
Contemplating a Science Court:

On the Question of Institutionalizing Scientific Factfinding

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The past two decades have seen much discussion among legal and science professionals about the competence with which our elected officials decide upon public policy matters that have a scientific or technological dimension. A consensus seems to have formed that the present system of decision making is flawed, that policymakers lack the expertise to weigh complex technical data, and that scientific facts are too often mangled in the political arena, thus rendering rational decisions nearly impossible.

Arthur Kantrowitz has been an articulate proponent of creating a science court designed to improve such decision making. The court would weigh scientific data pertaining to an issue apart from its political and moral considerations. As a current example, the Reagan administration's SDI program is a controversial public policy issue with an obvious scientific and technological dimension.

Just as clearly, it has political and moral dimensions. A science court might be asked to render a judgment on the technical feasibility of deploying a shield in space that would guard against incoming ballistic missiles and its economic costs relative to other technical options for achieving the same ends. In this and all other matters put to it, the court would leave aside political and moral questions, such as, should a space shield be deployed?

Central to the concept of a science court is a belief in the utility of separating the technical, verifiable facts of a matter from the political and moral issues it involves. Kantrowitz proposed that the court adopt an adversarial process, in which scientist-advocates would argue the competing sides of a question before a panel of scientist-judges. As in a court of law, the advocates would have an opportunity to question the evidence sub-

mitted by the opposing side. The judges would be trained scientists, though not experts in the particular disputed issue since they would likely have a bias in the matter. Having heard the evidence, the panel of judges would render its decision. But they would not advocate how the technical judgments ought to be acted upon. Kantrowitz also proposed that the decisions of the judges be published so the political community and the public would have a clear statement of the scientific facts in a dispute. With the "best thinking" of the scientific community in hand, the public debate might have a more rational underpinning.

The idea admittedly holds great appeal, especially, I imagine, to professional scientists, who have often seen the politicization of technical matters on which they are expert. So, too, the ideal of seeking scientific truth is a concept congenial to scientists; it is no surprise that Kantrowitz himself is a scientist. The literature in support of a science court rings with enthusiasm and optimism, and the sincerity of proponents' attempts to ameliorate the decision-making process is unquestioned.

However, many have questioned whether it is in fact possible to separate scientific facts from values. Dorothy Nelkin has argued that such separation might be achieved, but only with "issues that are clearly factual, involving simple measurement and little interpretation," which, she added, "are either relatively non-controversial or are dealt with adequately by existing non-adversarial procedures." In other words, the really difficult questions disputed among scientists, and those which Kantrowitz imagined the court would be most helpful in sorting out, generally concern probabilities rather than certainties. Since discussions focusing on probabilities are likely to be influenced [by] values, one begins to doubt that separation of facts from values is possible in the large and controversial issues a science court would hear.

Others have questioned whether the court could truly be free of politics. The Kantrowitz model seems susceptible to political manipulation, especially in administrative matters, such as the selections of judges and advocates and of the exact questions the court would consider. Barry M. Casper has observed that "the very process of separating technical from political and value questions could well involve political and value choices." Refinements of the Kantrowitz model might address these concerns.

But the most serious problem with a science court as Kantrowitz conceived it may be the court's authority. He plainly states that the court would play an advisory role and that its decision would not be binding. While this is the intent, what would be the reality and impact of the court's judgment?

By institutionalizing scientific factfinding in the form of a science court, a decision rendered by the court could well carry greater weight than intended and even unduly shape the ensuing political and moral discussion of an issue. The scientific facts certainly should not be played down; however, considering them first might mean neglecting other and equally important dimensions. The court might accumulate by perception greater authority than Kantrowitz imagined. Barry Commoner and Stephen L. Carter have emphasized in their discussions of the court its inherently undemocratic status as an unelected elite, one that would nonetheless end up wielding great power. They worry that public debate might be inhibited by the pronouncements of a science court. These are only a few of the possible problems of a court that in the real world possesses too much authority.

On the other hand, if the court lacked sufficient authority to command respect for its judgment, what would distinguish it from any other advisory panel? Without a measure of authority, how much would be settled? Dissenters among the panel of judges and scientists and policymakers outside the court would certainly remain active and vocal. It is difficult to imagine any opposition conceding to the court's judgment, packing up its tent, and going home. The complex question of the science court's effective authority has not been adequately considered, in my view.

The proponents of a science court correctly identify certain inadequacies in the current system of deciding public policy issues involving science and technology. But the idea of institutionalizing scientific factfinding in imitation of the legal system's advocates and judges offers, I think, more pitfalls than promise. In particular, the need for judges is questionable. Supporters of the idea of a science court assume that the public is incapable of informed and balanced judgments after hearing both sides of a technical matter. I think the public is educable and well able to make informed and balanced judgments after hearing both sides from scientists.

If professional scientists would become more involved in educating the public and its representatives who are charged with making these difficult technical decisions, the debate might be raised to a level on which political obfuscation is less likely. This, after all, was the goal of Kantrowitz in proposing a science court. I, therefore, place the burden on myself and my colleagues since our specialized knowledge carries public responsibility with it. Although primarily designed for an audience of science professionals and policymakers, *THE SCIENTIST*, I hope, will also serve in educating the public in the technical aspects of controversial issues.