Apparently, Bose did not make progress with either of the two questions, nor is there any evidence that Einstein considered them further. Bose had formulated an interaction between radiation and matter,[1] which Einstein criticized because, according to Wali's article, "the coefficient of absorption is independent of the density of the radiation." It can be shown, without the need to appeal to the "new quantum theory," that it is Einstein's 1916 quantum theory for the interaction between matter and radiation[2] that leads directly to Bose statistics.[3] Surprisingly, this deduction escaped the attention of Einstein, who otherwise would have discovered Bose statistics.

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Of politics and preparation in Cuban physics

What has happened to the community of physicists in Cuba (PHYSICS TODAY, September 2006, page 42) is a good example of how scientific research and the lives of scientists can be manipulated by authoritarian and inept politicians.

The article shows very clearly how Ernesto "Che" Guevara, Fidel Castro, and a few others without any scientific background have determined the direction of physics research in the country. After so many years of arbitrary political decisions, as the article says, "an estimated 200 physicists left the country, and an undetermined number sought better economic conditions in fields other than science."

The same politicians have dictated the economic, financial, industrial, journalistic, artistic, and literary lives of Cubans. As a consequence, censorship, prohibitions, and repression have dominated Cuban political, economic, and cultural life during the past 47 years. It's difficult and demoralizing to live in a country where all people, scientists included, are under the control of a totalitarian regime.

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Congratulations to PHYSICS TODAY on the very informative article about advanced physics education in Cuba during the late 20th century, from this former student of Ciencias Físico Químicas (chemical physics) at the University of Havana. The approximately two-century-old tradition of strong public science education has led to the success of their graduates at home and abroad. My contemporaries (1946–51) received instruction in various disciplines that physics depends on, particularly mathematics and chemistry. Many of us were prepared to obtain higher degrees abroad—for example, at the University of Minnesota and the University of California, Berkeley. The excellent, devoted professionals mentioned in the article gave us the foundations—such as the Gauss, Green, and Stokes theorems—that we would later use for solving real physics problems.

We were also exposed to lectures on street-wise topics. One noteworthy example was a presentation as the first lecture of organic chemistry. The instructor showed students how to build a firebomb using the important national product, sugar, plus a still readily available liquid that could be carried in a small test tube in a coat pocket. The purpose was not to train terrorists but to inform the students of possible threats in the world. This type of education is still needed everywhere.

I have made my academic career in the US because of family matters. But I received the important undergraduate foundations of my education in Cuba, from excellent teachers, at public institutions.

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Rodríguez, Fajer, and Baracca reply: It is a pleasure to see that scientists continuing their academic careers abroad are grateful for the high-quality education they received at Cuban public universities. In the times Juana Acrivos remembers, the number of university students was very small and a degree in physics was not yet offered, but there were two mixed programs: in physico-chemical and physico-mathematical sciences. Extensive access to universities, degree programs in physics, postgraduate studies, research, connections to industry and the health system, and so forth came later, with the revolutionary transformations of the 1960s. The selection of research directions was, and still is, a highly participative process involving physicists, students, and colleagues from many different countries. The vision and stimulus of some government leaders also played a very important and encouraging role.

At the beginning of the 1990s, changes in the international arena interrupted a 30-year process of growth and development of Cuban physics, which has returned only in recent years. Looking for better economic conditions, some physicists left the field or the country: Cuba experienced the so-called brain drain that affected so many countries. It had been almost nonexistent in Cuba until the 1990s.

We hope our article has provided a vision of Cuban reality, an alternative to reiterated diatribes and disinformation. We invite bona fide scientists to engage in free academic exchange based on mutual respect, understanding, and scientific interest.

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Bicycle stability in no-hands riding

With great pleasure, I reread the article "The Stability of the Bicycle" (PHYSICS TODAY, September 2006, page 51, reprinted from 1970). As an enthusiast who has bicycled daily for approximately 40 years, I was in resonance with much of the article, especially the discussion of no-hands riding, which I recklessly persist in doing. I was in the middle of my undergraduate career when this article first appeared, and my overall understanding of it at the time was feeble, but this article is one of the few in PHYSICS TODAY that I remember clearly, even after 36 years.

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The reprint of David E. H. Jones's article made me wonder how one can understand a bicycle's stability without