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Career Choices

In attempting to make good choices in preparing for a career, students have always faced uncertainties. Part of these have been within themselves; for example, questions of aptitudes, interest, and determination. Others have been external—questions of future opportunities to do significant work and the likely availability of employment. Mechanisms for helping students meet the internal uncertainties are still primitive, but they are far more effective than methods of providing guidance for the future. Two of the major sources of guidance have been defective. One of these is the departmental faculty advisers, who too often have advocated specialization in their own disciplines and discouraged broad preparation.

More serious are the mistakes that students often make when they try to use their own judgment in the search for future significance. Their common error is to assume that the challenge of the moment will be enduring. For example, in the early 1960's the mass media emphasized the potential of the space program. Many students accordingly prepared themselves for careers as space scientists and engineers. Later there was a smaller, but no less influential, exaggeration of opportunities in oceanography. In 1965, the Stratton Commission recommended that the federal government spend \$2 billion yearly in support of oceanography. Expectations were aroused both among students and in industry. The principal catch has been disappointment.

At the moment, we seem to be setting the scene for a fresh set of disappointments, this time around environmental concerns.

On many campuses across the nation, special courses, curricula, and institutes have been organized, in part to meet student demands and in part to channel students into environmental studies. Obviously it is desirable that students should be well informed about the environment. However, faculties should be cautious about encouraging students to believe that many job opportunities are likely to be available in that field.

A survey of major industrial companies indicates that they are devoting considerable attention and money to abating pollution. However, many point out that, given the current climate of public opinion, they must respond by utilizing established technology rather than by putting their bets on research that might pay off 8 years from now. The overwhelming majority stated that they were meeting their environmental problems by using talent already employed by the company, with only occasional use of outside consultants on ecological matters. The principal source of jobs will be governmental agencies—federal, state, and local. While a moderate number of new employees will be recruited, federal authorities have already received considerably more good applications than they can accept. They further estimate that state and local needs for scientists and engineers to work on environmental matters will amount to no more than several thousand per year.

Basing one's plans on the fashion of the moment is likely to lead to disappointment, but what is better? First, one should consider that there are some obvious societal needs that will long endure. Society will always accord prestige and financial rewards to its physicians. One cannot be so certain of the future for research scientists. We cannot state that society will support them or admire them. We cannot be sure they will find jobs, especially those who are narrowly trained. The best bet for the student is to prepare broadly, seeking a good grasp of the fundamentals of more than one science. Then, if he is willing to engage in life-long learning, he will be able to meet some of the many unexpected challenges that lie ahead.—PHILIP H. ABELSON