BOOK REVIEW

Philip Kitcher: Science, Truth and Democracy
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During the last decade or so a new philosophy of science has emerged. The present book gives a clear and authentic account of this branch of philosophy. In a lucid style the problems and arguments on both sides of the debate, called Science Wars (1995), are laid out in a compact volume. In contrast to traditional philosophy of science which focuses on conceptual clarification, roles of theories, laws of nature etc., the new movement discusses science policy and the social and political role of science, especially in advanced western societies.

The distinguished philosopher of science Philip Kitcher in this book examines the intense debate since the nineties going on about the role of science in our society, how scientific knowledge should be pursued and employed. He begins with questions such as: Does science tell us anything about the nature of the world we live in, or is what we perceive a construction of our mind–the well known dispute between realist and anti-realist viewpoints. What can we know about entities which cannot be observed by our senses, such as electrons, quarks, galaxies. Does the predictive success of a scientific theory prove that it is also true i.e., its assumptions are correct. To give an idea of the scope of the book we might list the chapter headings.

PART I THE SEARCH FOR TRUTH

Unacceptable Images
The World as We find it
The Ideal of Objectivity
The World as we make it
Mapping Reality
Scientific Significance

PART II THE CLAIMS OF DEMOCRACY

The Myth of Purity
Constraints of Free Inquiry
Organizing Inquiry
Well-Ordered Science
Elitism, Democracy and Science Policy
Subvervise Truth and Ideals of Progress
The Luddites' Laments
Research in an Imperfect World.

Kitcher defends the claim that scientific research can acquaint us with the truth of various aspects of reality and proposes that objective scientific knowledge is still possible. He balances this idea with the admission that our search for truth is inevitably influenced by social context and by what we select as worthy of investigation. Various large projects such as the super-collider project in Texas that was ultimately abandoned, the cloning of the sheep Dolly which showed some negative aspects of research, the human genome project still on-going but still far from any direct practical application,are discussed in the book. Using these and other examples, Kitcher examines the sharp divide that separates purists who believe that the pursuit of scientific knowledge is always valuable and necessary, on the one hand, from others who believe that it invariably serves the interest of those in positions of

power, on the other. He rejects both perspectives and works out a more realistic image of the sciences–one that allows for scientific truth, but nonetheless permits social consensus to determine which avenues to investigate. He then proposes a new notion of science, a democratic and deliberative framework, for responsible scientists to follow.

Taking the case of the Human Genome Project, Kitcher points out that economic benefits of engaging in the project appear to outweigh possible future benefits for human health. There may be obvious way to apply the molecular insights obtained in treating, curing, preventing or ameliorating the malady in question, he says (p.5). He, however, grants that the project might improve diagnostic testing in some cases and bring some medical benefits.

On the, now abandoned, super-conducting super-collider project, people questioned the justification of spending large sums of public money, an order of magnitude larger than that spent on mapping and sequencing genomes. The super-collider would after all only confirm an esoteric theory about the ultimate constituents of matter. People unhappy about the abandoment of the project said that the decision ignored the intrinsic benefit of the knowledge it would bring. (p.8). They argued that science besides its practical benefits or harms produces knowledge that has intrinsic value which overrides mundane practical concerns.

In the opening chapters Kitcher examines the notions of truth, knowledge and objectivity and the realistic and anti-realistic positions on them. He defends the notion of truth, justifying the idea that the sciences sometimes deliver the truth, even about quite abstract entities and properties. A model realism, he claims, survives even the most sophisticated challenges. (p. 199).

On the appropriate idea for the practice of science, Kitcher says, that the traditional conception of science as aiming at truth should be expanded to a scheme where a truth retains a place, but is set within a democratic framework. In this framework the proper notion of scientific significance which would emerge from ideal deliberations among ideal agents. (p. 200).

The text is presented in an accessible, unencumbered style and is supplemented by an excellent detailed reference at the end, which is called an Essay on Sources (pp. 203-213). From the opening pages we learn that the manuscript of the book was discussed at several seminars and reviewed by prominent philosophers before publication.

In conclusion, we quote the comments by a reviewer printed on the dust cover:

Kitcher convincingly takes on the doubters of scientific realism and objectivity, while exposing as a kind of unexamined theology the claim that the search for truth is always morally and socially an absolute good.

Vienna, 10th October, 2001.