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Teaching the History of Radical Science with Materials on Science for the People (1969-1989)

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EPIGRAPH

"We must not let the utter powerlessness of dissidents in the short range in advanced capitalist conditions deter us from learning from them about the political implications of our particular way of teaching about scientific thought." — Donna Haraway, 1975¹

In spring 2014, the Social Thought & Political Economy program at the University of Massachusetts, Amherst hosted a three-day workshop titled "Science for the People: The 1970s and Today." The conference provided an opportunity to revisit the history of the US organization Science for the People (SftP), which from 1969 to 1989 brought together scientists, engineers, and others with a radical vision for wresting the power of science away from corporate and military control and toward the fulfillment of social needs.² SftP emerged from the anti-war movement of the 1960s and made its first waves in its disruptions at the annual meetings of the American Association for the Advancement of Science (or what they called AAAS). Later activities included providing scientific expertise and technical support to organizations like the Black Panthers and Farm Labor Organizing Committee; publicly confronting sociobiology and other scientific theories that buttressed racism, sexism, and class oppression; sending

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- 1 Donna Haraway, "The Transformation of the Left in Science: Radical Associations in Britain in the 30's and the U.S.A. in the 60's," *Soundings* 58.4 (1975): 441-62, 459.
 - 2 About two hundred people attended and more than sixty people presented, many of whom were members of the original organization. The conference is archived on <http://science-for-the-people.org>. Note that at the time of its founding in January 1969, SftP was originally called Scientists for Social and Political Action, and then Scientists and Engineers for Social and Political Action, before some chapters began calling themselves Science for the People in December 1969.

international delegations to China and pursuing solidarity work in Nicaragua and other revolutionary societies; and perhaps most importantly, publishing a quarterly magazine.

To accompany the 2014 conference, I taught an undergraduate seminar at UMass that focused entirely on the remarkably understudied history of this important organization. In the weeks leading up to the conference, students delved into SftP-authored writings, including the organization's early manifesto "A People's Science," investigative reports on science deployed by the US military in Vietnam, the *Science for the People* magazine, and the 1974 book *China: Science Walks on Two Legs*. They also explored some of the FBI documents on SftP analyzed by Daniel Chard in this issue. Of the few secondary sources we consulted, the most helpful was Kelly Moore's book *Disrupting Science: Social Movements, American Scientists, and the Politics of the Military, 1945-1975*, which contains two thoughtful chapters on SftP alongside separate chapters on the liberal organizations Society for Social Responsibility in Science and the St. Louis Committee for Nuclear Information.

While relatively few people would want to teach an entire course just on SftP, the materials could be integrated very effectively into courses all over campus—most obviously as a unit in classes on the history of social movements and in interdisciplinary courses in science and technology studies, but also potentially in biology, chemistry, and physics courses that tackle science and social issues. Indeed, the students in my seminar came from a wide range of majors, spanning the natural sciences, social sciences, and humanities. The members of SftP provided an exemplary model for us as we spoke across those divides: these were practicing scientists and engineers—Rita Arditti, Stephen Jay Gould, Richard Levins, and Richard Lewontin will perhaps be the most familiar to historians—who really knew their history, sociology, economics, and political science.

My own plan the next time I teach the SftP materials is to fold it into a course on the “history of radical science.” The materials provide a powerful introduction to a different way of thinking about many issues that face us today—climate change, GMOs, and health care inequalities being only a few of the most obvious. Indeed, as Donna Haraway argued in 1975 (see epigraph), one of the most important reasons to study radical science movements like Science for the People is for the challenge they have offered to mainstream understandings of the political contexts undergirding the production, circulation, and application of knowledge.

For most people, the “history of radical science” as a subject requires much explanation, and this was very true for the seminar I taught on SftP. The first explanation involves the word *history*: I emphasized that this was not a science class, nor even a science “issues” class, but a history class. After all, if our goal were to discuss the pros and cons of nuclear power, we would not rely on articles from the 1970s and 1980s. Second, as readers of *RHR* will no doubt already realize, Americans in particular widely misunderstand the term *radical* to signify “extreme” or even “irrational”; few of my students entered the class understanding “radical” to mean a commitment to systemic analysis of root causes and to strategies that involve fundamental changes in social, political, and economic structures. Third, I urged students to rethink their assumption about *science*, especially the notion that science exists in a domain separate from the rest of society and is governed by objective laws. Nature may or may not obey objective laws, but science is a social and political activity. Scientific knowledge, like any form of knowledge, thus can and must be analyzed in social and political context.

While I was planning the course, I imagined that I would use the first meeting to establish these understandings once and for all. We could then, I thought, move forward to tackle more sophisticated questions. Instead, I found myself having to return to basic principles again and

again. But in many ways it was the ability to offer these critical interventions that made the course worth teaching, and if every class provided new opportunities to grapple with fundamental problems, so much the better.

I began the course by asking students to read SftP's early 1970s manifesto "A People's Science" alongside an iconic article representing the 1980s Public Understanding of Science (PUS) movement, and for each article to answer the questions: What do the authors see as "the problems"? What do they see as "the solutions"? My goal was for students to discover in the texts some of the crucial differences between radical and liberal analyses. "A People's Science" had an interesting history: it began as a pamphlet circulated by SftP at the 1970 meeting of the AAAS; the authors then expanded the essay and submitted it to *Science* magazine where it was rejected by the editor despite recommendations by reviewers to publish it.³ To represent the Public Understanding of Science movement, I selected a summary and commentary of the British Royal Society's foundational 1985 *The Public Understanding of Science*, published as "Public Understanding of Science: The Royal Society Reports" in *Science, Technology and Human Values*.⁴

While more than a decade separates the two documents and I would ordinarily favor treating the earlier one first, in this case I thought there was good reason to address them in reverse order. The liberal model is much more familiar to students, so it made more sense to start there and then introduce the radical challenge. The PUS document laid out very familiar claims about the need for a knowledgeable public to make democratic decisions about such issues as nuclear power, the treatment of animals in medical experiments, and the proper use of natural resources. As such, the chief problem the authors identified was the public's reported "hostility or

3 Bill Zimmerman, Len Radinsky, Mel Rothenberg, and Bart Meyers, *Towards a Science for the People* (Brookline, Mass.: People's Press, 1972).

4 "Public Understanding of Science: The Royal Society Reports," *Science, Technology, & Human Values* 11.3 (Summer, 1986): 53-60.

indifference to science and technology,” which “weakens the nation's industry.” A related problem they highlighted was the failure of scientists to take it upon themselves to “communicate science to the public.” Thus, the solution they proposed was for scientists, spearheaded by the Royal Society, to engage more directly in educating the public about science. While the document bears the clear markings of the Thatcher/Reagan era, I would argue that it is still in many ways the dominant perspective on science and politics today. We hear constantly that the ignorance of the public is to blame for problems like climate change denial, and that the only solution is better “communication” by scientists. The PUS report makes these points with exceptional clarity: the only real difficulty is to convince students that it reflects not simply “common sense,” but a specific political ideology—and this, of course, is often the challenge when confronting liberalism in college classrooms.

It would be hard to find a document that better served to relativize the perspectives expressed in *The Public Understanding of Science* than the SftP treatise “A People's Science.” I explained to the class that we were going back in time to a period when people—including established scientists—had a wider range of theoretical perspectives on science in society. For the SftP authors of “A People's Science,” the underlying problem was corporate capitalism. More specifically, they targeted the “government-corporate axis” that funded research “narrowly beneficial to ruling-class interests” (303), resulting not only in failure to address widespread social needs but also in the development of technologies harmful to human health and freedom. Most importantly, they argued that “science is inevitably political,” in other words that “scientific activity in a technological society is not, and cannot be, politically neutral or value-free” (299, 307).

For the following week, I assigned a selection of readings representing a range of political

ideologies that prompted different perspectives on the problems presented by science in society and the solutions to those problems. For a radical approach to scientist activism in 1930s Britain, I gave them Robert Filner's "The Social Relations of Science Movement (SRS) and J. B. S. Haldane."⁵ To explore a liberal approach to scientist activism in the 1950s and 1960s U.S., I assigned Moore's chapter on the Committee for Nuclear Information.⁶ To see how SftP's Marxist analysis could be broadened to address questions of racism in science, I offered the article "Science, Technology, and Black Liberation," by SftP members S. E. Anderson and Maurice Bazin.⁷

With this foundation in the history and ideology of radical science, I considered the class ready to move into a deeper study of Science for the People itself. We read Kelly Moore's chapters on SftP and an assortment of primary sources, including the organization's founding document, FBI reports on SftP activities, and one full issue of their choosing from the *Science for the People* magazine. For their midterm assessment, I asked them to read a short piece by Naomi Oreskes and Erik Conway related to their book *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*⁸ and then to write a four-page paper in which they first summarized the authors' key arguments, and then compared and contrasted the analysis with that offered by Science for the People on the one hand, and liberal movements like PUS on the other. Students identified many similarities and differences on both sides.

Following the midterm, we spent several weeks focusing on specific issues—for example,

5 Robert E. Filner, "The Social Relations of Science Movement (SRS) and J. B. S. Haldane," *Science & Society* 41.3 (Fall, 1977), pp. 303-316.

6 Kelly Moore, "Information and Political Neutrality," *Disrupting Science: Social Movements, American Scientists, and the Politics of the Military, 1945-1975* (Princeton: Princeton University Press, 2008), pp. 96-129

7 S. E. Anderson and Maurice Bazin, "Science, Technology, and Black Liberation," in *Science and Liberation*, ed. Rita Arditti, Pat Brennan, Steve Cavrak, pp. 330-349 (Boston: South End Press, 1980).

8 Naomi Oreskes and Erik M. Conway, "Defeating the Merchants of Doubt," *Nature* 465 (10 June 2010): 686-87.

the militarization of science, agricultural science and the politics of food, and race and gender in the politics of genetics. In each case, we compared Science for the People's approach with those of other organizations, especially in more recent times. Perhaps the most interesting was the week we spent on militarization: we read SftP's investigative report on Jason (the secretive organization of scientists advising the Pentagon)⁹, documents relating to the 1990 effort on the UMass campus (aided by SftP member Jonathan King) to ban anthrax research, and a recent article on anti-drone activism at Johns Hopkins University. The finale of the class was the conference itself: seminar students conducted oral history interviews with SftP veterans and contributed in meaningful ways to every aspect of running the event.

In the future, college and high school instructors will find it easier to teach the history of radical science with materials on Science for the People. A writing collective that came together at the 2014 SftP conference is completing an edited volume of primary sources titled *Science for the People: Documents from America's Movement of Radical Scientists, 1969-1989*. The volume—edited by Alyssa Botelho, Daniel S. Chard, and me—will offer representative documents organized according to subject, with chapters on SftP's disruptions of the AAAS, their writings on science and ideology, and their approaches to militarism, race and gender, agriculture, biology and medicine, technology, energy and the environment, and international solidarity. It will also include an introductory chapter that places SftP in the larger history of science activism, and especially in relation to 1930s Marxist historians and philosophers of science. In the meantime, many useful sources are available on the website <http://science-for-the-people.org>, including extensive coverage of the 2014 conference and documents from SftP's history. It is our hope that more teachers and professors will be able to incorporate such materials into their courses and so introduce their students to the history of this important social movement and its radical analysis

9 Berkeley SESPA, *Science against the People: The Story of Jason* (Berkeley, Calif.: Berkeley SESPA, 1972).

of science and political power.