Recruitment and Human Values

It is well known that the percentage of college students entering engineering has been steadily decreasing while salaries for engineering graduates continue to rise. Why, in the face of economic incentive and improved career guidance materials, are students not going into engineering?

At first it was believed that potential engineering students were moving to the sciences as a result of its better association in the public mind with space-age glamor and its lower requirements for a bachelor's degree. The result was a frenzied pressure to reduce the hours in an engineering curriculum that is expected to produce both a broadly educated person and a professionally competent engineer in four packed years. The purpose was not to improve the quality of engineering education, but merely "to compete". Now however, there are indications that the shift of students has not been into science, but instead into the humanities and the social sciences.

An explanation for this shift can be obtained from an observation that is made by Professor Henley in this issue of **CEE:** In the previous generation, engineering students were obtained largely from less affluent and "blue collar" families. These young men saw, in an engineering career, the possibility of upward economic and social mobility. Today however, the sons of these same engineers are not themselves interested in engineering. Along with many others from higher income families, they are less concerned about material gain and social status than they are about the social and human problems of our society. Professor Henley quite rightly argues that we should improve the flexibility and versatility of our undergraduate programs in order to attract students from the upper classes. But we believe that it is also essential that we recruit more minority group students, who, like those of the last generation, are seeking improved status and living conditions.

We further believe that we need to impress upon the idealistic young men who might be attracted by the social sciences that they can indeed serve their fellow man in a tangible way through an engineering career. For too long we have let the humanists suggest that they are the salvation of mankind and that the "technologists" are the destroyers, the polluters, and the dehumanizing materialists. Instead of using things and loving people, they charge us with loving things and using people.

It is likely that these negative attitudes have developed because our professional goals have not been understood from a sufficiently broad perspective. While our immediate purpose may be to produce improved goods, these are only means to an end, not ends in themselves. Our ultimate aim is to serve our fellow man and to insure him his intrinsic human worth and dignity. Accordingly, if our goal is to serve mankind, it is our responsibility to work to eliminate starvation and to see that the benefits of technology and education diffuse to all peoples everywhere. If our goal is to insure human dignity, we will see that the psychological and economical barriers that inhibit full participation of minority group members in the engineering profession are eliminated. If service is indeed our goal, our profession must then be identified with the prevention of war and social strife through an attack on its causes, with the enhancement of man's freedom (and humanization) through the elimination of drudgery, and with the reduction of pollution through imaginative research.

When we can convince our idealistic youth that the goals of our profession can be thereby implemented and expressed in terms of people and their needs, we should not need to jeopardize the quality of our programs in order to attract more students.

In order to focus attention on these matters, CEE is devoting much of this issue to the subject of engineering and public affairs. Our spring issue will emphasize the related theme "New Directions for Engineering!" Through these two issues, CEE hopes to show that the continued growth of technology need not be feared as a negation of human values, but can instead be construed as an essential component to their survival. —RWF