

letters

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switched fields, with the implicit assumption that if he could do it, most other unemployed physicists could do the same. This is nonsense. The positions quoted were essentially "one of a kind" type of jobs. I believe that your community is already finding that organized attempts to find jobs for physicists in other fields have statistically been failures. You of course will always find a few jobs in other fields but not in the numbers needed for your present rate of PhD production.

The second category of error is more serious. It is an assumption that somehow production of physics PhD's is above the law of supply and demand. You people must know what is happening in the university and college market, so I'll limit my remarks to industrial employment.

It may surprise you to learn that the new PhD was not the hardest hit. The people worst off were those in private industry, over 37 years of age, with a salary between \$15 000 and \$20 000. When a physicist has worked for several years for a company and has reached the point where he has a higher salary and the company's contribution to his retirement plan is significant, he is dismissed and replaced by a younger physicist who will work for much less. This same pattern, although not as severe, has existed in the aerospace industry for the last ten years and is now firmly established for industrial physicists. It is strictly a matter of supply and demand. Because of this pattern, the average professional lifetime of a physics PhD in industry has become somewhere between six and seven years.

A physicist, no matter what his credentials, is generally no longer considered by employers if he is over 37 years of age. Likewise, a physicist who has been unemployed for more than eight or nine months will not be considered for employment. Again, it's simply a matter of supply and demand.

I don't claim that these "rules of the game" are logical; only that they are firmly established and followed. The most employable of the unemployable are about 30 years of age, with between one and two years of industrial experience (no more and no less) and a salary in the low teens.

The very employment mechanism for the research physicist is now breaking down. By and large, employment is no longer routine. A particular scientist's background must fit precisely an employer's requirements to an unbelievable degree of specialization. Generally his employment must be approved by a host of executive vice-presidents. Employment has reached the point where it's strictly on an individual basis, gen-

erally through personal contacts rather than employment agencies, and must be approved by top management!

Finally, I'd like to discuss the several meanings of the term "overqualified" which employers in non-traditional employment areas use when rejecting PhD's. It is partly a matter of salary. These employers have no intention of paying a higher salary, and so they reject the PhD. They also feel that the job can be done adequately by someone with much less training, and they are generally right; employers are practical or they would soon go out of business. They also question the PhD's ability to get along with laymen, which is a very important consideration. Astonishingly, the physicist's very reputation of being high-powered hurts him. No immediate superior will hire a man whom he feels can do his own (the superior's) job with ease.

Let me now defend my original position. You people will not change employers' attitudes in much less than a decade, if ever. You have potential control over one variable only—PhD production. Fortunately, the effect of this variable far outweighs the effect of all others combined. If physicists, whom I consider to be among the smartest individuals in the country, cannot control their own numbers now that it's necessary to do so, then I hate to think of the outcome of the world overpopulation problem.

I predict that your time available for such control is limited. The only condition that will continue to attract sufficient numbers of students in the long run is the assurance that production is being sufficiently curtailed so that they can survive, after obtaining their doctorates.

The information I have presented above is factual. There is no point arguing its validity. I may be the harbinger of bad news but not its creator. So please, gentlemen, no more vitriolic letters.

Stuart A. Silverman
Allan & Speth of Buffalo
Amherst, N. Y.

NSF survey

In your May issue (page 64) you exhort our colleagues to respond promptly to NSF's thoughtful and well-meant attempt to assess the scope of the economic catastrophe via a post-card survey. Unfortunately, they will only find out how bad it has been, not how bad it is going to be: they neglected to ask whether the respondent had a job for the next academic year, and how long he had been looking for that.

Ronald Blum
University of Maryland
College Park □

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