



Participatory Governance Practices at the Democracy-Knowledge-Nexus

Eva Krick¹

Accepted: 23 May 2022 / Published online: 7 July 2022
© The Author(s) 2022

Abstract Against the background of an increasing dependency of governance on specialized expertise and growing calls for citizen participation, this study discusses solutions to the tension between knowledge and democracy. It asks: Which institutions and practices add to striking a balance between knowledge-based decision-making and the involvement of the affected? Based on the social studies of science, knowledge and expertise as well as democratic theory with a focus on participation, representation and inclusion, the study first identifies quality criteria of expertise and participation, and then, with reference to two quite different, up-and-coming empirical answers to the epistemic-democratic tension, spells out the conditions of realizing these criteria in practice. In focus are a) highly complex, multi-layered structures of policy deliberation and advice that combine expert panels with a range of public input channels and b) the involvement of ‘lay experts’ into policy-making through participatory knowledge practices such as ‘service user involvement’ or ‘citizen science’. The study underlines, inter alia, how claims that transcend individual viewpoints and integrate a multiplicity of experiences and concerns are of particular democratic and epistemic value; it points to the key role of organized advocacy groups when it comes to credibly combining a mandate to speak for others with useful and reliable experience-based expertise; and it illustrates the relevance of conflict-minimising institutions for the making of public policies.

Keywords Democratic theory · Epistemic-democratic tension · Citizen participation · Public engagement, experience-based knowledge · Policy advice · Lay expert · Policy-making · Governance · Deliberative democracy · Expert knowledge

✉ Eva Krick
eva.krick@arena.uio.no

¹ ARENA Centre for European Studies, University of Oslo, Oslo, Norway

Introduction

This study deals with the relationship of democracy and knowledge in the policy-making context. More specifically, it zooms in on a certain kind of knowledge, i.e. the specialized knowledge of experts ('expertise'), and on a certain source of democratic legitimacy, i.e. the participation of those affected in political decision-making. Both expertise and political participation are key sources of authority and legitimacy in the policy development phase, but there is also a natural tension between the specialization and independence logic of reliable expert knowledge, on the one hand, and the equality and inclusion imperative of democratic participation, on the other. At first sight, this 'epistemic-democratic tension' seems to leave us with the unsatisfactory choice between notoriously suboptimal democratic rule or elitist rule of the knowers. This contribution does not leave it at this apparent dilemma, but discusses tangible ways of reconciling epistemic and democratic demands.

To be sure, neither the two demands to policy-making, nor attention to the epistemic-democratic tension is new. In fact, the tension is as old as democratic governance, but it has been aggravated by two more recent societal shifts that can be summarized as an 'expertization' and a 'participatory turn' of modern governance: As a result of quantum leaps in technical development, of the dynamics of globalization and social differentiation as well as a recent history of world-spanning crises, policy problems have become more and more complex and the dependency on specialized knowledge to regulate public issues has increased (Brown 2009; Fischer 2009; Krick 2021b). The last decades have also seen a sharp and steady increase of access to information and scientific knowledge, growing levels of educational attainment around the world and a global shift towards 'knowledge societies' and 'knowledge markets' that rely on – and bring about – highly specialized societies (Gornitzka and Krick 2018; Holst and Molander 2017). Spurred by a general rationality mandate of public policy-making, the 'ceremonial worth' of expertise (Meyer and Rowan 1977) and a widespread belief in the merits of 'evidence-based policy-making' (Straßheim and Kettunen 2014), policy-makers have become more and more inclined to base their political choices on expert knowledge to retain credibility (Krick and Gornitzka 2020). The rise of powerful, detached expert bodies is one of the consequences of this development, the spread of technocratic governments, especially in times of crises, is another (Bickerton and Accetti 2017; Krick and Holst 2019; Majone 2001).

Partly as a response to 'expertization' and 'scientization' trends, public pressures have increased to 'democratize' public policy-making by strengthening the transparency, social embedding and democratic control of expert bodies (Busuioac 2009; Jasanoff 2003; Lövbrand et al. 2011; Krick and Holst 2019; Krick et al. 2019). With influential alternative schemes such as 'post-normal science' (Funtowicz and Ravetz 1993), 'mode-2' (Nowotny et al. 2001) and the 'co-production' of knowledge (Jasanoff 2003), science (and technology) studies have contributed to the debate about 'opening up' sense-making practices to increase the validity, usefulness and legitimacy of expertise-based governance.¹ Apart from an uneasiness towards the

¹ To be sure, these schemes differ substantially, and the general idea of 'opening up' or 'democratizing' public knowledge production is not new (see, for instance, the notion of (participatory or collaborative)

power and the wanting accountability of experts, recent democratization pressures have further been fueled by the crisis of confidence in the traditional model of representative democracy: With decreasing election turnout and party membership as well as declining levels of public trust in state institutions, citizens' demands to tap new sources of legitimacy, participation and responsiveness have been raised more loudly, and, across Europe and the US, governments have responded to this pressure by attempting to engage the general public more directly into policy-making (Brown 2009; Fischer 2009; Irvin and Stansbury 2004; Saward 2010).

The double development of an 'expertisation' and a 'participatory turn' of modern governance has in some ways accentuated the tension between epistemic and democratic demands to policy-making further, because knowledge-based policy-making and participatory governance tend to draw into different directions and the views of the public and those of experts do not necessarily coincide. In fact, there is often a "noticeable tension between what scientists and technologists consider feasible and what the broader public finds acceptable or desirable" (Hansen and Allansdottir 2011: 609; see also Jasanoff 2003: 237; Young 2000: 53). Nonetheless, these perspectives need to be integrated in the course of public policy-making when we take both the participatory and the epistemic demand equally seriously. In direct collaborations between experts and non-experts, however, knowledge hierarchies often translate into power hierarchies to the advantage of experts (Epstein 1995: 429; Jasanoff 2003: 237; Young 2000: 53). What is more, the viewpoints of experts and citizens need to link up in a meaningful way with policy-makers. It is therefore more important than ever to ask: How can epistemic and democratic demands be reconciled in the phase of policy development? How can experts and citizens' viewpoints be interconnected and fed into the policy process? Which institutions and practices add to striking a balance between knowledge-based decision-making and the involvement of the affected?

This study shows that there are positive ways of responding to the epistemic-democratic tension and it contrasts two up-and-coming approaches:

a) Complex, multi-layered structures of policy deliberation and advice that include a highly mixed range of actor groups and combine, for instance, a classic expert commission with a variety of public input channels such as 'minipublics'², online consultation tools or surveys (here termed: 'complex deliberative arenas' or, more specifically, 'mixed, multi-layered arrangements of policy advice and consultation').

b) The involvement of lay experts in policy-making through participatory governance practices such as 'service user involvement' or 'citizen science'.

Footnote 1 (continued)

'action research' originally coined by Lewin 1946); yet, the movement seems to have gained momentum during the last two decades.

² 'Minipublics' are often defined as randomly selected, deliberative citizen participation fora, such as 'planning cells', 'consensus conferences' or 'citizen juries' (see Brown 2009: 251; Krick 2021b, 26; Steiner 2012: 33), but some authors understand the notion in a wider way that includes town hall meetings and other open access consultation forums (see Curato/Böker 2016: 174f.; Fung 2003: 338f.).

Both practices seem to be principally capable of reconciling participatory governance and expertise- and evidence-based decision-making, but they also have to handle a range of dilemmas and they do this in different ways. While one relies on – and grapples with – maximum complexity, since it invites the broadest possible spectrum of actor groups into the deliberation process, the other one seems to minimize complexity by merging the roles of expert and citizen and attributing them to one and the same person. This study scrutinizes the potential of the two approaches, points at key concerns to consider when using these practices and develops conditions that contribute to high scores on both normative dimensions.

Before the key notions of expertise and participation are explored and conceptualized in the section entitled “[Conceptualizing expertise and participation](#)”, the upcoming section locates the study within the state of the art. The sections “[Complex, mixed and multi-layered deliberative arenas](#)” and “[Lay expert involvement](#)” discuss the democratic and epistemic credentials of multi-layered advisory arrangements and lay expertise, respectively, and point at conditions that help to score on both dimensions. In the conclusion, the approach of the study and the lessons learned are summarized and interconnections with a range of research debates are pointed out.

The Epistemic-Democratic Relationship in Social Science Debates: The Study’s Theoretical Perspective Against the State of the Art

The relationship between expertise and participation and between experts and citizens has been subject to much debate in different fields of the social sciences. Some fields, such as agency and delegation research, tend to stress conflicts between the autonomy of ‘de-politicized’ expert bodies and the accountability imperative of democracy (Ennsner-Jedenastik 2016; Majone 2001).³ Other fields of research have rather made out room for reconciliation, and these are the debates that this study builds on: Within political theory, deliberative democracy’s ‘systems perspective’ has made an important point in emphasizing that the ‘ethical’, ‘epistemic’ and ‘democratic’ functions of democracy do not have to be simultaneously fulfilled by every single political institution on its own, but can be distributed between institutions within a system (Mansbridge et al. 2012). Different venues can share the work, with some being more expert-based, others representing the people well, and again others resolving conflicts of interest. Yet, this ‘division of labour’ is not without risks. If the venues of a system are not well interlinked, the different views of stakeholders, policy-makers, scientists and citizens will not be confronted with each other. This can strengthen knowledge hierarchies and other power imbalances, lead to translation problems and reinforce dichotomies between different groups, such as between ‘citizens’ and ‘experts’ (Brown 2009: 253). Some recent studies in the field, which focus on ‘coupling’ minipublics with representative institutions to

³ A strong attention to the *divides* between experts and citizens also seems to characterize contemporary public debate around populism, technocracy, distrust in experts, disinformation and fake news to a considerable extent.

ensure transmission and impact of participatory input, deal with this problem, and they are particularly insightful for the analysis of mixed, multi-layered advisory and consultation arrangements in the section [Complex, mixed and multi-layered deliberative arenas](#) (Curato and Böker 2016; Hendricks 2016; Setälä 2017). These studies are complemented by democratic theory insights into questions of representation, participation and inclusion (e.g. Brown 2009; Fung 2006; Ryfe 2005; Steiner 2012; Urbinati and Warren 2008; Warren 2002; Young 2000), and by the discussion of an exemplary case of a multi-level policy advisory arrangement that managed to balance epistemic and democratic demands to a significant extent (Krick 2021b).

From a different perspective, the social studies of science, expertise and knowledge also deal with the reconcilability of epistemic and democratic standards in processes of policy-making. Many contributions have stressed the manifold sources of useful knowledge, not least in the policy context, that stretch far beyond scientific knowledge (see e.g. Blume 2017; Collins and Evans 2002; Eyal 2019; Corburn 2003; Grundmann 2017; Jasanoff 2003; Maasen and Weingart 2005). The necessity to reconsider and readjust the detachment and closedness of science is often stated and a ‘democratization’ of science, knowledge and expertise has often been called for in these studies (see e.g. Jasanoff 2003; Maasen and Weingart 2005; Nowotny 2003).⁴ Yet, it is not always spelled out what exactly a democratization would presuppose and how it could be realized in the face of democratic dilemmas, epistemic-democratic tensions and collective action problems. Particularly interesting for the study of lay expert involvement are those works in the field that examine the knowledge resources of ‘ordinary citizens’, and amongst them those that highlight the representativeness challenges that come with involving only small numbers of external actors into policy-making (Barnes 1999; Blume 2017; Jones et al. 2021; Lehoux et al. 2012; Martin 2008; Meriluoto 2017; Pols 2014). When conceptualizing expertise in the upcoming section, studies that theorize about the conditions of reliable, persuasive and useful expertise of different origin are built on in addition (Beck and Forsyth 2015; Collins and Evans 2002; Grundmann 2017; Haas 2004; Holst and Molander 2017; Krick 2021b; Lentsch and Weingart 2011) as well as exemplary empirical studies of patient and service user expertise (Epstein 1995; Meriluoto 2017; Noorani 2013).

Conceptualizing Expertise and Participation

Based on debates in the social studies of science, knowledge and expertise and on democratic theory with a focus on participation, representation and inclusion, this section conceptualizes the notions of ‘expertise’ and ‘participation’ as key terms of this study, and, in the course of this, specifies what constitutes ‘good’ expertise and ‘good’ participation.

⁴ This appeal extends to contemporary public and political debate. See e.g. the Wikipedia entry on ‘Democratization of knowledge’ (https://en.wikipedia.org/wiki/Democratization_of_knowledge) or the EU Commission-sponsored platform eu-citizen.science (<https://eu-citizen.science/about/>).

Expertise can be paraphrased as the specialized knowledge that experts hold. From a sociological-relational viewpoint, ‘expert’ is a social status, a role that an audience attributes to somebody who is deemed to hold (or qualified to generate) reliable knowledge about a certain issue (Eyal 2019: 22; Krick 2021b: 46f.; Straßheim 2008: 292). Someone who is believed to be an expert is furthermore expected to give advice, make judgments, mediate or identify courses of action (Eyal 2019: 24; Funtowicz and Ravetz 1993: 748; Grundmann 2017: 26, 42; Jasanoff 2005: 3; Nowotny 2001: 151; Krick 2021a: 11; Straßheim 2013: 68f.). ‘Expertise’ (as well as ‘expert’) is an ‘epistemological badge’ that signifies a high reliability and usefulness and often presupposes a certain *disinterestedness* or objectivity of those in the role of an expert (Haas 2004: 573, 576; Krick and Holst 2019: 126; Lentsch and Weingart 2011: 361; cf. Grundmann 2017: 26, 45). Expertise usually relates to something that is to some extent original, *non-ubiquitous* and thus *not held by (almost) everyone* (hence ‘specialized’ knowledge) (Krick 2021a: 11). One would usually not use the term simply for everyday knowledge that most people acquire by doing something often (e.g. riding a bike or or washing up). Expertise claims are furthermore particularly useful and reliable when they *transcend an individual perspective*, i.e. draw on manifold observations and a certain agreement amongst experts (Beck and Forsyth 2015: 6; Jones et al. 2021: 562; Lentsch and Weingart 2011: 367). *Multi-perspectivity*, a balance of viewpoints or even consensual closure consolidate expertise claims and lend them a specific kind of objectivity (Holst and Molander 2017: 248; Krick and Holst 2019: 127).

When we accept these characteristics, expertise can incorporate scientific, professional and credentialed knowledge as well as non-credentialed, informal, tacit and alternative forms. It comprises practical know-how as well as scholastic knowledge, and mixtures of these forms. It can include ‘core science’, as well as mandated, ‘regulatory’ and ‘post-normal’ science (Funtowicz and Ravetz 1993; Jasanoff 2005), ‘contributory’ as well as ‘interactional expertise’ (Collins and Evans 2002; Eyal 2019). Useful expertise can be the ‘scientific knowledge’ of academics, the ‘administrative knowledge’ typically held by civil servants, the ‘professional knowledge’ held by practitioners in certain occupational fields, the ‘sector-specific knowledge’ of stakeholders, the ‘local knowledge’ held by users of a locality (farmers or residents e.g.), or the ‘experience-based knowledge’ of public service users such as patients, to name but a few (Beck and Forsyth 2015: 15; Collins and Evans 2002: 238, 266; Fischer 2000: 193ff.; Maasen and Weingart 2005: 14; Meriluoto 2017: 295).

The notion of (political) *participation* can be defined in its most simple way as the variety of voluntary actions by those outside the system of government that aim at influencing policies or politicians (Gabriel and Völkl 2005: 528; Verba et al. 1995: 38). Despite very positive connotations and a general “participatory enthusiasm” (Polletta 2016; see also Krick et al. 2019; Meriluoto 2017) in modern societies, there is usually little agreement on what constitutes ‘good’ participation (Fischer 2009: 101). This has to do with the fact that participation is not necessarily particularly ‘democratic’ or “good in itself” (Brown 2009: 223): If election turnout falls to very low degrees, if only the very privileged or those with anti-democratic values get involved in policy-making, or if participatory endeavours are completely

detached from actual political decision-making, the democratic quality of participation is at stake. Besides, the notion of participation certainly covers a variety of actions that differ in their degree of empowerment, ranging from citizens being informed or consulted to the handing-over of genuine political authority.

From a democratic theory standpoint, participation is ‘good’, i.e. democratically legitimate, when *all those affected* by a decision are *effectively* involved into making the decision (Fung 2006: 66; Gabriel and Völkl 2005: 528; Verba et al. 1995: 1; Warren 2002: 693; Young 2000: 5–6). The circle of those affected can in some cases be rather small, but many political issues concern large strata of society, affect whole nations or extend across borders. Under conditions of mass democracy, of the complexity of many problems and the myriad of collective decisions that need to be made in a society, the idea of *involving everyone directly* into every issue of concern can indeed be called “fanciful” (Dahl 1994: 32; see also Fung 2006: 66; Young 2000: 124). Since people can only *directly* participate in some decisions on certain selected issues, in all other cases “stakeholder” or “delegated participation” (Warren 2002: 686; see also Ansell and Gash 2007), i.e. *indirect participation through representatives* needs to be the rule, and this necessitates selection. This is by no means easy to get right, as underlined by the ‘social privilege bias’ that characterizes many innovative, alternative and deliberative forms of participation and knowledge co-production (Fischer 2009: 70; Fung 2006: 67; Krick 2021b: 43, 139; Martin 2008: 37; Ryfe 2005: 52; Steiner 2012: 49; Young 2000: 34). Whenever a selection needs to be drawn and delegates are chosen, questions of *representativeness*, i.e. legitimate representation, pose themselves. Two quintessential pathways to realizing democratic representation are usually distinguished in the literature (see e.g. Brown 2009; Krick 2021b; Pitkin 1967; Saward 2010; Urbinati and Warren 2008; Young 2000): *Descriptive representation* relies on the similarity between the selected and those they stand for and it is usually realized by drawing lots (random selection). When it is applied to more than very few demographic criteria, it presupposes a large sample. Especially in deliberative decision procedures that work best in small groups, comprehensive descriptive representation is therefore often difficult to achieve (Ryfe 2005: 51; Young 2000: 124ff). *Substantive representation* builds on acts of authorization and accountability between the selected and their constituency and it is usually realized by targeted recruitment or voting methods. It is most directly and transparently fulfilled by democratically organized, membership-based civic organizations (such as political parties and civic groups), which entertain ongoing accountability relationships with their constituents and are formally authorized to speak for them (Saward 2010: 95ff.; Urbinati and Warren 2008: 404f.).⁵

Apart from questions of inclusion (and subsequently representation), the definition of democratic participation given above also points at an *impact- or effectiveness-dimension*. This does not mean that every participatory practice must be

⁵ To be sure, accountability relationships can also be established more indirectly on the grounds of a track record of credible, engaged advocacy, intimate knowledge of the community, public recognition, audits or performance indicators (Krick 2021b: 151; Saward 2010: 95ff.; Urbinati and Warren 2008: 404f.).

guaranteed an immediate effect or that any consultative input should to be fully implemented into law. In fact, whether a pronounced impact is desirable in individual cases inter alia hinges on the degree of inclusion as well as the epistemic value of the respective participatory endeavour (Fung 2006: 67; Krick 2021b: 45). Yet, as a general rule, participation needs to be meaningful and taken seriously by decision-makers, while ‘pseudo-participation’ that is set up as a token exercise or for manipulation purposes is rather problematic (Fischer 2009: 74; Young 2000: 24). Especially when *asked* for input in ‘invited spaces’, of course, citizens should have a fair chance to be heard by policy-makers, and this is, not least, affected by the ability of citizens to convey an *unequivocal, broadly backed message* that closes down contestation (Lövbrand et al. 2011: 485; Krick 2021b: 43). It also helps when the advisory and consultation arrangement is firmly *embedded* into the policy process (Fung 2006: 66; Hendricks 2016: 50; Setälä 2017: 854).

These wide and integrative conceptualizations of participation and expertise already move the epistemic and democratic dimension closer towards each other and indicate points of contact. The gap that appears so wide when one concentrates on expert-lay-dichotomies or on tensions between ‘expertisation’ and a ‘participatory turn’ already closes to some extent. From these integrative perspectives, the roles of expert and citizen are no longer miles apart, but can be merged and fulfilled simultaneously, for instance by delegates of advocacy groups or by citizen experts. The upcoming two sections make the reconciliation of epistemic and democratic demands more concrete by spelling out how two quite different participatory knowledge practices realize it and which specific challenges they each grapple with. Both sections start by defining the practice in focus and underlining its popularity and potentials (a). They then specify some of the most important normative and practical challenges at play in the respective contexts (b) and show how empirical cases deal with them under exemplary conditions (c). This will spell out how the normative criteria of democratic participation and reliable expertise (sketched above on a rather abstract level) translate to real cases and point out conditions for balancing epistemic and democratic norms that can potentially guide future use of these practices.

Complex, Mixed and Multi-layered Deliberative Arenas

a) The first participatory practice in focus are complex deliberative arenas., i.e. multi-layered institutions of policy deliberation that bring together a mix of different actors (scientists, stakeholders, members of the general public, civil servants, politicians, practitioners etc.) in a shared quest for joint policy proposals on a certain issue. These institutions are usually set up by governments and they seem to be proliferating: A new study of the Norwegian context demonstrates a tendency towards linking up classic expert commissions with ‘minipublics’ and online participation tools, for instance (Krick et al. 2019). For the German context, recent studies have emphasized a tendency towards setting up institutional innovations that complement the ‘classic forms’ of policy advice and deliberation and a general extension, hybridization and informalization of the advisory system (Czada 2014; Krick 2021b; Veit

et al. 2017). This corresponds to a change in deliberative democracy studies, where attention has shifted away from isolated, small-scale minipublics and towards a systems perspective that takes networks of deliberative fora and their political embedding into account (see e.g. Curato and Böker 2016; Hendricks 2016; Setälä 2017; Mansbridge et al. 2012).

b) While the multiplicity of input and deliberation channels certainly bears democratic and epistemic potential, complex structures with high and multi-dimensional standards can also bring about a variety of frictions. Not only epistemic-democratic tensions have to be dealt with. The democratic dimension is also complex in itself and can produce a range of ‘democratic dilemmas’. Besides, collective action problems abound when a multiplicity of participants needs to develop joint policy proposals and speak with a more or less unified voice. Democratic theory and participatory governance research have pointed out tensions between the degree of inclusion and transparency of a decision-making process, on the one hand, and the civility of deliberation and the degree of consensual closure it likely achieves, on the other (Mansbridge et al. 2012: 19; Ryfe 2005: 51; Steiner 2012: 125ff.). It is especially the number of participants and the differentiation of input channels that potentially undermines the likelihood of integrating everyone fairly and reaching agreement. What is more, it is often particularly the inclusive and deliberative minipublics that are very weakly embedded into the policy process and lack impact, despite their democratic credentials (Irvin and Stansbury 2004: 59; Steiner 2012: 33).

c) An outstanding case of a multi-layered, mixed consultation and advice arrangement will now be analyzed in depth in order to tease out those institutional conditions that can help to score both on the dimension of democratic participation and on the reliable expertise-dimension. These insights will be complemented with research on deliberative systems and the coupling of minipublics with representative institutions. In focus is the search for a final repository for highly radioactive waste in Germany, and more specifically the participatory process accompanying the first phase of this search.⁶ Located at the centre of this process was a ‘classic’, mixed expert commission, the ‘final storage committee’ (‘Endlagerkommission’) that was composed of a wide range of professional experts and representatives of affected interests, political parties and the German constituent states. In this ‘core committee’, many participants held the double role of expert and representative of a certain societal interest. The committee received input from a large variety of face-to-face public fora and from several online consultation tools that were designed for different target groups (e.g. ‘young adults’, the ‘general’ and the ‘informed public’, professionals, expert civil servants and those regions that potentially qualified as storage sites). The participation approach answered to both descriptive and substantial representation standards in that it combined the random selection of participants with open access fora and the targeted recruitment of advocacy groups and

⁶ The committee’s mandate was to agree on criteria for selecting a final repository for highly radioactive waste in Germany and on the participatory process accompanying the site selection process. This task was accomplished in July 2016 after more than one and a half years of intensive deliberation. For a full account of this case, see Krick (2021b).

experts. The committee furthermore opted for an exceptionally high standard of disclosure.⁷ It also deliberated on a high scholarly level: A large majority of the committee members had pronounced issue-related expertise and experience themselves, and external, particularly independent scientists were included in addition through expert hearings and written work. While the general public was not addressed as experts and the involvement of experience-based, lay expertise was not emphasized, different kinds of specialized, non-ubiquitous and highly relevant expertise held by stakeholders, practitioners, administrative and scientific experts were tapped and seriously dealt with (Krick 2021b).

Despite its complex structure and the many voices included, as well as high scores on the epistemic and democratic dimension, the final storage committee and its numerous annexed input channels managed to integrate and balance the multiplicity of expert, citizen, stakeholder and policy-maker voices very successfully and fed them into the policy-making process. The aggregation and integration of voices is not a given, and it becomes a real challenge when numerous channels of input are opened. But this is a difficulty that needs to be dealt with because policy advice and consultation endeavours lack formal decision-making authority and their messages therefore need to be as unambiguous and broadly backed as possible in order to reach their target.

In the case of the final storage committee, exceptional degrees of transparency and public involvement could have been liabilities, but instead turned out to be cornerstones of the committee's reputation and authority. Together with the considerable level of expertise involved, they helped to build trust among participants and bridge the deep divides between two opposing camps on the issue of final storage in Germany, so that widely supported and balanced suggestions were put forward that developed considerable policy impact. On top of genuine commitment on all sides and generous time resources that are an important precondition for meaningful and thorough deliberations (Smith and Setälä 2018: 5), a range of *institutional devices* contributed to reconciling high epistemic and democratic standards with an effective aggregation of voices (see Table 1 for an overview): First of all, a relatively *narrow mandate* helped to focus the debate and to keep conflicts in check because it reduced the number of affected interests and allowed concentration on solving the most pressing issues. Second, since *participation rights were nuanced*, a large variety of actors could be involved into the development of the proposals, but the number of those entitled to make the final decision was kept down at the same time: The participatory structure centred around a core committee, in which many members, and particularly intermediary organizations such as parties and interest groups, combined the double role of expert and societal representative, thus reducing the size of the decision round. In addition, only half of this committee's members had voting rights on the final report, while the other half shaped the draft report very actively,

⁷ The final storage committee produced videos of all of its plenary sessions that were streamed on TV and available on the committee website. It also produced verbatim records of its working group and plenary sessions, allowed access to all the materials and studies used in the committee, and even opened up its plenary sessions to visiting members of the public.

Table 1 Institutional devices that help reconcile epistemic, democratic and collective choice demands in complex deliberative arenas

| Institutional devices | Effects |
|--|---|
| Narrow mandate | Focuses debate Potentially keeps conflicts in check Minimises the round of affected interests Makes solution of most pressing issues more likely |
| Conflict-minimising decision rules (consensus-minus one, abstentions, dissenting voices, nostrification rule etc.) | Can reduce polarisation and prevent obstruction Potentially appeases marginalised and radical groups Allows demonstration of disagreement without having to exit the process |
| Nuanced participation rights & a prime role for intermediary organisations | Allows broad integration of many voices without attributing individual vetorights Keeps final decision round small, thus reduces degree of conflict |
| Loose coupling with policy-makers (no direct control, but feedback loops and two-sided transmission mechanisms) | Ensures flow of information and communication between key venues (both ways) Allows for processes of convergence, mutual influence and account-giving Allows integration and aggregation of a variety of input Adds to the structural integrity of the consultative arrangement Facilitates implementation of recommendations |

but did not vote on it at the very end. Further key actors participated in slightly minor roles: for instance, government delegates acted as observers of the committee's work without holding speaking rights, and the annexed public and expert fora provided non-binding input that the committee dealt seriously with and responded to. Third, a range of *conflict-minimizing decision rules* further facilitated agreement. Examples for such rules are the use of a 'consensus-minus-one-rule' and the possibility to publish dissenting voices or to use a 'nostrification procedure', that allows a collective to let an outcome stand as the position of the group, without every individual supporting the decisions in all details (Krick 2021b: 179). These devices can, at best, reduce polarization and prevent obstruction, appease marginalized or radical groups and allow the demonstration of a certain amount of disagreement (e.g. vis-à-vis one's constituency), without having to exit or veto the process. Marginal positions potentially 'save face' and 'side with the winners' at the same time (Krick 2017).

Fourth, manifold transmission mechanisms interconnected the different venues (i.e. the committee, the annexed input fora, parliament and government), integrated a variety of expert voices and societal input, ensured the structure's integrity and paved the way for implementation. The transmission mechanisms were *loose forms of coupling*, which provide for a flow of information and communication between the system's parts, allow for processes of convergence, mutual influence and account-giving, but prevent interference and direct control (Brown 2006: 213; Busuioac 2009: 606; Mansbridge et al. 2012: 23; Hendricks 2016: 44). The following

examples can illustrate this: On top of governmental observers and the detailed feedback the committee delivered to the public input it received, committee members acted as ‘ambassadors’ in the public fora. There, they explained the committee’s positions and were in turn able to communicate the positions expressed in the public fora back into the committee. Besides, several members of parliament’s environmental standing committee, which was to deal with the committee report, held seats in the committee. This double-hats-principle made for a two-sided transmission mechanism that further facilitates the translation of policy advice into law (Setälä 2017, 854).

Lay Expert Involvement

a) The second phenomenon that will be given attention is the involvement of ‘lay’ (or ‘citizen’) experts into policy-making. *Lay expert* refers to individuals that are thought capable of bringing in public viewpoints *and* specialized knowledge at the same time, i.e. persons who combine the role of an expert *and* the role of a societal representative. Typically, the expertise that lay experts are expected to hold is first and foremost based on first-hand life experience, rather than training, discursive reasoning or professional activity (Bellander and Landqvist 2020; Collins and Evans 2002; Meriluoto 2017; Noorani 2013). It is usually non-certified, context-bound, often rather tacit than written down and “obtained by being part of a phenomenon” (Blume 2017: 94; see also Fischer 2000: 197). In effect, lay knowledge often transcends the personal experience of individuals and reflects the views, lives and traditions of a community (Corburn 2003: 421; Jones et al. 2021: 569). What makes for the participatory, democratic credentials of lay expert involvement is not always made explicit, but some coveted credentials stand out: Lay citizens invited to policy-making processes are often expected to be ‘ordinary’, ‘typical’ or ‘average’, they should have a ‘sense of the common good’ and be able to speak for others, they should be detached or disinterested as well as enthusiastic and devoted to the task they are involved in (see Brown 2009: 231ff.; Lehoux et al. 2012: 1844; Lezaun and Soneryd 2007: 280, 284; Martin 2008: 46ff.).

The involvement of lay experts potentially compensates for the elitist and socially detached character of certified expertise and science-based policy advice in particular. It promises to contribute to citizens’ self-efficacy and empowerment and it potentially generates more adequate, efficient and cheaper co-produced public services, thus providing extra legitimacy for governance (see also Krick and Meriluoto 2022: 2; Martin 2008: 41; Meriluoto 2017: 2ff., 2018: 125f.; Noorani 2013: 50). Because of this normative potential, the involvement of lay experts has gained currency in a range of different contexts and policy fields: Lay experts play a part as ‘experts-by-experience’ in health policy, as ‘local experts’ in city planning policy, as ‘citizen scientists’ in environmental policy, as ‘expert citizens’ (‘sachverständige Bürger’) in monument protection policy, and as ‘service users’ in public administration reform, for instance (Krick 2021a). The typical channels through which lay experts access the policy-making realm are advisory panels, monitoring boards,

minipublics, parliamentary hearings and more informal collaborative meetings between policy-makers and societal stakeholders (Epstein 1995: 426; Noorani 2013: 52; Jones et al. 2021: 567).⁸

b) Yet, frictions can occur between the democratic, participatory credentials of the citizen role and the knowledge resources of the expert. The above-listed expectations towards lay experts are ambiguous and some of them seem to draw into rather different directions: There may be a preference for ‘ordinary’ people’s input in many engagement practices (Barnes 1999: 79; Lezaun and Soneryd 2007: 284, 294), but what it means to be an ‘ordinary’, ‘average’ or ‘typical’ citizen is actually far from straightforward. It is a question that needs to be dealt with, however, because it makes a huge difference whether we speak of a randomly selected person, a politically unengaged person, someone in an average *social* position (e.g. regarding income or education), a person holding the political views of the population’s majority or a rather disenfranchised person on the margins of society. In any case, we should avoid to construct a ‘common good’ that a non-specified ‘ordinary’, ‘typical citizen’ would be able to convey or to prematurely assume a purer, somehow more authentic perspective of a random lay person (see also Brown 2009: 253; Hennen 2012: 36; Krick 2021a: 10).

The prioritization of average, ordinary lay persons also to some extent conflicts with holding expertise. After all, one cannot expect everyone, or a randomly selected person (if that is the meaning of ‘average’), to hold expertise that is of special value in policy-making. As argued above, knowledge claims need to be useful and instructive for others to qualify as expertise – whether lay, alternative expertise or credentialed forms –, and this usually applies only to relatively unique, non-ubiquitous insights and experiences (Krick 2021a: 11). What is more, lay expertise originates in being personally affected and holding that kind of knowledge therefore also conflicts with being disinterested. The norm of disinterestedness furthermore disagrees to some extent with an eagerness to get engaged at all and it is also often not self-explanatory on what grounds a disinterested, uncommitted and detached person can speak for other members of a community (Barnes 1999: 79; Lezaun and Soneryd 2007: 284, 294; Martin 2008: 41, 49).

c) With reference to empirical studies about patient expertise, the upcoming sections investigate the keys to reconcile epistemic reliability and usability with democratic credentials of lay expertise practices. It will be shown that, first, lay expert claims may originate in personal, often bodily experiences, but gain legitimacy and validity when, second, a range of authentic voices and kinds of knowledges are pooled and when, third, these claims are expressed by organized, professional collectives of lay experts.

To be sure, every voice has a right to express itself, and anyone with relevant experience may have something interesting to contribute. Yet, first, we need to assume a variety of partly competing voices under conditions of pluralism and second, from a democratic standpoint, larger shares of the citizenry surely outweigh the

⁸ Lay experts of course also use grassroots-initiated participation channels such as campaigns and organized protests, but the focus is here on official, invited forms of involvement.

viewpoint of an individual citizen. This difference in political authority between collective and individual standpoints is also reflected by the above-mentioned expectations towards lay experts: They are often not just asked to say what they think individually, but to express the more authoritative *view of a social group* (Lehoux et al. 2012; Martin 2008). Yet, when a person is chosen to represent an ‘average’ viewpoint and speak for others, questions of *legitimate representation* pose themselves from a standpoint of democratic participation (see section [Conceptualizing expertise and participation](#)). Since lay experts, as shown above, do usually not access the policy realm through mass devices of participation (such as elections), but through quite specialized venues with only few participants, descriptive, statistical representation cannot be achieved and substantive representation by delegates needs to be aimed for. Certainly, not only the *democratic* authority of a statement rises, when it transcends individual perspectives and experiences. It also adds to the *epistemic* authority of claims (Krick 2021a: 12).

While personal, individual experiences may be the basis of (useful) lay expertise, this kind of knowledge is often enriched and complemented by other forms of knowledge. The expertise of patients, for instance, not only draws on their ‘raw’ experience with a disease, but often also on the experiences of their peers that is shared in self-help forums, as well as credentialed scholastic knowledge learned from self-study and talk with medical professionals (Blume 2017; Noorani 2013; Pols 2014; Jones et al. 2021). As health studies have pointed out, this mix of knowledges and the process of comparing and sharing illness- and treatment-related testimonies, widens illness-related wisdom. It validates claims about illness, turns patients’ expertise into an epistemic resource for others and overall enhances the acceptance and credibility of patients’ claims (Blume 2017: 95; Epstein 1995: 428; Noorani 2013: 58ff.; Jones et al. 2021: 568). For both democratic and epistemic reasons, lay, experience-based expertise that *integrates a multiplicity of experiences and affected perspectives* is likely to be considered *more objective and authoritative* than insights that build on personal experience only. To achieve this, training courses for lay ‘experts-by-experience’ have been established in the public health systems of many countries (e.g. Finland, Germany, UK). In these courses, people with illness and health treatment histories are trained to analyze and distance themselves from their personal experience, in order to provide peer support and advise experts and policy-makers in a preferably rational, impartial and unemotional way (Blume 2017; Martin 2008; Meriluoto 2017; Noorani 2013; Pols 2014; Jones et al. 2021). Processing, generalizing and rationalizing personal insights in this way is meant to enable the trained expert-by-experience to speak on a par with decision-makers, convincingly advocate the group’s view and provide input that is considered useful and reliable (Blume 2017; Martin 2008; Pols 2014; Jones et al. 2021). Yet, this ‘making of experts’ has also been criticized by both participants and researchers for taming and streamlining people and compromising the authenticity of their knowledge (Meriluoto 2017: 3; Blume 2017: 97; Noorani 2013: 54; Jones et al. 2017: 567f.). Studies on health and illness expertise have also shown repeatedly that patients speaking the language of science and concurring with medical views are more likely to compel researchers and policy-makers to listen (Blume 2017: 101; Epstein 1995: 418; Noorani 2013: 56; Jones et al. 2017: 569). Therefore, while the task of polishing

and abstracting from personal experiences and of ‘proto-professionalising’ (Blume 2017: 97) is likely to enhance the representativeness and objectivity as well as the consequentiality of lay expert claims, pure experiential knowledge and alternative, critical voices are at risk of being lost in the process (Noorani 2013: 56; Jones et al. 2021: 568f.).

What is more, individual citizens can of course easily become overburdened by the task of integrating and advocating all relevant viewpoints of their social group (let alone ‘the public’ at large) and a general preference for unaffiliated individuals can therefore compromise the legitimacy of participatory knowledge practices. Incorporating the manifold voices of the affected comes much more naturally to *collectives of lay experts*. Not only can their members share the work, they are also in a position to ensure substantive representation (Krick 2021a: 10). As Barnes (1999, 70f.) points out, *organizing* as groups within social movements creates the very conditions under which it is possible for people to act as genuine ‘representatives’ of communities of identities (see also Jones et al. 2021). Interest organizations can establish effective communication channels and accountability relationships with the people they speak for, which enable them to pool the knowledge, experience and interests of many affected individuals and feed these perspectives into the policy-making process.

Research on the health sector has pointed to a range of positive examples where patient groups made convincing collective claims to political participation *and* to highly specialized expertise, and on the grounds of this input as well as their *organization, professionalism* and *targeted campaigning* accessed the policy process and became influential policy advisors. A particularly intriguing example is provided by Epstein’s (1995) case study on AIDS/HIV activists: In more or less hierarchical, organized groups, these activists developed the capacity to present themselves as the legitimate voice of the affected by building a collective identity and asserting political claims on that basis (Epstein 1995: 419). They interconnected epistemic with moral arguments and, through sharing, merging and processing different kinds of experiences and information, built a body of reliable, generalizable knowledge claims. They thus engaged in the construction of social knowledge and were ultimately able to influence what counts as credible. They succeeded in convincing the biomedical establishment, monopolized the capacity to say what the affected want and acquired seats on a range of policy advisory boards (Epstein 1995: 426). Yet, to be sure, the organization and professionalization of activists can also increase the gap between the engaged and the rest of the affected: “As activist leaders have become full-fledged experts, they have often tended to replicate the expert-lay division” (Epstein 1995: 429; see also Noorani 2013: 55).

Conclusion

This study dealt with the relationship of democracy and knowledge, and more specifically asked about the potential of two promising and quite different empirical efforts at balancing expertise-based decision-making and participation of the affected.

In a first step, expertise and political participation were conceptualized and epistemic and democratic quality criteria were derived from social studies of expertise, science and knowledge as well as democratic theory-inspired studies of representation, inclusion and participation. In short, it was argued that knowledge claims that integrate a range of experiences, insights and concerns, are better suited to instruct collective action and become an epistemic resource for others, while the democratic quality of participatory knowledge production depends on an inclusion- and an impact-dimension and thus calls for the representativeness of claims and a fair chance to resonate in the policy realm.

In a second step, two participatory practices that have gained currency in today's policy-making, were scrutinized in terms of the conditions beneficial to generating 'good', reliable expertise and 'good', democratic participation at the same time:

The first practice under scrutiny provides for a division of labour between different actor groups on the grounds of a mixed, multi-level advisory and consultation structure and encompassing inclusion. The study demonstrates the pronounced potential of such complex deliberative arenas, as well as the challenges and high costs that come with maximum complexity. It points to institutional conditions that not only help to achieve high democratic and epistemic standards, but also reduce the degree of complexity considerably and thus facilitate collective decision-making: Ample time resources and a high commitment on all sides, a narrow mandate, nuanced participation rights, conflict-minimizing decision rules, mechanisms of loose coupling between the venues of a multi-level structure and a prime role for intermediary organizations that adopt the double function of expert and representative.

The second participatory governance practice in focus in this paper relies on lay people with experience-based knowledge assuming the double role of expert and citizen. At first glance, it thus minimizes complexity to a considerable extent. Yet, it is shown that a convincing fulfilment of both roles by *individuals* is a difficult (if not entirely impossible) task. While lay expertise is essentially grounded in personal experiences, it gains both democratic and epistemic authority when it builds on a variety of viewpoints, concerns and insights that have been pooled, processed and generalized to some extent. In many cases, these practices benefit from inviting a bit of complexity and involving collectives of affected people. Trainings for lay experts-by-experience, self-help and advocacy groups can provide venues for constructing such democratically and epistemically valuable citizen expertise, for professionalizing claim-making and gaining access to the policy process.

Some lessons stand out across individual empirical practices, and they are therefore of particular value for democratic governance more generally: From both a democratic and an epistemic perspective, claims that *transcend individual viewpoints* are particularly valuable because they *radiate representativeness and a certain kind of objectivity* that comes with balancing divergent interests, experiences and viewpoints. The more inclusive, consensually backed, deliberative and balanced the processes are that bring about shared claims, the more authoritative their outcomes become.

It follows from this that the widespread, indiscriminate preference for detached, 'disinterested' 'average' individuals in large parts of participatory practice and

public debate is rather problematic, while *advocacy organizations and pressure groups* deserve to be given more credit. Organized groups can bridge the epistemic-democratic tension particularly convincingly by pooling and conveying a spectrum of individual and shared perspectives in a substantial, legitimate way. They are in the position of building a lasting relationship with their constituency and are a source of highly relevant knowledge. Their professionalism and political experience enable them to speak on a par with policy-makers and affect political decisions significantly. Of course, advocacy groups need to stay in close touch with their population to substantiate the mutuality of demands and ideas within the constituency. What is more, the more professionalized and hierarchical organized groups get, the more they need to deal with the challenge of retaining an independent, authentic voice that does not echo or completely merge into elite viewpoints or scientific knowledge. It is paramount that organized groups remain open to disenfranchised voices, which depend particularly on the efforts of pressure groups. In any case, the argument of advocacy groups being partial is not a good counterargument against their close involvement. Important is that all affected perspectives have a chance to be heard and that *conflicting interests are balanced on an aggregate level* so that biases are kept at a minimum in policy development processes.

Privileging democratically organized civic groups also has practical benefits when it comes to efficient and democratic collective decision-making. When many voices need to be integrated, advocacy groups can contribute with both multi-source expertise and a multiplicity of affected viewpoints, thus merging the roles of expert and citizen representative and reducing the number of those involved in policy deliberations. This is a factor that is not only of relevance for the above-analyzed mixed, multi-layered deliberative arenas, but in fact for any political practice that strives for both knowledge-based, sound and democratically legitimate decisions. Besides, it also applies to the other institutional devices described above, such as nuanced participation rights, conflict-minimizing decision rules as well as coupling and transmission mechanisms, which facilitate the making of public policies quite generally.

In a nutshell, the contribution of the study can be summarized as follows: First, it strengthens the link between rather unconnected fields of research, i.e. the social studies of knowledge and democratic theory, which are usually kept apart by disciplinary boundaries and seemingly distinct empirical subjects. Second, in the course of conceptualizing expertise and participation in integrative, relational ways, the study moves the notions closer together, yet keeps them distinct, spotlights overlaps and thus to some extent dissolves the epistemic-democratic tension. Third, the study identifies quality criteria of expertise and participation and, fourth, spells out conditions of realizing them in empirical contexts.

Many of the theoretical arguments and conclusions drawn in this study of course point beyond the specific phenomena under scrutiny here and are transferable to other forms of participatory or collaborative governance, and certainly also to interest group politics, social movement, civil society and civic action studies. They are also not limited to the specific problems that the epistemic-democratic tension brings about. In fact, many findings are just as relevant for more specific democratic legitimacy debates with a focus on the norms of representation, accountability, public engagement, deliberation, consensus and inclusion, while the knowledge- and

expertise-related insights of the study link up to research on the co-production of knowledge, science-society relations, knowledge societies as well as on non-majoritarian institutions, technocracy, epistemic communities and policy advisory systems. Finally, the findings on how to practically integrate a range of voices into policy-making closely relate to debates on institutional design, collective decision-making and political organization.

Funding Open access funding provided by University of Oslo (incl Oslo University Hospital).

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Ansell, Chris, and Alison Gash. 2007. Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory* 18(4): 543–571.
- Barnes, M. 1999. Users as citizens: collective action and the local governance of welfare. *Social Policy & Administration* 33(1): 73–90.
- Beck, Silke, and Tim Forsyth. 2015. Co-production and democratizing global environmental expertise: The IPCC and adaptation to climate change. In *Science and democracy: Making knowledge and making power in the biosciences and beyond*, eds. Rob Hagendijk, Stephen Hilgartner, and Clark Miller, 113–132. London: Routledge.
- Bellander, Theres, and Mats Landqvist. 2020. Becoming an expert constructing health knowledge in epistemic communities online. *Information, Communication and Society* 23(4): 507–522.
- Bickerton, Christopher, and Carlo Invernizzi Accetti. 2017. Populism and technocracy: Opposites or complements? *Critical Review of International Social and Political Philosophy* 20(2): 186–206.
- Blume, Stuart. 2017. In search of experiential knowledge. *Innovation: the European Journal of Social Science Research* 30(1): 91–103.
- Brown, Mark B. 2006. Survey article. Citizen panels and the concept of representation. *The Journal of Political Philosophy* 14(2): 203–225.
- Brown, Mark B. 2009. *Science in democracy: Expertise, institutions, and representation*. Cambridge, MA: MIT Press.
- Busuioc, Madalina. 2009. Accountability, control and independence: The case of European agencies. *European Law Journal* 15(5): 599–615.
- Collins, H.M., and Robert Evans. 2002. The third wave of science studies. Studies of expertise and experience. *Social Studies of Science* 32(2): 235–296.
- Corburn, Jason. 2003. Bringing local knowledge into environmental decision making. Improving urban planning for communities at risk. *Journal of Planning Education and Research* 22: 420–433.
- Curato, Nicole, and Marit Böker. 2016. Linking minipublics to the deliberative system: a research agenda. *Policy Science* 49: 173–190.
- Czada, Ronald. 2014. Informalität und Öffentlichkeit in politischen Aushandlungsprozessen. *Zeitschrift für vergleichende Politikwissenschaft* 8: 115–139.
- Dahl, Robert A. 1994. A democratic dilemma: System effectiveness versus citizen participation. *Political Science Quarterly* 109(1): 23–34.

- Ennsler-Jedenastik, Laurenz. 2016. The politicization of regulatory agencies: Between partisan influence and formal independence. *Journal of Public Administration Research and Theory* 26(3): 507–518.
- Epstein, Steven. 1995. The construction of lay expertise: AIDS activism and the forging of credibility in the reform of clinical trials. *Science, Technology & Human Values* 20(4): 408–437.
- Eyal, Gil. 2019. *The crisis of expertise*. Cambridge: Polity Press.
- Fischer, Frank. 2009. *Democracy and expertise. Reorienting policy inquiry*. Oxford: Oxford University Press.
- Fischer, Frank. 2000. *Citizens, experts and the environment. The politics of local knowledge*. London: Duke.
- Fung, Archon. 2006. Varieties of participation in complex governance. *Public Administration Review* 66(1): 66–74.
- Fung, Archon. 2003. Survey article. Recipes for public spheres: Eight institutional design choices and their consequences. *The Journal of Political Philosophy* 11(3): 338–367.
- Funtowicz, Silvio O., and Jerome R. Ravetz. 1993. Science for the post-normal age. *Futures* 25(7): 739–755.
- Gabriel, Oscar W., and Kerstin Vökl. 2005. Politische und soziale Partizipation. In *Handbuch Politisches System der Bundesrepublik Deutschland*, eds. Oscar W. Gabriel and Everhard Holtmann, 523–573. München/Wien: Oldenbourg.
- Gornitzka, Åse, and Eva Krick. 2018. The expertisation of stakeholder involvement in EU policy making. In *Expertisation and democracy in Europe*, eds. Magdalena Góra, Cathrine Holst and Marta Warat, 51–70. New York: Routledge.
- Grundmann, Reiner. 2017. The problem of expertise in knowledge societies. *Minerva* 55(1): 25–48.
- Hansen, Janus, and Agnes Allansdottir. 2011. Assessing the impacts of citizen participation in science governance: Exploring new roads in comparative analysis. *Science and Public Policy* 38(8): 609–617.
- Haas, Peter M. 2004. When does power listen to truth? A constructivist approach to the policy process. *Journal of European Public Policy* 11(4): 569–592.
- Hendricks, Carolyn M. 2016. Coupling citizens and elites in deliberative systems: The role of institutional design. *European Journal of Political Research* 55(1): 43–60.
- Hennen, Leonhard. 2012. Why do we still need participatory technology assessment? *Poiesis Praxis* 9: 27–41.
- Holst, Cathrine, and Anders Molander. 2017. Public deliberation and the fact of expertise: Making experts accountable. *Social Epistemology* 31(3): 235–250.
- Irvin, Renée A., and John Stansbury. 2004. Citizen participation in decision making: Is it worth the effort? *Public Administration Review* 64(1): 55–65.
- Jasanoff, Sheila. 2005. Judgment under siege: The three-body problem of expert legitimacy. In *Democratization of expertise? Exploring novel forms of scientific advice in political decision-making*, eds. Sabine Maasen and Peter Weingart, 209–224. Dordrecht: Springer.
- Jasanoff, Sheila. 2003. (No?) Accounting for expertise. *Science and Public Policy* 30(3): 157–162.
- Jones, Marjaana, Piia Jallinoja, and Ilkka Pietilä. 2021. Representing the ‘voice’ of patients: How third sector organisations conceptualise experiential knowledge in health service development. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 32(3): 561–572.
- Krick, Eva. 2021a. Citizen experts in participatory governance. Democratic and epistemic assets of service user involvement, local knowledge and citizen science. *Current Sociology*. <https://doi.org/10.1177/001139212111059225>.
- Krick, Eva. 2021b. *Expertise and participation. Institutional designs for policy development in Europe*. Basingstoke: Palgrave Macmillan.
- Krick, Eva. 2017. The myth of effective veto power under the rule of consensus. Dynamics and democratic legitimacy of collective decision-making by ‘tacit consent.’ *Negotiations* 27(1): 109–128.
- Krick, Eva, Johan Christensen, and Cathrine Holst. 2019. Between ‘scientisation’ and a ‘participatory turn’. Tracing shifts in the governance of policy advice. *Science & Public Policy* 46(6): 927–939.
- Krick, Eva, and Åse Gornitzka. 2020. Tracing scientisation in the EU Commission’s expert group system. *Innovation: the European Journal of Social Science Research*. <https://doi.org/10.1080/13511610.2020.1811649>.
- Krick, Eva, and Cathrine Holst. 2019. The socio-political ties of expert bodies. How to reconcile the independence requirement of reliable expertise and the responsiveness requirement of democratic governance. *European Politics and Society* 20(1): 117–131.

- Krick, Eva, and Taina Meriluoto. 2022. The advent of the citizen expert. Democratising or pushing the boundaries of expertise? *Current Sociology*. <https://doi.org/10.1177/00113921221078043>.
- Lehoux, P., G. Daudelin, and J. Abelson. 2012. The unbearable lightness of citizens within public deliberation processes. *Social Science & Medicine* 74: 1843–1850.
- Lentsch, Justus, and Peter Weingart. 2011. Quality control in the advisory process: Towards an institutional design for robust science advice. In *The politics of scientific advice: Institutional design for quality assurance*, eds. Justus Lentsch and Peter Weingart, 353–374. Cambridge: Cambridge University Press.
- Lewin, Kurt. 1946. Action research and minority problems. *Journal of Social Issues* 2(4): 34–46.
- Lezaun, Javier, and Linda Soneryd. 2007. Consulting citizens: Technologies of elicitation and the mobility of publics. *Public Understanding of Science* 16: 279–297.
- Lövsbrand, Eva, Roger Pielke, and Silke Beck. 2011. A democracy paradox in studies of science and technology. *Science, Technology, & Human Values* 36(4): 474–496.
- Maasen, Sabine, and Peter Weingart. 2005. What's new in scientific advice to politics? In *Democratization of expertise? Exploring novel forms of scientific advice in political decision-making*, eds. Sabine Maasen and Peter Weingart, 1–19. Dordrecht: Springer.
- Majone, Giandomenico. 2001. Non-majoritarian institutions and the limits of democratic governance: A political transaction-cost approach. *Journal of Institutional and Theoretical Economics (JITE)* 157(1): 57–78.
- Mansbridge, Jane, James Bohman, Simone Chambers, Thomas Christiano, Archon Fung, John Parkinson, Dennis F. Thompson, and Mark E. Warren. 2012. A systematic approach to deliberative democracy. In *Deliberative systems: Deliberative democracy at the large scale*, eds. John Parkinson and Jane Mansbridge, 1–26. Cambridge: Cambridge University Press.
- Martin, Graham P. 2008. 'Ordinary people only': Knowledge, representativeness, and the publics of public participation in healthcare. *Sociology of Health and Illness* 30(1): 35–54.
- Meriluoto, Taina. 2018. Neutral experts or passionate participants? Renegotiating expertise and the right to act in Finnish participatory social policy. *European Journal of Cultural and Political Sociology* 5(1–2): 116–139.
- Meriluoto, Taina. 2017. Turning experience into expertise: technologies of the self in Finnish participatory social policy. *Critical Policy Studies* 12(3): 294–313.
- Meyer, John W., and Brian Rowan. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology* 83(2): 340–363.
- Noorani, Tehseen. 2013. Service user involvement, authority and the 'expert-by-experience' in mental health. *Journal of Political Power* 6(1): 49–68.
- Nowotny, Helga, Peter Scott, and Michael Gibbons. 2001. *Re-thinking science. Knowledge and the public in an age of uncertainty*. Cambridge: Polity.
- Nowotny, Helga. 2003. Democratising expertise and socially robust knowledge. *Science and Public Policy* 30(3): 151–156.
- Pitkin, Hanna F. 1967. *The concept of representation*. Berkeley/Los Angeles: University of California Press.
- Pols, Jeannette. 2014. Knowing patients: Turning patient knowledge into science. *Social Studies of Science* 39(1): 73–97.
- Polletta, Francesca. 2016. Participatory enthusiasms: a recent history of citizen engagement initiatives. *Journal of Civil Society* 12(3): 231–246.
- Ryfe, David M. 2005. Does deliberative democracy work? *Annual Review of Political Science* 8(1): 49–71.
- Saward, Michael. 2010. *The representative claim*. Oxford: Oxford University Press.
- Setälä, Maija. 2017. Connecting deliberative mini-publics to representative decision making. *European Journal of Political Research* 56(4): 846–863.
- Smith, Graham, and Maija Setälä. 2018. Mini-publics and deliberative democracy. In *The Oxford Handbook of Deliberative Democracy*, eds. Andre Bächtiger, John S. Dryzek, Jane Mansbridge, and Mark Warren. <https://doi.org/10.1093/oxfordhb/9780198747369.013.27>.
- Steiner, Jürg. 2012. *The foundations of deliberative democracy. Empirical research and normative implications*. Cambridge: Cambridge University Press.
- Straßheim, Holger. 2013. Politische Expertise im Wandel: Ansätze zu einer Analyse epistemischer Autorität. In *Wissen und Expertise in Politik und Verwaltung (Special Issue of Der Moderne Staat)*, eds. Sabine Kropp and Sabine Kuhlmann, 65–87. Opladen/Toronto: Verlag Barbara Budrich.

- Straßheim, Holger. 2008. Kulturen der Expertise und politischen Wissensproduktion im Wandel. Vergleichende Beobachtungen. In *Politische Kultur im Wandel von Staatlichkeit. WZB-Jahrbuch 2007*, eds. Dieter Gosewinkel and Gunnar F. Schuppert, 281–301. Berlin: Edition Sigma.
- Straßheim, Holger, and Pekka Kettunen. 2014. When does evidence-based policy turn into policy-based evidence? Configurations, contexts and mechanisms. *Evidence and Policy* 10(2): 259–277.
- Urbinati, Nadia, and Mark E. Warren. 2008. The concept of representation in contemporary democratic theory. *Annual Review of Political Sciences* 11(1): 387–412.
- Veit, Sylvia, Thurid Hustedt, and Tobias Bach. 2017. Dynamics of change in internal policy advisory systems: The hybridization of advisory capacities in Germany. *Policy Sciences* 50(1): 85–103.
- Verba, Sidney, Kay Lehman Schlozman, and Henry E. Brady. 1995. *Voice and equality: Civic voluntarism in American politics*. Cambridge, Mass.: Cambridge University Press.
- Warren, Mark E. 2002. What can democratic participation mean today? *Political Theory* 30(5): 677–701.
- Young, Iris M. 2000. *Inclusion and democracy*. Oxford: Oxford University Press.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.