

to the editor

More on the greening

"The greening of the American Physical Society" (SN: 3/6/71, p. 167) is a report of college graduates who are not educated.

I had thought that physicists were among the best educated people we have, but if Dr. Schwartz can only use a colloquial expression for natural fertilizer it shows he does not have an educated command of language. He places himself on a level with a hill-billy who never went to school.

And it seems the young physicists must depend on someone else to employ them and provide a living for them. The outcry against Dr. Land shows ignorance because they are complaining about lack of employment when Dr. Land is one of the few who has built a business to provide employment for some of them. If the young physicists are educated—why don't they develop their own businesses "for people" and not depend on employment by Government or industry in a defense-related position?

Perhaps the young physicists are an example of the mistake of going to college "so I can earn big money." I believe one should go to college for an education to gain "understanding." I think one should study physics because he likes it and gets pleasure from the study of it. If he only wants money, consider a trade; if he wants ethics, study that.

James F. Jackson
Carlisle, Ind.

I read "The greening of the American Physical Society" and it appealed forcibly to my mind. The article brought the problems of employment and morals (which are the predominant concern to all branches of science not only to physicists) to the forefront. It is now incumbent upon all scientists to solve them.

The problems have simple solutions. Therefore, since we know what we, as scientists, want and require, let us elect our committees and get to work.

Max Gershfield PE
Electrical Engineer
Chicago, Ill.

I'm afraid that the current discord among physicists is really a reflection of a serious weakness in the universities where our new scientists are trained. Today's academic communities are largely made up of people with a similar and rather narrow political viewpoint, one which is often disdainful of the noncollege world and its leaders. It is hardly surprising that many young physicists do not want to work for "the

Government" or "the establishment," since they've heard so little good about them.

As for the young radicals, their fondness for abusive language (reminiscent of 10-year-olds trying to shock their parents) and corny pseudo-Marxist slogans like "Science For the People" suggests that they are not mature enough to decide such momentous issues as the morality of the atomic bomb. They should probably confine their scientific investigations to more esoteric research topics not likely to affect the rest of the population.

Thomas A. Schenach
Research Chemist
San Clemente, Calif.

Misinterpretation

I hope that the quotation in your March 6 issue (p. 164) does not become a minor Bathtub Hoax. I was reacting sarcastically to the attitude of a particular question. I enthusiastically endorse such programs as the National Science Foundation summer institutes. However, they are not scientific manpower "channels" or "controls." They are best directed toward the quality of scientific education.

James H. Van Aken
Lyons Township High School
La Grange, Ill.

(Mr. Van Aken was winner of the \$10,000 scholarship in this year's Westinghouse Science Talent Search.—Ed.)

In support of dowsing

The article on dowsing (SN: 2/13/71, p. 119) serves both the dowser and the qualified experimenter poorly. The work of R. A. Foulkes produced nothing more than additional confusion in an area of science already cluttered by useless experiments and poor reporting.

We have been studying the phenomenon of dowsing for over 10 years and our results when carefully analyzed tend to support the validity of the art of dowsing. In order to study dowsers, you must have available a group of bona fide dowsers. Certainly if we used the ratio of the large number of self-proclaimed dowsers to the number of qualified dowsers, we would probably have obtained results similar to those reported by Mr. Foulkes. However, when qualified dowsers are selected by careful test procedures, they demonstrate an amazing ability to locate underground streams of water.

Caution must be used in evaluating their performance as their solution or ability to pinpoint an underground stream may have a CEP of 5 to 15 feet, and a well drilled at a dowsed location will often miss a narrow stream.

In one field test, the underground stream was 20 feet below the surface but had a diameter of only 5 inches. Only 3 out of 7 professional dowsers located the stream within a two-foot spread. An earth mover was used to cut a trench across the stream path and its true location revealed.

We have had very poor results using water flowing in underground plastic pipes as a test for dowsing ability. Our tests do not verify the dowser's ability to determine the depth of the stream. In the field test mentioned above, the dowsers guessed the depth of the stream to be somewhere between 30 and 200 feet.

Lewis E. Massie
Abaris Corp.
Solana Beach, Calif.

(It seems only fair to point out that much of Mr. Massie's criticism is what Mr. Foulkes in his paper called the "good and bad dowser" argument, that dowsing gets a bad name because too many amateurs have dabbled in it. "That was not true," in his tests, Foulkes says, "for only those who claimed to be good dowsers and were recognized as such by other dowsers took part."—Ed.)

Not path to superconductivity

In reading your article on a one-dimensional conductor (SN: 3/20/71, p. 194) you state that the conductivity of potassium tetracyano platinate is 5×10^{-7} mho and, therefore, 10,000 times smaller than the conductivity of common electric materials like copper. Comparing it to average copper, where the conductivity is 10^5 mho per centimeter, the ratio quoted by you is erroneous since it amounts to 10^{11} or 100,000,000,000.

Groups of atoms which are electrically polarized do not lead to superconductivity, but ferroelectricity instead. This has been pointed out earlier, and has recently been shown experimentally as presented in a paper by L. I. Buravov et al, in JETP LETTERS 12, 99 (1970).

Bernd T. Matthias
Institute for Pure and
Applied Physical Sciences
University of California
at San Diego
La Jolla, Calif.

(We were reporting what Dr. Perlstein wrote and said. We have reported opposing opinions on other occasions. We erred on the conductivity of copper.—Ed.)