



Editorial

Whose History Is It?

In his recent book *To Explain the World: The Discovery of Modern Science* (2015, reviewed in this issue), Steven Weinberg seeks to tell “how science progressed from its past to its present” from the perspective of a “modern working scientist.” Weinberg, who won the Nobel Prize in 1979 for his contributions to the Standard Model of elementary particle physics—a label he says he coined—declares that his aim is not to understand the past on its own terms, but to judge “the past by the standards of the present.” Who better for this task than scientists themselves?

In a sharp rebuttal of Weinberg in the *Wall Street Journal*, Harvard historian and sociologist of science Steven Shapin rejects this idea. Shapin repeats an often-told—though possibly apocryphal—story about a “distinguished cardiac surgeon who, about to retire, decided he’d like to take up the history of medicine” and asked a historian for tips. The historian replied, “As it happens, I’m about to retire too, and I’m thinking of taking up heart surgery. Do you have any tips for me?” Shapin is outraged at the notion that the skills of science and history are asymmetric—that the ability to do heart surgery (or physics) is acquired only after time and training, whereas the history of science is best written by those who are trained in and work as scientists first, supplemented by whatever cross-training or tip acquisition is necessary.

Who is qualified to write the history of science? *Physics in Perspective* constantly confronts this question. We appreciate how carefully scientists value their craft, hence the supposition that they are uniquely qualified to understand science and its evolution. We also know, however, that science does not unfold in its own special ether but is the byproduct of a cultural and historical life that strongly shapes its participants, their work, and how their work is understood and advanced; we recognize that historians are specially trained to study and describe that kind of growth. Scientists may well be tempted to think that, because they understand the technical details of their field, they are also qualified to pronounce upon its origins. But this reminds us of what Socrates said after quizzing craftsmen about life: “They did know their craft, but thought that they therefore also knew about many other fine things.”

The history of physics involves the contributions of many “fine things.” For this reason, we think it is a mistake to view the history of science as a rarefied activity best carried out either by scientists or by a specially trained elite of professional historians. Writing the history of physics deserves to be multi-faceted—calling for

high standards, but also an allowance for different points of view and perspectives. It is good, and even necessary, for scientists to aspire to make serious contributions to history, understanding how much they need to learn in the process. For one thing, participants often provide useful insights. For another, they can correct mistakes that even exemplary historians can make. Furthermore, there are not enough historians of science to go around. Finally, having accounts by working scientists does not mean that professional historians of science have to buy into the assumptions of these accounts or take them as authoritative. History is not a standardized kind of writing, but is polymorphous, in a constant state of reflection, revision, and renovation, constantly seeking to develop and incorporate new perspectives on issues that outsiders might have assumed were settled. This is as true of the history of science as of history in general.

This journal especially seeks to encourage this kind of rethinking; your editors themselves came to the practice of history after originally studying philosophy and physics, respectively. The practice of science is interwoven in many different networks of instruments and institutions, people and politics. Drawing these networks into the graspable space of these articles is a challenge. You can't grab physics by the throat, as it were, and isolate one part as "all we need to know" about it. History, after all, is an art that requires great sensitivity, attentiveness, and a certain humility confronting the complexities of human affairs. When science is involved, these humane skills must be connected to the matrix of technical, theoretical, experimental, and organizational detail, which can be done from many different perspectives.

This issue provides an excellent illustration, with its authors coming from three different disciplines. Deepanwita Dasgupta, a philosopher, addresses the myriad challenges faced by Meghnad Saha (and many other Indian scientists) investigating the physics of stars while working at the geographical periphery of contemporary science. Helge Kragh, a historian, finds new connections between fundamental physics (in the work of Pascual Jordan) and geophysical sciences. John D. Rush, a physicist, recounts the development of neutron physics in the United States, drawing on his extensive experience in the field and its laboratories.

Scientists interested in history need to develop new sensitivities to human nuance and subtlety. Conversely, historians and philosophers need to engage the details of science as well as its all-too-human context, going beyond implicit presuppositions about what science is or is not. Sometimes a sensitive outsider—whether a historian looking at science or a scientist investigating history—can discern features ignored or taken for granted by insiders.

Thus, our journal seeks *perspective*, which comes from a mixture of distance and closeness, of science and history, of curiosity, perceptiveness, and scope.

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