



Lay but not Lacking: The collective production of “lay” expertise surrounding the German energy crisis of 2022+

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ABSTRACT

Debates within the geography of knowledge and the sociology of expertise have heretofore often occurred largely independently of one another. Drawing from both bodies of work, the phenomenon of ‘lay’ expertise - that developed by actors not conventionally seen as legitimate experts in a field - is explored. Amidst uncertainty during the German energy crisis of 2022, this paper inquires into the knowledge practices, performances of expertise, and community structures of an online forum in which ‘lay’ knowledge and expertise are produced. Resisting simplistic narratives of lay expertise as inferior expertise or outright disinformation, a differentiated analysis of the forum in question shows lay expertise to be a diverse phenomenon with at times highly sophisticated knowledge practices. Based on 9 months of online ethnography and 10 qualitative interviews, it is shown how expertise emerges at the collective level from repeated interactions between users which engage in depth with one another's contributions on the basis of an iterative process of peer correction, a common notion of what makes knowledge contributions valid, and shared socio-political values which gain salience at the backdrop of the crisis. Contributions to a growing corpus of ‘geographies of expertise’ are discussed.

1. Introduction

For many Germans, the energy transition towards renewables (*Energiewende*) is a point of collective pride and a symbol of a hopeful future. Only in 2015, in a report by the Jülich Research Center, the *Energiewende* was seen as being “not only politically and legally adopted, [but] also fundamentally anchored in the public opinion” so that “only radical incidents or developments may lead to deviations from a pursued political path” (Hake, Fischer, Venghaus, and Weckenbrock, 2015; p. 544). While considered “unlikely”; the authors wrote; these incidents could conceivably be either technological failures such as a major blackout; or socio-economic failures such as significant increases in energy prices which threaten either social unrest or reduced economic competitiveness of key German industries (Hake et al., 2015; p. 544). However; in 2022; relations between Europe and Russia deteriorated in the face of the war in Ukraine; and global competition for LNG supplies had already been heightened by the post-COVID recovery of key economies around the world (Goldthau and Youngs, 2023). The resulting gas shortages and price spikes in electricity now played the role of the aforementioned “radical incidents”. In late Summer and Fall; as Winter loomed; ‘the energy crisis’ dominated German public debate and

politics. Faced with growing concerns over whether there would be enough gas to heat German households and power the fuel-intensive industries which are often depicted as providing the basis for German wealth; the nation faced growing discontent. Fears of blackouts; anxiety about rising prices; and anger at the government rose (and were stoked by various parties). This was a crucial turning point in German (and more broadly European) public debate (Goldthau and Youngs, 2023; Wiertz, Kuhn, and Mattissek, 2023). First and foremost, it led to a turn in energy politics from a rhetoric of climate change to one of geopolitics and energy security (Wiertz et al., 2023). Goldthau and Youngs speak of a “securitization” of renewables; a more explicit extractivism concerning renewables abroad; and a generally more state-interventionist energy policy across European states (2023; p. 119). In Germany; specifically; the energy crisis also reignited controversy as to whether the *Energiewende* was progressing too slowly or too fast; reintroducing fossil fuels and nuclear energy as viable energy sources in the public eye; while simultaneously kickstarting an accelerated expansion of renewables across the nation (Wiertz et al., 2023). The energy crisis gnawed at the public's support for the war in Ukraine; shook the until then widely supported and culturally salient *Energiewende*; and led to the government worrying publicly about extremist revolts and spreading fantasies

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of upheaval (see also Budnik, Grossmann, Hess, and Wemheuer, 2025).

All of this change provided additional cause for worry and controversy among everyday Germans, who rightly began to question how this could have happened - and why things were not simply being handled by 'people who know what they are doing'. For social scientists, the energy crisis provides the ideal backdrop for exploring the role of expertise and experts in society under conditions of heightened uncertainty and increased urgency. In contemporary 'knowledge societies' (Jasanoff, 2005); in which techno-scientific knowledge informs most areas of life and is seen as the basis of legitimate politics; decision-making actors faced with a crisis often turn to 'experts'¹ for assistance in diagnosing problems and suggesting actionable solutions (Rosenthal and T Hart, 1991). A crisis is thereby a situation of acute threat; fundamental insecurity; and great urgency; in which - in contrast to that of a 'catastrophe' - action can and should be taken to prevent a worse outcome (Boin, T Hart, and Kuipers, 2018; Brinks and Ibert, 2023). A crisis, furthermore, is to a large degree socially constructed - it is what people (and the media) make it (Boin et al., 2018; p. 34). Thus; the role of expert narratives is often not merely to inform; but also to persuade; to reassure; and to provide a feeling that 'things are known' when in fact uncertainty prevails (Grundmann, 2023; Jasanoff, 2005). For this to be effective, traditional experts often seek to establish a monopoly over epistemic authority, performing strict boundary work between 'real' and 'fake' experts who might threaten their hold over crisis framing (Eyal, 2019; Grundmann, 2023). Expert narratives are thus deeply intertwined with governance.

This intense reliance upon often-times opaque and authoritative expert judgments (Eyal, 2019); the politicization of science (Weingart, 1999); and the landscape of heightened risk and perceived powerlessness which everyday citizens face (Beck, 1986); may lead to friction; resentment; and reactionary populism. When traditional experts cannot provide a satisfactory (or establish a hegemonic) narrative for a crisis; it is not only formal; certified expertise which is given consideration in public debate. More and more - and particularly with the easy spread of information via the internet (Parviainen and Lahikainen, 2021) - new actors in expertise emerge; leading to talk of the 'digital transformation' of the knowledge order (Neuberger et al., 2023). These new actors are sometimes blamed for an increasingly polarized public debate and accused of opportunistically seeking attention by making claims without possessing the necessary knowledge or competences; or else as explicitly spreading disinformation for nefarious purposes. This is not without cause. There are certainly justified worries e.g. over the political power of social media influencers disseminating false information; peddling conspiracy; or promoting certain political views (Leidig, 2023; Marchal and Au, 2020; Marwick, Pippert, Furl, and Schnabel, 2025).

However, such "unconventional epistemic authorities" (Bartsch et al., 2025) take many different forms and play many different roles in the overall ecology of knowledge and expertise (Neuberger et al., 2023): First; they may present as individuals (as in the case of social media influencers) or work as collectives (as when expertise emerges from discussions or comment sections on social media or in online forums). Second; they may produce knowledge themselves (epistemic authorities; proper) or 'merely' disseminate and mediate that of others

(epistemic intermediaries; Bartsch et al., 2025). Third; they may position themselves as auxiliary (Berr, 2025) or confrontational (Sheehan, 2022) to traditional expertise. Fourth; the knowledge they disseminate may be quite similar to or a mimicry of the techno-scientific knowledge of traditional experts (Au and Eyal, 2022; Berr, 2025; Epstein, 1995), or it might be marked by greater emotional valence, by reliance upon personal experience, or by an outright aversion to rationality and facts (Au and Eyal, 2022; Marwick et al., 2025; Sheehan, 2022). Note, however, that even when traditional and unconventional expertise diverges, audiences may nonetheless consult both sources, mixing and matching as it suits them best (Ritwick and Koljonen, 2025). Thus, the reality of such actors is more complex than is given credit for in some public debates.

With alternative forms of knowledge gaining influence, and new groups of experts establishing themselves online, it is worth exploring the cultures, communities, and practices of such unconventional epistemic authorities further: How are knowledge and expertise socially embedded in these online communities? How is expertise produced here - i.e. which knowledge practices and performances of credibility underlie their epistemic activities? What role does the backdrop of "crisis" play? Within this paper, one such community surrounding the German energy crisis of 2022+ (termed F1) is explored along these guiding questions. As such, this work does not cover the breadth of unconventional epistemic authorities online, but rather delves into one specific empirical case which challenges existing views in order to leverage analytical insights (cf. Flyvbjerg, 2006). Specifically; based on the four dimensions introduced above; F1 is an example of knowledge production and claim-making which i) emerges collectively from the interactions of users of a forum; who ii) both produce knowledge themselves; as well as disseminate and mediate that of others; and iii) position themselves as auxiliary to science and traditional institutions of expertise; and who; finally; iv) trade in both techno-scientific knowledge; as well as in hands-on personal experiences with the issue at hand. Two bodies of literature; discussed below; inform this work: the concept of "lay expertise" (Au and Eyal, 2022; Epstein, 2023) and Grabher and Ibert (2014) concept of "hybrid virtual communities" (and its parent body; the "communities of practice" (CoP) concept (Lave and Wenger, 1991)).

Empirically, I present evidence from an online knowledge community surrounding the German energy crisis of 2022+. Based on 10 in-depth qualitative interviews and a 9 month-long, mixed-methods digital ethnography of over 24,000 posts within an online sub-forum (F1), I make following contributions to the debate: In line with insights from theories of lay expertise, I show how actors within this community draw from a mix of personal experiences, professional credentials, and acquired techno-scientific knowledge in making their knowledge claims credible to their peers (Au and Eyal, 2022; Epstein, 1995, 2023). Additionally, in line with the broader "communities of practice" and the more specific "virtual" communities literature, I show how actors communicate context through technical and personal detail, producing relational proximity despite spatial dispersion (Grabher and Ibert, 2014); as well as how they benefit from the affordances of online communication such as asynchronicity; anonymity; archivability (Akrich, 2010; Grabher and Ibert, 2014). Moving beyond past research, however, I additionally illustrate how actors in this community gauge the credibility of others' expertise, through assessments of posts by their content and author's past user history, as well as a 'crowdsourced' practice of iterative peer correction which involves fact checking, demands for sources specific to controversial claims, and a collective opinion-sharing on the merits of this or that argument. Finally, recognizing that with the propagation of any assessment or expertise come politico-cultural bias, power, and persuasion, I reveal a clear community culture within the forum studied, and show how this normative social structure shapes the kinds of expertises and knowledges which are accepted and disseminated there. This paper is structured as follows: first, I outline the theories of lay expertise and the broader "communities

¹ Within this paper, experts are defined structurally by their ephemeral role within a given situation as advisors (Brinks and Donner, 2025; Grundmann, 2023), not by any factual or normative evaluation of the content of their advice or by their professional status within society. Furthermore, expertise is referred to not as something possessed by experts (i.e. a form of competence or specialized knowledge), but as an evaluation or assessment given for another to consider or implement (Brinks and Donner, 2025; Eyal, 2019). In a given situation or public problem, then, multiple specialists or lay persons might contend to the role of expert by providing expertise based on their professed knowledge of the issue. Audiences then decide which expertise is authoritative or credible based on various factors.

of practice“literature, respectively, in order to illustrate the complementary nature of these heretofore largely disparate bodies of work; second, I present the methods and data utilized within this paper; then, I delve into the empirical description of the knowledge practices, community, and performances of expertise within the studied online forum, interpreting this data in light of the literatures previously outlined. Finally, I cover limitations, offer fodder for discussion and propose avenues for future research, and conclude by illustrating links between this paper and larger debates in (digital) geography regarding knowledge and expertise.

2. Knowledge practices in communities of online lay expertise

2.1. The politics of lay expertise

For the remainder of this paper, I shall refer to the unconventional epistemic authorities studied within this paper as a form of “lay expertise“, drawing from a rich and established literature within the disciplines of sociology and science and technology studies (STS). Lay expertise is defined as that “*developed or deployed by people not normally or previously deemed legitimate expert participants in the relevant social domain – whether due to their lack of credentials or formal training or some other ‘discredited’ attribute*” (Epstein, 2023; p. 85). The term has been applied to a host of different phenomena: It has denoted social movements with clear political goals; such as patients of rare or stigmatized medical disorders advocating for greater recognition and support (Epstein, 1995; Eyal, 2013), or local farmers or residents contesting scientific assessments of the nature of environmental risks to their lives and livelihoods (Irwin and Wynne, 1996; Wynne, 1989). Additionally, it remains an important perspective on the mutual exchange of knowledge within online communities, such as self-help forums (Akrich, 2010; Au and Eyal, 2022).

Analytically, the focus here has been on showing how such actors make their claims credible by both achieving validation for their own forms of knowledge, as well as acquiring an ability to mediate and communicate using formal experts’ forms of knowledge, so that lay expertise “*typically manifests as a fusion of ‘experiential’ or ‘embodied’ knowledge or tools with those that are more ‘formal’, ‘traditional’, or ‘professional’*” (Epstein, 2023; p. 87; see also Sheehan, 2022; Au and Eyal, 2022; Marwick et al., 2025; Price, 2021 for empirical examples). This is visible e.g. in Epstein’s classical work on AIDS patient activism; whom he describes as both being able to “presenting themselves as credible within the arena of credentialed expertise”; as well as “transforming the very definition of what counts as credibility in scientific research such that their particular assets would prove efficacious” (1995; 409). Especially in recent works (Au and Eyal, 2022; Epstein, 2023), the emphasis has also been on the collective nature of lay expertise as embedded in specific communities. As Epstein writes: “*in practice, such work is the product not of abstract, isolated ‘citizens’ but, rather, specific and located collective actors*” (2023, p.85). Thus, while fears regarding new actors in online expertise often paint the picture of individual nefarious influencers spreading fake news for profit or attention, in practice, lay expertise may often be regarded as embedded in specific knowledge communities.

Two interrelated aspects remain controversial within the literature on lay expertise: First, while some definitions of lay expertise are adamant that it be a form of collective mobilization based on concrete goals - policy or otherwise (Epstein, 2023); other studies view the mere exchange of knowledge and experiences among lay communities in times of uncertainty as sufficient to warrant the term (Au and Eyal, 2022). This comes to the fore especially with the advent of new forms of online lay expertise; as Ritwick and Koljonen note: “Instead of locally and culturally bounded advocacy groups; these new kinds of communities offer knowledge and collectivity without formal organization or the goal of mobilization” (2025; p. 7). This issue may; however; be one of semantics; as one might see even in the mere exchange of knowledge and

experiences online a form of “quiet activism” (Price, 2021 based on Horton and Kraftl, 2009) and thus of politics of some kind. Incidentally; these “quiet politics of the everyday” (Hankins, 2017, p. 503) are particularly visible in an example such as F1 within this paper, where users propel the political project of the energy transition by co-building DIY competences in implementing solar panels or heat pumps in their own homes.

Secondly, and relatedly, there is the question of whether lay expertise is always a *contentious* form of knowledge politics. Thus, lay expertise may fall into either the “prophets” (Sheehan, 2022) or the “allies of expertise” (Berr, 2025) camp. In theory; lay experts need not be positioned in contention with established experts (Epstein, 2023). Nonetheless; in practice the literature has focused on actors who challenge established epistemic structures (e.g. Epstein, 1995; Eyal, 2013; Wynne, 1989). This may be because it is particularly in times of uncertainty and disappointment with formal experts, elites and institutions that lay experts may leverage credibility on the basis of opposition to these established voices (Au and Eyal, 2022; Eyal, 2019; Sheehan, 2022). In this *prophets* perspective (Sheehan, 2022; Weber, 1963), when formal experts neglect relational work with their audiences – hiding behind an opaque ‘expert status’ and failing to engage with and recognize lay intellectualism – they open themselves up to incursions upon their intellectual jurisdiction by lay experts who excel at just such relational work. Importantly, the power of the prophet thereby lies always in their distancing themselves from the established authority of the priesthood (in this case, e.g. formal expert bodies, scientists or the government). This vein of research explains well the rise of conspiracy, populist, and disinformation narratives on social media (Marchal and Au, 2020; Marwick et al., 2025).

Recently, however, more effort has gone into recognizing that lay expertise may also *co-exist alongside* (Ritwick and Koljonen, 2025) or even *work with* established expertise (Berr, 2025; Epstein, 2023), disseminating and amplifying the latter without seeking to challenge (or at times even participate in) it. In the field of communication studies, online “gatewatchers” have been observed, who fact-check alternative claims to knowledge and push back against challenges to science and established expertise (Neuberger et al., 2023). Within sociology; Berr (2025) has studied “allies of expertise”- laypeople who “perceive the epistemic authority of science in society as threatened and in need of support” (p. 4). Importantly; rather than seeking to mobilize their own knowledge or gain a seat at the table with experts; “their goal is to make scientific expertise as visible as alternative claims; and to ultimately convince other laypeople that scientific expertise is the most credible and reliable knowledge to inform their opinions and decisions” (Berr, 2025; p. 4). Moving beyond strict dichotomies; Ritwick and Koljonen (2025) further observe that recipients of expertise often engage with both lay and traditional expertise depending on their needs; preferences; or simple trial and error. They may thus turn to communities of lay expertise after a disappointing experience with traditional experts; or to receive emotional support and identity in a challenging personal situation from these communities while still seeking solutions from traditional expertise (see also Akrich, 2010; Au, Capotescu, Eyal, and Finestone, 2022; Au and Eyal, 2022).

Within this paper, the empirical example of F1 illustrates the tensions above as its users are shown to be highly supportive of traditional scientific expertise, while still placing a strong emphasis on, and seeking to contribute to the state of knowledge through, their personal experiences. While users do not mobilize politically beyond the frame of the forum, many see their engagement with other users as a form of political work, ‘enlightening’ others as to the real state of things during a highly politicized and controversial public debate.

2.2. Knowledge practices in online communities

The idea of knowing as embedded in specific communities and their practices, originally popularized in the “community of practice” (CoP,

Lave and Wenger, 1991); has since flourished and evolved into a plethora of sub-types; competing definitions; and various other theoretical reshufflings. While there is much diversity in these definitions at any given point – and even more so over time – an open description of such communities of knowing might read: “groups of people who share a concern; set of problems or a passion about a topic; and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al.; 2002 in Capdevila, Cohendet, and Simon, 2018; p. 529). Members are seen as united by a common concern; voluntarily adhering to a common framework of rules and norms which focus on reciprocity; sharing; and providing mutual recognition or gaining reputation among peers (Cohendet, Creplet, and Dupouët, 2001; Cohendet, Grandadam, Simon, and Capdevila, 2014; Grabher and Ibert, 2014, 2017).

Originally, the concept focused on face-to-face interactions and physical proximity among professional or craftsman groups and intended to show how knowledge is acquired through socialization into an actively-practicing group of specialists (Lave and Wenger, 1991) – hence the term community of *practice*. As the term was popularized; however; it took on a life of its own. Drawing the line to the present article; Akrich (2010) points to online communities in lay self-help forums as a form of community of practice in which the ‘practice’ in common is less a practice and more the experiences of everyday forum users with an issue of common concern (e.g. a shared health or environmental concern) – introducing the term “community of experience”. Brinks and Ibert (2015) similarly speak of “communities of interest” (see also Müller and Ibert, 2015) as a sub-form of CoP in which members “constitute themselves around an increased enthusiasm for particular objects; topics; styles or activities” (Brinks and Ibert, 2015, p. 364). Here, a heterogeneous mix of lay persons, hobbyists and also idealistic professionals organize around their shared, strong emotions – be they passion and fun, or anger and grievances. Finally, Grabher and Ibert’s concept of “hybrid” (lay and professional), “virtual” (taking place predominantly via online communication tools) communities integrates many of these points and provides a vivid description of the quintessential contemporary knowledge community found online:

“widely dispersed and loosely coupled groups of enthusiastic users, semi-professionals and idealistic professionals who interact with one another online are able to share knowledge, generate new ideas and even self-organize quite demanding tasks of knowledge co-creation despite a fundamental lack of both physical co-location and relational proximity. Such communities circulate different types of knowledge, ranging from usage experiences to technical design details. In some instances, even procedural knowledge, the ability to effectively self-organize collective processes of knowledge creation, can be observed in virtual communities” (2017, p.537).

In this concept of the hybrid virtual community, Grabher and Ibert (2014, 2017) outline several key processes by which online forum users make their contributions of expertise credible and understandable vis-à-vis their peers; providing a valuable set of tools for understanding lay expertise: First; contrary to early claims that physical proximity be necessary for the co-production and dissemination of knowledge; members are able to effectively communicate practice context where it is not physically shared through grounded; technical descriptions of their tools; environments; and contexts (e.g. photography enthusiasts sharing the technical specs of their camera set ups for replicability when offering expertise). Similarly; members are able to utilize the archivability; asynchronicity; and quasi-anonymity of virtual communication for collective knowledge-building over time. As interactions are logged and often preserved over time; and interactions unfold asynchronously; members are able to reference past posts; follow and contribute to a discussion thread over years at a time; and supplement their textual input with embedded media such as pictures; links to other websites and videos; or homemade graphs and figures (see also Akrich, 2010). Within this paper; users of F1 display many of these processes of generating and sharing knowledge; engaging in what we might term a process of “peer

correction”; by which users’ knowledge claims and contributions are submitted to a collective; iterative process of fact-checking; commenting; and challenging by their forum peers; so that the knowledge found in F1 is not merely the sum of contributions from individual knowledgeable or influential users; but rather emerges at the collective level from the community and its “epistemic culture” (Knorr-Cetina, 1999).

The first section above outlined the contributions of the literature on lay expertise to understanding forms of unconventional epistemic authority found in forums and on social media platforms online. However, while this literature focuses much on the political dimensions of expertise (i.e. about how knowledge is made credible, positioned towards other narratives and groups in society, or deployed in policy work), it has less to say about the practices by which knowledge is generated and exchanged internally within such communities. It was thus complemented by a second rich research tradition: the “communities of practice” literature, which – while somewhat lacking in a sensitivity for power and politics – provides excellent insights into the concrete knowledge practices of communities such as the online forum studied. Together, these literatures provides the basis for a rich analysis of communities of lay expertise regarding both the negotiations of authority and performances of credibility, as well as the embeddedness of knowledge practices in social structures and platform affordances (cf. Brinks and Donner, 2025).

3. Methodology

3.1. Methods and data

This research is the first of several publications from a larger research project in which digital ethnography and qualitative interviews were conducted on multiple social media platforms and online forums. For this specific paper, between December 2023 and September 2024, a mixed-method digital investigation of a German-language online sub-forum concerned with energy politics and the energy sector was conducted. This thematic sub-forum was a subset of a larger general forum which i) covered a variety of topics far beyond energy and ii) was structured to allow for users to open accounts with self-chosen usernames which applied to any of the various sub-forums where they could iii) leave their own contributions, “likes” and “comments”. The sub-forum was structured as a continuous feed of user posts, each of which could be liked and commented by other users. Clicking on a post opened a new page showing the original post and allowing for the scrolling down to further comments. Both the main feed, as well as the comments under each post were displayed according to various algorithms which could be selected by users themselves (though the algorithms themselves remain opaque to users) – e.g. by chronological order, most liked first, “hot” topics, etc.

F1 was nominally concerned with the German and international energy sector, and in practice covered anything from the state of the German energy transition, news in conventional and renewable energy technologies, political events and updates in industry regulations, and practical tips for private households such as choosing the right energy provider or technical DIY posts about installing one’s own solar panels, optimizing one’s EV (electric vehicle) charging, or the pros and cons of owning a heat pump. However, F1’s membership arguably only grew the way that it did following the increased public concern with energy after the public energy crisis of Fall 2022 (even if it did so with a delay of over a year. Founded in February 2022 with only a few hundred members, its membership grew from 2.400 to 10.300 between September 2023 and January 2025, and has since climbed closer to the 30.000 mark). The topics covered in F1, despite not explicitly mentioning the energy crisis in many cases, only gained salience in the context of “the energy crisis” as a discursive object in German public debates. The vehemence of many claims made regarding renewables e.g. makes sense only against the backdrop of disinformation regarding the *Energiewende* circulating during the crisis, and the increased concern with equipping one’s

household with solar panels or installing heat pumps only makes sense against the backdrop of crisis narratives of energy self-sufficiency, energy-saving, and sanctions against Russian gas.

F1 was investigated via digital ethnography and qualitative interviews. A 9-month digital ethnography was conducted on F1 between December 2023 and September 2024, in which 915 original posts and some 24.000 comments underneath these posts were observed. A mixed method approach was utilized (Elwood, 2010). This consisted of weekly virtual “visits” to the forum in which the posts of the preceding week (usually some 20–30 posts) were documented in an excel table for later analysis; as well as qualitatively analyzed and documented in a “field diary”-style document. The spreadsheet documentation allowed for a sorting of the posts collected by date; user; total likes; and total comments; capturing larger trends in the sub-forum. The qualitative analysis included ethnographic notes on the contexts of posts; the interactions of users; the register of discourse; the use of sources; the structure of posts; the topics covered; and more. Additionally; in the manner of a “collage” of methods (following recent methodological advances (Freeman, 2020; Ships, 2024), I acted as a digital native in the community would and routinely chased down a variety of links, keywords, and actors ‘name-dropped’ in posts across platforms in order to fully immerse myself in the social world studied and flow with the algorithms of the platforms rather than stiffly entering search terms as only a researcher would do.

As the anonymity of the internet makes it difficult (though not impossible) to glean information on the individuals behind a given post (particularly their lifeworlds, backgrounds, and motivations), in-depth qualitative interviews were conducted as an additional source of information (for a discussion of the complementarity of ethnography and interviewing see Jerolmack and Khan, 2014; Lamont and Swidler, 2014) – though this undertaking was limited by many users’ lack of interest in participating/giving up their anonymity. In this case, 10 users agreed to participate in interviews, after being contacted via DM in the platform interface or after responding to a public post placed in the sub-forum. Those users contacted directly were chosen on the basis of their visible and frequent participation in sub-forum discussions, observed during the months of fieldwork which preceded the interview phase. A general post calling for users interested in participating in interviews was later added to open the floor for a more diverse mix of interviewees. The final distribution of the interview sample was markedly male (9/10), in their 30s and 40s, and either held a technical degree (8/10) or else was nonetheless working in the energy sector with a business or social science background (2/10). However, this seemed to match interviewees’ impression of the sub-forum’s user base overall (as well as my own, based on fieldwork), reflected in comments such as:

“I suspect, if you were to conduct a survey... I’d bet that the majority is probably male... probably leaning towards the natural sciences... and working in related professions” - research participant.

Interviews were held in German, lasted between 36 and 112 min (mean: 80 min) and followed a ‘semi-structured’ format which allowed for both the structure of a common interview guide shared by all interviews and the flexibility of an organic conversation as participants respond to open-ended questions and prompts. Interview questions covered e.g. the participants’ personal and professional backgrounds, their overall social media and internet use, how and why they came to use the subforum F1, the process behind their own contributions, how they assess others’ contributions, their assessment of the “energy crisis”, and more. Interviews were recorded (with one exception for reasons of anonymity) and transcribed ad verbatim, then coded thematically and inductively using the qualitative analysis software MaxQDA to identify overarching trends, topics, and sentiments in the data, following Lar-eau’s (2021) “listening” approach to qualitative analysis. Interview and field work extracts reproduced in this paper were chosen to represent in the limited space available larger trends observed across the body of mixed-method data analyzed. For publication in this paper, these select

extracts were translated from their original German into English using a two step process: i) a preliminary translation by NVIDIA’s Nemotron Ultra 253b licensed by the university at the time of writing, followed by ii) a careful checking by hand by the author, ensuring that the translation retained as much of the original, ‘thick’-ly read context as possible.

4. Evidence from F1: Hybrid knowledges, allegiances, and peer correction

In the following section, I illustrate the centrality of knowledge and expertise sharing in F1, conducted between lay, enthusiast, and professional users, and made credible on the basis of multiple forms of knowing - personal experience, professional credentials, and acquired techno-scientific knowledge (Au and Eyal, 2022; Epstein, 1995, 2023). I show how actors communicate context through technical and personal detail, producing relational proximity despite spatial dispersion (Grabher and Ibert, 2014); as well as how they benefit from the affordances of online communication such as asynchronicity; anonymity; archivability (Akrich, 2010; Grabher and Ibert, 2014) in order to perform a “crowdsourced” practice of iterative peer correction which involves fact checking, demands for sources specific to controversial claims, and a collective opinion sharing on the merits of this or that argument. Finally, I reveal a clear community culture within the forum studied, and show how this normative social structure shapes the kinds of expertises and knowledges which are accepted and disseminated there.

4.1. The role of sharing knowledge and expertise in F1: A hybrid community

In the everyday interactions observed during field work, users spent much of the forum’s virtual space exchanging and collectively producing knowledge. As the examples below show, some users took posting in F1 quite seriously, contributing long, detailed, personal, and yet highly technical posts and comments. When asked what F1 was all about, or what distinguished it as a sub-forum, participants highlighted the role of F1 in providing expertise for lay persons, hosting in-depth exchanges between knowledgeable users (both formal expert and interested lay), and spreading news and articles on current developments – often prior to their discussion in mainstream media. Indeed, unlike what the term “lay expertise” seems to imply, online knowledge communities are in fact often made up of a hybrid mix of both lay and professional actors (Grabher and Ibert, 2014). The following extract illustrates the hybrid nature of F1, and its richness as a source of collective knowledge-building, as well as of expertise for individual laypersons with concrete questions.

“[F1 is] a conglomerate of those interested in topics surrounding the energy economy. On the one hand, I can imagine that many ‘prosumers’ are active there, so people who are dealing with the issue for the first time, like from an individual household perspective [...] Maybe someone who is interested in purchasing an EV, maybe even already has solar panels on their roof, and is just looking for niche knowledge in this pretty difficult-to-understand field. And on the other hand also employees working in the energy sector who simply wish to stay up-to-date with discussions surrounding the topic and enjoy engaging in discussions” - research participant.

This sharing of knowledge often took the form of ‘call-and-response’, by which the original poster would ask a question in the title of their post, often elaborating on the context of their inquiry in a brief comment below, and other F1 members would answer the question in the comment section below. Oftentimes, this occurred in a ‘crowdsourcing’-like fashion, with many different users contributing a fragment to the answer, which emerged at the collective level as a detailed, differentiated analysis of the subject at hand. Consider the example below, drawn

from fieldwork, in which different users iteratively contribute to a first users' lay question regarding their own home solar panel set up (it is not necessary for readers to understand the technical jargon below, though its very presence is notable):

USER A: "Hey, we've had a 6 kW solar panel system and a 6.5 kWh battery in operation for two years as part of our newly built home. As solar modules are so cheap at this point, I'm thinking about adding them to the carport. A question on this: can subsequently purchased modules in principle be integrated into the existing inverter? I would then install the panel myself if necessary and have an electrician connect it. Sorry for this absolute noob question but I am a layman in the field ☐".

USER B: "Technically yes, provided you still have an MPPT left on the inverter. It is possible though that the inverter and/or storage system will then reach the power limit much more quickly and you will give away a relatively large amount of electricity produced [...]".

USER C: "Sure, you won't manage to exceed the 6 kW of your inverter at peak power, but if it's not perfectly sunny you'll get more out of it".

USER D: "You can also simply connect the new modules to a separate inverter (e.g. from [brand name]). This means that the battery cannot be charged, but you only have to connect it via one phase. This should be significantly less effort".

Additionally to addressing concrete questions in long-form, F1 is a depository of sources, an up-to-date feed of breaking energy news to be dissected and discussed, and a place to find insider information before the general public.

"I think for many, it's probably similar as it is for me, a collection of sources or just this assembling together of in some way interesting articles on the topic, and this shared exchange"- research participant. "On energy topics, [F1] can actually provide a lot of information about what's currently happening in the market. Like just now, in June, there was this separation of the spot market in France and so on, which led to suddenly high electricity prices [...] and through [F1] you could find out faster why the prices were so high [...] and you could see from two or three people, who might be traders or something, that's what I'm guessing, who wrote: 'This and that occurred, and the electricity market has now split into local price zones.' - and that information was only available in the news a day later"- research participant.

4.2. The basis for users' knowledge contributions: A hybrid language

F1 members made such knowledge contributions to the inquiries of others on the basis of several factors: by talking about personal experiences, by invoking their own professional status and experiences, or by simply making a knowledge claim (with or without sources) or giving an opinion. First, users frequently met their peers' claims, news headlines, and insights from linked reports with relevant personal experiences. Underneath studies reporting in which types of houses or under which energy price conditions heat pumps are worth installing e.g., users posted detailed descriptions of the conditions of their homes (e.g. area, construction date, state of insulation, gas usage and costs per year, potential savings after a switch to a heat pump taking into consideration the costs of purchase and installation, etc). They did so either to make a point vis-a-vis the claims of the study, or in order to ask the forum for advice on whether a heat pump would be worth it in their unique situation (communicating context through technical and personal detail in the way described by Grabher and Ibert (2014)). Other users countered their arguments with data or their own personal experiences, and offered recommendations (see also the example in 4.1 above).

However, within F1, amateur and professional expertises could be found side by side, with many users claiming professional credentials in making their points. Underneath a post asking how in future phases of low renewables in the energy mix (when there is little sun and wind) can

be bridged, a user prefaces their answer with the statement "I work in a large wind and solar firm", while another writes "I currently work as a researcher addressing exactly this question". In response to a call for expertise regarding possible subsidies in renovating a roof, a user writes: "Energy consultant here: [...] Recommendation: [...]". Overall, many contributions are prefaced with an "authority clause" in which professional status or university accreditation as an (electrical) engineer, physicist, chemist, etc. is claimed - though this does not spare such users from their peers' scrutiny (see below).

Lastly, many claims were made on the basis of explicit or codified knowledge, not experiences made at work or at home. While many such statements are made from the users' own (perceived) knowledge base, others are backed up with an extensive list of sources for easy verification.

4.3. Checking one another's claims: An iterative process of knowledge verification

In each case, whether or not posts include sources or well-reasoned arguments from the get-go, any post may be subject to a process of 'peer correction' after posting, outlined below. While discussions in F1 included the usual humorous, opinion-based, or altogether off-topic contributions found in many internet communities, the overall register of discourse was techno-scientific, factual, and civil. Interview participants frequently mentioned being positively surprised at the quality of interactions on F1, especially compared to other sub-forums on the General Forum, as well as to the internet as a whole. This was a due in no small part to users' regular knowledge work in keeping one another in check and vetting individual contributions. While users are careful with information they discover on F1, many see it as a largely reliable source for information which somewhat rivals other more "professional" gatekeepers of knowledge when these fail. Particular lip service is paid to factual, scientific ways of arguing (see also Berr, 2025); reflecting the community's specific culture of knowing (their "procedural authority"; Cowan, David, and Foray, 2000).

"So... normally Journalism should be promoting facts and, if necessary, qualifying opinions that are expressed in articles. But that often doesn't happen as much as it used to and then the users [of F1] take over that task to some extent [...] it's certainly not a professional source, [...] but of course information that comes from [F1] can also be reliable and accurate"- research participant.

"[there are] people who make an effort to describe things in a particularly factual way and others who don't, and I definitely assign a higher value to their [the former's] contributions. But I wouldn't say that I would automatically accept all of that without questioning it just because someone posted it"- research participant.

Users report several strategies for discriminating between trustworthy and non-trustworthy posts. Overall, users value "factual" presentation of information which can be independently verified based on previous knowledge or a brief use of Google, as well as relying on the reputation of users who post high-quality content often (see also Cohendet et al., 2001, 2014).

"you think it's credible from the way it's presented or from your previous experience and sometimes there are things where you google it, for example, and see if you can find other evidence [...] you do some research because you are given a number and at some point you ask yourself, wait a minute, where does [that number] actually come from?"- research participant.

"of course it's helpful if you know the users a bit - I'd say - and I mean they also post on different topics and if you realize in one topic, where I have the knowledge myself, I can judge - okay, what he's saying isn't complete nonsense, then I also rely to a certain extent on the fact that if he argues in the same way on the other topics that he won't suddenly start to be a complete fool, but that if he argues so

well on one topic and knows his stuff, then he won't be completely wrong on the other topic"– research participant.

However, the burden of evaluation does not lie on the shoulders of each individual for themselves. As users themselves note, a certain quality of posts within F1 is upheld by a process of collective, iterative mutual correction – something I term a process of 'peer correction'.

"I think it's more of an exchange of opinions, so what typically happens is that someone writes something and either you have a question about that exact thing, you have a follow-up or something like that, or you want to respond because you think that what the person has written isn't quite right, or you have a differentiated analysis of it, or you can provide a source for it, or something like that"– research participant.

"I mean it's a forum, right - if someone writes something [...] then the others also comment and then either write underneath it is total bullshit, what you write there, [...] or nobody writes anything about it, but the comment gets a lot of upvotes. Then that means, at least for me in [F1]: okay, because I know that there are a lot of people there who know a lot about it, [and if they] find it plausible, even if I'm surprised, then that's a hint for me that it might be true and then I either follow it up myself or leave it at that if it's plausible enough"– research participant.

Users also frequently asked other users to provide further sources or clear reasoning for their claims, and these demands were frequently met. Take the following example of a knowledge claim made without sources: When User B contests an assessment by User A, they are asked by User C to provide sources ("This claim would be stronger with a source.") – which they do, leading to a civil "thanks" from User C.

USER A: "Germany is not being "deindustrialized". That is simply nonsense. Companies are relocating, as they have always done, because they have lower labor costs there. It has always happened and will always happen. Also because customers are not prepared to pay the prices that would be necessary to buy reasonably fairly produced products."

USER B: "But the figures do point in that direction, even if you don't like it. Of course there has always been outsourcing etc., but what we are currently seeing is far more, both in historical comparison and relative to other exporting nations or other European states."

USER C: "That claim would be stronger with a source."

USER B: [provides 9 sources to the topics of GDP, Consumer Trends, Investment, Inflation, etc. with links].

USER C: "Thanks".

Similarly, when users posted graphs (depicting e.g. trends in the German energy mix), other users frequently demanded that the axes be labeled more clearly, the units changed, or offered other methodological critiques. Consider this exchange under User A's post of a graph of Chinese solar module exports to the EU which they qualify as follows:

USER A: "I had/have a bit of time on my hands, so I took a look at other data from the Ember-Climate dataset. This time the data comes from Ember's China Solar Export [link]. Questions, suggestions and criticism are welcome."

USER B: "Poorly-chosen visualization of the Y-axis".

USER A: "How could it be better?"

USER B: "If it started at 0, you could estimate the individual values better".

USER A: "True. You're right, it looks better. I had it on auto-scaling, that was a bad idea. [updated graph inserted]"

User B had a critique to offer, which User A accepts and implements in a factual, civil manner (something not always observable in internet forums) as it abides by the procedural authority which is currency in F1. Not all suggestions were implemented this smoothly, and many as nit-picky as that above were simply ignored. In other cases, users

discussed at length the validity of the graph's underlying sources. However, the exchanges illustrate the collective, iterative nature of peer correction. For some users, knowing they will encounter this peer feedback shapes the way they write their posts and even which posts they decide to contribute in the end.

"I also try to give a few links to examples and I often delete a comment if I can't find a real source for it because I realize, ok, if I post it like this without a source, then people will just say, „ok, where is the source? Now send me the source, otherwise I won't believe it "and I've already deleted a comment more than once, just when I was writing, because I just couldn't find a suitable source [while at my desk] at work, which I had read or seen in the last few weeks"– research participant.

4.4. Allegiances, culture, and social class: The E-bourgeoisie

Unlike much previous work on communities of lay expertise as epistemic 'challengers' and political activists (e.g. [Au and Eyal, 2022](#); [Epstein, 1995](#)), support for the (at the time) acting minister Robert Habeck and the Greens proved politically and culturally dominant within F1. This ties in with a general stance which could be observed in the sub-forum of defending science ([Berr, 2025](#)) and clearing the way for a successful energy transition which was seen by many as the way forward for Germany and the world. In the words of one user:

"it's clearly a clientele that supports the Energiewende, or the transition to renewable energy [...] many users welcome and want to promote this by sharing their knowledge... and I think there do exist also critical voices, of which there are very, very few, people who want to go back to nuclear power or something like that, who I think, quickly face backlash in the comments [...] it really does lean in one direction, like it's not mainstream society discussing there" - research participant.

Indeed, users displayed clear allegiances and were willing to defend them. Several types of epistemic corrective work ("gatewatching", [Bartsch et al., 2025](#)) were observed in the sample of study: First, some posts dealt with correcting mistakes made by otherwise credible media outlets, as when e.g. kWh and MWh were conflated in an article, or an extra 0 had slipped into the estimation of the costs for the energy transition. A second class of posts linked in an approving manner to articles from the media which highlighted myths, fake news, or successful smear campaigns against the energy transition, the Greens, or similar topics. Many users contributed stories of family members (particularly of older generations) for falling for such narratives and resisting what were seen as rational moves towards opting for solar panels, electric vehicles (EV) or heat pumps for private household use. Finally, several posts explicitly linked to videos from public figures from (social) media who opposed the energy transition and asked their forum peers for a point-for-point rebuttal of key talking points in order to better convince friends and family of the falseness of such claims. F1 members obliged and offered sources (such as news articles, advocacy or corporate reports, scientific articles, etc.), counter-arguments, personal anecdotes and political opinions in the comment section below. This form of (perhaps not quiet, but localized and mundane) everyday activism emerged in interviews as a key motivation for many users' participation in the forum:

"That's also just important, of course, to try to I guess go against the grain - like [a popular German tabloid media], [a German far-right party], and so on [...] to provide more factual information on these topics" - research participant.

Culturally, the energy transition, and renewable energy as a symbol of a brighter, greener future, was thus highly salient emotionally and served to promote a strong sense of identity among F1 members. This cultural attitude, which shaped the knowledges drawn upon and

assessments made, may in part also be influenced by the material conditions of many F1 users. While I lack the data to representatively show the social background of F1 users, a vocal middle class, homeowner segment of the sub-forum was highly visible in fieldwork, boasting of the yields of their solar panels, the reach of their electric vehicles (EV), and the ‘smartness’ of their household electrical appliances in syncing with their dynamic electricity contracts which adapted to fluctuating market prices. Together, we might speak of F1 hosting (among other sub-currents) a budding ‘E-Bourgeoisie’ which counted itself among the winners of the energy transition, identifying strongly with its ideological values and able to profit from its technological advances due to possessing the financial and property capital, as well as knowledge or social capital to purchase and install solar panels, EVs, home batteries, heat pumps, and innovative household appliances.

Additionally to feeling that they were contributing to a brighter future by relying on renewables and supporting the energy transition, as well as resisting what they saw as false and harmful narratives, these F1 members also appeared to enjoy performing a certain tech-savvy masculinity. This was reflected in the pride they showed in their (often self-installed) gadgets and systems, which required considerable effort and knowledge to install, maintain, and optimize to include various appliances and efficiently make use of spontaneous price falls. During particularly low market prices (often the result of a high proportion of renewables in the electricity mix due to beneficial sun or wind conditions), these F1 members would post screenshots of the low prices they were paying in a given hour due to their above-mentioned dynamic electricity contracts (e.g. 3–4 cent per kWh) with captions such as *“It’s moments like these that make saving energy fun!”*. To this, other members might post their own screenshots in a play ‘bidding war’, boasting even lower prices (*“Does this mean I win?”*) or celebrating particular uses of the cheap electricity thus gained. These uses tended to reflect a very middle class-leisure, masculine culture, as indicated by user comments: *“Maybe I’ll rev up my gaming PC and spend the rest of the day playing XY”*, *“Looks like we’re firing up the electric grill today”*, *“Generated an easy X kWh today - 20 went straight into the car”*, or *“Only 10 [kWh] into the car, but I’ve got another 10 heating the pool”*.

5. Discussion and limitations

This paper looked at alternative knowledge actors online during the German energy crisis through the lens of “lay expertise” and knowledge communities and practices. Several research questions regarding the online cultures, communities, and practices of these actors were posed: First, *how are knowledge and expertise socially embedded in these online communities?* It was shown that they emerged at the collective level from repeated interactions between users which engaged in depth with one another’s contributions on the basis of reciprocity, reputation-building, and a shared notion of ‘procedural authority’, as well as, by and large, socio-political values (illustrated by the dominance of pro-Energiewende and ‘myth busting’ rhetoric, as well as by the visibility of a masculine, tech-savvy homeowner segment within the forum). This collective embeddedness in a forum community and culture with repeated engagement with one another sets the members of F1 apart from other forms of alternative knowledge actors, such as individual influencers making claims by unidirectionally grabbing the attention of large followings on social media for their own personal (often financial) gain, or controversial figures from fringe parties taking to social media to propagate political claims vis-a-vis the public.

Second, *which knowledge practices and performances of credibility underlie their epistemic activities?* As argued above, members of F1 engaged with one another’s contributions in repeated, in-depth interactions on the basis of a shared procedural authority (i.e. rational, techno-scientific language and references to science or established expert institutions, as well as personal, hands-on experience with installation, etc.). In a process of ‘peer correction’, users verified others’ claims, demanded sources or clarification of arguments, did their own background research on the

content of or user behind claims, and otherwise showed themselves to be reflexive and critical in their co-production of knowledge and reception of others’ expertise. As such, knowledge practices and performances within F1 was set apart from that of other online forums and websites where users may only go as far as one-off interactions marked by superficial arguments, the unchecked spreading of disinformation, or extreme political polarization.

Finally, *what role does the backdrop of ‘crisis’ play?* The backdrop of crisis gave the often highly technical and dry debates within F1 a political salience and personal significance to users who sought clarity among disinformation and polarization in public debate, or who saw in their private installation of solar panels or heat pumps a form of refuge from the energy shortages and lack of energy security which marked public news. The crisis thus provided many with the motivation to participate in discussion, sharpened the forum into a ‘counter-space’ to disinformation and anti-Energiewende rhetoric, and arguably led to its growth and prominence as a sub-forum in the first place.

There are several limitations to this research, from which emerge opportunities for future research. First, as an explorative study, this work focused on broad-strokes outlines of the epistemic community and its culture. In future research, a greater emphasis could be placed on specific issues, such as problematizing the starkly gendered and class-based sphere of technical online discussions surrounding energy, as well as a general intersectional perspective on the social factors which encourage or prevent one to share one’s opinion in an online forum. While no representational survey of users was possible, my ethnographic reading of the forum’s contributions suggests F1 to be a highly masculine, technical, and middle-class space. Indeed, the techno-scientific foundation of users’ contributions (and the frequent self-identification as an engineer, mechanic, etc.) was notable. Perhaps there are thus also insights to be won here about the influence of networks of professions on expertise (Kuus, 2021); as users’ backgrounds undoubtedly shaped the expertise produced in F1. More broadly; in the future; exploring the diverse contexts of online lay expertise would be crucial (Epstein, 2023) – comparative studies of female dominated and male dominated spaces; or of class and ethnic differences in regards to knowledges favored and allegiances professed would be valuable (e.g. Marwick et al. (2025) recent work showing the intersection of conspiracy theories, New Age beliefs, and marginalized groups online).

Second, within my online ethnographic approach, the identities and stories behind individual users and their posts was not easily verifiable, as forum posts only revealed so much about users. Additionally, while allowing for some measure of counterbalance, the interview sample was neither representative, nor untouched by issues of participation bias, with many interview participants showing themselves to be (and at times explicitly identifying as) particularly outgoing, eager to discuss, and happy to ‘contribute to science’. Nonetheless, the discourse and social interactions observed during 9 months of fieldwork provided rich data on the character of the community of F1 as performed within the arena of the forum – a space beyond which most users appeared not to interact with one another, anyway. As discussed above (3.2), I also utilized a collage of methods in order to fully immerse myself not only in the community of F1, but also in adjacent cultures and communities, by following up on links to platforms such as mainstream news websites, YouTube, or X. In doing so, I was able to capture the landscape of information at the backdrop of which users contributions in F1 could be seen (e.g. currently circulating media narratives on the energy crisis/transition, viral videos by science communicators on YouTube, or epistemic clashes fought out between prominent scientists on X).

6. Conclusions

Within this paper, I brought together insights from two largely disconnected literatures: that of “lay expertise” from the disciplines of sociology and STS with its focus on political issues of participation and credibility, and that of “hybrid virtual communities” (via the

“communities of practice” literature) with its focus on how knowledge practices in different communities shape innovation. While the former has traditionally concentrated on studies of controversy in the field of medicine and patient activism (Akrich, 2010; Au and Eyal, 2022; Epstein, 1995, 2023; Eyal, 2013; Prior, 2003), and the latter on not overtly politicized economic processes of innovation or technical knowledge sharing (Brinks and Ibert, 2015; Capdevila et al., 2018; Cohendet et al., 2001; Grabher and Ibert, 2014; Müller and Ibert, 2015), in this paper I introduce the novel empirical backdrop of energy technology and politics, as well as an element of national crisis, reflected in users’ overt political allegiances and motivations (4.4). Furthermore, while past research has often lumped various different alternative knowledge actors together as threats to science, order, and truth, I make a novel contribution by illustrating that *lay* need not mean *lacking*. Unconventional epistemic authorities come in many shapes and sizes, some of them - as this paper empirically demonstrates - possessing rather sophisticated forms of knowledge production, sharing and peer-verification. Future research should aim to represent such actors and their communities in a differentiated manner - both empirically and theoretically. Research on the role of lay expertise as “allies” (Berr, 2025), rather than as opponents and challengers, of traditional expertise has begun to take this step. Further research on the role of online lay expertise specifically as “green transition expertise” (Frandsen & Haselbalch, 2024) and a larger awareness for their role in mediating between traditional expertise and actual implementation of the energy transition might follow. Detailed empirical accounts, such as the one provided within this paper, are suggested to be a vital component of such an agenda, as empirical specificity may serve as a counterbalance to tendencies to generalize in theorizing.

Additionally, moving forward, stronger interdisciplinarity between geographies of knowledge (e.g. surrounding CoP) and research on expertise (e.g. surrounding “lay expertise”) are suggested to be fruitful. While the former has provided rich insights into the concrete knowledge practices of communities, the latter complements this angle with a keen eye for the political dimensions of expertise, as well as for the performative aspect of experts and their need to generate authority and credibility. This theoretical collaboration also drives home the point that geographies of expertise are not merely geographies of knowledge under a different label (Brigstocke, Bresnihan, Dawney, and Millner, 2021). While geographies of knowledge are well-established (particularly in economic geography); expertise remains underexplored within the discipline (with the exceptions of e.g. Brigstocke et al., 2021; Kuus, 2021). Thus; this paper follows a recent theoretical shift in geography towards creating a more distinct body of “geographies of expertise” (Brinks and Donner, 2025) which explores performances of authority and credibility, as well as the embeddedness of expertise in communities or coalitions - and does so with a special sensitivity for the influence of ‘digital disruptions’ (such as the online communities of lay expertise represented empirically within this paper).

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work the author used Nemotron Ultra 253b in order to translate select interview quotes and field work extracts from German into English. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the published article. No AI-assisted writing tools were used in any other portion of the text.

CRediT authorship contribution statement

Friedrich Donner: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

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