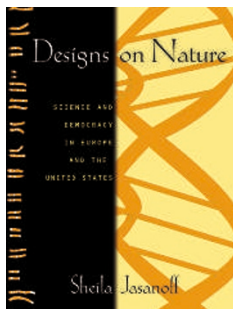


Biotechnology politics



Designs on Nature: Science and Democracy in Europe and the United States

By Sheila Jasanoff

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Although the governance of biotechnology has often been presented as involving a series of narrow technical questions, a closer look suggests that these processes challenge some of the founding assumptions of liberal democracy. Meanwhile, traditional ideas of academic science have undergone substantial transformation since the emergence of biotechnology in the early 1970s — partly in response to the changing economic and institutional context. In the face of such developments, international scientific institutions largely continue to assume that the ‘technical’ and the ‘social’ (including the legal and the ethical) aspects of biotechnology can be kept apart. In *Designs on Nature*, Sheila Jasanoff presents an erudite challenge to the usual attempts to separate science from politics. Drawing on the recent history of biotechnology in North America and Europe, Jasanoff’s account reveals just how much more complicated (and more interesting) the world of scientific governance really is.

For example, in Germany, the regulation of embryo research and the science of assisted reproduction are profoundly inter-connected with the development of national identity. Certainly, the Nazi preoccupation with eugenics has brought a particular edge to discussions about the freedom to conduct genetic research. In the United Kingdom, the making of policy on genetically modified (GM) crops has had to confront uncertainties, not only about the quality of scientific risk assessment, but also about the moral, social and economic benefits of agricultural biotechnology. In the United States, legal disputes over intellectual property rights have been central to the development of biotechnology, posing difficult questions over where to draw the line between what is natural and what is not. In all these cases, we witness not simply the entanglement of science and politics, but also a shift in the very definition of these entities.

Drawing on a variety of social science perspectives and with a confident grasp of the evidence, Jasanoff provides the reader with a rich and well textured account of the politics of biotechnology. Although impossible to describe the depth of this account, two core themes deserve discussion.

First, the author makes an important contribution to the literature by framing her discussion within a comparative methodology. The approaches of Germany, the United Kingdom and the United States

to the regulation of biotechnology are singled out for particular treatment. This method offers a wealth of detail about the manner in which the policy scenarios surrounding this technology played out in each nation. Moreover, Jasanoff applies the methodology so as to uncover the patterns of variability and change between these different political cultures.

A key aspect of this project involves documenting the varied, shifting and often unsuccessful attempts of the American, British and German governments to stabilize a regulatory approach to GM crops through the enrolment of science and expert authority. In the US, a discourse of risk that focussed on specific GM products pervaded early approaches to the technology and asserted the authority of science to draw a line around their safety. Science was also given tremendous weight in Britain, but through recourse to the legitimacy of professional associations and

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expert bodies. In Germany, less emphasis was initially given to science, instead drawing on the development of rational institutional processes and robust policy-making practices to address any uncertainties associated with GM crops. Interestingly, each of these strategies is shown to have failed, at least to some extent, by the end of the 1990’s, forcing the respective governments to redefine the role of scientific authority in democratic decision-making.

A second important theme in this book concerns the relationship between the public, expertise and decision-making. Specifically, Jasanoff enquires into how the role of citizenship developed within the debate around biotechnology. Citizenship is characterized as involving the institutional practices through which publics interrogate and evaluate the knowledge claims applied in decision making. Interwoven with the repositioning of science in governance, a further characteristic of the politics of biotechnology has been the willingness for publics to challenge these relationships. Governments have thus had to adapt and find new ways of engaging these citizens to develop legitimacy and trust in governance and to give stability to decision-making process. How these changes translate into practice is varied both in, and between, political cultures. The underlying point is that political cultures have been obliged, in some fashion, to address issues of transparency, engagement and participation in technical decision making.

Scientists, as well as political decision makers, will find *Designs on Nature* an excellent introduction to the politics of science and technology. The author does not offer a model of best practice in scientific governance, but challenges the reader to put aside common assumptions and address the political complexity and range of issues at stake. In particular, the author’s treatment of political culture, her comparative methodology and her analysis of politics at multiple levels and sites within government, as well as within the wider polity, are of great importance. The old idea that science and politics can be kept apart may still linger, but Jasanoff’s account has removed any academic credibility for such a claim.

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