project was cancelled after a decade and very substantial expenditure.

Schweber speculates that the generous postwar governmental support of accelerators was partly motivated by possible military applications. Although that may have been so in the minds of some officials, I suspect that few informed people harbored any illusions that the great machines would serve any purpose other than basic science or applications to medicine.

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Memories of Philip Morse

Thank you for the illuminating article "Memories of Feynman" by Theodore Welton (PHYSICS TODAY, February 2007, page 46). Richard Feynman's career might have been substantially different had he not been directly influenced as an undergraduate at MIT by Philip Morse. Each week Morse gave Feynman, Welton, and Albert Clogston the unusual attention of an afternoon of advanced quantum mechanics. Having his own PhD from Princeton University, he is said to have influenced Feynman's choice of Princeton for the graduate studies that resulted in his germinal work with John Wheeler.

Readers may be interested to know that Morse had a distinguished, multifaceted career: He was a founder of the field of operations research, first president of the Operations Research Society of America, president of the Acoustical Society of America, and the first director of Brookhaven National Laboratory. Morse also served as president of the American Physical Society in 1972 and chairman of the Governing Board of the American Institute of Physics from 1975 to 1980. His two-volume *Methods of Theoretical Physics*, written with Herman Feshbach, is still in print more than 50 years after publication.

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American physics implosion

Kannan Jagannathan's review of two recent books (PHYSICS TODAY, December 2006, page 57) with the arresting titles *Not Even Wrong: The Failure of String Theory . . .* and *The Trouble with Physics: The Rise of String Theory, the Fall of a Science . . .* amusingly compares string theorists' faith in their own transcendental insights to the Great Disappointment of 1844, in which religious leader William Miller and his followers renounced worldly goods and awaited the Second Coming. However, the tempest in a teacup surrounding string theory conceals a much larger problem in American physics. That problem is well illustrated by theories that have evolved over the past 20 years to describe high-temperature superconductivity (HTSC).

Since its discovery in 1911, superconductivity has fascinated many physicists. However, by 1980 the field was thought to be dormant; even the quest for higher transition temperatures T_c seemed to have leveled off around 30 K. In 1986 Georg Bednorz and K. Alex Müller announced that they had found superconductivity in a most unexpected place: not a metal, but a ceramic oxide, with T_c near 40 K. Within a few years, transition temperatures had climbed to well over 100 K.

Unlike string theory, HTSC was a field with abundant experimental information—today there are more than 65 000 publications on the topic, about one-third of them patents. Here was a real challenge for theory; no fewer than nine Nobel Prize winners, and many other scientists as well, have contributed theories on the subject. The question they raised most often was, What interactions are responsible for the high transition temperatures—the conventional electron–phonon interaction, as in the metallic superconductors, or something else? Of the nine Nobel laureates, three supported the conventional interaction, while six went for something exotic—usually electron–spin interactions. The experiments are now in, and the majority was wrong—the electron–phonon interaction is responsible.

Few readers will be surprised to learn that so many Nobel laureates were wrong. As they say on Wall Street, prior performance is no guarantee of future success. But now comes the interesting part—the three who were right are European, and the six who were wrong are American. That can scarcely be a coincidence, and it says something about American physics and especially what American professors and graduate students expect from research. Plainly stated, string theory and erroneous theories of HTSC may have a common explanation: Americans have become so self-centered that their physics theories are disconnected from reality, not only when no data are available, but even when experimental data are abundant.

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Retired Scientists Cooperative

The US is experiencing a growing shortage of trained scientists and people with science-related technical skills. It would be expedient to draw on the large reservoir of scientific expertise among the thousands of retired scientists from academic, industrial, and government institutions. Many of these scientists retain their peak competence and would welcome the opportunity to use their skills and knowledge on a part-time or temporary basis. To provide the general public with continued access to the wealth of information held by retired and retiring scientists, the Retired Scientists Cooperative was formed in 2002.

One consideration that influenced the formation of the RSC is the fact that men and women at 65 years of age are still vital, strong, capable people. Bradley Hyman of Massachusetts General Hospital conducted a study of a group of 60- to 90-year-olds; his results indicated that aging in healthy people is not associated with mental decline. Responses may slow down, but the power to think does not change with age. Some people even show an increase in mental abilities in later years. John Morris, director and principal investigator for the Alzheimer's Disease Research Center at Washington University in St. Louis, came to essentially the same conclusion.

The RSC currently has some 200 scientists listed, in fields including chemistry, biochemistry, life sciences, physics, engineering, environmental science, astrophysics, geology, oceanography, mathematical physics, and theoretical chemistry. Following are some examples of activities that could be undertaken by members of the cooperative.

▶ **Academic teach-in**. A university in Massachusetts wants to instruct its physics students in astrophysics but lacks the funding to retain a full-time professor. An RSC astrophysicist could conduct several lectures, or even a full-semester course.