* 46(2):282–311
- Rödler S (2009) *Wahrhaft sichtbar*. *Nomos, Baden-Baden*. <https://doi.org/10.5771/9783845218076>
- Rödler S (2012) The ambivalence of visible scientists. In: Rödler, S, Franzen, M, Weingart, P (eds.) *The sciences’ media connection –public communication and its repercussions*. *Sociology of the sciences yearbook*, vol 28. Springer Netherlands, Dordrecht, pp. 155–177. https://doi.org/10.1007/978-94-007-2085-5_8
- Rödler S, Guenther L, Joubert M (2025) “They never appear on tv and if they have, i might have missed that moment.” how publics in south africa and germany view visible scientists. *PLOS ONE* 20(1):e0316991. <https://doi.org/10.1371/journal.pone.0316991>
- Rosa H (2020) Pfadabhängigkeit, Bifurkationspunkte und die Rolle der Soziologie. Ein soziologischer Deutungsversuch der Corona-Krise. *Berl J Soziol* 30(2):191–213. <https://doi.org/10.1007/s11609-020-00418-2>
- Saltelli A (2024) What is post-normal science? a personal encounter. *Found Sci* 29(4):945–954. <https://doi.org/10.1007/s10699-023-09932-x>
- Schäfer MS (2009) From public understanding to public engagement: an empirical assessment of changes in science coverage. *Sci Commun* 30(4):475–505. <https://doi.org/10.1177/1075547008326943>
- Schäfer MS, Kristiansen S, Bonfadelli H (2015) *Wissenschaftskommunikation im Wandel: Relevanz, Entwicklung und Herausforderungen des Forschungsfeldes*. In: *Wissenschaftskommunikation im Wandel*. von Halem, Köln, pp. 10–42
- Scheu AM, Volpers A-M (2017) *Sozial- und Geisteswissenschaften im Öffentlichen Diskurs*. In: Bonfadelli, H, Fähnrich, B, Lüthje, C, Milde, J, Rhomberg, M, Schäfer, MS (eds.) *Forschungsfeld Wissenschaftskommunikation*. Springer Fachmedien, Wiesbaden, pp. 391–404. https://doi.org/10.1007/978-3-658-12898-2_21
- Schmid-Petri H, Bürger M (2019) Modeling science communication: from linear to more complex models. In: Leßmöllmann, A, Dascal, M, Gloning, T (eds.)

- Science communication. De Gruyter, Boston/Berlin, pp. 105–122. <https://doi.org/10.1515/9783110255522-005>
- Schmidt-Wellenburg C, Schmitz A (2023) Divided we stand, united we fall? structure and struggles of contemporary German sociology. *Int Rev Socio* 33(3):512–545. <https://doi.org/10.1080/03906701.2023.2244170>
- Schrögel P, Humm C (2019) Science communication, advising, and advocacy in public debates. In: Lefsmöllmann, A, Dascal, M, Gloning, T (eds.) *Science communication*. De Gruyter, Boston/Berlin, pp. 485–514. <https://doi.org/10.1515/9783110255522-023>
- Schwering M (2020) Jürgen Habermas über Corona: “So viel Wissen über unser Nichtwissen gab es noch nie”. *Frankfurter Rundschau*. April 10
- Sebhatu A, Wennberg K, Arora-Jonsson S et al (2020) Explaining the homogeneous diffusion of covid-19 nonpharmaceutical interventions across heterogeneous countries. *PNAS* 117(35):21201–21208. <https://doi.org/10.1073/pnas.2010625117>
- Seyd B, Hamm JA, Jennings W et al (2025) ‘Follow the science’: popular trust in scientific experts during the coronavirus pandemic. *Public Underst Sci* 34(1):2–18. <https://doi.org/10.1177/09636625241253968>
- Shepherd RG (1981) Selectivity of sources: reporting the marijuana controversy. *J Commun* 31(2):129–137. <https://doi.org/10.1111/j.1460-2466.1981.tb01236.x>
- Sloane PD, Zimmerman S (2021) The impact of the covid-19 pandemic on scientific publishing. *J Am Med Dir Assoc* 22(3):484–488. <https://doi.org/10.1016/j.jamda.2021.01.073>
- Stichweh R (2020) Simplifikation des Sozialen. In: Volkmer, M, Werner, K (eds.) *Die Corona-Gesellschaft*. transcript, Bielefeld, pp. 195–206. <https://doi.org/10.1515/9783839454329-020>
- Thiebach M, Mayweg-Paus E, Jucks R (2015) Probably true” says the expert: how two types of lexical hedges influence students’ evaluation of scientificity. *Eur J Psychol Educ* 30(3):369–384. <https://doi.org/10.1007/s10212-014-0243-4>
- Thießen M (2021) *Auf Abstand: eine Gesellschaftsgeschichte der Coronapandemie*. Campus Verlag, Frankfurt/New York
- Thorpe C (2022) *Sociology in Post-Normal Times*. Lexington Books, Lanham. <https://doi.org/10.5771/9781793625984>
- Townsley E (2015) Science, expertise and profession in the post-normal discipline. *Am Soc* 46(1):18–28. <https://doi.org/10.1007/s12108-014-9246-5>
- Trench B (2008) Internet: turning science communication inside-out? In: Bucchi, M, Trench, B (eds.) *Handbook of public communication of science and technology*. Routledge, London/New York, pp. 185–198
- Vera-Baceta M-A, Thelwall M, Kousha K (2019) Web of science and scopus language coverage. *Scientometrics* 121(3):1803–1813. <https://doi.org/10.1007/s11192-019-03264-z>
- Wagenknecht S (2012) Debating troy in the mass media – the catalytic impact of public controversy on academic discourse. In: Rödder, S, Franzen, M, Weingart, P (eds.) *The sciences’ media connection – public communication and its repercussions*. Springer Netherlands, Dordrecht, pp. 291–306. https://doi.org/10.1007/978-94-007-2085-5_15
- Ward PR (2020) A sociology of the covid-19 pandemic: a commentary and research agenda for sociologists. *J Socio* 56(4):726–735. <https://doi.org/10.1177/1440783320939682>
- Weingart P, Pansegrau P (1999) Reputation in science and prominence in the media: the goldhagen debate. *Public Underst Sci* 8(1):1–16. <https://doi.org/10.1088/0963-6625/8/1/001>
- Weingart P, van Schalkwyk F, Guenther L (2022) Democratic and expert legitimacy: science, politics and the public during the covid-19 pandemic. *Sci Public Policy* 49(3):499–517. <https://doi.org/10.1093/scipol/scac003>
- Winter S, Krämer NC (2014) A question of credibility – effects of source cues and recommendations on information selection on news sites and blogs. *Communications*. 39(4). <https://doi.org/10.1515/commun-2014-0020>
- Wissenschaft im Dialog (2021) *Wissenschaftsbarometer 2021*. Wissenschaft im Dialog, Berlin
- Wissenschaft im Dialog (2024) *Wissenschaftsbarometer 2024*. Wissenschaft im Dialog, Berlin
- Wissenschaft im Dialog, Bundesverband Hochschulkommunikation ed. (2025) *Leitlinien zur guten Wissenschaftskommunikation*
- Ziegler R, Schwarzbach V, Kremer B et al. (2021) Informationen zu Corona aus der Wissenschaft – welche Disziplinen und Forschungsbereiche nimmt die Bevölkerung wahr? Ergebnisse einer offenen Fragestellung im Wissenschaftsbarometer Corona Spezial

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