

Fairly Balanced

The Politics of Representation on Government Advisory Committees

Mark B. Brown

California State University, Sacramento

The United States Federal Advisory Committee Act (FACA) requires advisory committees to be “fairly balanced.” By examining legislative, judicial, and administrative interpretations of FACA’s balance requirement, this article identifies a prevailing double standard: public officials assess committee members classified as experts in terms of their professional competence, while they assess those classified as representatives in terms of their political interests. Although the prevailing approach seeks to prevent the politicization of expert advice, it actually promotes it. Advisory committee balance is better understood, this article suggests, in terms of social and professional perspectives. This approach avoids both naively apolitical and destructively partisan conceptions of advisory committee balance. It also suggests a promising way to think about the role of technical expertise in public deliberation.

Keywords: *Federal Advisory Committee Act; political representation; deliberative democracy; expertise*

Government advisory committees are usually one of the least noticed elements of American politics, but they have come under intense scrutiny in the wake of their misuse by the administration of President George W. Bush. Numerous reports have documented instances in which Bush administration officials have altered or suppressed research findings that conflict with administration policy, vetted nominees to advisory committees to ensure they support the president, and replaced committee members with people more amenable to the administration (United States House of Representatives 2003; Union of Concerned Scientists 2004; Mooney 2005). These charges are often presented as evidence of the “politicization” of science—or as the editor of the prestigious journal *Science* put it, “an epidemic of politics” (Kennedy 2003). Although the Bush administration’s distortion and suppression of science advice has had disastrous consequences, the charge of “politicization” mistakenly suggests the possibility of science advice entirely free of politics. Numerous studies have shown how science advice inevitably combines technical and political considerations (e.g., Jasanoff 1990; Sarewitz 2004; Pielke 2007). Sociotechnical problems today are complex, multifaceted, and fraught with both political and scientific uncertainties. As a result, different scientific disciplines and methodologies generate different assessments, often with conflicting political implications. This means that, in many cases, the composition of government advisory committees is unavoidably political.

Moreover, those charging the Bush administration with politicizing science rarely reveal or defend their own value commitments and political interests, instead presenting themselves as defenders of pure science—as though global warming, sex education, or teaching evolution in public schools have remained controversial because of a lack of independent expertise (Sarewitz 2006; Pielke 2007). Issues like these remain controversial, not because science has been politicized but because they involve ongoing conflicts over basic values and interests. Although effectively addressing such issues depends in part on science, efforts to eliminate politics from science advice inevitably lead to conflicts over what is “political,” thus displacing the political conflict onto science. Science becomes a proxy battleground for politics. In this respect, those

Mark B. Brown, Assistant Professor of Government, California State University-Sacramento; e-mail: mark.brown@csus.edu.

Author’s Note: For helpful suggestions on this research, I thank David Guston, Kirsten Harjes, Summer Johnson, Roger Pielke, Dan Sarewitz, and three anonymous reviewers. I am also grateful for audience comments on presentations at the Consortium for Science, Policy & Outcomes, Arizona State University, as well as annual meetings of the Association for Practical and Professional Ethics, the American Association for the Advancement of Science, and the Western Political Science Association. This research was supported in part by the National Science Foundation under award number 0451289. Any opinions, findings, conclusions, or recommendations are those of the author and do not necessarily reflect the views of the National Science Foundation.

calling for science advice free of politics are as guilty of politicizing science as their adversaries—even as they simultaneously scientize politics by implying that political questions can be resolved by science (Weingart 1999; Pielke 2007). As a result, the need for inclusive public deliberation and contestation on such issues—informed by science, of course, but not subordinated to it—becomes obscured, and political conflicts become intractable.

This article develops an alternative perspective on the politics of advisory committees by examining various interpretations of the Federal Advisory Committee Act (FACA), which is the key legislation governing the composition of such committees. FACA requires the membership of federal government advisory committees “to be *fairly balanced* in terms of the points of view represented and the functions to be performed by the advisory committee.”¹ The word *fairly* is meant here not in the sense of “moderately” or “tolerably” balanced but balanced in a fair manner—that is, “impartially” or “legitimately” balanced—which suggests that FACA calls for a fair process of balancing rather than a substantive standard of fair balance. Building on this basic consideration, this article examines legislative, judicial, and administrative articulations of FACA’s balance provision, revealing three distinct views of what advisory committees potentially represent: direct interests, abstract interests, or social and professional perspectives. The analysis also shows that most current advisory committee guidelines rest on an untenable double standard that directs agencies to evaluate potential expert members of advisory committees solely in terms of their professional qualifications and nonexpert members in terms of their political interests. In this respect, the dichotomy between science and politics evident in recent debates over the politicization of science echoes longstanding judicial decisions and agency guidelines on the composition of government advisory committees.

The most common view of what advisory committees represent is *direct interests*, a concept central to liberal political thought as well as to most electoral and interest-group politics (Pitkin 1967). Sometimes called the “delegate model” of representation, this view sees interests as relatively fixed, subjective, self-conscious, mutually consistent, and clearly prioritized. Democratic theorists thus often contrast this view of representation with models of representation that seek to transform and accommodate conflicting interests through deliberation. They also distinguish the liberal model of direct-interest representation from a “trustee model” that conceives interests in terms of the

disembodied, impersonal, *abstract interests* that many or most citizens share (e.g., environmental protection, economic growth, workplace safety). This model of representation associates interests with the objective needs of groups rather than the subjective preferences of individuals. Commentators often associate it with “descriptive representation,” which is based on the expectation that descriptive similarity (e.g., race, gender, ideology) between constituents and representatives will induce representatives to promote their constituents’ interests. A third model of representation also draws on the notion of descriptive representation, but rather than conceiving descriptive representation as a means of promoting interests, it sees descriptive representation as a way of introducing diverse *perspectives* into deliberation (Phillips 1995; Young 2000; Mansbridge 2003). Whereas interests are usually associated with specific substantive goals, a perspective involves similar questions and concerns. As further elaborated later in this article, a “perspective” consists of a set of deliberative resources arising from either shared social experiences (e.g., unemployment, racial discrimination, pregnancy) or shared intellectual background and training (e.g., microbiology, theology, anthropology).

It might seem odd to lump together the experiential perspectives of laypeople with the professional perspectives of experts, and it is certainly important to remain aware of their differences. But as I argue below, placing lay and expert perspectives in the same category has the advantage of emphasizing their shared deliberative orientation, in contrast to the decision-making orientation of interest representation. Representing interests is obviously an important part of any political system, but modern democracies are institutionally differentiated; different institutions make different contributions to democratic politics and thus have different normative purposes (Warren 2001). The purpose of advisory institutions is arguably to seek consensus—or, failing that, to articulate the reasons underlying competing positions. Put differently, although every vote in a democracy should count equally, every opinion should not, as long as recognizing some opinions as superior serves the interests of all (Mansbridge 1992; Urbinati 2006). Government advisory committees have the task of improving the epistemic quality of the decisions reached by government officials, interest groups, and individual citizens.

In practice, of course, none of the above three models of representation excludes the others. Each type of interest and each type of perspective may be represented by a single individual (e.g., a liberal female biologist employed by an environmental group). Moreover,

social and professional perspectives often shape each other, and they are each shaped by considerations of direct or abstract interest. Nonetheless, because the aim here is not to describe the performance of government advisory committees but to examine alternative views of what or whom their members should represent, it will be helpful to distinguish among these different modes of representation.

The only extended scholarly treatment of FACA's balance provision locates it within the prevailing discourse of interest-group politics (Stark 1997; see also Petracca 1986). It conceptualizes advisory committees as "quasi-legislative" institutions, thus highlighting their contributions to decision making rather than deliberation. The vast majority of federal advisory committees, however, are not formally authorized to make binding decisions.² The authority of their recommendations depends on the members' having deliberated with each other (cf. Richardson 2002). This does not mean advisory committees always reach consensus, and voting plays an important role in many advisory committees (Guston 2006). But voting on advisory committees is a pragmatic device to end deliberation in the face of time constraints; it does not convey the idea that all opinions are equally correct. In this sense, the deliberative ideal distinguishes advisory committees from expert testimony in public hearings, in which experts present prepared statements on opposing sides of an issue with little expectation that people will change their views.

Despite the importance of deliberation to advisory committee practice, theorists of deliberative democracy have not yet devoted much attention to either the U.S. advisory committee system or questions of technical expertise more generally. Most of the deliberative forums examined in recent years by democratic theorists—legislatures, courts, civic organizations, deliberative polls, and so on—do not fall under FACA, because they are not created by the government for the purpose of providing recommendations to public officials.³ Were the U.S. government to sponsor citizen advisory forums, however, as do several European governments, they would likely be subject to FACA. Theorists of deliberative democracy, however, have tended to conceive lay deliberation in opposition to expert knowledge (e.g., Manin 1987, 355; Fung 2003, 343).⁴ Although deliberative democrats sometimes acknowledge that lay deliberation should take established technical knowledge into account (Rawls 1993, 56; Gutmann and Thompson 1996, 14-15), they have done little to consider how lay and expert deliberation might shape each other.

Similarly, many practical efforts to institutionalize deliberative democracy—citizens' juries, consensus

conferences, deliberative polls, and similar forums—have also adopted a division between lay and expert deliberation. In contrast to the intermingling of experts and nonexperts (defined below) on many U.S. federal advisory committees, such forums usually exclude experts from the lay panel, restricting them to a special session during which lay participants ask the experts specific questions (Brown 2006). The understandable aim is to prevent experts from dominating the lay panel and to introduce a distinctive lay perspective into public discourses dominated by experts, politicians, and interest groups. The risk of this approach, however, is that it fosters a romantic conception of "the citizen" as inherently possessed of an esoteric form of "lay knowledge," sometimes stylized as a sort of "wisdom from the mouths of babes." It also suggests that laypeople need to be protected from intimidation by experts, a problem that certainly occurs but probably no more often than headstrong laypeople dominate those less outgoing. The solution commonly applied to the second problem, a skilled facilitator, would probably also work for the first. Moreover, the knowledge of most experts is so specialized that they are effectively laypeople with regard to issues beyond their immediate area of expertise. As members of the professional class, all experts may share a certain social perspective, but there is no lingua franca among experts. Experts on interdisciplinary advisory committees, therefore, must frame their statements in terms that experts from other disciplines—and hence, for the most part, laypeople as well—can understand (cf. Bohman 1996).

Lay deliberation is certainly less structured than the "specialized discourses" of the natural sciences (Bohman 1996, 44), but the procedures, problems, and audiences of even the most technical advisory committees differ enormously from those of basic science. I cannot explore all the relevant differences here, but it is worth noting that unlike many of the problems addressed by basic science, the "ill-formed" problems for which political actors require expertise usually lack a single-best solution. Different possible responses may each be best according to a particular scientific discipline or social group, and no response is best in every way (Turner 2003). To be sure, advisory committee deliberations are usually more formalized than the "anonymous publics" theorized by deliberative democrats. In this regard, advisory committees are somewhere on a continuum between unstructured deliberation in civil society and the specialized discourses of scientific subdisciplines.

This article does not fully examine the relationship between lay and expert deliberation, but it shows why

the theory and practice of deliberative democracy would benefit from such an account, and it begins to develop an appropriate conceptual framework. This framework departs from the dominant approach to conceiving advisory committee balance, but it is implicit in the guidelines of certain advisory institutions, notably the National Academy of Sciences. Focusing on the selection and classification of advisory committee members, this article conceptualizes representation in terms of both social and professional perspectives, thus avoiding the split between science and politics that currently undermines the credibility and effectiveness of government advisory committees.

Legislative History of FACA's Balance Provision

In 2006, the United States federal government maintained 916 advisory committees composed of 67,346 members at a total cost of approximately \$384 million.⁵ The composition of these committees is governed by a variety of federal and agency-specific rules and regulations, foremost among which is FACA. FACA became law in 1972, more than twenty years after concern over industry influence on government advisory committees led the Justice Department to prepare the first federal advisory committee guidelines in 1951. In the intervening period, Congress considered a variety of bills to regulate advisory committees, several of which included versions of the balance provision quite different from the final legislation. This history cannot be reviewed in detail here, but it is worth highlighting a few early formulations of the balance provision.

During the 1969–70 legislative session, the Senate Subcommittee on Intergovernmental Relations held hearings on S. 3067, a bill “to provide for consumer, small business, and labor representation” on advisory committees that advised the Bureau of the Budget on the approval of public information requests of federal agencies (CRS 1978, 116). This bill, which did not pass, applied to only a very limited number of committees. Then, in the spring of 1971, the House considered H.R. 4383, a bill that applied to all federal advisory committees and contained the formulation of the balance requirement later included in FACA: “fairly balanced in terms of points of view represented and functions to be performed.” The House report on the bill, however, included a more specific formulation than the legislation itself, stating that the

bill would require advisory committees to include “representatives of conservation, the environment, clean water, consumer, or other public interest groups.”⁶ In contrast to the later focus on direct interests by the federal courts, discussed below, this formulation suggests that advisory committee members represent abstract disembodied interests, not the concrete individuals presumed to hold those interests.

While the House was considering H.R. 4383, the Senate took up three separate bills on advisory committees. The “Open Advisory Committee Act” (S. 1637) required that “at least one-third of the members” would be people “who are knowledgeable and competent to represent the interests of the public with respect to the subject matter of such committee” (CRS 1978, 135). This was the first bill to explicitly call for the appointment of committee members to represent not the direct interests of “public interest groups” and their members but the abstract “interests of the public” as such. It thus differed from both previous and subsequent efforts to protect the public interest by ensuring a balance of competing direct interests.

Another Senate bill introduced in the spring of 1971 (S. 1964) contained the vague requirement that advisory committees be “fairly balanced in terms of the particular responsibilities of the committee” (CRS 1978, 141). A more expansive call for public representation appeared in a third bill (S. 2064), which required advisory committees to be “representative of all those who are legitimately interested in the responsibilities and functions of the committee” (CRS 1978, 147). The reference here to people who are “interested,” rather than to those who “have an interest,” suggests a conception of subjective, direct interest rather than abstract, disembodied interest. Exactly whom this formulation includes, however, depends on the controversial matter of whose interest is deemed legitimate. Following twelve days of hearings in June and July of 1971, the Senate adopted a compromise bill (S. 3529), which stated that every federal advisory committee “shall be representative of those who have a direct interest in the purpose of such committee” (CRS 1978, 177).

In the end, when a House–Senate conference committee prepared a bill for consideration by the full Congress, it adopted the formulation of the House bill (H.R. 4383) quoted above. This did not prevent the Senate Report on the bill from summarizing the balance requirement with reference to its own version, stating that the bill required advisory committees to be “representative of those who have a direct interest in the purpose of the committee.”⁷ The federal courts have

repeatedly seized on this statement as indicative of the “legislative history” of FACA, thus neglecting the other congressional formulations of the balance requirement. Congress passed the compromise bill in September, and President Nixon signed it into law on October 6, 1972.

Since FACA’s passage, Congress has occasionally sought to alleviate the ambiguities of the balance provision by specifying in the authorizing legislation for particular advisory committees precisely which social groups and areas of expertise must be represented on the committees (Glitzenstein and Goldman 1989). And in some cases, Congress has specifically prohibited consideration of political affiliation in selecting members (Government Accountability Office 2004). Amendments to FACA were introduced in the Senate in 1989 (S. 444) and 1991 (S. 2039). Both of these bills, which failed to become law, would have required all federal advisory committees to have a plan for achieving balanced membership, including a statement as to whether members would represent non-governmental interests, and if so, which interests they would represent. Congress amended FACA in 1997 to exempt the National Academy of Sciences from some FACA requirements, but it did not revise the balance provision. Indeed, the ambiguities contained in the various congressional formulations of the balance provision have persisted. One federal judge thus described FACA as an example of “unimpressive legislative drafting” and characterized its provisions as “obscure, imprecise.”⁸ It is not surprising, therefore, that the ambiguities of FACA’s legislative history have led to similar ambiguities in federal court decisions.

Advisory Committee Balance in the Courts

The federal courts have occasionally acted to remedy what seem to be obvious violations of FACA’s balance requirement, but they have not offered a definitive standard of advisory committee balance. The courts have usually viewed FACA’s balance requirement in terms of the direct-interest standard mentioned above, in part because standing to sue requires that plaintiffs show they have suffered an actual “injury in fact.” Judges have repeatedly disagreed, however, on whether advisory committee balance is a judicial or political question.

One prominent example of the leading approach appears in a 1983 case in which the National Anti-Hunger Coalition sued to be included in President

Reagan’s Private Sector Survey on Cost Control in Government (the Grace Commission). The Anti-Hunger Coalition argued that nearly all of the committee members were corporate executives and that the committee included no public interest advocates or beneficiaries of federal food assistance, people potentially affected by the committee’s advice. Both the district court and the appeals court that reviewed the case granted the plaintiffs standing. Citing the above quoted reference to “direct interests” in the 1972 Senate Report on FACA and neglecting the focus on abstract interests in the House Report, the appeals court wrote, “The legislative history makes clear, the ‘fairly balanced’ requirement was designed to ensure that persons or groups directly affected by the work of a particular advisory committee would have some representation on the committee. When the requirement is ignored, therefore, persons having a direct interest in the committee’s purpose suffer injury-in-fact sufficient to confer standing to sue.”⁹ Given that the direct-interest standard does not appear in the language of FACA itself, and that the legislation leading up to FACA included a variety of formulations of the balance provision, it is misleading for the court to claim that “the legislative history” of FACA conclusively supports the direct-interest standard.

Although it granted the plaintiffs’ standing, the district court initially ruled against them, arguing that the advisory committee’s mandate was “narrow and explicit” and that the interests the Anti-Hunger Coalition claimed to represent were not “directly affected by the work of the committee.”¹⁰ A few months later, the same court reversed the ruling but upheld the direct-interest standard, noting that the committee’s functions had expanded since the initial ruling and that it was now addressing “legislation concerning specific benefits granted to members of plaintiffs’ constituency [sic].”¹¹ The court further determined that the Anti-Hunger Coalition had a plausible claim to represent the direct interests of a particular group of people, and therefore, that it deserved a seat on a federal advisory committee that would potentially affect those people.

There are a number of other cases in which federal courts have relied on the direct-interest standard to require that advisory committees rectify imbalances by including additional members (Spielman 2003). In several cases, however, federal courts have refused to rectify alleged imbalances, sometimes to preserve a perceived executive branch prerogative to solicit advice conducive to its goals (Bybee 1994; Mongan 2005). In other cases, courts have explained their refusal to rectify alleged imbalances by arguing that

whether an interest group adequately represents those it claims to represent—and hence, whether one of its members should be included on an advisory committee—is a political question that cannot be determined by the courts.

The most revealing such case is the 1989 case of *Public Citizen v. National Advisory Committee on Microbiological Criteria for Foods*, in which a three-judge panel of the D.C. Circuit Court of Appeals arrived at three different assessments.¹² Judge Silberman, dissenting from the majority, argued that courts lack both the capacity and the authority to balance advisory committees. Judge Silberman referred to both the “points of view” and the “interests” potentially represented on a committee, but he did not specify the distinction. Sometimes he used the terms synonymously, and sometimes he used *points of view* to characterize the intellectual perspectives rather than political goals of committee members. With regard to “points of view,” he noted that the relevant points of view are “virtually infinite,” and that he could not conceive of a “principled basis” for a court to determine which points of view deserve representation (426-27; cf. Stark 1997, 389-93).

Judge Silberman went on to apply the same analysis to the question of balancing interests. He asserted that the direct-interest standard endorsed in the *National Anti-Hunger Coalition* case “is not definable,” because “the line between those with ‘direct interests’ and those with indirect or intangible ones is hopelessly manipulable.” A direct interest might be taken to refer to “economic, ideological, or intellectual interest (or all three)” (427). Furthermore, Judge Silberman argued, courts cannot determine which committee members represent which interests. Any identification of committee members with particular groups—e.g., government, consumers, industry—is a “quintessentially political question” (427). “Everyone in the entire United States is a consumer of food products, so I do not understand why *any* American—including all those who have already been appointed to the Committee—would not legitimately be considered a consumer representative” (429, original emphasis). According to Judge Silberman, claims to represent either other people’s interests or their points of view are inherently contestable (i.e., political), and hence, not subject to judicial determination. Judge Silberman’s assessment was disputed by the other judges in the *Microbiological Criteria* case, but it has been endorsed in several other federal court cases.¹³

A somewhat different rationale for refusing to rectify an alleged imbalance of a federal advisory committee

appears in the case of *Cargill v. United States*.¹⁴ A coalition of mine owners claimed that the National Institute for Occupational Safety and Health had violated FACA’s balance requirement in constituting its Board of Scientific Counselors (BSC). The BSC had been charged with reviewing a protocol for research on the health effects of exposure to diesel exhaust. The mine owners argued that despite the diverse scientific fields represented on the BSC, the lack of members with expertise in diesel processes, as well as the lack of scientists “employed by, or retained by, or at least recommended by the companies and labor groups affected by the study,” rendered the BSC unbalanced. The court argued that the phrasing of FACA’s balance requirement—“fairly balanced in terms of points of view represented and functions to be performed”—points to both a “point-of-view balance” requirement and a “functional balance” requirement (335 n22). The court did not precisely specify this distinction, but it used the terms to establish separate standards for technical and nontechnical committees: the court used “functional balance” to refer to the range of viewpoints needed to fulfill the function of providing scientific advice, and it used “point-of-view balance” to refer to the representation of political interests. Based on this distinction, the court concluded that the peer-review function of the committee did not require the inclusion of someone with expertise in diesel processes, as the plaintiffs claimed, because the BSC’s task of peer review required only “expertise in the scientific method,” not in any particular scientific field. “The task of the committee—providing *scientific* peer review—is politically neutral and technocratic, so there is no need for representatives from the management of the subject mines to serve on the committee” (337, original emphasis).

This attempt to establish separate standards for technical and nontechnical committees neglects the fact that *all* advisory committees have the “function” of providing advice. Moreover, the notion that providing “expertise in the scientific method” is “politically neutral and technocratic” conflicts with scholarly studies that show how social values and assumptions play an important role in peer review processes (Chubin and Hackett 1990).

In sum, federal court decisions on advisory committee balance echo the divide between science and politics in the broader public discourse on advisory committees. According to one view, articulated by Judge Silberman, the courts cannot rectify imbalances in advisory committees, because it is impossible to say which interest group has the best claim to

represent a particular interest. Because everyone has diverse and conflicting interests, interest groups can only claim to represent abstract general interests, not particular individuals holding direct interests (Stark 1997). According to another view, interest groups do represent the direct interests of both their members and others with similar interests, so questions of committee balance are judicable. The two sides agree, however, that the key issue is whether advisory committee members represent the direct interests of their constituents. This is unfortunate, as it reinforces an understanding of advisory committees as adversary rather than deliberative bodies. Moreover, each side fails to articulate a conception of fair balance applicable to the expert committee members not charged with representing interests.

Science and Politics in Federal Agency Guidelines

As noted in the introduction, one of the central issues in advisory committee balance is the relationship between science and politics. Public officials tend to assert the need for strict boundaries between science and politics, while scholarly studies of agency practice reveal a far more flexible and permeable boundary (Jasanoff 1990; Sarewitz 2004; Pielke 2007). Indeed, contrary to widespread belief, most federal advisory committees are not composed exclusively or even primarily of technical experts. Of the 976 federal advisory committees in existence in 2004, only about one-third (344 committees) were composed of more than 75 percent technical members, defined as people holding an advanced degree or significant professional experience in science, engineering, or medicine. Another third (353 committees) had no technical experts whatsoever (Stine 2005). Moreover, observers often disagree on whether an advisory committee is primarily technical. Nonetheless, the dominant discourse on advisory committees assumes the need for a sharp division between science and politics.

A powerful manifestation of this assumption appears in the classification scheme for federal government employees: Regular Government Employee (RGE), Special Government Employee (SGE), representative, or consultant. RGEs are long-term government employees, very few of whom serve on advisory committees. Consultants are usually experts serving on National Institutes of Health (NIH) special-emphasis panels, which conduct peer reviews of research proposals. Experts employed on a temporary

or intermittent basis on federal advisory committees are usually classified as SGEs. Representatives are those who serve as spokespersons of particular groups or organizations. Committees may include any mixture of categories, but the vast majority of committee members are classified as either SGEs or representatives (Stine 2005).

It might seem that the distinction between SGEs and representatives would greatly simplify the task of ensuring advisory committee balance, because it suggests separate criteria for evaluating expert and non-expert nominees to advisory committees. With regard to experts, the task would be to solicit a balance of scientific disciplines; in the case of representatives, it would be to ensure a balance of political interests. This apparently straightforward approach, however, overestimates the objectivity of scientific experts, and it underestimates the expertise of interest-group representatives.

The category of Special Government Employee was created by Congress in 1962 to relax conflict of interest laws for advisory committee members, thus making it easier for them to serve “without relaxing basic ethical standards or permitting actual conflicts of interest” (OGE 1982, 2). SGEs were first distinguished from “representative” members of federal advisory committees in a presidential memorandum of May 2, 1963, “Preventing Conflicts of Interest on the Part of Special Government Employees,” issued by President Kennedy. The memorandum stated,

It is occasionally necessary to distinguish between consultants and advisers who are Special Government Employees and persons who are invited to appear at a department or agency in a *representative capacity* to speak for firms or an industry, or for labor or agriculture, or for any other recognizable group of persons, including on occasion the public at large. A consultant or adviser whose advice is obtained by a department or agency from time to time because of his *individual qualifications* and who serves in an *independent capacity* is an officer or employee of the Government. (OGE 1982, 4-5, emphasis added)

Kennedy’s memorandum groups together representatives who speak for the direct interests of particular groups with those who speak for abstract interests of “the public at large.” It distinguishes both of these types of representatives from committee members selected for their “individual qualifications” who serve in an “independent capacity.” It might seem strange that independence is

here contrasted with speaking for the public interest, since those who speak for the public interest, including many scientists, are presumably independent of particular interests. The contrast makes sense, however, if it is meant to imply a distinction between those who have professional qualifications and those who represent interests of any kind. This distinction parallels the traditional divide between facts and values, science and politics.

The provisions of the Kennedy memorandum remain in effect today. The only significant change, contained in the 1982 guidelines issued by the Office of Government Ethics (OGE), has been to remove the category of public interest representative. The OGE now defines “representatives” simply as committee members who speak for others with an interest in the topic of the committee (OGE 1982, 15). The OGE guidelines do not specify a clear standard for determining when someone is an SGE or a representative, but they offer a series of examples to convey a sense of how the distinction might be applied in practice. They also state that it is necessary to carefully examine the authorizing legislation, Executive Order, or other relevant documents. “The choices are two: (1) the use of words to command the members to exercise individual and independent judgment, or (2) the use of words to characterize them as the representatives of individuals or entities outside the Government who have an interest in the subject matter assigned to the committee” (OGE 1982, 15). These criteria reaffirm the association of “individual and independent judgment” with expert rather than lay members, as well as the notion that the task of representatives lies in advancing the direct interests of particular individuals or groups. In February 2000, the OGE reaffirmed the 1982 guidelines, noting that advisors appointed as representatives are expected to “represent a particular bias” (OGE 2000, 4). The same view of representatives appears in a 2004 report by the General Accounting Office (GAO, now the Government Accountability Office), which states that “information, opinions, and advice from representatives are to reflect the bias of the particular group that they are appointed to represent” (GAO 2004, 13).

This distinction between SGEs and representatives neglects, first, that scientists themselves sometimes constitute an interest group in need of representation, and second, that the public representation of scientific knowledge is not a strictly technical affair entirely insulated from considerations of political interest.

As quoted above, President Kennedy’s memorandum states that a representative is anyone with “a

capacity to speak for firms or an industry, or for labor or agriculture, or for any other recognizable group of persons, including on occasion the public at large” (emphasis added). This formulation leaves open the possibility that scientists might themselves be construed as a “recognizable group of persons.” Indeed, the 2004 GAO report found that the Department of Energy, Department of the Interior, Department of Agriculture, and NASA classify some of their committee members as “representatives” of particular scientific fields, such as biology or toxicology.¹⁵ A review of the FACA online database reveals many similar cases, some of them rather amusing. For example, all the members of the President’s Council on Service and Civic Participation are appointed as representatives: political scientist Robert Putnam represents “academia,” football players Steve Young and Darrel Green represent “athletics,” journalist Cokie Roberts represents the “media,” and politicians Bob Dole and John Glenn represent “government.”¹⁶ Many such appointments presumably result from agencies’ seeking to avoid the paperwork entailed by conflict-of-interest rules, which apply to members appointed as SGEs but not to those appointed as representatives.

The GAO criticizes the practice of appointing experts as representatives, arguing that it is unclear “that academia or the private sector would have a specific point of view that could be represented” (GAO 2004, 28, 128). Moreover, the GAO argues, it does not help to examine the “use of words” in authorizing legislation, as the OGE guidelines recommend, since the legislation often conflates two meanings of the term *representative*. Sometimes, the legislation uses the term *represent* to mean “speak for” a particular constituency, such as labor or business, and sometimes to mean “stand for” a particular body of knowledge or scientific discipline, such as biology or toxicology (GAO 2004, 24). Despite statements elsewhere to the contrary (GAO 2004, 132-33), the GAO’s overall position seems to be that academic disciplines and institutions do not have any particular interests that could be represented on an advisory committee—a rather quaint notion, given the long and successful history of universities’ and other research institutions’ lobbying the government for public funds (Greenberg 2001).

It is worth recalling in this context a 1989 report on FACA by the advocacy group Public Citizen, which argued against the “schizophrenic approach” of using different conflict-of-interest requirements for SGEs and representatives (Glitzenstein and Goldman 1989, 6). Citing support by the Federal Bar

Association's Select Committee on FACA and the Administrative Conference of the United States, the report recommended replacing the current "dual system" with a single conflict-of-interest reporting requirement for all advisory committee members. Although the Public Citizen report held to the direct-interest model of advisory committee representation, it correctly rejected the prevailing divide between experts and nonexperts.

Balancing Social and Professional Perspectives

The dominant discourse on advisory committee balance both assumes an implausible view of value-free science and neglects the fact that many interest-group representatives are themselves competent experts, even if their expertise is based on experience rather than professional training. A more promising approach would be to view both experts and laypeople (with the latter including both interest-group representatives and those appointed to represent the public interest) in terms of a single category—as representing various perspectives. FACA itself employs the phrase "points of view" without distinguishing between experts and laypeople. The notion of a social or professional "perspective" is certainly not an inherently better synonym for *points of view* than the term *interest*. But if one wants to avoid a double standard, the concept of "perspective" works better than "interest," in part because it avoids reducing expertise to political interest. It conveys the idea that expert and lay perspectives deserve equal respect, without implying that they are equally qualified with regard to any particular set of concerns. Understanding the experience of a cancer patient, for example, requires a patient's perspective, while understanding how to treat cancer requires technical expertise.

Part of the reason why most commentators have conceived advisory committee balance in terms of direct interests rather than social and professional perspectives is that they see "interest" as a more manageable, objective concept than the apparently amorphous and subjective notion of a "point of view" (Stark 1997, 387-88). Several federal judges, for example, as noted above, have argued that FACA's balance provision is nonjudiciable because, they say, assessments of committee balance are inherently subjective. Some commentators rely on similar logic in recommending that agencies assess committee balance

in terms of members' organizational affiliations, which offer a presumably more objective indicator than social or professional perspective (Glitzenstein and Goldman 1989). Organizational affiliation, however, is only one of many possible factors to consider in assessing the perspectives of potential committee members. Moreover, perspectives are not properly understood as subjective states of mind or opinion. As conceptualized in contemporary political theory, *social perspectives* emerge through interaction between structural relations of power (e.g., class, race, gender, etc.) and the individual experiences and self-conceptions of individuals (Young 2000). An analogous argument can be made to the effect that *professional perspectives* are shaped by the interaction between professional standards and cultures on one hand and individual ideas and goals on the other. In either case, perspectives encompass the questions, concerns, knowledge, and worldviews of particular social and professional groups. Of course, given the diversity of views and experiences within any social or professional group, any attribution of a particular perspective must remain publicly accountable and open to challenge (Young 2000).

There are important differences, of course, between social and professional perspectives. Efforts to increase the diversity of social perspectives in public deliberation aim in part to remedy long histories of systemic discrimination against socially disadvantaged groups. They also seek to provide symbolic representation of these groups, in part to encourage political engagement by group members. These justifications for the representation of diverse social perspectives do not apply to scientific disciplines. Moreover, the structural relations of power that shape social perspectives usually play a less direct role in the creation of disciplinary perspectives (although the history of science certainly reveals power relations within disciplines as well).

Despite these differences, the concepts of social and professional perspectives share an orientation toward deliberation that justifies their combination in a unified approach to advisory committee balance. Within deliberative democratic theory, one of the most common justifications (though certainly not the only one) for increasing the diversity of social perspectives in deliberation is that it promises to improve deliberation's epistemic quality (Bohman 1996). Both technical experts and interest-group representatives long involved with a particular policy area tend to develop blind spots that may be remedied

by including laypeople with relevant experiential knowledge. In this respect, the inclusive representation of both professional and social perspectives fosters a more impartial—in the sense of more complete, less biased—assessment of sociotechnical problems (Young 2000). Similarly, whereas political interests tend to be associated with specific policy goals, both social perspectives and scientific disciplines have an open-ended character, which facilitates the transformation of individual viewpoints to which deliberation aspires. Whereas interest representation generally seeks to narrow the options available to policy makers, representing diverse perspectives expands the range of perceived options (Pielke 2007). Both scientific disciplines and social perspectives are lenses on reality that condition without determining what a person sees (cf. Young 2000, 139).

Since social and professional perspectives often shape each other, as noted previously, this distinction should not be confused with the dichotomy between experts and interest-group representatives assumed in current agency guidelines. Indeed, there is a certain asymmetry between social and professional perspectives, since all committee members bring a certain social perspective to their work, whether or not they have the explicit task of representing that perspective, while committee members on nontechnical committees might entirely lack professional qualifications. That is, a white male biologist has a certain social perspective, no less than a black female cancer patient, even if people disagree on whether either is relevant to a particular advisory committee.

To argue that advisory committee members should represent perspectives rather than interests does not mean that interests should not be articulated in deliberation. Critics of rationalist approaches to deliberation have often pointed out that the interests of disadvantaged groups usually diverge in part from those of the majority, so excluding the expression of interests from deliberation is biased against disadvantaged groups (Phillips 1995; Sanders 1997; Young 2001; Dryzek 2000). Indeed, deliberation should illuminate not only commonalities but also conflicts of interest (Mansbridge 1992). As long as the expression of direct interests is justified with reference to some conception of an abstract public interest (e.g., it may serve the public interest to promote the direct interests of disadvantaged groups), expressing interests can enrich deliberation as much as social perspectives and professional expertise. Moreover, both technical experts and interest-group representatives are more likely to participate in deliberative forums, and their

deliberation is likely to be more creative, when much is at stake and they see possibilities for advancing their goals (Fung 2003; Hendriks 2006).

The idea that all advisory committee members have the task of representing social and/or professional perspectives arguably goes back to the early stages of legislative efforts to regulate federal advisory committees. In December 1970, the Special Studies Subcommittee of the House of Representatives published a comprehensive report, “The Role and Effectiveness of Federal Advisory Committees.” It argued that “when a particular region, university, industry, company or discipline are regularly overrepresented . . . the advisory system is open to the charge of favoritism. Individuals with ideas, knowledgeable people, affected individuals, should also be considered for appointment to advisory bodies rather than relying upon personal acquaintance or closeness to an agency or its clientele” (CRS 1978, 232). The report here draws a contrast not between experts and nonexperts but between the narrow perspective that results from patronage appointments and the broader insight acquired by seeking out a wide range of people—both “knowledgeable” and “affected”—who have relevant insights. The report goes on to state that agencies should seek “to include a greater number of ‘nonexpert’ interested and knowledgeable individuals on each advisory group. . . . Inclusion of environmentalists, consumers, geographic representatives, *non-involved persons* and others would be helpful in providing a balance to a group” (CRS 1978, 236, emphasis added). In making these recommendations, the report makes no distinction between committees primarily concerned with technical matters and those charged with balancing interests.

More recent examples of this view of committee balance are implicit in certain agency guidelines and practices. Despite asserting the importance of distinguishing between representatives and SGEs, the General Services Administration (GSA) guidelines for committee balance include a broad mix of technical and nontechnical factors, including the “geographic, ethnic, social, economic, or scientific impact” of the committee’s recommendations, the “type of scientific perspectives required, for example, such as those of consumers, technical experts, the public-at-large, academia, business, or other sectors,” and the “need to obtain divergent points of view” (GSA 2001, 37740). The GSA notes that these factors are “not comprehensive or universally applicable,” but it does not specify which factors apply to which types of committees (GSA 2001, 37731). Apparently following this advice,

numerous federal agencies have tried to assess the social and professional perspectives of potential committee members by collecting demographic information for both expert and nonexpert nominees (GAO 2004).

The aim of representing diverse social and professional perspectives is also implicit in the advisory committee guidelines of the National Academy of Sciences (NAS). Most importantly, the NAS emphasizes the epistemic rather than partisan reasons for including lay perspectives:

For some studies, for example, it may be important to have an “industrial” perspective or an “environmental” perspective. This is not because such individuals are “representatives” of industrial or environmental interests, because *no one is appointed by the institution to a study committee to represent a particular point of view or special interest*. Rather it is because such individuals, through their particular knowledge and experience, are often vital to achieving an informed, comprehensive, and authoritative understanding and analysis of the specific problems and potential solutions to be considered by the committee. (NAS 2003, 3, original emphasis)

Unlike the GAO and OGE, the NAS suggests that advisory committee members should never be understood as speaking for particular constituencies, and it expects all members—including those with an “environmental” or “industrial” perspective—to exercise independent judgment. The NAS thus casts the inclusion of diverse perspectives as a matter of enriching deliberation rather than ensuring the fair representation of interests. This allows the NAS to tolerate a fairly high degree of potential bias among committee members. “Indeed, it is often necessary, in order to ensure that a committee is fully competent, to appoint members in such a way as to represent a balance of potentially biasing backgrounds or professional or organizational perspectives” (NAS 2003, 3). The NAS guidelines state that biases cannot be tolerated “where one is totally committed to a particular point of view and unwilling, or reasonably perceived to be unwilling, to consider other perspectives or relevant evidence to the contrary” (NAS 2003, 4). But in most cases, “bias” should be distinguished from “conflict of interest,” and the latter should be defined narrowly (NAS 2003, 4).

A more recent NAS report states that potential committee members should not be asked about their voting

records, party affiliations, or political views, because such matters are no more relevant than “other personal and immaterial information, such as hair color or height” (NAS 2005, 6). Nonetheless, the same NAS report goes on to state that once members are appointed, the political opinions of nominees should be “disclosed to staff and other committee members in closed session,” because this “provides an opportunity to balance *strong* opinions or perspectives through the appointment of additional committee members” (NAS 2005, 42, original emphasis). The NAS thus again suggests that the political views of committee members should be evaluated, not in terms of their capacity to represent the direct interests of particular groups but in terms of their contribution to the epistemic quality of deliberation. This is not to say that the NAS has always succeeded in appointing balanced committees.¹⁷ But the NAS guidelines rightly emphasize deliberation over the representation of interests. Indeed, if committee balance were a matter of balancing political interests, fairness would require that the number of representatives for each group be proportionate to the group’s numerical percentage of the population, which would be impossible on committees small enough to facilitate serious deliberation (Stark 1997).¹⁸

Recent legal analyses support the NAS approach. The constitutional and statutory prohibitions against discriminating on the basis of political affiliation apply only to regular government employees, not to the members of advisory committees (Government Accountability Office 2004; Moy 2005). Indeed, ensuring that an advisory committee as a whole is not biased with regard to any particular view requires finding out what the individual members’ views are in the first place (Pielke 2005, 2007, 147-49). It is thus useful to distinguish “politicizing” advisory committees in a broad sense—that is, making explicit the presence of different social and political perspectives with the aim of enhancing deliberation—from a partisan form of politicization that reduces advisory committees to arenas of interest-group competition and party politics.

Soliciting the political views of potential committee members does create a risk of partisan politicization, but this can be mitigated by increasing the transparency of the selection process. The U.S. Environmental Protection Agency (EPA), for example, provides public notice when creating a new advisory committee, and it solicits nominations for and comments on advisory committee membership from the general public (CSPI 2006). The GAO recommends that all agencies publicize how they assess committee balance, whether committees

operate by voting or consensus, and whether committee members have any potential conflicts of interest (GAO 2004; Steinbrook 2004). Such measures effectively link FACA's participation and representation provisions, allowing public input on advisory committee efforts to represent diverse perspectives.

Conclusion

This article has argued that the prevailing double standard for assessing advisory committee balance should be revised in favor of an approach based on social and professional perspectives. One should note, however, that implementing any such approach requires attention to the specific purpose of any given advisory committee. Government advisory committees address a wide range of issues and are charged with a variety of tasks: provide policy recommendations, review grant proposals, explore long-range problems, or facilitate public deliberation and debate, among other things. Any approach to advisory committee balance, therefore, must be flexible enough to allow administrators sufficient discretion to pursue the goals of the committee, while remaining responsive to public input and contestation. The proposed approach meets that criterion, as it allows administrators to choose whether to emphasize social or professional perspectives, depending on the committee's purpose.

More generally, conceptualizing advisory committee balance in terms of social and professional perspectives promises to help administrators avoid both naively apolitical views of expert advice, on one hand, and the partisan politicization of expertise, on the other. The former takes expert advice too far away from politics, thus making it irrelevant and ineffective; the latter brings it too close, thus undermining its credibility (Weingart 1999). In this respect, the approach to advisory committee balance proposed in this article can help improve both the credibility and effectiveness of government advisory committees.

This article also suggests a productive direction for theories of deliberative democracy, which have tended to neglect the role of technical expertise in public deliberation. Deliberative democrats might consider the challenges posed by hybrid deliberation involving both laypeople and experts, such as that undertaken by many government advisory committees. Examining a broader array of deliberative institutions may well produce insights useful for all of them.

Finally, despite the promise of the approach to advisory committee balance outlined here, it is

important to remember the limited role of advisory committees in political decision making. Political decisions should not be judged by their epistemic quality alone, and critics of rationalist conceptions of deliberation have rightly highlighted the coercive potential of efforts to establish consensus based on either scientific expertise or lay deliberation. One way of responding to such concerns has been to expand the range of communicative resources admissible in deliberative forums to include affective modes of communication, including personal testimony, storytelling, and the defense of marginalized interests. The President's Council on Bioethics, for example, which is governed by FACA, has sought to foster a "richer bioethics" that supplements technical expertise and rational argument with religion, literature, and experiential testimony (Kass 2005).

Another way to address concerns about the coercive potential of deliberation is to emphasize the need for normative and institutional constraints on the role of deliberative forums in political decisions. Such constraints apply regardless of whether the expertise is generated through lay or expert deliberation. Critics of technocracy have long argued that the political role of expertise should vary according to the degree of consensus among experts and nonexperts, respectively, with regard to any given issue (Ezrahi 1980; Pielke 2007). It is only in those very rare cases in which both political values and technical knowledge are well established and generally accepted that the "linear model" of science advice applies, according to which expert knowledge should be translated directly into political decisions. In the vast majority of situations, advisory committee recommendations are merely one factor among many (including public opinion, personal convictions, campaign promises, etc.) that political decision makers should take into account. Hence, democracy requires nondeliberative modes of contestation and decision making, including voting, bargaining, and demonstration (Walzer 1999). Indeed, FACA rightly makes clear that advisory committees should be "advisory only."¹⁹

Having said that, informed judgments on complex public issues depend in part on the advice of "fairly balanced" deliberative forums. Establishing balanced advisory committees is a political process, the public acceptance of which depends on appointments' remaining open to public challenge. Structuring the process to assess and balance the social and professional perspectives of advisory committee members, rather than according to separate standards for experts and interest-group representatives, promises

to help improve the effectiveness and legitimacy of government advisory committees.

Notes

1. 5 U.S.C. Appendix §§ 5(b)(2), emphasis added.
2. Only those committees charged with negotiated rule making are formally empowered to make decisions. The number of such committees subject to FACA in the years 1997 to 2007 ranged from a low of two to a high of only fourteen, out of a total of approximately one thousand committees. <http://www.fido.gov/facadatabase/databasesearch.asp>.
3. Whether particular advisory committees are subject to FACA remains a frequent source of controversy, especially with regard to committees established by the president (Mongan 2005).
4. There are exceptions, of course, including Bohman (1996) and Warren (1996), as well as numerous studies by scholars primarily associated with fields in which technical expertise plays a central role, including policy studies, environmental politics, and science and technology studies.
5. Information compiled from fiscal year 2006 committee lists in FACA database, <http://www.fido.gov/facadatabase/acr.asp>.
6. H. Rep. 1017, 92nd Cong., 2nd Ses. (1972).
7. S. Rep. No. 1098, 92nd Cong., 2nd, Ses. (1972).
8. *National Anti-Hunger Coalition v. Executive Committee of the President's Sector Survey on Cost Control*, 557 F. Supp. 524, 530 (D.D.C. Feb. 24, 1983).
9. *National Anti-Hunger Coalition* 711 F.2d 1071, 1074 (D.C. Cir. June 14, 1983).
10. *National Anti-Hunger Coalition* 557 F. Supp. 524, 526 (D.D.C. Feb. 24, 1983).
11. *National Anti-Hunger Coalition* 556 F. Supp. 1515, 1517 (D.D.C. July 26, 1983).
12. *Public Citizen v. National Advisory Committee on Microbiological Criteria for Foods*, 886 F.2d 419 (D.C. Cir. 1989). The case involved a review by the D.C. Circuit Court of Appeals of a district court's dismissal of a complaint by a public interest group that an advisory committee on food safety at the U.S. Department of Agriculture lacked consumer representatives. Two judges considered the case judiciable, but they disagreed on whether the committee was imbalanced. The third judge considered the case not judiciable. The result was an affirmation of the district court's dismissal of the case.
13. *Public Citizen v. Department of Health and Human Services*, 795 Supp. 1212, 1222 (D.D.C. 1992); *Fertilizer Institute v. United States Environmental Protection Agency*, 938 F. Supp. 52, 54 (D.D.C. 1996). Courts have also refused to rule on questions of advisory committee balance by arguing that a court decree to either balance a committee or enjoin the use of a report by an unbalanced committee would have no effect on agency decisions, and thus, would not redress the alleged injury. See, for example, *Northwest Forest Resource Council v. Espy*, 846 F. Supp. 1009, 1015 (D.D.C. 1994); *Doe v. Shalala*, 862 F. Supp. 1421, 1429 (4th Cir. Md. 1994).
14. *Cargill v. United States*, 173 F.3d 323 (5th Cir. 1999).
15. A Public Citizen report on FACA also noted that administrative convenience led most agencies to "lump all of their advisers into one category or another" (Glitzenstein and Goldman 1989, 11).
16. <http://www.fido.gov/facadatabase/databasesearch.asp>
17. One recent study found that during the past three years, out of 320 committee members, at least 66 had a long history of

taking a pro-industry stance. Only 9 of the 320 were closely identified with environmental or public interest groups (CSPI 2006).

18. Given that a single committee member may not be able to convey the internal diversity of a particular perspective, some have argued that committees should strive to include a "critical mass" of each perspective (Philips 1995, 67; Mansbridge 1999; Young 2000, 148).

19. 5 U.S.C. Appendix §§ 2(6).

References

- Bohman, James. 1996. *Public deliberation: Pluralism, complexity, and democracy*. Cambridge, MA: MIT Press.
- Brown, Mark B. 2006. Citizen panels and the concept of representation. *Journal of Political Philosophy* 14 (2): 203-25.
- Bybee, Jay S. 1994. Advising the president: Separation of powers and the Federal Advisory Committee Act. *Yale Law Journal* 104 (1): 51-128.
- Center for Science in the Public Interest (CSPI). 2006. *Ensuring independence and objectivity at the National Academies*. Washington, DC: Center for Science in the Public Interest.
- Chubin, Daryl E., and Edward J. Hackett. 1990. *Peerless science: Peer review and U.S. science policy*. Albany: State University of New York Press.
- Congressional Research Service (CRS). 1978. *Federal Advisory Committee Act source book: Legislative history, texts, and other documents*. Washington, DC: U.S. Government Printing Office.
- Dryzek, John. 2000. *Deliberative democracy and beyond: Liberals, critics, contestations*. Oxford, UK: Oxford University Press.
- Ezrahi, Yaron. 1980. Utopian and pragmatic rationalism: The political context of scientific advice. *Minerva* 18 (1980): 111-31.
- Fung, Archon. 2003. Recipes for public spheres: Eight institutional design choices and their consequences. *Journal of Political Philosophy* 11 (3): 338-67.
- General Accounting Office (GAO). 2004. *Federal advisory committees: Additional guidance could help agencies better ensure independence and balance* (April). GAO-04-328. Washington, DC: U.S. General Accounting Office.
- General Services Administration (GSA). 2001. Federal Advisory Committee Management, Final Rule. 41 CFR Parts 101-6 and 102-3. *Federal Register* 66 (139): 37728-50.
- Glitzenstein, Eric R., and Patti A. Goldman. 1989. *The Federal Advisory Committee Act at the crossroads*. Washington, DC: Public Citizen.
- Government Accountability Office. 2004. Legal principles applicable to selection of federal advisory committee members (October 18).
- Guston, David H. 2006. On consensus and voting in science: From Asilomar to the National Toxicology Program. In *The new political sociology of science*, ed. Kelly Moore and Scott Frickel, 378-404. Madison: University of Wisconsin Press.
- Gutmann, Amy, and Dennis Thompson. 1996. *Democracy and disagreement*. Cambridge, MA: Harvard University Press.
- Greenberg, Daniel S. 2001. *Science, money, and politics: Political triumph and ethical erosion*. Chicago: University of Chicago Press.
- Hendriks, Carolyn M. 2006. When the forum meets interest politics: Strategic uses of public deliberation. *Politics & Society* 34 (4): 571-602.
- Jasanoff, Sheila. 1990. *The fifth branch: Science advisors as policy makers*. Cambridge, MA: Harvard University Press.

- Kass, Leon R. 2005. Reflections on public bioethics: A view from the trenches. *Kennedy Institute of Ethics Journal* 15 (3): 221-250.
- Kennedy, Donald. 2003. An epidemic of politics. *Science* 299 (5607): 625.
- Manin, Bernard. 1987. On legitimacy and political deliberation. *Political Theory* 15 (3): 338-68.
- Mansbridge, Jane J. 1992. A deliberative theory of interest representation. In *The politics of interests: Interest groups transformed*, ed. Mark P. Petracca, 32-57. Boulder, CO: Westview.
- . 1999. Should blacks represent blacks and women represent women? A contingent "yes." *Journal of Politics* 61 (3): 628-57.
- . 2003. Rethinking representation. *American Political Science Review* 97 (4): 515-528.
- Mongan, Michael J. 2005. Fixing FACA: The case for exempting presidential advisory committees from judicial review under the Federal Advisory Committee Act. *Stanford Law Review* 58:895-933.
- Mooney, Chris. 2005. *The Republican war on science*. New York: Basic Books.
- Moy, Russell. 2005. Political and professional considerations in the appointment of advisory committee members. In NAS 2005, Appendix F, 151-63.
- National Academy of Sciences (NAS). 2003. Policy on committee composition and balance and conflicts of interest for committees used in the development of reports (May 12).
- National Academy of Sciences (NAS), National Academy of Engineering, Institute of Medicine, Committee on Ensuring the Best Presidential and Federal Advisory Committee Science and Technology Appointments. 2005. *Science and technology in the national interest: Ensuring the best presidential and federal advisory committee science and technology appointments*. Washington, DC: National Academies Press.
- Office of Government Ethics (OGE). 1982. Memorandum 82 x 22, Members of Federal Advisory Committees and the Conflict-of-Interest Statutes (July 9).
- . 2000. Memorandum 00 x 1, Summary of Ethical Requirements Applicable to Special Government Employees (February 15).
- Petracca, Mark P. 1986. Federal advisory committees, interest groups, and the administrative state. *Congress and the Presidency* 13:83-114.
- Phillips, Anne. 1995. *The politics of presence: The political representation of gender, ethnicity, and race*. Oxford, UK: Oxford University Press.
- Pielke, Roger A., Jr. 2005. Accepting politics in science. *Washington Post*, January 10, A17.
- . 2007. *The honest broker: Making sense of science in policy and politics*. Cambridge, UK: Cambridge University Press.
- Pitkin, Hanna Fenichel. 1967. *The concept of representation*. Berkeley: University of California Press.
- Rawls, John. 1993. *Political liberalism*. New York: Columbia University Press.
- Richardson, Henry S. 2002. *Democratic autonomy: Public reasoning about the ends of policy*. Oxford, UK: Oxford University Press.
- Sanders, Lynn. 1997. Against deliberation. *Political Theory* 25 (3): 347-76.
- Sarewitz, Daniel. 2004. How science makes environmental controversies worse. *Environmental Science & Policy* 7:385-403.
- . 2006. Scientizing politics. *Issues in Science and Technology* Winter:91-93.
- Spielman, Bethany. 2003. Should consensus be "the commission method" in the U.S.? The perspective of the Federal Advisory Committee Act, regulations, and case law. *Bioethics* 17 (4): 341-56.
- Stark, Andrew. 1997. What is a balanced committee? Democratic theory, public law, and the question of fair representation on quasi-legislative bodies. In *Nomos XXXIX, ethnicity and group rights*, ed. Ian Shapiro and Will Kymlicka, 377-418. New York: New York University Press.
- Steinbrook, Robert. 2004. Science, politics, and federal advisory committees. *New England Journal of Medicine* 350 (14): 1454-60.
- Stine, Deborah D. 2005. Federal advisory committees: Background and current issues. In NAS 2005, Appendix E, 129-49.
- Turner, Stephen P. 2003. *Liberal democracy 3.0: Civil society in an age of experts*. Thousand Oaks, CA: Sage.
- Union of Concerned Scientists. 2004. *Scientific integrity in policymaking: An investigation into the Bush administration's misuse of science* (February).
- United States House of Representatives, Committee on Government Reform, Minority Staff Special Investigations Division, prepared for Rep. Henry A. Waxman. 2003. *Politics and science in the Bush administration* (August).
- Urbinati, Nadia. 2006. *Representative democracy: Principles and genealogy*. Chicago: University of Chicago Press.
- Walzer, Michael. 1999. Deliberation, and what else? In *Deliberative politics: Essays on democracy and disagreement*, ed. Stephen Macedo, 58-69. Oxford, UK: Oxford University Press.
- Warren, Mark E. 1996. Deliberative democracy and authority. *American Political Science Review* 90 (1): 46-60.
- . 2001. *Democracy and association*. Princeton, NJ: Princeton University Press.
- Weingart, Peter. 1999. Scientific expertise and political accountability: Paradoxes of science in politics. *Science and Public Policy* 26 (3): 151-61.
- Young, Iris Marion. 2000. *Inclusion and democracy*. Oxford, UK: Oxford University Press.
- . 2001. Activist challenges to deliberative democracy. *Political Theory* 29 (5): 670-90.