

Letters

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Editor:

I just read your excellent article on Linus Pauling in the most recent *E&S*. You are probably overloaded with stories about him, but here's another one.

In 1972, I was teaching a chemistry appreciation course at the University (or whatever it was called then) of Wisconsin in Stevens Point. These "science for poets" courses were very popular in those days. The objective was to show the wonder and excitement of chemistry and its applications to our daily lives, and not to bore or confuse the students with a lot of theory (chemistry majors were forbidden). Part of the course involved "case studies"—for example, we read *The Double Helix*, as much for its insight into the personalities and politics of science as for its importance to what is now molecular biology. And, of course, that brought us back to Linus: vitamin C was hot, Vietnam and the peace movement was hotter, and we had already run into Pauling in Crick's race for the structure of DNA.

Sensing that the students might like to meet him, I wrote him, saying that I was sure he wouldn't remember me from Atom (sorry), even though I was in his freshman chemistry course in 1958–59. Explaining the situation, I took a long

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shot and asked for an hour of his time for a two-way conversation with my class (we had just acquired a speaker-phone, the high-tech pinnacle of communications technology of the day). Linus, of course, was more than happy to oblige.

The students asked about *all* of it—they were most interested in the vitamin C controversy, especially since the speaker was not part of the establishment. They also asked about nuclear testing (although they were too young to remember it). As I recall, they didn't care too much about molecular modeling and structure. And the students got to ask the questions.

They were entranced. Anyone who ever heard a Pauling lecture didn't forget it. I suspect that Linus Pauling is all that many of these students ever learned or remember about chemistry, and I think that may have been more important than the rest of it. November 15, 1972. I still remember it.

Oh yes, I still remember him as a chemistry professor. That might be why I went on for degrees in chemistry, although they are now fully depreciated and I've had several different careers since. I learned much from Linus about the actual practice of science, and about having values and acting on them, and this has done more for me than the technology and science itself.

I've seen other academic institutions treat their free radicals much as Caltech treated Pauling, and they are much the worse for it. Thanks, Caltech, for finally giving him the recognition he so richly deserved.

D.E.I.

Bob Rouda, '62 Ch

Editor:

I owe my Caltech career to Linus Pauling. In the fall of 1952 I came to Caltech instead of MIT. My teacher of geology and chemistry had said, "Sam, you have to go to Caltech. Linus Pauling's there, and he's the greatest crystallographer in the world!" End of argument.

This compelling logic and *Facts About Caltech* must have worked their wonders on that 16-year-old boy, but they ill

prepared me for the shock of my first day at Caltech. Monday, 8:00 a.m., Freshman Chemistry: "Good morning, boys. My name is Linus Pauling." Those were the last words I understood all morning. When he spoke about the Bragg equation and read his five-inch slide rule to seven places, all the valedictorians around me nodded as if they understood. I did not. Afterward, everyone raced to the nearest calculator to confirm the slide-rule answer. Of course (thanks probably to small writing and Scotch tape) it was correct.

Flash forward nearly 40 years. I had written Dr. Pauling at his institute, and he invited me to visit. Although he couldn't have known me from Adam's off ox, he was extremely courteous and friendly. His appearance was energetic, and his voice retained the uniquely clear enunciation that I had remembered. (A biochemist friend had recently opined that Dr. Pauling was slowing down, becoming only half as sharp as previously and therefore only five times as sharp as anyone else.)

The conversation turned to how his interest in chemistry began. As a boy he was a forester. He became interested in the minerals he found, then metallurgy, forging, and welding—particularly interesting to me as a mechanical engineer. His interest then expanded to crystals and then to all of chemistry. At his Big Sur ranch, he still used his geology hammer until it was inadvertently left in a car that was sold. When I sent him a replacement, he responded with copies of his books on vitamin C and nuclear testing; I began taking the vitamin C and have never felt better.

His knowledge was extraordinarily broad. When I mentioned that my wife worked with a great-ape language-acquisition project, he began a discussion of the 40 differences between the fetal bloods of humans and gorillas. Like Edison's, Dr. Pauling's career was remarkably productive, and for a similar reason. Not only did he put out a great deal every day, he worked more days, still productive at an advanced age.

A wonderful afternoon with a great man—one of the many benefits of attending Caltech.

Samuel R. Phillips, '56 Eng, MS '57 ME



Pauling visits Caltech in 1970.