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SCIENCE, founded in 1880, is published each Friday by the American Association for the Advancement of Science at Business Press, Lancaster, Pa. Entered at the Lancaster, Pa., Post Office as second class matter under the Act of 3 March 1879.

SCIENCE is indexed in the *Reader's Guide to Periodical Literature* and in the *Industrial Arts Index*.

Editorial and personnel-placement correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors. For detailed suggestions on the preparation of manuscripts, book reviews, and illustrations, see *Science* 125, 16 (4 Jan. 1957).

Display-advertising correspondence should be addressed to SCIENCE, Room 740, 11 West 42 St., New York 36, N.Y.

Change of address notification should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. If possible, furnish an address stencil label from a recent issue. Be sure to give both old and new addresses, including zone numbers, if any.

Annual subscriptions: \$7.50; foreign postage, \$1; Canadian postage, 50¢. Single copies, 25¢. Special rates to members of the AAAS. Cable address: Advancesci, Washington.

The AAAS also publishes THE SCIENTIFIC MONTHLY.



## Impossible Choices

The present problem of young people at college is much the same everywhere. They are finding their way into an enormous cognitive jungle, the jungle of everything there is to know. In recent years, I have talked with and been among undergraduates—and schoolboys and graduate students as well—in some places around the country, and a typical agony is: "What do I do? Where am I headed?" The complement of that, of course, is to be told what to do.

There is a spectrum between openness and permissiveness, on the one hand, and rather strict and specific guidance, on the other; between knowledge as an end in itself, something to study because of the joy of it and the beauty of it—and knowledge as an instrument, as a way of getting on in the future. Here, and in other institutions that lie on the instrumental, on the predetermined, side of the spectrum, I sense among the students a loss of the things which they are not studying; the sense of loss at all that they might be learning, and are not; the slight fear that this might not be easy to make up at a later time.

And yet this loss is a much larger thing, a quite general part of human life. There is much more that one might know than any of us are ever going to know. There is much more to know than any of us are ever going to catch up with; and this is not just the trivial fact that we don't work hard enough; it is not the trivial fact that things are difficult to learn. It is that any form of knowledge really precludes other forms; that any serious study of one thing cuts out some other part of your life. Narrowness is not an accident of one place, but it is a condition of knowledge.

I think myself that, with the growth of knowledge—the immense perplexity, the pervasive mutual relevance of different things to each other—all we can do is to accept the state of affairs, to affirm it, and to accept it deeply. It is not that some courses are not better than others and some worse, some even good and some evil; it is that, in the balance between ignorance and loss, on the one hand, and knowledge and richness of experience, on the other, we have to keep the affirmative love of the knowledge and the richness very close and never deny that most of what men can know, we don't know; that much of what man can know, nobody knows.

Of course, in a certain sense, this is trivial, and people have always known it. When it comes to the will, the element of choice has always been clear. The fact that you had one course which precluded another; you could take a job, or you could continue to study; you could marry, or you could say goodbye; everybody knows that. But I think it has not been quite as clear how, in the very conditions of knowledge, choice is built in and exclusion is part of depth.—J. ROBERT OPPENHEIMER, *Institute for Advanced Study, Princeton, New Jersey*.

*This editorial is based on excerpts from an address given to the undergraduates at the California Institute of Technology and published in Engineering and Technology (March 1957).*