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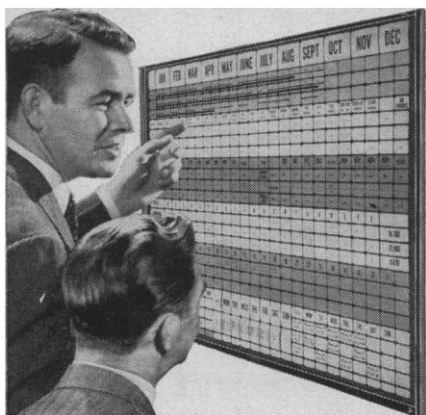
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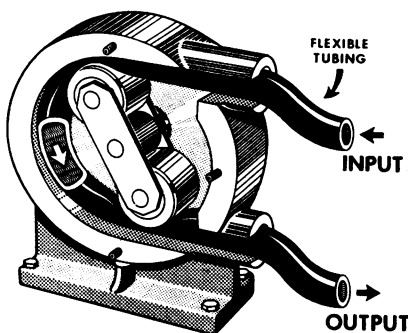
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responsibility. If this reasoning were to hold, it would absolve any driver arrested for a traffic violation because he could say if he had not speeded, somebody else would have.

In former times, this sense of personal responsibility was strongly developed, and it may be well to remember that Leonardo refused to disclose the invention of a submarine because he foresaw the evil use to which such an invention might be put.

VICTOR PASCHKIS

Columbia University, New York

## Classroom Teaching and Research

Your editorial "The system," in a recent issue of *Science* [134, 159 (21 July 1961)] deals with what I regard as one of the most important and troublesome problems facing our universities, but one which is generally ignored. Partly as a result of our desire to increase research activity and partly because of the availability of research funds in nearly all fields, the best minds in our universities are being diverted from undergraduate teaching to research and graduate teaching.

Our energetic young staff members try to get out of beginning courses as soon as possible in order to have more time for research. If the present trend continues, only those staff members lacking the initiative and imagination to obtain research grants will be left to do our undergraduate teaching. We can scarcely expect such people to be effective in attracting bright young students into graduate school. In fact, they cannot even give the general student body the kind of background it needs.

The effects on undergraduate teaching of our excessive preoccupation with research on university campuses is seen in the fact that most of our graduate students come from colleges where little research is done, and relatively few come from universities where research occupies much of the time and energy of the staff.

You suggest that perhaps undergraduate teaching will be left largely to the four-year colleges, but they also are beginning to develop research programs which will divert an increasing proportion of the time and energy of their staff members away from teaching. As I hear college administrators asking for money to develop research programs, I wonder if they realize how this may affect their teaching programs.

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Good undergraduate teaching and good research are not incompatible, but they are competitive, and whichever promises the most rewards is likely to take precedence. Young college staff members distrust the claims of administrators that they will reward good teaching, because they have seen too much evidence that research and publication are rewarded even better. It takes many years for an individual or a department to build a reputation for good teaching, but a few good papers will establish a reputation for research rather quickly.

I doubt if many of our university administrators have given serious attention to this problem. Most of them have encouraged staff members to take as much research money as they can obtain and have shut their eyes to the consequences. Perhaps administrators need to reconsider their objectives and the value scales used for determining pay and promotion. It seems possible that a well-taught freshman course and a few good students inspired to go into graduate school may be a greater accomplishment for most of us than our research.

PAUL J. KRAMER

National Science Foundation,  
Washington 25, D.C.

Your editorial entitled "The system" is the sort of challenge that I envisaged in a recent article [*Queen's Quarterly* 68, 249 (1961)]. Writing on "Double standards and the university professor," I said the following: "To teach, even to teach well, is not by itself enough for the university professor. This has come to be accepted so widely and without question in top-ranking academic circles that it has assumed the proportions of sacred dogma. As with most dogmata, its very danger lies in its demand for blind faith. Such demands lead in turn to a very natural reaction—an ever-enlarging group is certain to appear sooner or later to challenge the dogma, or to cast it aside as untenable, or perhaps to replace it with a new and diametrically opposite one. Such a challenge seems to be looming in general attitudes toward the rôle of the university professor. As the pressure of increasing enrollments grows more and more acute, should we revise our concept of the ideal university teacher and adopt more firmly the tacitly accepted double standard of many inferior colleges?"

Needless to say I was surprised at the source of reaction. The difficulty stems not so much from the dichotomy in the responsibility of the professor but rather

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from double standards whereby certain endeavors are said to be desirable and yet do not appear to be rewarded. There is no evidence that much thought is ever given by those who exercise fiscal control of universities to any consideration other than the enhancement of the current and future standing and reputation of the specific institution involved. All evidence suggests that the quality of classroom teaching does not greatly alter the reputation of the modern university. We may be occasionally annoyed by this as individuals, but we must admit that it is generally true. The current, unspoken attitude is that a professor in

a university worthy of the name must devote a calculable fraction of his time to research or scholarship, whether he is drawn to these pursuits or not. If he refuses to conform, he will find advancement slow or lacking. If he conforms but is inept, his future is just as discouraging. Rarely—very rarely—he will be fired. Should he leave university teaching? Is he at fault, or is the “system”? How good a teacher must he be to compensate for obvious inadequacy in the other required facets of his profession?

The important ingredient for personal success in a university should be no

secret by this time. The aspect of the professor's efforts which enhances the university's reputation is *not* classroom teaching. Unfortunately, the ambivalent attitude of administrators toward teachers who do nothing but teach well has been confused by some with a lack of sympathy for good teaching (as contrasted, say, with profuse publication). The problem is confused further by the erroneous notion that the man who prides himself on being a teacher and nothing more is necessarily a good teacher. All of us in the universities have known some proud but terrible teachers, as well as others who were quite mediocre. Rare indeed is the really first-class university classroom teacher, and, in my experience, he is not likely to limit his interest to the dry, classroom aspect of his subject. I have often heard professors modestly deprecate their efforts in research, but I have never heard one deprecate his effectiveness as a teacher.

I would suggest that we must soon segregate from the main body of professors all those who wish to gratify their egos by teaching only, and those who wish to attain the same end by only doing research. The former should enter the public schools, high schools, technical schools, and junior colleges, where they are badly needed. The latter should seek employment in research laboratories within or without the university structure. Only those who can perform both functions of a professorship and who are anxious to do so should form the great mass of university staffs. Governing boards must stop equivocating in their policies.

Universities must make clear to their teaching staffs, present and future, exactly what they conceive the role of the ideal professor to be. They must not beg questions such as those on the length of summer vacations, on what is considered to be true scholarship, and on what is a fair evaluation of teaching ability. They must stop paying fatuous lip service to “plain good teaching” and make clear that in a university it alone is not enough. They must end the callous pretence (aimed at an expedient increase of their teaching staffs in the approaching crisis of numbers) that it is enough. If they do not do these things, they will awaken one fine day to find that the reactionaries have effectively taken over.

J. V. BASMAJIAN

Anatomy Department,  
Queen's University,  
Kingston, Ontario, Canada

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