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Science in Perspective

On three occasions in the fall of 1984, and on two continents, scientists and scholars are assembling to pay centennial tribute to the vision of George Sarton (1884–1956). Sarton's life was devoted to an idea—that the history of science should be an organized field of learning, central to our culture. Attention to Sarton salutes a faithful pioneer. It also does more. It underlines the bubbling energy of the history of science in our day, and its growing importance for teaching, research, and policy.

The scientific enterprise has increased greatly in size, complexity, and diversity in the decades since Hiroshima. Change is the norm in areas as varied as the financing of science, policy for science, instrumentation, the links of technology and science, the education of scientists, and the public understanding of science. This listing is fragmentary, but underlines the need for perspective. We need to see science steadily and see it whole. And here history helps us, whether we are scientists, scholars, or policy-makers.

A partial inventory of institutes, projects, and publications suggests the multiplicity of roles that the history of science can perform. Scientific and technical societies have taken an important lead. The Center for History of Physics which the American Institute of Physics organized in 1965 has been followed by upwards of a dozen history centers for subjects from chemistry (American Chemical Society and American Institute of Chemical Engineers, together), through information processing (American Federation of Information Processing Societies), to microbiology (American Society for Microbiology). These centers encourage teamwork in conducting oral histories, in subduing the vast archival resources of 20th-century science, and in preparing exhibits and other materials to educate the citizen and the student. Teamwork also characterizes research on subjects from the early years of Los Alamos to the development of the laser, and from the creation of polymer science and technology in the 1920's and 1930's to the story of the (still unfinished) space telescope. More familiar in style are the American teams which are editing the papers of Joseph Henry, of Thomas Edison, of Charles Darwin, and of Albert Einstein.

Industrial companies have not been slow to perceive the significance of history for public understanding and for corporate culture alike. General Electric has had a (prizewinning) historian of science on its staff for almost a decade. Du Pont is sponsoring a major analysis of its patterns of research and development, and the Rohm and Haas Company is marking its first 75 years with a scholarly history. Perhaps the most striking testimony to the desire for perspective comes from the more popular press. The November issue of *Science 84* is devoted to "20 Discoveries That Changed the World," while in October the *New Yorker* began its serialization of "Annals of Eugenics" by Daniel J. Kevles, a noted historian of science.

This swelling tide of documentation, scholarship, and popular writing has been matched by the development of new intellectual concepts, new teaching contexts, and new professional forums. Thomas S. Kuhn's "paradigms" and "normal science" have eroded forever the credibility of older stereotypes. In pedagogy, the technologically oriented universities stand out, as witness Virginia Tech's Center for the Study of Science in Society, RPI's commitment to Science and Technology Studies, and Stanford's focus on Values, Technology, Science and Society. A resurgent History of Science Society has seen a membership increase of 50 percent in the past 5 years and HSS has been joined by such vigorous siblings as the Society for History of Technology and the Society for Social Studies of Science.

George Sarton's vision has its reward in today's flourishing community of historians of science. The challenge is to nourish and extend these humanities of science, as the pace of scientific and technological change quickens. Only then will we all—scientist and citizen alike—be able to see science in perspective.—ARNOLD THACKRAY, *Department of History and Sociology of Science, University of Pennsylvania, Philadelphia 19104*