

The epistemic quality of expertise. Contextualised criteria for the multi-source, negotiated policy advice of stakeholder fora

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Abstract

The study focuses on the epistemic quality of the policy expertise that is generated by stakeholder advisory bodies. Bringing together Science and Technology Studies, on Deliberative Democracy and Social Epistemology, the study suggests contextualised quality criteria for this collectively negotiated and multi-source kind of knowledge that is in multiple ways socially embedded and differs substantially from 'scientific' knowledge, on which research has focused so far. The criteria cover not only the reliability of the advice itself within the respective institutional context, but also the competence and experience of the individual experts and the thoroughness of the collective epistemic practices and they capture three different perspectives on the validity of this expertise.

Keywords

Expertise; knowledge; policy-making; policy advice; stakeholder fora; advisory committees

Introduction

This study deals with the knowledge quality of a very prevalent and potentially very influential kind of policy-related expertise, that is generated by stakeholder fora, i.e. advisory bodies that predominantly consist of representatives of societal and state

interests – often alongside some academics.¹ Expertise that is provided by stakeholder fora differs from ‘purely scientific’ knowledge in that it promises to be inherently “usable” (Haas 2004, 573), and “policy-relevant” (Beck 2012, 11) and is in more than one way “socially embedded” (Jung et al. 2014; Straßheim/Kettunen 2014, 259).² Since it relies on multiple sources and is collectively and consensually agreed upon, it responds to the simultaneous demand for epistemic and political authority that democratic governments face today (Beck 2012, 2; Haas 2004, 575; Jasanoff 2005, 216; Straßheim/Kettunen 2014). This potentially ‘double legitimacy’ provides these committees with a pronounced political impact (Lavertu/Weimer 2011; Maasen/Weingart 2005; Kropp 2003). While the democratic implications of such an influence of private agents on public policies has been debated widely within research (cf. e.g. Brown 2008; Fischer 2009; Holst/Molander 2014; Jasanoff 2003; Kropp 2003; Metz 2013; Nowotny 2001), this study focuses on the *knowledge quality*³ of this particular kind of (non-scientific) expertise and asks: Under which conditions can we rely on this advice and let it inform our policies? Or, in other words: how do we judge the epistemic value of these committees’ recommendations?

¹ Advisory bodies that collectively develop policy recommendations can be distinguished into three ideal types: ‘scientific’ or ‘technical’ committees that consist of academics (Brown 2008), ‘stakeholder’ or ‘corporatist’ (Christensen et al. 2010) committees that consist of representatives of non-state, organised interests and public administrations and ‘participatory’ fora that consist of lay individuals; of course, in reality, many advisory arenas are strictly speaking hybrids: committees that are dominated by stakeholders are often completed by a handful of academics, while participatory arenas are often complemented by expert panels and in various scientific arenas you find individuals that do not work in academia. Here, when we speak of *stakeholder fora*, we relate to those advisory committees that are dominated by societal and state representatives, while they may also include some independent experts.

² The notion of ‘social embeddedness’ usually points to the social constitution and co-production of all knowledge (Straßheim/Kettunen 2014; Jasanoff 1990, 2005, 2011; Jung et al. 2014). The specific nature of the expertise of policy advisory committees (as well as of regulatory agencies or epistemic communities, for that matter) makes it *particularly* socially embedded, ‘robust’ (Nowotny et al. 2001) or ‘situated’ (Haraway 1988): this knowledge is a product of collective decision-making and put forward as a consensual group view. It furthermore very rarely consists of simple and uncontested factual information about the natural world and cannot rest on logical deductions alone. Instead, it is usually complex, value-laden and often particularly sought after in situations of uncertainty and risk. It thus defies simple truth/falsity classifications (Fischer 2009) and its validity inherently depends on social context and perspective. What is more, it does not exist by itself, but comes into being through the social process of person A asking person(s) B for advice.

³ In line with the particularly socially embedded nature of the knowledge this study focuses on and following a post-positivist epistemology, the study builds on a social-relational, gradual and context-bound understanding of the *validity of knowledge* claims. The epistemic value or quality of a certain proposition or statement is thus not seen as absolute but depends on context, purpose and acknowledgement by the recipient of the advice. It is thus slightly detached from the notion of ‘justified true belief’ (Fricker 1998) and builds on alternative or ‘proxy’ epistemic qualities, such as problem-adequacy and usefulness in a given situation (Haas 2004).

The study brings together three fields of research that relate to epistemic aspects of collective decision-making and public policy-making – Science and Technology Studies (STS), Social Epistemology and Deliberative Democratic Theory. From these fields of research, the study derives context-bound and flexible criteria or guidelines that allow to assess the epistemic quality of the particularly socially embedded knowledge in focus here: negotiated and multi-source expertise that is generated by stakeholder advisory committees (section 3). Prior to that, more context is provided on the empirical phenomenon of stakeholder advisory fora, their governance functions, authority and potential impacts (section 2). The study starts off by describing its theoretical background and epistemological perspective (section 1).

1. A post-positivist perspective on embedded expertise: theoretical background and epistemology

This section describes the fields of research that the study builds upon. It explains on which grounds the normative guidelines were developed and how they relate to and complement existing assessment frameworks, before clarifying the epistemological perspective of the study.

The first part of this study (section 2) relies on empirically grounded research on advisory committees, on their composition and internal workings, their governance potential, political influence and their democratic accountability (cf. Beck 2012; Binderkrantz/Christiansen 2015; Brown et al. 2005; Brown 2008; Christensen et al. 2010; Gornitzka/Sverdrup 2011, 2014; Hansen 2012; Krick 2013, 2014, 2015b; Kropp 2003; Lavertu/Weimer 2011; Metz 2013; Siefken 2007), and it draws on research on regimes of policy advice and governance (Egeberg et al. 1981; Jasanoff 2005, 2011; Lentsch/Weingart 2011; Lijphart 1999; Maasen/Weingart 2005; Olsen 1983).

For the second part of the study (section 3), the development of quality criteria for embedded expertise, the study brings together those bodies of theory that have dealt with questions of knowledge in the policy realm:

It first of all builds on the sophisticated debates within policy advisory systems' literature and Science and Technology Studies (hereafter: STS) on the social constitution and production of knowledge, the relationship of knowledge and policy-making and the quality of expertise, as a particularly social kind of knowledge (cf. e.g. Beck 2011, 2012; Beck/Forsyth 2015; Fischer 2009; Haas 2004; Jasanoff 1990, 2005, 2011;

Jasanoff/Wynne 1998; Lentsch/Weingart 2011a/b; Maasen/Weingart 2005).⁴ Debates within STS have for some decades pointed to the social constitution and embeddedness of all knowledge. Concepts such as ‘mode-2’ knowledge production and socially robust knowledge (Nowotny et al. 2001) or ‘regulatory science’ and socially embedded knowledge (Jasanoff 1990, 2011) capture the social dimension of knowledge production in this line of thinking and call into question the purity of scientific knowledge and the notion of science speaking ‘truth to power’, which is reflected by the ‘linear model’ of science-policy-relations (cf. also Beck 2012; Beck/Forsyth 2013; Jasanoff/Wynne 1998). It has been pointed out in the field that, while science is characterised by particularly systematic analytical approaches, it provides by no means the only policy-relevant knowledge (Jasanoff 1990, 2005, 2011; Jasanoff/Wynne 1998; Lentsch/Weingart 2011); besides, it has repeatedly disappointed the expectation to produce “neutral” knowledge because of personal biases, dependencies and more general limits of knowing the truth (Jasanoff 1987, 1990, 2005). The particularly socially embedded, multi-source expertise that is provided by stakeholder advisory committees, thus cannot simply be subjected to the science’s sophisticated internal mechanisms of quality control, such as its ‘peer review’ publication system and the restricted processes of entry (Jasanoff 1987; Turner 2014, 282ff.); even the science’s distinctive methods of analysis and modes of conduct have limited value when analysing settings that collectively agree on policy advice by applying procedures of deliberation and bargaining and that are thus subject to the logics of social choice and group dynamics. Although the impact and value of “situated” (Haraway 1988, 581) expertise have been pointed out since the 1980s within feminist and social constructivist studies on the policy-science nexus (cf. e.g. Haraway 1988; Fricker 1998; Beck/Forsyth 2015; Fischer 2009; Jasanoff/Wynne 1998; Nowotny 2001; Nowotny et al. 2001; Young 2000; Wynne 1991) and while lately, research on policy advice turned towards ways of analysing such embedded policy-oriented expertise (cf. Jung et al. 2014; Lentsch/Weingart 2011; Pfister/Horvath 2014; Turner 2014; Straßheim/Kettunen 2014), the focus has been on knowledge that is provided by academics, while the role of non-scientists as well as the logic of collective decision-making in expertise production has been underexposed in these studies. Since the study

⁴ Since a social-relational notion of (multi-source and negotiated) expertise is fundamental to this study, approaches such as the one by Collins and Evans that are engaged with the pronounced authority of science and assume a separation between technical facts and political decisions are not considered here in detail (cf. Collins, Weinel and Evans 2010). For a comprehensive discussion of these ideas cf. however the contributions in *Critical Policy Studies* 5 (3) in the year 2011.

at hand centers its attention on non-scientific knowledge, insights from STS need to be complemented by other theories that deal with the question of assessing the value and validity of expertise. This study therefore builds secondly on Social Epistemology's explicit acknowledgement of the social sources of knowledge production – such as testimony and discourse – and its emphasis on the competences and experiences of the individual bearer of knowledge as well as the relations with the recipient of this knowledge (cf. e.g. Fricker 1998; Gelfert 2011; Goldman 2001). Yet, very few contributions of Social Epistemology consider *collective* or *joint* endeavours of aggregating or deliberating knowledge in groups. Third, we therefore suggest to complement an analysis of the epistemic quality of negotiated expertise with insights of Deliberative Democratic Theory, which has shown a keen eye for the collective dimension of decision-making by a multitude of agents (cf. for instance Bächtiger et al. 2005; Beatty/Moore 2010; Fischer 2009; Holst/Tørnblad 2015; Mansbridge et al. 2012; Young 2000) and thus provides the means to analyse group-internal processes. Yet, Deliberative Democracy does usually not consider the role of experts and knowledge in policy-making in any systematic way, as Fischer (2009) points out.

Within these three fields of research only very few approaches exist that aim at providing categories for assessing the value of expertise, actually spell out their categories and thus point to an application to the empirical world (cf. for interesting approaches Bächtiger et al. 2009, Goldman 2001, Holst/Tørnblad 2015, Lentsch/Weingart 2011). Each of these approaches are, however, rooted within one of the above described research traditions. Therefore, these contributions can be built upon prominently, but they have to be adapted, refined, brought together and further connected to the many theoretical considerations of the issue of the epistemic value of policy advice, which, however, do not offer enough ground for empirical applications (cf. for instance Haas 2004; Maasen/Weingart 2005; Straßheim 2013).

Suggesting normative guidelines for a certain kind of knowledge involves the risk of being misunderstood, especially since this study's epistemology is obviously influenced by social constructivist thinking, as implied by the use of the notions 'socially robust' and 'embedded' knowledge. In the eyes of the author, however, the insight that all knowledge is socially constituted does not entail that we should not assess and compare, in a transparent way, the epistemic quality of expertise. It surely demands that we always take the social context of knowledge production into account and constantly

reflect on and disclose our normative stance and criteria. This contribution attempts to strike a difficult balance between a skepticist or relativist and a positivist or objectivist epistemology. The suggested guidelines do by no means claim universal or definite validity but are tailored to the specific institutional contexts of knowledge production that the study focuses on – stakeholders advisory committees. They are developed in debate about existing theoretical approaches from different disciplines and informed by extensive empirical research on these institutions. They are meant to be flexible and adaptable to specific real-life cases. This approach is believed to contribute to opening up and enlightening the interpretation and debate on the phenomenon in focus, at best avoid random judgments, help to moot our underlying assumptions, admit analyses beyond the single case and ground comparisons in common perspectives, which, again, should be challenged and scrutinized in a constant process of theoretically and also empirically enriched disputes on these issues.

2. Stakeholder advisory committees and their multi-source, negotiated expertise

The following part of the study describes the empirical settings of expertise production in more detail. This contextualises the kind of knowledge this study is looking at and guides the selection of suitable epistemic quality guidelines in the subsequent section.

By including experiences and knowledge from various backgrounds, committees that are dominated by stakeholders differ in important respects from scientific advisory committees. They reflect a general “shift from science to expertise and from knowledge to judgment” (Jasanoff 2005, 211) in the process of policy-making. Participants usually fulfil double roles – or “wear two hats”: that of a specialist and that of a representative of societal interests (Krick 2015b, 489). They respond in a unique way to contemporary governance demands. Governments are confronted with complex and partly conflicting requirements: they strive to legitimate their decisions with reference to knowledge to an increasing degree (Maasen/Weingart 2005, 5) while at the same time being increasingly bound to open up policy-making to “the people” and allow the inclusion of concerned – and potentially conflicting – interests (Straßheim 2008, 289). Their policy advice is negotiated and formulated in mixed groups and therefore directly connected to the “real world”; since government agents are usually present in these negotiations, questions of implementation and feasibility will be considered in the process of co-ordination. Participation of stakeholders and the broader public reduces risks in the

implementation process and can ensure compliance – and besides, not only independent experts, but also interest organisations often provide excellent and much sought-after expertise in their policy area (Bernhagen et al. 2015; Bouwen 2004; Krick 2015b). Relevant viewpoints can be provided by a multitude of agents such as NGOs, interest groups, practitioners, private business and even “experts of everyday life” (Maasen/Weingart 2005, 14) who contribute “local knowledge” (Beck/Forsyth 2013, 15); the entirety of these perspectives is valuable for the realm of policy-making, since it makes policy-related expertise relevant, usable and socially robust. When such agents agree on compromises within advisory committees and thus concentrate and solidify their knowledge via consensual procedures, the value of this expertise is given added cachet (Krick 2013, 2014, 2015b). The advice of these committees thus rests on *dual sources of legitimacy or authority*: its *epistemic* authority relies on the (different) sources of knowledge represented in the committee, while its *political* authority relies on the participation of societal representatives and the orientation towards consensus (Beck 2012, 2; Haas 2004, 575). One could also describe this expertise as resting on a double standard of “technical rationality” (based on expert knowledge) and “political legitimacy” (based on participation and consensus-oriented negotiation) (Jasanoff 2005, 216).

These characteristics qualify stakeholder fora for two main purposes that are distinguished within knowledge utilisation literature: instrumental, i.e. co-ordinating and information-providing functions on the one hand, which come to the fore when these committees actively shape policies, and symbolic functions on the other hand that mainly serve a government’s strategic interests of substantiating its preferences and of shirking (Boswell 2008; Brown 2008, 549; Haas 2004, 673; Krick 2015b, 491; Maasen/Weingart 2005, 14-15; Siefken 2007, 497). While advisory committees are of course not formally authorised to make binding decisions and their advice will also usually not be implemented 1 to 1, their double authority is considerable and can provide these “quasi-legislative bod[ies]” (Brown 2008, 544) with a pronounced *de facto influence on policy-making* (Brown et al. 2005, 85). Their negotiated outcomes cannot easily be ignored by decision makers, and even if the degree of direct diffusion is low, parts of the advice usually resonates strongly in the political sphere (Maasen/Weingart 2005, 15; Kropp 2003). Their visibility also makes it costly for policy-makers to take

decisions that contradict committee advice, as Lavertu and Weimer (2011, 232) point out.

Particularly characteristic are stakeholder advisory committees of the consensual, corporatist political systems that are widespread within the Northern part of Western Europe (Christensen et al 2010; Jasanoff 2005; Lijphart 1999, 248) – the EU itself featuring many aspects of a consensus democracy (Lijphart 1999, 42ff.). These political systems are characterised by institutional elements such as federalism, parliamentarianism, proportional representation and corporatist structures of interest reconciliation (Lijphart 1999), which call for co-operative policy-making and a consensus- and compromise-oriented political culture, that, in turn, is reinforced by these conditions.⁵

Stakeholder advisory committees fulfill systemic functions in many of these countries (Binderkrantz/Christiansen 2015; Christensen et al 2010; Egeberg 1981; Jasanoff 2005; Olsen 1983) and are set up as co-ordination mechanisms for the sake of spanning political divides, building societal consensus, securing public acceptance and compliance and for generating situated expertise on public policies (ibid.; cf. also Beck 2012, 2; Brown et al 2005, 81; Brown 2008, 549; Haas 2004, 575; Krick 2015b; Maasen/Weingart 2005; Siefken 2007, 2007, 497). From a perspective of political representation and participation, they can be read as expressions of a ‘democratization of expertise’ (European Commission 2001; Maasen/Weingart 2005; Bader 2014).⁶ Yet, broadly composed public advisory committees have recently also come under pressure from a global trend towards “evidence-based policy-making” (Straßheim/Kettunen 2014) and an “expertisation” of politics and policy-making (Turner 2014). Inherently Along with the ongoing decline of traditional European corporatism and the subsequent weakened trust towards classic interest group politics, these developments can undermine the legitimacy of stakeholder advisory committees, while not necessarily

⁵ Jasanoff (2005) shows for the case of Germany, how consensus-oriented political regimes build on consensus-oriented “national civic epistemologies” that allow objectivity constructions by way of broad societal inclusion and compromise and are in particular need – and particularly open – for coordinated policy-making on the grounds of public consensus (cf. also Binderkrantz et al. 2015).

⁶ Whether the transfer of the task of policy development to external committees is indeed such a democratic move and to what extent such institutions sidestep parliament and unduly predispose public policies, is another question that this study does not focus on, however (cf. for debates on these issues e.g. Brown 2008; Fischer 2009; Jasanoff 2003; Krick 2013; Kropp 2003).

eliminating them, however.⁷ The necessity for broad public support remains important in consensus democracies and the basic exchange logic between interest groups and stake actors persists (Binderkrantz/Christiansen 2015, 1036). Thus, despite this trend towards an ‘expertisation’ and a potentially growing role of scientists and scientific reasoning in public policy-making (Fischer 2009; Nowotny et al. 2001; Turner 2014), interest groups and stakeholder fora continue to be striking elements of modern policy-making in need of scrutiny (Binderkrantz/Christiansen 2015; Brown et al. 2005; Brown 2008; Christensen et al. 2010; Egeberg et al 2003; Gornitzka/Sverdrup 2011, 2015; Jasanoff 2005; Krick 2014, 2015b; Kropp 2003; Lavertu/Weimer 2011; Metz 2013; Siefken 2007).

3. Epistemic quality criteria for multi-source, negotiated expertise

The analytical framework within this section largely corresponds to and fleshes out the three dimensions or bodies of expert knowledge that have been suggested by Jasanoff (2005) for the analysis of expertise: The study takes the individual experts (dimension 1), their relations and epistemic practices (dimension 2) as well as the expertise itself and the institutional context of their production and application into account (dimension 3).⁸ Building on a social-relational notion of knowledge, the framework further combines three different perspectives on the epistemic quality of expertise: the policy-maker as recipient of the advice, other experts in the respective knowledge domain that the advisory committee operates in, and the social scientist as analyst of these procedures. Table 1 provides an overview of the analytical dimensions, criteria and perspectives while table 2 provides a detailed listing of the suggested framework of categories.

⁷ Instead of being replaced by or making way for academic experts, there are signs indicating that interest group representatives adapt their arguing and bargaining strategies and build increasingly on information as ‘access goods’ (Bouwen 2004) to the policy realm as a response to expertisation pressures. This has been shown for environmental NGOs and private business interests on the EU level in particular (cf. Eden et al. 2006; Bernhagen et al. 2015; Bouwen 2004).

⁸ These dimensions largely correspond to Jasanoff’s three-body conceptualisation as described in 2011, where she defines her second dimension no longer as the body of the advisory committee but as the “the collective body or group that advises governments” (Jasanoff 2011, 28). This study expands Jasanoff’s framework in that it considers internal institutional features of the advisory body, such as decision rules, largely within dimension 2, while the institutional embeddedness of the advice, its policy relevance and usefulness, and the relationship of the advisory committee with its sponsor are considered within dimension 3.

Table 1: Analytic dimensions, quality criteria and perspectives on socially embedded expertise

Analytical dimensions	Individual experts	Collective epistemic practice	Expertise in context
Quality criteria	<p>Reliability and trustworthiness</p> <p>1) Experienced and competent advisors vis-à-vis the policy issue at stake: Track-record of issues-specific experience and practice</p> <p>2) Trustworthy and credible advisors: Track-record of non-deception</p>	<p>Thoroughness, inclusion and fairness</p> <p>1) Justification of knowledge claims: Systematic, thorough, well-documented, coherent, justified, reasoned analysis</p> <p>2) Plurality of viewpoints: Broad inclusion of all those concerned</p> <p>Fair, cooperative and inclusive deliberation</p> <p>Minimisation of personal biases</p> <p>3) Agreement: Consolidated, uncontested, consensual outcome</p>	<p>Problem-solving capacity</p> <p>1) Politically relevant, applicable, implementable, enforceable outcome</p> <p>2) Reasonable, technically accurate, peer-approved, up-to-date analysis</p>
Perspectives	Social scientific viewpoint		<p>1) Policy-makers as recipients of expertise</p> <p>2) Other experts in the respective field</p>

3.1. Reliability of the individual advisors

Modelled on categories in Social Epistemology, 1) the competence and experience and 2) the trustworthiness and credibility of the bearer of the knowledge are quality criteria for the epistemic reliability of the individual advisory committee participant vis-à-vis the issue in question (Fricker 1998; Gelfert 2011; Goldman 2001, 2004).

1) Competence and experience can be deduced from credentials that demonstrate training, experience, skills and competence in the respective field (Pierson 1994, 401), such as (academic) degrees, professional accreditations and work experience. Goldman calls this an expert's track record of "cognitive success" surrounding an issue (Goldman 2001, 106). The concept of work experience does not have to be confined to paid work but can also embrace voluntary work at NGOs and charities and even be stretched to include extensively practiced hobbies to thus cover expertise of every-day life. When analysing the competence of *scientists* (or 'academics' more generally), the respective person's track record of peer-reviewed publications, recent research projects as well as

affiliations with independent research institutions can additionally be considered (Gelfert 2011, 306; Goldman 2001, 98; Haas 2004, 576).

“Impartiality” or “independence” of the experts that deliver policy advice is a quality criterion that is often put forward. This usually refers to the absence of conflicts of (commercial or political) interests of the advisors vis-à-vis the issue at stake (Goldman 2001, 93) and sometimes also to the distance between adviser and appointing authority (Lentsch/Weingart 2011a, 15, 2011b, 361; Verhoest et al. 2004, 105). Yet, for one thing, biases and conflicts of interest can never be entirely eliminated in groups (Lentsch/Weingart 2011b, 366), even in formal advisory committees whose members are selectively appointed. In fact, they are part and parcel of the business of expertise production and possibly of any epistemic practice: “Experts act as society’s agents in the fulfilment of particular goals, and hence are never even in principle disinterested” (Jasanoff 2011, 28; cf. also Jasanoff 2003, 160). Being interested is what is expected of many advisors: Particularly multi-source, not ‘purely scientific’, advice by definition includes different societal positions into policy-making; Besides, knowledge utilisation analysis and organisational theory point out that a certain entanglement and transmission mechanisms between an advisory body and state authorities allow exchange on administrative knowledge and can actually add to the quality of advice, e.g. in terms of its applicability (Boswell 2008, 475; Haas 2004, 573; Krick 2015b, 492; Verhoest et al. 2004, 102). Therefore, this study suggests to expect a considerable amount of independence from academics whose authority considerably builds on this, while relaxing the standard to societal representatives. When looking at the relationship of adviser and the recipient of advice, a more restrained, reasonable degree of independence is suggested that aims at a minimisation of personal biases (Haas 2004, 575) by reflecting on and openly dealing with them during the deliberation (Lentsch/Weingart 2011b, 366).

2) Another epistemic quality criterion of individual experts is their trustworthiness and credibility; this can best be analysed by a default criterion, the individual track record of non-deception of the individual experts (Fricker 1998, 163) and of impeccable reputations of the home institution (Goldman 2001, 93, 97). This can be complemented by an analysis of the general level of understanding and trust between informant and inquirer: have the channels of communication between advisors and recipients been

open? Do the bearer of knowledge and its recipient speak the same language (Fricker 1998, 163)?

3.2. Thorough and fair collective epistemic practices

The epistemic value of the collective processes of knowledge production can be described as determined by the justification of knowledge claims (1), the plurality of viewpoints, i.e. the inclusiveness of the process (2) and the level of agreement that is reached (3):

1) Deliberative Democracy and parts of Social Epistemology have emphasised the use of (rational) arguments or explicit reason-giving as the main indicator of the *justification* of knowledge claims (cf. for instance Bächtiger et al. 2007, 231; Goldman 2001, 93).⁹ Yet, the relevance of *arguing* or *explicit* reason-giving for epistemic quality should not be overestimated: First, rational reasoning and arguing are not the only means of expression and persuasion, which is why we need to at least complement them by other modes of communication and justification such as demonstrating, persuading (Mansbridge et al. 2012, 4-5), non-lingual showing, narratives or humour (Young 2000, 53ff.). While it surely depends on the understanding of the terms ‘argument’ and ‘reason’, a narrow concept of argument that is built on formal logic, scientific rationality and objectivity constructions, tends to neglect the prevalence of storylines in every discourse and the narrative embeddedness of every argument (Fischer 2009, 193; 200ff.). Second, a low level of *explicit* justification for a certain policy recommendation can indicate a high degree of closure, little contestation or low stakes around a policy issue; reason-giving is thus not a very convincing, and maybe even a negative indicator for epistemic worth, as Holst and Tørnblod (2015, 168) point out.

Instead of focusing solely on reason-giving and rational arguing as criteria, it seems more convincing to analyse the level of justification of advice by asking whether the problem has been systematically, thoroughly and comprehensively analysed, whether the process of concluding was transparent, the methodology well-documented and open to scrutiny (Lentsch and Weingart 2011a, 15) and whether the product, the advice,

⁹ Some authors discuss the relevance of “dialectical superiority” or the argumentative performance of experts for assessing epistemic worth (Goldman 2001, 95), i.e. the question whether the person scoring best in an intellectual dispute can be considered the one whose conclusions are most correct. It is easy to see the flaws in this argument, since in effect, a person trained in open dispute and indeed any charismatic demagogue would score particularly well in this dimension, but surely not on the basis of superior expertise (cf. also Holst/Molander 2014, 21).

shows consistency and coherence of thoughts, provides a red thread and draws a convincing storyline (Fischer 2009, 198ff.; Lentsch and Weingart 2011b, 368; cf. also List 2012, 207ff.) – whatever its underlying modes of communication and justification are.

2) Throughout Social Epistemology, STS and Deliberative Democracy, authors agree that the incorporation of all relevant, affected viewpoints and interests vis-à-vis the question at stake is paramount for the epistemic authority of policy advice (Beck 2011, 305; Beck 2012, 5; Beck and Forsyth 2013, 15; Fricker 1998; Goldman 2001, 105; Guston 2005, 77; Holst and Tørnblad 2015, 170; Jasanoff 2003, 161, 2005, 220; Mansbridge et al. 2012, 17; Straßheim/Kettunen 2014, 268). Scholars have argued that a better analysis of policy issues can be reached by bringing in more diverse knowledge, for instance by educating laics or by including specialised NGOs (Mansbridge et al. 2012, 17), by including localised or informal forms of knowledge (Beck and Forsyth 2013, 15), or stakeholders and their regional experience and knowledge (Beck 2011, 305). Broad inclusion or “epistemic justice” (Fricker 1998, 173) is argued to be not just fairer but also conducive to the “verific value” (ibid.) of a practice and the achievement of truth, i.e. add to the epistemic quality of decisions (Mansbridge et al. 2012, 17) and the credibility and stability of knowledge claims (Beck 2011, 305).

The criterion of plurality is *minimally* met when an advisory body is *broadly composed* of representatives of all relevant positions vis-à-vis the respective issues. It is *substantially* met if conditions for inclusive deliberation apply, i.e. when the exchange is sufficiently respectful and co-operative, inclusive and fair (Bächtiger et al. 2007, 231, cf. also Young 2000), so that all participants *de facto* have a chance of getting involved. If “bounded but candid deliberation among the holders of divergent viewpoints” has been allowed this promises to lead to “a sharpening of analysis, more accountable exercise of judgments and eventually better assessments” (Jasanoff 2003, 161). Respect and cooperation are reflected by an atmosphere in which participants pay attention and listen to others, recognise each other’s statements, are willing to learn and make concessions and show non-competitive but friendly and considerate behaviour. The domination of the scientific habitus and mode of communication, which tends to privilege the white male academic, can be counterbalanced by legitimising and even actively promoting alternative modes of communication and expression such as participation via written input or by narratives, which have been described as the more harmonious mode that

seeks to create a common understanding and does not undermine the other (Fischer 2009, 203; Young 2000).

3) When analysing collective decision-making practices, the degree of convergence of the advisors' opinion, their agreement regarding the advice, or the level of support for the solution have widely been described as important indicators of uncontested knowledge and of a high degree of verification (Gelfert 2011; Goldman 2001, 93, 97; Guston 2005, 65; Haas 1992, 23; Jasanoff/Wynne 1998, 19; Lentsch/Weingart 2011b, 367; Mansbridge et al. 2012, 18). While 'consensual closure' is hard to achieve, especially on complex questions, a high degree of agreement or even consensus of experts points to the degree of certainty of the knowledge (Mansbridge et al. 2012, 18) and adds to the authority of decisions (Beck and Forsyth 2013, 6; Beatty and Moore 2010).

The norm of consensus has also been criticised for its oppressive potential when it delegitimises dissent (Turner 2014, 273; Young 2000), for its tendency to favour the status quo (Beatty/Moore 2010) and for its ability to cover up certain degrees of de facto disagreement (Krick 2015a). Indeed, large agreement is not in itself a reliable indicator for the epistemic value of statements, as Goldman shows with respect to gurus and to rumours (Goldman 2001, 98ff.); as all the other criteria suggested within this framework, the degree of consensus always needs to be considered in connection with other indicators such as justification or the trustworthiness of the experts. Yet, these arguments do not actually challenge the relevance of the consensus criterion for the epistemic validity of policy advice. Rather, these debates make apparent that we need to complement it with other quality criteria and also look beyond general group approval at the end of a decision process as a quality criterion (Lentsch and Weingart 2011b, 367), which is merely a *minimal* requirement of epistemic value. In addition, we need to analyse the deliberative practice in a *substantive* way to be able to judge the quality of the consensus, i.e. the earnestness, openness and fairness of the dispute beforehand and the actual degree of conflict resolution that a joint decision of an epistemic arena stands for (cf. also Bächtiger et al. 2007; Beatty/Moore 2010; Goldman 2001, 93; Krick 2015a).

3.3. Two perspectives on the problem-solving capacity of the expertise

Abiding by a relational, social notion of knowledge, a twofold external perspective on the problem-adequacy and usefulness of the advice is suggested, which allows to look at

the bodies of expertise that have been brought into and produced during the process from the point of view of the authority that mandated the policy advice production, the sponsor of the advisory committee (1) *and* from the perspective of (other) experts in the respective policy field (2):

1) Recipients of the policy advice from the domain of policy-making can judge in how far the advice is politically relevant and applicable (Haas 2004, 573-575.; Holst/Tørnblad 2015, 170f.; Lentsch/Weingart 2011b, 368), which adds to the problem-solving capacity of the expertise from a perspective of political practice and thus to its epistemic authority in the given context. The perspective of the political practitioner goes beyond the criterion of broad agreement: for instance, recipients of the advice will be able to judge whether a piece of expertise is actually implementable within the given regulatory regimes, enforceable within the existing sanctioning regime, answering to the original problem, whether there will be political support for the solution and sufficient public funding. This is all part of the struggle for recognition and validity that is central to the epistemic quality of expertise (Straßheim/Kettunen 2014, 265)

2) Other experts in the respective policy and knowledge domain can be called upon to evaluate whether the advice is based upon the scientific state of the art and the more general, current state of debate on the issue. One needs to ask whether the advice is based on thorough insights into the field of knowledge, accounts for the history and development of a field of expertise, for existing conflicts and competing solutions, earlier public and professional debates and dead ends, as well as knowledge of key players within a certain domain of expertise. External experts can be drawn upon to judge whether the advice is reasonable in consideration of the original problem, whether assumptions and conclusions are technically accurate and comprehensible, data sources trustworthy and whether it can thus overall contribute to problem-solving from a perspective of analytical soundness, rigor, accuracy and methodical authoritativeness (Fricker 1998; Goldman 2001; Haas 2004). Surely, when confronted with opposing knowledge claims by such experts, a novice/2-expert problem (Goldman 2001, 90; cf. also Gelfert 2011) may apply, i.e. the inability of the observer to judge how competent other potential experts are. Yet, if one heeds Goldman's (2001, 93) suggestion to ask as many experts as possible (cf. also Fricker 1998), if one follows standards of qualitative inquiry and strives for theoretical saturation (i.e. a state of inquiry at which point expert

opinions reaffirm each other and thus converge) and weighs contradictory assessments against each other, a balanced judgement can be approximated.

Table 2: Analytical framework for assessing the epistemic quality of multi-source, negotiated expertise

	Quality criteria	Indicators
I) Reliability and trustworthiness of the individual experts		
I.1.	Competence and experience of the involved experts (vis-à-vis the issue at stake)	Track record of issue-specific practice: <ul style="list-style-type: none"> • (Academic) degrees • Professional accreditations from institutions with distinct reputation • Practice from (voluntary) work and hobbies • Minimisation of personal biases • Academics: peer reviewed publications, recent research projects, affiliations with independent research institutions • (...)
I.2.	Trustworthiness and credibility of the involved experts	Track record of non-deception: <ul style="list-style-type: none"> • Absence of indications of deceit, fraud, opacity of conflicts of interest of both the individuals and their home institutions • Trust and understanding between recipient and bearer of expertise: Open channels of communication and shared language between informant and inquirer • (...)
II) Thorough and fair collective epistemic practice		
	Validity criteria	Indicators
II.1.	Justification	High level of justification of knowledge claims during the advisory process: <ul style="list-style-type: none"> • Systematic, thorough and comprehensive treatment and analysis of the problem • Red thread, convincing storyline • Transparent, well-documented process of reasoning and concluding • Individual expert's coherence and consistency of thought • (...)

II.2.	Plurality of viewpoints	<p>Minimal plurality: procedural inclusion of all relevant and affected viewpoints and interests vis-à-vis the question at stake:</p> <ul style="list-style-type: none"> • Broad composition of the advisory group <p>Substantial plurality: de facto inclusion of all participants into decision-making:</p> <ul style="list-style-type: none"> • Fair, inclusive, respectful, co-operative deliberation • Consideration, concessions, mutual learning • Contained power imbalances • Legitimacy/active promotion of different modes of communication and justification • (...)
II.3.	Agreement	<p>Minimal convergence of experts' opinions:</p> <ul style="list-style-type: none"> • Consensual outcome <p>Substantive support by the group for the found solution:</p> <ul style="list-style-type: none"> • Earnest, open and fair dispute • Inclusive decision rule and maximum de facto degree of voice aggregation • (...)
III) Problem-solving capacity of the expertise		
	Validity criterion	Indicators
III.1.	Problem-solving capacity from the perspective of the recipient of the advice	<p>Politically relevant and applicable expertise:</p> <ul style="list-style-type: none"> • Publicly accepted advice • Implementable within the given regulatory regimes • Enforceable within the existing sanctioning regime • Answering to original problem • Political support for the solution • Sufficient funds • (...)
III.2.	Problem-solving capacity from the perspective of other experts in the field	<p>Accurate, analytically sound, peer approved and methodically authoritative expertise:</p> <ul style="list-style-type: none"> • Based on state of the art and debate in the field of expertise • Reasonable in consideration of the original problem • Accurate and comprehensible assumptions and conclusions • Trustworthy data sources • (...)

Conclusion

Stakeholder advisory bodies are powerful instruments of modern governance that produce influential policy recommendations. These institutions are not necessarily controlled by their sponsor, although they do have substantiating functions that governments make use of. Yet, when established at arm's length from the state, they can

develop a life of their own as well as an internal collective identity and become quite independent loci of policy-making. In consensus democracies in particular, where these institutions often resemble 'microcosms of society' (Jasanoff 2005), they are used as coordination mechanisms that ensure the smooth operation of the political system. When these committees succeed in generating consensual advice on public policy, it usually resonates strongly in the public sphere and can hardly be ignored by governments. Due to their composition, the influential advice that these committees produce rests on the double authority of expert knowledge and the broad inclusion of stakeholders and it differs substantially from the scientific ideal; it much more qualifies as policy-relevant, usable and socially robust expertise that is so important in the policy-realm. Its social embeddedness and robustness rests on multiple grounds: it is advisory by nature and addresses a specific social audience, it rests on multiple societal backgrounds, experiences and viewpoints that span the public realm, it is negotiated collectively within a broadly composed group and particularly consolidated and verified through consensual procedures, and, finally, it usually answers to societal conflicts and complex, value-laden problems.

The study tried to go beyond the widespread post-positivist assertion of the merits of socially embedded knowledge. It argued for systematic and transparent analyses of its epistemic value and for an understanding of 'criteria' in a context-bound way, i.e. not as universal, definite criteria, but as tailored to the phenomenon in question. Since a simple reproduction of scientific quality standards would be both unfair outside academia and would fail to capture the peculiarities and assets of this knowledge, this study has suggested quality guidelines that fit negotiated, multi-source knowledge by drawing on and interconnecting three bodies of knowledge theory. This compensates Social Epistemology's emphasis on individual epistemic practices, the exclusive focus on science in STS and the procedural micro-perspective of Deliberative Theory. The quality criteria relate not only to the expertise itself, but also to the collective process of deliberation, the individual advisors and their relationships and they combine different perspectives: the perspective of the social scientists, the viewpoint of the recipient of the knowledge, the policy-maker, and other experts in the domain of policy-related knowledge. Surely these perspectives do not have to converge, but may be inconsistent and the suggested criteria may be in tension with each other. Yet, this reflects the social constitution of the value of knowledge and of expertise in the policy-context in

particular and is no reason against such a multi-perspectives and multi-dimensional approach. Rather, such context-bound criteria are in constant need of development, scrutiny and debate. They are meant to provide a guideline for judgments and make normative positions explicit. They need to be further operationalized, tested when applied to empirical cases and adapted according to the particular context. While they have been developed to fit stakeholder arenas, they may – with the required adjustments – very well be transferable to other sites of collective expertise production, such as epistemic communities, technical advisory committees, citizen participation arenas (such as consensus conferences, for instance) or even regulatory agencies.

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