

## Smaller Enrollments: A Brighter Side

The reduced number of students entering into the study of engineering is disheartening, particularly after many years of steadily increasing enrollment. It is always pleasing and satisfying to know that one's field of endeavor is attractive to young men, and it is painful to acknowledge any diminution in that attraction. It must of course be freely admitted that some students were attracted to engineering because of its glamor, its popularization in the press, or its financial rewards. If some of the glamor has worn off, if we must share some of our popularity with science or other fields, we can endure. The student who elected to study engineering for such reasons did not have much to commend him to the profession, and his loss to other fields is not beyond bearing.

It is no doubt true, however, that we are also losing some of the more capable and better motivated students, particularly to pure science. If such students make this decision on the basis of full information and careful thought, no criticism can be made. But if these decisions reflect erroneous emphasis in the popular press or ignorance among the advisers of students, the matter is very different. It is imperative that students receive accurate information about engineering and its attractiveness, so that they may reach a proper decision. This is certainly an opportunity which is open to us.

Many individuals and organizations are seeking other reasons for this trend toward low enrollments—and ways to reverse it once the reasons are known. But as reversal will require some time, this problem will undoubtedly confront us for a period of years. Such a period can be one of great opportunity, however, if it is used wisely.

While we are going through a period of lower enrollments, we shall have a wonderful opportunity to get to know better than ever before the students we have. Engineering students are, by and large, a remarkably fine group. They have all the admirable qualities of youth, all the vigor and enthusiasms, plus

a sincere interest in their studies and a purposefulness about the pursuit of their studies which are all too rare in the great mass of college students. Surprisingly enough, most engineering students are in a university to acquire an education, not merely a degree. They exhibit a better understanding of the purposes of education than many of their elders. It is always a privilege to know such young people, and we now have an opportunity to know them better.

With lower enrollments the effectiveness of our teaching should be improved. Smaller classes permit more personal attention and more opportunity for developing the capacities of particularly promising individuals. Experimentation as to teaching methods and to subject matter should be attempted.

It might even be possible to find a little time for contemplation, for reconsideration of some of the problems and opportunities of engineering education. We have been bombarded with what is wrong with our education; perhaps we should consider a bit what is right with it. Some critics will be satisfied only if the neophyte engineering school graduate can turn his hand to magnetohydrodynamics today and the laser tomorrow and can manage the whole works on both days. It is as if our schools of medicine were expected to graduate finished brain surgeons, psychoanalysts, and research stars, all ready for immediate maximum performance. Certainly we have a remarkably successful profession, and it has played a major part in the productive marvel which is the American economy. Certainly the traditional engineering education with its emphasis on formulation of a problem, analysis thereof, quantitative solution, and design has played a large part in the development of this successful profession. We should strengthen this; we should not dilute it. Particularly we should not substitute other studies for it in the name of engineering. If we insist on our identity, we may find that our period of lower enrollments is at an end.

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