CHAPTER 5

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REPRESENTATION, EXPERTISE, AND THE GERMAN PARLIAMENT: A COMPARISON OF THREE ADVISORY INSTITUTIONS

INTRODUCTION

At least since the first democracy executed its most prominent expert advisor, the relationship between democracy and expertise has been a topic of more than academic interest. Socrates was not a scientist in today's sense of the term, but like many experts today, and unlike the Sophists of his own time, he sought to make the search for truth useful to his contemporaries. The Athenians' marked lack of appreciation led Plato to the view that in a just state philosophers would need to be kings. Things have not worked out that way, but politics today has become unthinkable without the continual reliance on various forms of expertise. Expert advice enters the political process through established institutions, short-term commissions, ad hoc committees, and informal personal networks. Experts from every imaginable profession and academic discipline advise executive, legislative, and judiciary branches of government, as well as interest groups, businesses, and civic organizations of all kinds.

This chapter examines the potential contribution of expert advice to the representative tasks of the German Bundestag (Federal Parliament). We consider three advisory institutions relevant for legislative decision making in Germany, each primarily associated with one of the reference points of our analysis: enquete commissions (parliament), the Office of Technology Assessment (science), and citizen panels (the public sphere). We evaluate these institutions with respect to both the quality of their expertise and the extent of their contribution to democratic representation.

Political decision makers turn to experts for two fundamental reasons. First, they use expertise to make their decisions more reasonable, justifiable, and effective. Second, because the use of expertise gives decisions a greater claim to public acceptance, politicians hope that citizens will be more willing to accept a decision based on (or at least rationalized with) expert advice. Expertise thus serves what might be called problem-oriented and politics-oriented functions.[1] The former refers to the 'substantive' use of expertise to identify, understand, and make decisions about socio-technical problems. The latter refers to the communicative use of expertise to justify policies, as well as the strategic use of expertise to delay decisions or avoid

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responsibility. Using expertise to either develop or explain policy decisions allows politicians to make a justifiable claim to public acceptance. Even the strategic use of expertise might offer a justifiable way of promoting the goals for which a politician was elected, thus increasing acceptance among supporters.[2] It is important to note, however, that a justifiable claim to public acceptance cannot be equated with actual public acceptance, and the latter rarely depends entirely (and often not at all) on expertise.

Expertise thus provides only one of the resources with which politicians seek to make their decisions democratically legitimate. Legitimacy is of course a complex concept and cannot be explored here. For present purposes we want to suggest that ideally legitimate decisions require a combination of expert advice, popular involvement and acceptance, and legal authorization and accountability. Legitimacy thus has both substantive and procedural components. Neither rational and effective decisions that are publicly rejected, nor irrational and ineffective decisions that are publicly accepted, are fully legitimate.[3]

The substantive and procedural components of legitimacy roughly correspond to the two key elements of our normative conception of democratic representation: leadership and participation, sometimes conceived in terms of the 'trustee' and 'delegate' models of representation (Pitkin 1967: chap. 10). Public representatives in a democracy should neither slavishly follow nor entirely ignore public opinion. Representatives ought to promote those policies they consider to be in the public interest, and it is in the public's interest that representatives take the desires, opinions, and electoral preferences of regular citizens into account. Understood in this way, political representation does not conflict with public participation, as is often assumed, but depends on it (Plotke 1997).[4]

The relationship between technical expertise and democratic representation has long taken the form of a *scientization of politics*. Since the mid-twentieth century, expanding governmental activities and new technological risks have increased the reliance of advanced industrial states on technical advice. This has led to an expansion of the leadership component of democratic representation, usually at the expense of the participatory component. Expertise of various sorts has always played a key role in representative democracy, insofar as it helps representatives determine which policies will effectively promote the public interest (Ezrahi 1990: chap. 2). But in the context of scientized politics, experts are mistakenly portrayed as fulfilling a universal human interest in effective policy, and hence, as the public's only true representatives (Hitzler 1994: 17; Feenberg 1999: 137).

The scientization of politics has been associated with both *decisionist* and *technocratic* models of expertise (Habermas 1970: 62–80). According to the former, experts provide value-neutral information about available means, and politicians make value-based decisions about desirable ends. The legitimacy of political decisions is seen to rest not on substantive standards of rationality, nor on active public participation, but solely on the formal authorization and accountability of the decision makers. The technocratic model, in contrast, equates political legitimacy with the rationality and effectiveness of policy, replacing politics with scientific administration. Both models mistakenly assume it possible to promote the public interest without active public involvement. And both depend on an image of value-free science that has been repeatedly refuted by empirical research on the co-production of science and politics in the laboratory and public life (Jasanoff et al. 1995). Each model thus fails to fulfill the above-described conception of legitimacy: the decisionist model lacks substantive rationality, and the technocratic model lacks public acceptance and involvement.

In response to the shortcomings of scientized politics, interest groups of all kinds have sought their own sources of expertise, which when coupled with the complexity of socio-technical problems and the uncertainty of scientific knowledge, has led to a *politicization of science* – the flip-side, so to speak, of the scientization of politics (Weingart 2001: chap. 4). Paradoxically, the politicization of science has simultaneously increased expert prominence and decreased expert authority. And to the extent that experts today become associated with the interest groups that sponsor their work, the politicization of science extends interest-group representation into the realm of expertise.

A desire to restore expert authority without returning to scientized politics has led over the past thirty years to calls for the *democratization of expertise*, usually focused on efforts to expand the number and type of parties involved in technically complex political issues (e.g., Petersen 1984; Hennen 1999; Joss and Bellucci 2002). When determining research priorities, making policy recommendations, or even, less frequently, when conducting research itself, experts are increasingly expected to solicit and respond to the views of lay citizens. Efforts to democratize expertise often draw on a *pragmatist model* of expertise, according to which the values implicit in science and technology are subjected to political deliberation, and political goals are adjusted in light of the technical means available for their realization (Habermas 1970: 66).[5] Depending on the range of participants involved in such pragmatist mediation processes, commentators refer to either a *corporatist model* or a *participatory model* of expertise. The former includes representatives from government, science, and major interest groups; the latter expands the range of participants to include lay citizens (see Joss and Bellucci 2002). As long as it avoids a populist reduction of political questions to matters of subjective preference, the participatory approach more fully captures the aims of the pragmatist model than the corporatist view. Whereas the decisionist model reduces public participation to periodic elections, and the technocratic model includes no role at all for the lay public, a participatory version of the pragmatist model links the participation and leadership elements of democratic representation.

Efforts to democratize expertise have met with two distinct responses. Some see democratization efforts as nothing but a further politicization of expertise and argue instead for a return to an imagined golden age of value-free expert advice. Others claim that public participation on expert advisory committees justifies the immediate adoption of their recommendations by legislatures without further deliberation or consultation. From our perspective, each of these responses to democratized expertise lacks a coherent understanding of the relationship between expert advice and democratic representation. The first response assumes expert advisory bodies can ignore the lay public; the second asserts that by involving the public they acquire the same representative status as a popularly elected legislature. This chapter attempts to identify a conceptual and institutional space for expert advisory bodies that avoids both of these misconceptions.

EVALUATING EXPERT ADVISORY INSTITUTIONS

In developing criteria of evaluation, we have sought to go beyond the typical concern with the scientific validity of expertise. When expert knowledge is uncertain, controversial, and intertwined with value judgments, when many advisory commissions include non-experts, and when the political need is not so much for science but for policy relevant advice, traditional criteria of validity are insufficient. We have thus developed two criteria that combine a rough measure of scientific validity with certain aspects of the participation and leadership elements of democratic representation.

Representativeness

The criterion of representativeness refers to the degree to which advisory institutions incorporate diverse social, political, and disciplinary perspectives. With regard to scientific validity, the notion of disciplinary representativeness captures the basic idea of peer review, which typically seeks to include a wide range of perspectives from a single discipline. It is also similar to traditional scientific notions of publicity and openness to criticism, especially as they pertain to the frequent need for interdisciplinary cooperation in expert advisory processes. In politics the idea of representativeness is associated with the tradition of 'descriptive' representation, which conceives representation in terms of resemblance or similarity between representative and constituent (Pitkin 1967: chap. 4). In contrast to the 'delegate' model of representation, which employs elections or communication between elections to bind representatives to their constituents, the descriptive view assumes that descriptively similar representatives will spontaneously act as their constituents would have acted. It appears in the common expectation that representatives should possess the same demographic characteristics – race, class, gender, age, education, etc. – as the people they claim to represent. It can also be seen in the United States Federal Advisory Committee Act of 1972, which requires that advisory committees be "fairly balanced in terms of points of view represented and functions performed" (5 U.S.C. App. I, §§5(b)(2), 5(c); Jasanoff 1990: 47; Smith 1992).

It is important to note that descriptive similarity in either science or politics does not authorize representatives to act on their constituents' behalf. Nor can representatives whose claim to represent resides only in descriptive similarity be held accountable by or to their constituents, since people can be held to account only for what they have done, not for who they are (Pitkin 1967: 83–91). What descriptive representatives can do is call attention to the questions, concerns, and social perspective they share with their constituents (Young 1997; Mansbridge 1999). Evaluations of representativeness always remain contestable, however, as the relevance of any particular perspective to a particular question often becomes a controversial question itself.

A high degree of descriptive representativeness on an expert advisory committee has a number of potential benefits. First, to the extent that increasing the number of alternative perspectives on a problem improves understanding of the problem, representativeness contributes to the rationality of an advisory committee's work. The more perspectives involved, the more likely that errors and biases will be identified and corrected. Second, representativeness may increase the public acceptance of expert advisory committees, insofar as it increases the likelihood that committee recommendations will be responsive to the concerns of every social group relevant to the committee's topic.[6] Third, if the members of an expert advisory committee are publicly associated with particular social, political, or disciplinary groups, they may evoke a symbolic form of representation – that is, a feeling of being represented – among other members of those groups. Although symbolic political representation is easily misused for ideological purposes, it can also foster a sense of membership and help decrease the alienation of excluded groups from political life.

Despite these potential benefits, the representativeness of an advisory committee cannot by itself ensure the legitimacy of any decisions to which it contributes. The democratization of expertise does not alter the fact that, at a fundamental level, expertise aims at a primarily scientific rather than political form of representation. Rather than 'representing' in the sense of acting for others, expert advisory committees 'make representations of' empirical evidence, experiential perspectives, and normative claims. Expanding the membership of such committees may make their recommendations more broadly representative of available evidence and social perspectives, but it does not authorize such committees to act on the public's behalf. Similarly, descriptive representativeness may foster public acceptance of both the advisory process and any subsequent decisions, but it does not provide a measure of public acceptance.

Resonance

No matter how representative an advisory institution, if it remains ignored by policy makers and the public it will have little impact on either policy decisions or public discourse, and hence, make little contribution to democratic representation. We use the idea of parliamentary and public resonance to characterize the level of attention generated by advisory committees to their topics and activities among decision makers and the general public.

Our assessment of both representativeness and resonance focuses on the institutional design of our three selected advisory institutions. Our assessment depends in part, of course, on the actual performance of these institutions to date, especially in cases where an established pattern of activity suggests an informal institutional norm. But we are less concerned with the representativeness and resonance that these advisory institutions have achieved so far, and more with what can be expected in light of their institutional designs and their relationships with other institutions. We do not address micro-level questions regarding the quality of deliberation within these advisory institutions or between their members and the politicians they advise. Our conclusions thus take the form of hypotheses regarding the contribution to democratic representation that one might reasonably expect from each of these advisory bodies in light of the norms and incentives reflected in their institutional frameworks.

EXPERTISE AND THE GERMAN PARLIAMENT

Like the legislatures and parliaments of other advanced industrial states, the German Bundestag has over the past fifty years expanded its activities to address a wide range of technically complex problems, increasing its need for expertise. This has led to numerous changes in both the form and function of expertise (see Krevert 1993: 128f.; Thunert 2001). Expert advisory processes have become more explicitly political, more interdisciplinary, and more open to including lay citizens. Indeed, there has been a general shift away from decisionist and technocratic models and toward a pragmatist model of expertise. Many advisory bodies today, including those examined here, build explicitly on the pragmatist insight that politicians have little use for scientific knowledge as such, but rather for expertise tailored to their political needs. At the same time, however, this generally pragmatist orientation manifests itself in very different ways.

ENQUETE COMMISSIONS

The enquete commission was created as part of the Bundestag's 'small parliament reform' on 1 October 1969. Parliamentary investigative committees (*Untersuchungsausschüsse)* generally confine themselves to past instances of alleged corruption, so many parliamentarians wanted a new institution that would provide advice on emerging problems and upcoming decisions. Enquete commissions were also specifically aimed at overcoming the legislature's informational deficit with respect to the executive (Altenhof 2002: 12). According to the Bundestag's administrative regulations, any member of the legislature may request the creation of an enquete commission, and if 25 percent join the request a commission must be created. One half of the seats on every commission are given to members of the legislature, one half to invited experts. Both legislative and expert members are appointed by the parliamentary party groups (*Fraktionen*), each group receiving an allotment of seats in proportion to its number of seats in the Bundestag. Enquete commissions generally have 12–20 members. They meet periodically during a single legislative term, after which they may be reestablished by the next legislature. Commissions often prepare several interim reports, and they are required to provide a final report to the legislature at the end of each legislative term. Over twenty enquete commissions have addressed a wide variety of topics, including nuclear power, information technology, 'youth protest,' AIDS, global warming, genetic engineering, technology assessment, and the legacy of the East German dictatorship.[7]

Enquete commissions serve both problem-oriented and politics-oriented functions (see Krevert 1993: 167ff.). Insofar as they educate parliamentarians and the general public, they facilitate scientifically informed public policy and the effective resolution of political problems. They are not research institutions, however, and do not aim to resolve political conflicts by 'speaking truth to power.' Indeed, the Bundestag has repeatedly affirmed the essentially political character of enquete commissions (Altenhof 2002: 161f., 326). Beyond this general orientation toward political issues, different commissions have somewhat different purposes: some aim more to monitor and control the government, others more to seek consensus on an emerging issue.[8]

Some even appear to have primarily strategic purposes (Hoffmann-Riem 1988: 61). Whatever their purpose, because they include experts not elected by the public, administrative regulations explicitly limit enquete commissions to providing general recommendations rather than advocating specific policy measures (Altenhof 2002: 92).

Representativeness of Enquete Commissions

Given their institutional proximity to political power, one can expect the disciplinary representativeness of the expert members of enquete commissions to be lower than that of most other advisory institutions. It is no secret that the parliamentary groups select experts with the aim of garnering scientific validation for their political positions. Experts are not chosen according to their party membership, but the selection process generally involves careful screening of an expert's scientific publications in light of their political implications. Although experts occasionally surprise the party that invited them, the lines of division on an enquete commission usually run not between experts and politicians, but between the commission members from the governing coalition and those from the opposition parties, with the experts aligned with the side that invited them. Depending on the particulars of the case, this arrangement can hinder the inclusion of all relevant disciplinary perspectives (Hoffmann-Riem 1988: 63). Indeed, some expert members of enquete commissions have complained that, if they wanted to have any influence on the commission's deliberations, they had to tailor their statements to their sponsor's position (Ismayr 1996: 37).

In addition to their institutional bias against high disciplinary representativeness, enquete commissions have limited social representativeness. Although enquete commissions increasingly hold extensive public hearings, they are not legally required to involve the general public. Nor are there institutional incentives to employ demographic criteria in selecting commission members. Demographic criteria seem to play a role only when it becomes politically impossible to ignore them, as with the commission on the legacy of the East German dictatorship, which emphasized the inclusion of participants from former East Germany (Altenhof 2002: 181–3). There are no formal requirements, however, for the inclusion of traditionally excluded social perspectives, such as those of women and minorities.

A representative political composition, in contrast, is an implicit goal of the enquete commission's institutional design. Because the parliamentary members are appointed by the parliamentary party groups in proportion to the groups' electoral strength, the political makeup of every enquete commission mirrors that of the Bundestag. Insofar as the legislature is descriptively representative of the full range of political views in German society, enquete commissions will be too. The use of proportional representation in the German electoral system facilitates the representation of a relatively wide range of political views. This does not guarantee, of course, that all political views are represented, and those members of the legislature not aligned with a parliamentary party group (*Fraktionslose*) have charged that their exclusion from the appointment of members to enquete commissions reduces the commissions' representativeness (Altenhof 2002: 80–85). More generally, the direct link between the political composition of enquete commissions and that of the legislature

creates an institutional limitation on complete representativeness not present in, for example, citizen panels. This lack of full political representativeness might help explain why enquete commissions have so far not addressed some of the issues that most concern German citizens, including unemployment, terrorism, German unification, security policy, and European integration (Altenhof 2002: 334f.). Nonetheless, enquete commissions probably have a higher degree of political representativeness than any other form of expert advice in Germany.

Parliamentary Resonance of Enquete Commissions

Some enquete commissions elicit far more interest from Bundestag representatives than others, due simply to the topicality of the subjects they address. Beyond the matter of parliamentary interest in their topics, the most important factor in the uptake of commission ideas and reports appears to be the efforts of the parliamentary members to mediate between the commission and the Bundestag through both informal contacts and organized workshops. Although everyone on an enquete commission has a single vote when approving the final report, parliamentary members have a certain 'home court' advantage: they are familiar with the procedures, they chair the meetings, they may bring an assistant to the meetings, and they have existing alliances and cooperative relationships with other members of the legislature (Altenhof 2002: 205). Expert members of the commission tend to have more influence in cases where parliamentarians have not yet committed themselves to a particular position on the topic. Overall, however, a commission's influence does not depend primarily on the quality or quantity of the scientific evidence assembled by the commission. Indeed, the more enquete commissions succeed in capturing the complex, interdisciplinary character of the problems they study, the more difficult it becomes to assimilate their reports to the segmented organizational structure of the legislature (Ismayr 1996: 40). Rather than scientific validity, parliamentary resonance depends on the efforts of individual parliamentarians in actively promoting a commission's work (Altenhof 2002: 203–209).

Such efforts have so far proven successful in only certain respects. With regard to the problem-oriented functions of expertise, the Bundestag has never adopted all the recommendations of an enquete commission, and no recommendations have been implemented that were not in accord with the program of the majority coalition (Altenhof 2002: 318). Enquete commissions have achieved greater parliamentary resonance with respect to the politics-oriented functions of expertise. For example, they have sometimes been effective at serving a 'pilot function': parliamentarians who are able to reach a consensus among the members of an enquete commission can expect to reach one in the Bundestag as well (Altenhof 2002: 209f.). Additionally, the most influential commission recommendations have been those that were already present in the broader public discourse (Altenhof 2002: 320). In sum, enquete commissions merit relatively high expectations for parliamentary resonance, but primarily with regard to their politics-oriented functions, and especially when combined with strong public resonance.

Public Resonance of Enquete Commissions

As with parliamentary resonance, the topics of some enquete commissions simply elicit more public resonance (and mass media attention) than others. Several enquete commissions have actually been established in response to public controversies on a particular topic (Altenhof 2002: 321). In recent years, enquete commissions have sought to stimulate public interest by making their work as publicly transparent and accessible as possible (Ismayr 1996: 41). Although they remain primarily oriented toward the Bundestag, enquete commissions have increasingly made use of public hearings, symposia, and other means of involving the public in their work. The commission on the East German dictatorship, for example, heard testimony from 327 experts and concerned citizens at 24 public hearings. The commission on global climate change heard testimony from almost 500 experts (Altenhof 2002: 222–225). The commission on 'youth protest' even held one of its hearings on live television (Altenhof 2002: 322).

The interim and final reports of every commission are published by the Bundestag and occasionally by a commercial publisher as well. Commission meetings are generally not open to the public, nor are transcripts usually published, so as to spare participants public scrutiny, give them more freedom to modify their positions, and thus facilitate the search for consensus (Altenhof 2002: 209). Several commissions, however, have made their commissioned reports and other research materials available to the interested public. Some commissions have also solicited written testimony from both civic organizations and the general public (Altenhof 2002: 226). According to one assessment, enquete commissions have in recent years pursued a 'continuing dialog' with the interested public (Hampel 1991: 119). Thought it might go too far to call them "one of the most important instruments of interaction between parliament and society" (Braß 1990: 94), it seems reasonable to expect a relatively high public resonance from most enquete commissions.

THE OFFICE OF TECHNOLOGY ASSESSMENT AT THE GERMAN PARLIAMENT (TAB)

The *Büro für Technikfolgenabschätzung beim Deutschen Bundestag* or TAB was created by the Bundestag in 1990. The authorizing directive called for the establishment of an institution whose legal form, scientific competence, and interdisciplinary structure would allow it to provide advice to the legislature with a high degree of institutional independence (Deutscher Bundestag 1989). The task of establishing such an advisory body was thus appropriately delegated to the Institute for Technology Assessment and Systems Analysis (ITAS), a major research institute in Karlsruhe, Germany. The ITAS is almost entirely government funded, but it remains institutionally independent of the Bundestag. Organizational and political responsibility for the TAB is held by the Bundestag's Committee for Education, Research, and Technology Assessment, facilitated by a permanent rapporteur group, comprised of one member from each of the parliamentary party groups.

The TAB pursues a diverse program of activities aimed at, first, understanding the legal, social, and environmental potentials and risks associated with scientific and technological developments; and second, suggesting alternative options for political

action, though not specific policy measures (Petermann 1994: 80; Meyer 1997: 347). The TAB does not generally perform research itself, but commissions either original research or literature reviews of existing research. Given its political independence and institutional distance from the legislature, the TAB is the most scientifically-oriented of the advisory institutions examined here. It embraces a relatively traditional, 'instrumental' conception of technology assessment, making it the most suited to the problem-oriented functions of expertise (see Peters 1996; Petermann 1999: 56).[9]

Representativeness of the TAB

Unlike enquete commissions and citizen panels, the TAB has little aspiration to either social or political representativeness. The notion of political representativeness does appear in the work of the TAB's parliamentary permanent rapporteur group (*Berichterstatter-Kreis*), a subcommittee of the Bundestag's science and technology committee. The rapporteur group has the task of turning legislators' often very general expressions of interest in research on a particular topic into concrete research proposals. The rapporteur group is supposed to remain politically neutral, with each parliamentary party group appointing only one member. Nevertheless, insofar as the work of the rapporteur group involves politically charged decisions, it may have a distinctly political influence on the topics of TAB research. This is only to say that, as an advisory institution, the TAB's work might be considered politically representative in the minimal sense that it conducts research on topics of interest to those in power. Social representativeness, in contrast, seems to play no role in the TAB's work.

With regard to disciplinary representativeness, there is little evidence that the political influence on the selection of TAB research topics extends to the research itself. Indeed, the TAB's mission is explicitly conceived as advising the entire parliament, rather than any particular parliamentary group (Beyme 1997: 160f.). Put differently, the TAB seeks to make its work representative of scientific rather than political opinion. Although the TAB staff is relatively small (currently ten scientists), a wide range of disciplines are represented, including biology, chemistry, physics, agricultural sciences, political science, sociology, and economics. Moreover, when preparing its reports the TAB commissions 5-10 external studies, seeking to solicit a wide range of scientific opinion (Grunwald 2003). It also occasionally holds interdisciplinary workshops, thus increasing the disciplinary representativeness of its projects. This generally high disciplinary representativeness is decreased somewhat by the dominance of the social and natural sciences with respect to both the TAB staff and the topics of TAB reports. Perspectives from the humanities are almost entirely absent. Given the ethical issues at the center of recent public debates on genetic research, the lack of bioethical expertise, in particular, is an important limitation of the TAB's disciplinary representativeness.

Parliamentary Resonance of the TAB

The TAB's impact on legislative processes is even more indirect than that of enquete commissions, and its parliamentary resonance is not easy to assess. The parliamentary rapporteur group holds primary responsibility for ensuring that TAB reports and activities receive a hearing in the legislature. The rapporteur group attempts to bring attention to TAB advice in all of the relevant Bundestag committees. This is an enormous task for which there is rarely sufficient time and expertise (Deutscher Bundestag 2002). The reception of TAB reports is also hindered by the inevitable conflict between their interdisciplinary approach and the highly specialized character of legislative committees.

Nonetheless, TAB reports have often had an indirect effect on Bundestag decision making. They do not contain specific policy recommendations, but aim rather to provide an informational basis for parliamentary deliberation. Of the 78 reports prepared between 1991 and 2001, twenty-five were published in the official Bundestag register; nine of those resulted in Bundestag resolutions proposed by the rapporteur group (Deutscher Bundestag 2002). It appears that TAB reports contribute to the conceptualization of problems and the development of parliamentary agendas, even without being directly referenced in parliamentary debate.

Public Resonance of the TAB

Unlike the other advisory institutions examined here, the TAB generally does not seek a direct influence on public discourse on technical issues. Nonetheless, it is possible to identify a few areas in which it has achieved a certain level of public resonance. Many TAB reports are available to the public, the agency publishes a biannual newsletter, and it maintains a public website. A recent parliamentary assessment recommended that the TAB undertake more aggressive public relations work, suggesting public workshops, increased cooperation with other research institutes, and participatory technology assessment projects as ways to involve the lay public (Deutscher Bundestag 2002). Another possibility is to allow public access to the Bundestag committee meetings at which new TAB reports are initially presented. This occurred for the first time on 21 May 2003.

Finally, the TAB may be said to have a certain amount of indirect public resonance. Unlike the executive branch, the German legislature has a constitutional mandate for public transparency, which it seeks to fulfill in various ways. Plenary sessions, for example, are televised and open to the public. If TAB reports and activities find resonance within the Bundestag, they may also contribute in a roundabout way to public discussion of scientific and technological issues (see Peterman 1999: 52).

CITIZEN PANELS

Recent calls for involving lay citizens in the work of enquete commissions and the TAB pay homage to a thirty-year tradition of participatory expertise. The frequent political bias of mainstream technology assessment toward elites, as well as its epistemological bias toward technical rather than social and moral questions, has fostered

a wide variety of efforts to include regular citizens in expert advisory procedures (see Saretzki 1997: 281; Joss and Bellucci 2002: 6). A number of studies have compared the various existing forms of participatory technology assessment (e.g., Rowe and Frewer 2000). We focus here on those that a) bring experts and lay citizens into dialogue with each other, b) include participants not affiliated with established interest groups, and c) address themselves to both policy makers and the general public. These criteria are most clearly fulfilled by consensus conferences, planning cells, and citizen juries, which we refer to collectively as 'citizen panels.'

Citizen panels consist of a group of 10-20 lay citizens who meet on three or four weekends to learn about and discuss a socio-technical issue, confer with an expert panel, write a report with policy recommendations, and then hold a press conference to publicize their work. Citizen panels have been sponsored by both private and governmental institutions. They aim to educate participants, stimulate public discourse, and advise decision makers on socio-technical issues. Although the precise meaning of 'lay citizen' often remains unclear, organizers expect that participants will articulate goals and values different from those of most experts and politicians. Discussions among the panelists are meant to follow a 'deliberative' model in which panelists eschew bargaining or self-interested claims in favor of reasoned argument. Even so, organizers usually allow majority and minority reports when consensus proves impossible. As of 2002 about 50 citizen panels had been organized in over fifteen countries on a wide range of socio-technical issues, including transgenic plants and animals, food irradiation, telecommunications, atomic waste, genetic testing, and stem cell research (Loka Institute 2002). In Germany, planning cells have been organized since the 1960s (Dienel 2002), and in 2001 the German Hygiene Museum in Dresden sponsored the country's first consensus conference (Schicktanz and Naumann 2003).[10]

Representativeness of Citizen Panels

Citizen panels aspire to high social representativeness, but their methods for achieving it are diverse and complex.[11] Citizen juries and consensus conferences use either a telephone poll or advertisements in local and national media to generate an initial selection pool. The organizers then draw on the pool to select a panel fulfilling a range of demographic criteria, including age, gender, education, occupation, and area of residence. Political party membership or ideology has not usually been a selection factor, suggesting that political representativeness is not a priority for most citizen panels. Planning cells rely solely on random selection to compose the panel, selecting a larger number of participants for 2-10 panels that run simultaneously (Dienel 2002: 253).[12]

Despite the widespread use of random selection in assembling citizen panels, organizers often fail to clarify whether the goal is to achieve a statistically representative sample or a demographic cross-section of the population (see Carson and Martin 2002). In a statistically representative sample, the number of people representing each significant social group is proportionate to the number of that group in the general population. Defining 'significant social group' is of course problematic, as is determining which people ought to be deemed representative of which groups (Smith

and Wales 2000: 56–57). It is clear, however, that a panel of 10-20 members is far too small to be statistically representative of even the most relevant social groups in any of the countries where citizen panels have been organized. A cross-section, in contrast, need only have a single member from each relevant social group.[13] Nonetheless, many commentators continue to uphold the statistical sample as an implicit ideal, presumably because it seems to ensure every citizen an equal chance of participating.

There are two things to be said here. First, in comparison to other forms of citizen participation – voting, demonstrating, contacting public officials, even donating money – the number of those involved in citizen panels is extremely small. Inequalities in the probability of selection, therefore, pale in significance when compared to the enormous inequalities in most other forms of participation. Second, the use of random selection does not provide an equal *opportunity* for everyone to participate, but merely an equal *probability* of being chosen. Those chosen must accept the invitation, but those not chosen have no way to become involved. The purpose of representativeness on citizen panels, therefore, ought not to be seen in terms of its contribution to citizen participation. There is little reason, therefore, to prefer an ideal of statistical representativeness to that of a representative cross-section. Indeed, despite occasionally misleading formulations, most organizers justify their selection procedure with reference to the idea of a representative cross-section (Hörning 1999: 357; Hennen 1999: 356). This ideal standard makes it likely that citizen panels will realize the benefits of social representativeness more fully than the other advisory institutions examined here.

Unlike the lay panelists, the participants on the expert panel are not randomly selected but carefully hand-picked by organizers, usually with some degree of input from the lay panelists. The aim has generally been to achieve as much variety as possible with regard to both the fields of expertise and the range of opinion on the relevant issues (Durant 1995, 77; Joss 1995, 99–100). Like the TAB and unlike enquete commissions, citizen panels have no institutionalized incentives that would prevent a high degree of disciplinary representativeness on the expert panel. At the same time, however, most citizen panels have far fewer financial and organizational resources than the other institutions examined here. Those enquete commissions that hold public hearings with a large number of experts probably achieve a higher degree of disciplinary representativeness than a citizen panel. In terms of institutional design, however, citizen panels match the high disciplinary representativeness of the TAB.

Parliamentary Resonance of Citizen Panels

Most citizen panels seek to impact legislative decision making in some way. This goal is most obvious in those countries, such as Denmark and the Netherlands, where citizen panels are institutionally linked to the national legislature (see Gloede and Hennen 2002). In a recent survey, Danish legislators said that by lessening their dependence on biased experts and uninformed citizens, consensus conferences had made important contributions to legislative decision making (Grundahl 1995: 38; Joss 2000: 347–48). There is also evidence that the Danish Parliament's decisions to ban food irradiation and to prohibit companies from demanding DNA-profiles of

their employees were influenced by consensus conferences on those topics (Andersen and Jaeger 1999: 335). The nature and degree of this influence, however, is very difficult to assess.

Unlike enquete commissions and the TAB, the parliamentary resonance of citizen panels may conflict with their goal of offering a critical perspective on legislative decisions and stimulating public debate. Indeed, overemphasizing the potential for political influence might create incentives for panelists to tailor their recommendations to the exigencies of legislative decision making. It appears reasonable, then, to expect less direct legislative resonance from citizen panels than from the other advisory institutions examined here.

Public Resonance of Citizen Panels

Beyond their potential impact on policy makers, most citizen panels seek to influence both the general public and the panelists themselves. Such influence might take the form of changes in people's substantive knowledge of the topic of the panel, their procedural knowledge about the policy process, or their reflexive knowledge of themselves as citizens (Guston 1999: 469f.). With regard to influence on the panelists themselves, most participants report having learned a lot about the topic of the panel, and many claim to have an increased interest in science and technology policy well after the conclusion of the panel. Most seem to take the task very seriously, and they appreciate being taken seriously as political actors (Smith and Wales 2000: 60f.). Although there is little to be said against such educational effects, one might ask whether they are an effective way of improving citizen involvement in science and technology policy. Whatever educational and empowering effects citizen panels have on participants, their possibilities in this regard pale in comparison to those of traditional civic organizations, political parties, and interest groups – all of which, however, might well benefit by adopting the pragmatist approach to expert advice evident in citizen panels.

Given these considerations, it seems that the more important potential of citizen panels lies in their impact on the general public. Given sufficient media coverage, citizen panels can serve as crystallization points for public discussion of sociotechnical issues. As one commentator puts it, a citizen panel "should act as a two-way link between public debate and the representative decision-making institutions. As such, it draws on, and seeks to represent, public discourse on science and technology, as well as advancing it by feeding the results of the assessment procedure back into it" (Joss 1998: 21). The degree of media coverage and public interest has been very different for different citizen panels, but their institutional design equips them to speak at least as well to the general public as to political decision makers.

CONCLUSION

The social, political, and disciplinary representativeness of each advisory institution examined here depends primarily on its procedures for selecting participants and its use of external resources. A comparison of enquete commissions and citizen panels shows that the latter aim for a higher level of social and disciplinary representativeness. Citizen panels have not tended to emphasize political representativeness, but there is nothing to prevent them from doing so, and it is an implicit aspect of their

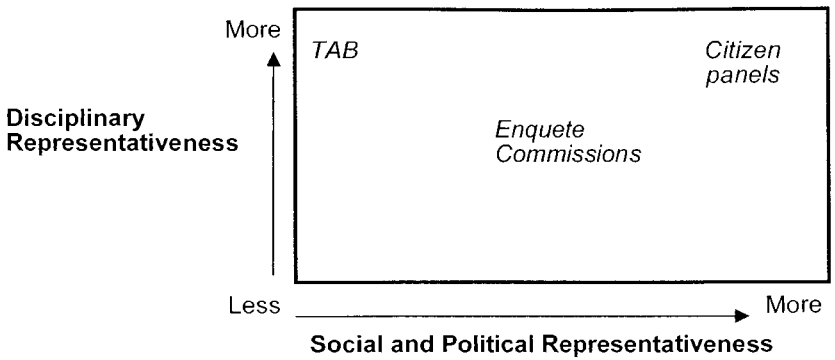

Diagram 1: Social, political, and disciplinary representativeness in the design of three advisory institutions

announced goal of generating the most inclusive deliberation possible. Although the superior resources of enquete commissions, and especially their use of public hearings, may often lead to a level of representativeness higher than most citizen panels, their reliance on an openly partisan procedure for selecting participants sets a lower institutional standard for representativeness. Whereas the organizers of citizen panels may be asked by those excluded from a particular panel to justify the exclusion with reference to the panel's topic, the parliamentary party groups that organize enquete commissions have an electoral mandate to pursue their party program and may well be justified in tailoring their selection of participants to this purpose. The TAB aspires to high disciplinary representativeness, but it has thus far sought neither political nor social representativeness (see Diagram 1).

With regard to parliamentary and public resonance, our analysis suggests that both are usually very indirect. Each of the three advisory institutions aims primarily to shape the identification, understanding, and discussion of socio-technical problems, rather than the resolution of those problems. The TAB and enquete commissions both aim for a high degree of parliamentary resonance. Enquete commissions have in recent years increasingly defined their task in terms of public resonance as well. Citizen panels are the most dependent on public resonance, relying on mass media coverage to influence both public discourse and legislative decision making. Whereas citizen panels seek parliamentary resonance via public resonance, the TAB has the potential of reaching the public through its impact on legislative debate. The TAB has thus far sought little direct resonance with the general public (see Diagram 2).

It would be a mistake to assume that each of these advisory institutions should seek to maximize its resonance and representativeness on all levels. Not only would this exceed the resources of most institutions, it might in some cases be counterpro-

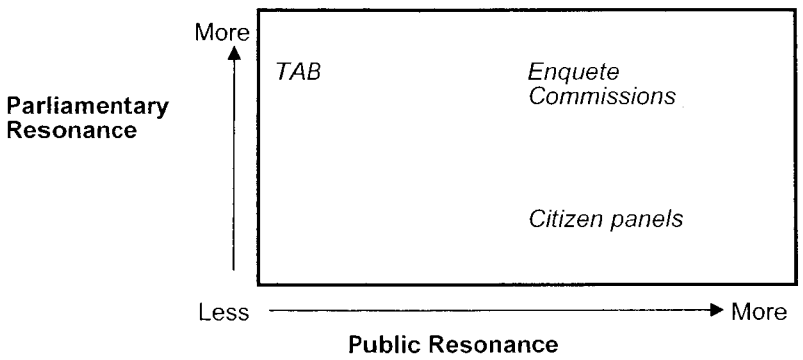

Diagram 2: Parliamentary and public resonance in the design of three advisory institutions

ductive. Citizen panels, as noted above, might compromise their ability to stimulate critical public debate by seeking too much parliamentary resonance. The TAB might sacrifice some of its disciplinary representativeness if it sought to also include a wide range of social and political perspectives. Indeed, the differences among these advisory institutions allow each to make a distinct contribution to the legislature's task of democratic representation. The TAB provides politically relevant but otherwise neutral scientific expertise; enquete commissions facilitate pragmatist negotiation over competing policy options in light of expert testimony; and citizen panels provide an informed but potentially critical perspective from outside the framework of mainstream scientific and political institutions.

The contribution of each advisory institution to democratic representation might also be seen in terms of political leadership and participation, as mentioned above. Contributions to leadership appear primarily in advisory committee reports; contributions to participation can be seen in processes of public consultation. The TAB thus fosters the Bundestag's efforts to exercise political leadership when legislators draw on its work. Legislators advised by the TAB are better able to devise and rationally justify effective public policies, which stimulates public confidence that the legislature is acting responsibly in the public interest. The greater the TAB's disciplinary representativeness and parliamentary resonance, the greater its contribution in these respects. The TAB as currently structured, however, has little potential to contribute to the participation element of democratic representation.

Enquete commissions, in contrast, are well suited to contribute to both leadership and participation. They promote leadership by introducing expertise into legislative decision making; they foster participation by providing a platform for the articulation of citizen interests, to which legislators can respond. Due to their unique institutional location, enquete commissions might well benefit by maximizing all the forms of representativeness and resonance examined here.

Given that the recommendations expressed by citizen panels have been refined and informed through expert advice and collective deliberation, they can make a limited contribution to parliamentarians' efforts to provide democratic leadership. When legislators seek to identify the public interest, as opposed to expressed citizen opinions, they are justified in paying special attention to the recommendations of citizen panels. But citizen panels are not authorized to act on the public's behalf, and they should not be treated as mini-parliaments or the authentic voice of the people. Insofar as they stimulate public debate and help parliamentarians learn about citizen concerns, citizen panels are suited to fostering the participation element of democratic representation. Like the other institutions examined here, citizen panels should be wary of sacrificing their contribution to one aspect of democratic represenation for the sake of another.

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NOTES

1 Bimber (1996: 36) draws a similar distinction between the 'analytical' and 'rhetorical' uses of expertise.

2 For example, a politician might use the recent completion of an expert study as an excuse for requiring a decision before the opposition can assemble supporters.

3 Note that public acceptance should ideally be expressed through both informal political communication (e.g., public discourses, civic organizations) and formal procedures of popular and governmental decision making (e.g., popular elections and voting in parliament). Note also that if public rejection of governmental decisions takes the form of voting those responsible out of office, this does not by itself lessen the legitimacy of the preceding decisions. But without the authorization and accountability that elections provide, decisions cannot be democratically legitimate in the fullest sense. This view of legitimacy seeks to combine the Weberian emphasis on legal procedures, the focus in empirical political science on public preferences, and the normative concern with rational justification prevalent in recent theories of deliberative democracy (see Connolly 1984).

4 This view of political representation as an ongoing process of interaction between state institutions and civil society is broadly compatible with recent interest in processes of 'governance.' The state is cast in the role of facilitating the resolution of public problems through cooperative networks, rather than 'engineering' or 'steering' society from the top down.

5 Note that the pragmatist model does not imply an elimination of the boundaries between science and politics (Weingart 2001: 159). Science and politics each maintain their own rationalities as distinct social systems, each structured around a different set of rules, norms, incentives, and goals. The preserva-

tion of boundaries between science and politics makes efforts to mediate across them all the more important (Guston 2000).

6 Such effects are not guaranteed, of course, and in some cases deliberation among diverse participants may exacerbate rather than ameliorate disagreements (Warren 1996).

7 Sixty-eight percent of the 'experts' sitting on enquete commissions are associated with a scientific or scholarly institution; 16 percent have no such affiliation and can be considered interest group representatives (Altenhof 2002: 183f.).

8 Whether a problem- or politics-orientation prevails may have a lot to do with which party holds the majority of seats on the commission. Those commissions led by the Social Democratic Party (SPD) have tended to see their task as stimulating public discussion, those led by the Christian Democratic Party (CDU) have focused on proposing legislative solutions (Altenhof 2002: 167). Given that opposition parties have a strategic interest in ongoing discussion, while governing parties have an interest in policy solutions, this difference in style may be traceable to the fact that the SPD was in the opposition during most of the enquete commissions held to date, i.e., from 1982 to 1998.

9 Several studies have examined the scientific quality and political influence of TAB activities (e.g., Petermann 1994; Peters 1996; Meyer 1997; Paschen 2000). They devote little attention, however, to questions of democratic representation or political legitimacy (see Grunwald 2003). It is also worth noting that most existing studies on the TAB have been performed by TAB staff members. Similarly, a recent evaluation of the TAB by the Committee for Education, Research, and Technology Assessment was conducted in close cooperation with TAB staff (Deutscher Bundestag 2002).

10 In addition to the members of the panel itself, citizen panels rely on a small organizing committee to select participants and manage the overall process. Many citizen panels also have an independent steering committee to provide advice, and they often employ a professional facilitator to ensure the fairness and efficiency of their deliberations. Some citizen panels even make use of secretarial services to assist with preparing the final report.

11 The following discussion of representativeness on citizen panels is developed more fully in Brown (2004).

12 In contrast to the handpicking of participants by the organizers, random selection lends the process a sense of objectivity. It may thus increase the panel's contribution to both the rationality and public acceptance of subsequent decisions. Additionally, since random selection conveys the notion that anyone may have been invited to participate, it may give the general public a sense of being symbolically represented by the panel (Renn et al. 1995: 353).

13 Some have argued that minority groups should actually have disproportionately more members, to ensure that their perspectives on the issue receive a fair hearing (Mansbridge 1999).

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