Letters

Who Succeeds in Graduate School?

My suggestion (Letters, 15 Nov.) that postgraduate institutions use faculty letters of recommendation for selection of students instead of the students' cumulative grade point average (GPA) was criticized by many, so I am willing to withdraw that suggestion for the moment. The substance of my proposal, however, was that grades not be transmitted beyond the undergraduate school. It is the use of the GPA that I wish to criticize. Several respondents claim that the college GPA is a good predictor of "performance in graduate school," although no evidence was cited. Indeed, the two most recent surveys (*1*, *2*) find previous research either to be defective or tending to prove the contrary. There are three points:

1) Any attempt to correlate undergraduate GPA's with graduate grades will be unsound because the range of the dependent variable is restricted; most graduate grades are A's or B's with an occasional C.

2) The major concern of graduate schools is attrition, not grades. Students who drop out of graduate programs do so largely for nonacademic reasons. Thus, graduate schools are interested in selecting students who will complete the program.

3) We should be concerned with selecting those individuals who will make significant contributions to their field. Here the correlations with the GPA are zero or slightly negative (*2*).

The need, clearly, is to develop predictors or postgraduate "success" (defined variously by different graduate institutions). If standardized tests would serve these various purposes, what is the objection to them? (See Angoff's letter, 24 Jan.). For my part, I would be willing to use the number of hairs on a student's head divided by his weight (kilograms) times his height (meters) if that were an effective predictor ($r = 1.00$).

Since I have been compared to a Midwest legislator who suggested omitting a train's caboose (not "the last car"), I take the liberty of recalling the Western gambler who played the crooked roulette wheel because it was the only game in town. Are we willing to establish a new and fairer game?

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2. S. Miller, *Measure, Number and Weight*, report to the Academic Senate Select Committee on Education (Univ. of California, Berkeley, 1965).

Boost for IBP

If it would give any consolation to Frank Blair ("International Biological Program: U.S. effort stands on shaky ground," 22 Mar. 1968, p. 1331), and stimulate participation in the IBP, I think I can provide a historical example of a poorer time when an international scientific program was carried out with success.

Despite a "severe economic depression" and attempts at postponement, the Second International Polar Year began in August 1932. "At that date promises of participation had been received from 44 countries. Special Committees of the Polar Year had been set up in 16 countries, and 22 countries had undertaken to organize special expeditions, or to establish stations outside their own frontiers. During the Polar Year the number of magnetic stations to the north of 60°N. latitude was increased from 7 to 30. The carefully developed plan for geophysical investigations on an international basis had been inaugurated" (*1*). This last sentence is of particular importance when consideration is being given to the development of the IBP. As your article rightly states, Peters and Montalenti have "sought to do for biology what the International Geophysical Year had done for geophysics." A point which was not considered was that the IGY was preceded by two International Polar Years which had, in fact, been programs of international geophysical studies. Moreover, a number of people, including Sydney Chapman, president of the International Council of Scientific Unions' committee for the IGY, had played a leading role in organizing IPY-2, and in the scientific work of the program. Also, at the point when prospects seemed dimmest, the Rockefeller Foundation came forward with a generous grant of $40,000 which made it possible to purchase the standardized special equipment necessary for the scientific work. Regrettably, no direct grant of this importance has been made to IBP, although $44,000 has been allocated from the Ford and Nuffield Foundation grants to ICSU.

In view of the interest in our deteriorating environment, it is surprising that official support of the IBP has not increased. The recent UNESCO Biosphere Conference was not lacking in praise of the IBP and most of the research being carried out will be of prime importance to future studies of our environment and the rate of its deterioration. It is tragic that a program, which is providing the ecological base lines so essential for any study of man and his environment, should receive so little encouragement from a world which is currently poisoning all life. Are we, lemming-like, providing our own solution to the population problem by pouring our excesses onto the waters?

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Abrus precatorius: Pretty but Poisonous

Since the news releases and warning based on my recent identification of *Abrus precatorius* seeds used in novelty pins imported from Japan, I have received many requests for seed identification. Over 90 percent of these seeds have been *A. precatorius*. They are used to decorate many products (*1*), especially souvenirs from the Caribbean area and northern South America. Some of these objects have been in North American homes 30 to 50 years.

Seeds of *Abrus precatorius* are attractive but quite poisonous if chewed and swallowed. The perennial leguminous vines that produce them are native to India, but the plants are now found in nearly all tropical and subtropical countries, and in the United States the vines are naturalized in southern

Florida. The seeds are ovoid, ¼ to ½ inch long, combining bright glossy vermilion with jet black. In old seeds the vermilion area may be dark red, reddish-orange, reddish-brown, or reddish-yellow. The black portion, restricted to the hilum end of the seed, occupies about one-third of the seed coat. The black area is not altered with age.

These seeds contain at least one deadly poison, the phytotoxin abrin, an albumin. Other physiologically active substances are also present. Deaths from ingestion of the seeds, when chewed and swallowed by humans and when fed without their seed coats to animals, have been recorded. Extracts from the seeds, given subcutaneously, are approximately 100 times more toxic than swallowed seeds (*2*).

I have conducted preliminary tests which indicate that germinating *Abrus precatorius* seeds have an adverse effect on germinating ryegrass seed (*Lolium multiflorum* Lam. and *L. perenne* L.). The Hazardous Substances Branch of the Food and Drug Administration also plans to conduct tests on the toxicity of *A. precatorius* seeds.

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References

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Einar Lundsgaard

Word has come from Copenhagen of the death, during the last days of 1968, of Einar Lundsgaard. In these times of rush and short recall, I am particularly keen to refresh the memory of the scientific community about his truly great discovery which is now slipping into the background. Personally and scientifically, I encountered Lundsgaard during my period of maturation and I owe him much. I was in Meyerhof's laboratory in Heidelberg when he came in 1930: tall, blond, and very Danish, with his handsome wife, Helle. There we first met and became friends, and later when I moved to Copenhagen in 1932 and stayed until 1939, we saw each other a great deal. In the fall of 1967, his friends and colleagues went to Copenhagen to celebrate the 40th anniversary of the discovery of what