editorial

Remembering ourselves

One of the things which makes the physics community unique is our attitude towards our own history. There is no group of scientists, perhaps no profession anywhere, that takes as much interest in its own history as American physicists. Imagine a group without a history—imagine people without a memory. Amnesiacs, knowing nothing of their past, also have no identity in the present; and by not understanding how they once succeeded or failed they are helpless before the future. A community bereft of its history will be precisely as aimless and incapacitated as an amnesiac. In modern America a number of groups seem to be near this state, owning either no history at all, or worse, a grab-bag of distorted myths. Fortunately the physics community stands a better chance than most of preserving its collective memory.

Much of the credit for this favorable situation is due to an unusually active group of historians of physics. According to a 1974 survey by Stephen Brush, of the 170-odd graduate students of history of science in this country, more had undergraduate degrees in physics than in any other area of science, and the same was true of their teachers. Physics history also regularly wins the largest share of the grants awarded by the History and Philosophy of Science program of the National Science Foundation. The same predominance is seen in the production of books and articles on history of science, and an entire journal, *Historical Studies in the Physical Sciences* (mainly about physics) is now well established.

Physicists themselves have much to do with this activity. With encouragement from groups such as the Heinemann Foundation, they have founded, for example, the American Institute of Physics' Center for History of Physics, whose mission is to ensure the preservation and scholarly use of historical source materials (for example, correspondence and tape-recorded interviews of scientists) documenting the development of modern physics and astronomy. There is no comparable activity in any other science, or indeed in any other field of work. The AIP Center owes its unique success to the strong concern of physicists and astronomers, several thousand of whom contribute time and money.

With such support, historians have begun to uncover a number of stories which surprise and enlighten physicists who read them, for example:

- the connections among Newton's religion, his alchemical work, and his mechanics;
- the mutual influences of medicine and the early study of radioactivity;
- the changing role of physicists in American industry.

However, historians of science have barely begun to study particle accelerators, astrophysics, the arms race, electronic computers, and many other developments that have meant much to us all. And most general historians are still blind to the history of science altogether, no matter how obvious the impact of physics on human life has become. Historical research and teaching have a long way to go.

We physicists cannot congratulate ourselves for being superior to the humanists: It is still only a minority of scientists who ever read history, and many physicists, content with second-hand stories, know as little as anyone does of the past of their profession. Surely we could function more fully as human beings. Should not students who are taught about the Michelson–Morley experiment also be taught that it was of little interest to Einstein when he developed the theory of special relativity? Should not administrators who discuss the current stagnation of research funding also note that it has been longer and more severe than anything seen before in this century, even during the Great Depression? There are two ways each of us can help to keep this fuller picture in view. We can encourage local and national efforts to preserve and make known the history of physics; here much remains to be done that will never happen unless physicists themselves act. And we can take time to learn any part of our history that attracts our interest. This will do much to free us from amnesia, to make us into humans who remember where we have come from, where we are bound, and what we are.

SPENCER WEART
American Institute of Physics
Center for History of Physics