



Editorial

What We Talk about When We Talk about Physics

As *Physics in Perspective* enters its third decade, it brings much that is new. We introduce a new editorial team; Peter Pesic is stepping aside after five years of assiduous service to the journal and Richard Staley joins Robert P. Crease and Joseph D. Martin as co-editor-in-chief. All three of us aspire to carry forward the exemplary acuity and care that Peter brought to his editorial work. This volume also inaugurates the practice of publishing the previous year's Pais Prize lecture. The Abraham Pais Prize for History of Physics, awarded annually by the American Physical Society, recognizes outstanding scholarly achievements in the history of physics. Last year's winner, Oregon State University's Mary Jo Nye, used the occasion of her lecture to remark on the changes she has seen in the history of physics over her career and to offer observations on how they have (and haven't) reflected changes in physics itself. We can think of no better touchstone for setting out our editorial vision.

In the course of describing the ways in which the study of physics has broadened over the past century, Nye makes a provocative suggestion. Perhaps, she writes, "physics has arrived at an epistemology not so different than the epistemology of chemical and biological science in which the notion of emergent properties has long coexisted with the search for basic elementary bodies and fundamental laws." This follows on the heels of the observation that historians of physics have not done all that they might to give proportional attention to all the topics and practices that now fall within the broad rubric of physics. We agree—and add that this is also true of our treatment of earlier periods.

For this reason, we conceive of the "physics" in *Physics in Perspective* broadly. Yes, we want to learn about the history of the standard model and the machines used to expound it. We want to learn about quantum mechanics and relativity, and about the evolving understanding of the nucleus and of the cosmos. But we also want to learn about where physics interfaced with chemistry, engineering, and metallurgy through the study of molecules and solids. We seek to explore its contributions to our understanding of the geosphere and the atmosphere. We wonder what new insights are to be gained from probing its connections with the sciences of life. And we recognize the need to encourage more systematic inquiry into the many applications of physics.

It is worth observing too that convictions about the identity and scope of physics itself also have a history. Physicists' instincts—as well as historians'—about

what characteristically falls within physics, what lies beside it, and what derives from it, have all changing substantially over time. For Herman von Helmholtz, Ernst Mach, James Clerk Maxwell, and others in the 1850s through the 1880s, for example, physiology, physics, and psychology were like-minded neighbors. They each confronted the physical phenomena of sound and light. They each engaged with how these phenomena interfaced with sense organs. Lewis Mumford's groundbreaking history of technology noted that intimacy with just these elements underlay many of the most impressive developments of the late nineteenth and early twentieth centuries—the telephone, the phonograph, and motion pictures. Full appreciation of the contributions physics made to these developments can only come in light of an appreciation of the contributions it made to, and received from, physiology and psychology.

Nye, in short, has put us on notice. We cannot claim to offer the “perspective” we promise unless we adopt a catholic attitude toward “physics.” It is in such under-explored areas of the history of physics, as much as in its better-mapped areas, that the gratification of historical insight can be found. We encourage submissions that explore that ground. The big questions about the history of physics are often questions that stretch our idea of what physics was and can be. We see *Physics in Perspective* as a venue ideally suited to explore those questions.

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