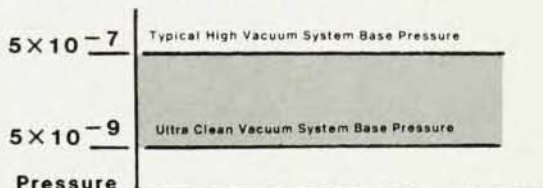


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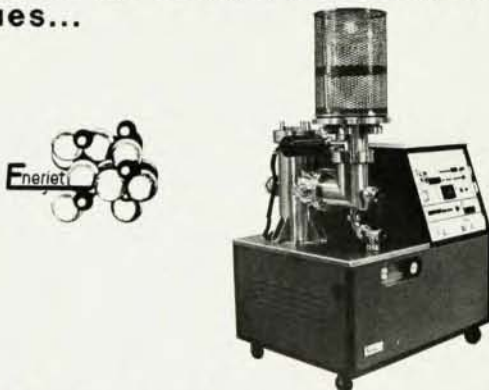


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letters

programs, neither do I. However, I am convinced by personal contacts with many of our alumni, some years after we have had them, that we were a strong, positive influence in their lives. Of course we are only a drop in the bucket, but my colleagues and I feel this to be a most worthwhile drop.

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8/83

High-school sabbatical

The June editorial (page 128) suggests that people in academia and industry may contribute, by active participation, to the goal of excellence in science and math education.

I have met my part of this obligation by taking a year sabbatical from teaching high-school physics and joining the corporate R&D staff of Pitney Bowes in Norwalk, Connecticut; I worked as a consultant and participant in the physics and chemistry laboratory there for the past academic year. My earlier experience in industry (25 years ago) was updated by contact with today's technology.

I shall return to the classroom this year with a greater appreciation for the "real world"; I now believe that both my physics and career-counseling skills will have improved.

I hope that more high-school science and math teachers will apply for sabbaticals; I also hope that industry will support this concept in a way that will cover as many disciplines as possible.

NICHOLAS J. GEORGIS

Staples High School

Westport, Connecticut

8/83

Origins of great scientists

With reference to the letter by Tung Tsang (June, page 101), I agree with him that it is not correct to say that before the 20th century "most scientists were independently wealthy gentlemen"—although Robert Boyle, Henry Cavendish, James Prescott Joule and Benjamin Franklin fall in that category. Stephen Gray, who discovered electrical conductivity, was a pensioner with no income; Johannes Kepler was a poorly paid calculator; Nicolaus Copernicus was a bishop's clerical assistant. Many great physicists were professional physicians—Thomas Young, William Wollaston, William Gilbert, Georg Ohm, among others. I would call all of these men amateur scientists, in the sense that their work was done for the love of it, not for a living. On the other hand, I would call a man who makes a success-

ful photocopier an inventor, not an amateur (or professional) scientist.

Alfred Loomis was a man who indeed did much to assist physicists and to establish fine laboratories on a financially sound basis. He was also an excellent administrator, but as I look at his own contributions to science I hesitate to designate him as a scientist. He was truly a man who loved science and enjoyed being around where it was going on, and probably contributed useful suggestions, but his own contributions to science seem not to be significant. In any case, to talk about him in the same breath as Isaac Newton is unjustifiable.

As far as the invention of the airplane is concerned, it seems to me that the "invention" of the airplane came when Samuel Pierpont Langley—an astronomer and the secretary of the Smithsonian Institution, not a "professor"—flew a heavier-than-air machine three-quarters of a mile in 1896, unmanned. He was testing a manned version over the Potomac in 1903, unsuccessfully, just 9 days before the Wright brothers flew at Kitty Hawk.

I would suggest that "First-generation founding fathers are often amateurs" but more often are professionals. As far as Edwin Land is concerned, I think that it is necessary to discriminate between a "college dropout" and someone who leaves college to work in a laboratory. Finally, I cannot believe that Thomas Edison was a prolific inventor because he didn't go to college.

E. SCOTT BARR

6/83

Tuscaloosa, Alabama

Anti-Jewish policy?

Melvin Shaw has my sympathy for his experience of having his contract to lecture in Saudi Arabia cancelled, possibly because of his Jewish background (May, page 15). It must be disconcerting to be singled out in this way.

It is only fair, however, to point out that the Saudi policy is not aimed at Jews as Jews: The Koran has innumerable instances where "the sons of Israel" are praised. Rather, there is a state of war with the modern Israel, and since many Jews might have dual citizenship, say US and Israeli, the policy becomes an unfortunate necessity. Israel, too, has a parallel policy of not allowing most holders of Arab passports within its borders, not because of any anti-Moslem feelings but as an elementary exercise in security.

In spite of its own significant achievements in physics, Israel is not noted for encouraging similar progress in Arab lands. Some examples are the bombing of the Iraqi nuclear reactor, the arrest and expulsion of Palestinian physicist Hanna Nasir, president of Bir Zeit

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