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Review of Roger S. Pielke, Jr., *The Honest Broker*: *Making Sense of Science in Policy and Politics*

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Imagine you are a climate scientist, and you get a call from a politician asking whether she should support a proposal to impose mandatory caps on carbon-dioxide emissions. Lucky you! Should you urge support of the proposal? Or should you restrict yourself to explaining recent developments in climate science? Should you offer to answer any specific questions the politician might have about climate science? Or should you try to broaden her thinking a bit and explain the merits not only of the proposed regulation but also several alternative options? A difficult choice, to be sure. Worse yet, as Roger S. Pielke, Jr., argues in his cogent book *The Honest Broker*: *Making Sense of Science in Policy and Politics*, many scientists are not aware they have a choice. Like the politicians they advise, many scientists assume a "linear model" of science and politics, according to which science advice precedes and compels political decisions. First let scientists get the facts straight, the linear models says, then require politicians to implement them. The important contribution of this engaging book is to show scientists and policymakers how and why to go beyond the linear model of science advice. Pielke's brief treatment of "big picture" questions of democracy has important shortcomings, and he does not engage the growing literature on public engagement. But for anyone interested in a policy-oriented perspective on science advice, *The Honest Broker* offers an accessible and stimulating guide to improving the role of science advisors in politics and policymaking.

Pielke summarizes his theory of science advice in two different diagrams: a two-by-two matrix that pairs two views of science with two views of democracy (p. 14), and a flowchart designed to help scientists choose how to respond to politicians'

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requests for advice (p. 19). I consider Pielke's comments on science and democracy below. The flowchart centers on two key factors: the degree of consensus on political values and the degree of uncertainty in scientific knowledge (p. 18). These same factors appear in the two-by-two matrix developed long ago by Yaron Ezrahi (1980). Unlike Ezrahi, however, Pielke combines political consensus and scientific uncertainty, suggesting that they vary together. Pielke's flowchart thus asks scientists to first consider, "Is the decision context characterized by *both* values consensus and low uncertainty?"

If scientists answer "yes" to this question, the basic assumptions of the linear model apply and Pielke invites scientists to provide objective answers to technical questions. Such contexts are rare in contemporary politics, but they may appear when policymakers are able to isolate narrow, technical questions from larger political issues. Pielke calls such contexts *Tornado Politics*: situations where a consensus on values exists—escape an approaching tornado—so that reducing scientific uncertainties leads directly to a legitimate decision. In such contexts, scientists may still choose whether to directly engage policy questions. If they choose not to, they adopt the stance of a *Pure Scientist* whose role as science advisor is limited to summarizing the state of knowledge in a particular field. When scientists in such contexts of political and scientific consensus do consider specific policy options, they adopt the role of *Science Arbiter*. Like Pure Scientists, Science Arbiters avoid entanglement in normative debates, but they provide detailed answers to policymakers' specific questions. If scientists perceive a lack of consensus in both science and politics and answer "no" to the first question in Pielke's flowchart, their context resembles what Pielke calls *Abortion Politics*: situations where value disputes cannot be resolved by reducing scientific uncertainties. In such contexts scientists face the question of whether to try to expand or reduce the range of policy options on the table. If they seek to reduce the range of options, they become *Issue Advocates* who align themselves with a particular political agenda or interest group. Issue Advocates offer their expertise as a resource in political battle. If scientists seek to expand the range of options, in contrast, they become *Honest Brokers of Policy Alternatives* who clarify existing policy options and identify new options. Honest Brokers explicitly integrate stakeholder concerns with available scientific knowledge. The former U.S. Office of Technology Assessment, for example, produced reports that identified a range of policy options and showed how they related to disagreements over both science and politics (pp. 17, 95). Interestingly, because Honest Brokers must draw on diverse perspectives to integrate scientific knowledge and policy options in contexts of uncertainty, they usually take the form of interdisciplinary advisory bodies rather than individual experts (pp. 151, 154–56).

By seeking to broaden scientists' perception of the possible political roles they might adopt, Pielke himself plays the role of Honest Broker. He declines to advocate any one of his four models as an ideal appropriate to all contexts. He even defends the role usually most frowned upon, the Issue Advocate, saying that scientists should engage in issue advocacy "in cases where they feel strongly enough" (p. 94). But Pielke insists that if scientists advocate particular policies, they should do so openly and with reference to political values, rather than pretending that their

preferred policies follow directly from their scientific claims. Such dissembling amounts to *Stealth Issue Advocacy,* which ultimately politicizes science advice and undermines the public credibility of science.

Pielke's analysis of Stealth Issue Advocacy and its consequences is perhaps the book's most important contribution. Stealth Issue Advocates are scientists who portray issues as Tornado Politics that are actually Abortion Politics. This conflation of decision contexts "encourages the mapping of established interests from across the political spectrum onto science," such that competing interests use "science as a proxy for political battle over these interests" (p. 47). Rather than arguing about the values at stake, parties to the controversy argue about the science. The American debate on climate change, for example, is dominated by competing Issue Advocates who all assume that the key question is whether existing scientific knowledge is certain enough to compel political action. They are all "waging a political battle through science" (p. 70), which leads to "a morphing of political and scientific debate" (p. 93). Most importantly, stealth issue advocates of policies to prevent global warming fundamentally misunderstand their opponents, because "the basis for opposition for most of these folks has nothing to do with scientific uncertainty and everything to do with their valuation of the costs and benefits of taking action" (pp. 70–71). As a result, the current debate is "largely disconnected from the real reasons for political debate over climate change, which is based on a conflict over values" (p. 72). Advocates of policies to stop global warming have allowed themselves to be lured into the debating the science, which has distracted them from the task of making a case based on values. And by focusing on science, the current debate neglects a wide range of policy alternatives that are all compatible with the current range of scientific disagreement. Where most other commentators have focused on the politicization of science by politicians and activists, Pielke rightly directs our attention toward the politicization of science by scientists.

Pielke overstates his point, however, when he suggests that the only role for science in political debate is to "help us to understand the associations between different choices and their outcomes" (p. 139). Despite his repeated assertion that science and policy are "inextricably interconnected" (p. 79), and despite his endorsement of constructivist research on the co-production of facts and values (p. 122), Pielke sometimes seems to want to insulate politics from science. For example, he writes, "In the abortion case, scientific information matters not at all, and its pursuit would represent a distraction from the task of reconciling different value commitments through bargaining, negotiation, and compromise" (p. 47). In a footnote Pielke then asks the reader to consider "what scientific information would make you change your own views on abortion" (p. 164 n6). The answer is that people might well modify their views in light of scientific knowledge about the development stage at which a fetus has cognitive ability or feels pain, or with respect to social scientific findings on how changes in abortion law affect the number of illegal or unsafe abortions and resulting maternal deaths. Pielke is right that scientific knowledge is unlikely to provide conclusive answers to moral dilemmas, but such knowledge is often relevant to those dilemmas. And it is relevant not only to the implementation and outcomes of decisions but also to the decisions themselves. Although he makes clear that political values shape science

advice, Pielke does not say much about the reciprocal influence of science advice on political values.

A similarly insulated view of politics appears in Pielke's effort to associate his four models of science advice with two conceptions of democracy. As Pielke rightly notes, "Our thinking about the role of experts in democracy is no doubt grounded in how we conceive of the notion of democracy itself" (p. 11). But Pielke considers only two theories: interest group pluralism, which he associates with James Madison, and a view that Pielke associates with E.E. Schattschneider and describes as "a competitive system in which the public is allowed to participate by voicing its views on alternatives presented to it in the political process. Such alternatives do not come up from the grassroots any more than you or me telling an auto mechanic what the options are for fixing a broken car" (p. 12). Pielke says nothing about communitarian, republican, participatory, or cosmopolitan models of democracy, each of which plays a role in contemporary politics. Moreover, Pielke's characterization obscures the most distinctive feature of Schattschneider's view of politics, which is that politicians alone cannot determine whether or how the public is, as Pielke puts it, "allowed to participate."

Pielke's account of Schattschneider sounds more like the elitism of Joseph Schumpeter (1950: 269–73) than Schattschneider's far more dynamic and participatory conception. Schumpeter reduced the role of citizens to choosing among electoral candidates, and Pielke reduces it to expressing views on policy options prepared by elites. For Schattschneider, in contrast, "a free society maximizes the contagion of conflict; it invites intervention and gives a high priority to the participation of the public in conflict" (Schattschneider 1960: 5). Schattschneider argues that politics revolves around the bias and scope of conflict, i.e., how a conflict is organized to favor one group or another, and who participates. Political adversaries attempt to shift the bias of conflicts by expanding or contracting the scope of conflict, which is to say, by including or excluding the public. Even when conflicts are initiated by small pressure groups, "conflicts become political only when an attempt is made to involve the wider public" (Ibid.: 39). And because elites seek to protect their interests by privatizing conflicts, "[i]t is the function of public authority to *modify private power relations by enlarging the scope of conflict*" (Ibid.: 40, original italics). Pielke portrays the expansion of policy options by Honest Brokers as a benevolent aid to democracy, but Schattschneider insists that "*the definition of the alternatives is the supreme instrument of power;* the antagonists can rarely agree what the issues are because power is involved in the definition" (Ibid.: 66, original italics, see also 109, 135). Every definition of policy options involves the exercise of power, even those offered by Pielke's Honest Brokers. To be sure, advisory commissions following the Honest Broker model may include stakeholder representatives. But for Schattschneider that is not enough, and he makes clear that democratic governments have the task of actively enlisting the general public in defining policy options.

Encouraging public engagement in science advice may not appeal to science advisors and policymakers, because they belong to the very elite that, according to Schattschneider, usually prefer to contain conflicts within a narrow circle. This point raises a question about how Pielke locates this book with reference to the field of

science and technology studies (STS). Although Pielke favorably cites STS criticisms of the linear model of science advice, he writes that STS "has itself fallen victim to the pathologies of the linear model" (p. 78). Pielke acknowledges the "powerful incentives" underlying the linear model, but he asserts that its persistence also "represents a failure of the science studies community to share their knowledge with those to whom it matters most" (p. 131). Pielke's point seems to be that STS scholars have assumed their criticisms of the linear model would automatically translate into practice, thus echoing the same linear model they criticize. This charge has accompanied STS since its inception, and the field has always included more academic and more activist scholars. Calls for relevance are always worthwhile, but a more pluralist view would welcome a diversity of approaches that mutually inform each other. Rather than following Pielke and becoming Honest Brokers, more academically inclined scholars might draw on Pielke's engaging book to enrich their own studies of science advice.

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