

It no longer surprises us to hear chemists and other technical folk extol the benefits of "general education." Perhaps it is the prick of conscience, perhaps it is a realization of the narrow restriction of their own early training. This may give some encouragement to those who believe that science is contributing more to the woe of the world than to its welfare. There are many who would welcome evidence to prove scientific training an opponent to liberal education.

It is therefore encouraging and refreshing to see a dyed-in-the-wool humanist state the case for the cultural value of science better than it has ever been stated by the scientists themselves.¹

The author, Rhodes R. Stabley, is a professor of English at the State Teachers College at Indiana, Pennsylvania. The essence of his argument is that in the subject of literature, at least (which is certainly representative of the humanistic or liberal-arts tradition), it is difficult to avoid an authoritarian attitude, while true science, by its very nature, cannot possibly be authoritarian.

He quotes from a number of humanistic educators who maintain that a liberal arts education is especially necessary in these troublous times, and imply that science does nothing but increase our technological development and add to confusion. Then he comments:

Not one indication that all subjects and areas of knowledge, from art to zoology, have moral and ethical, personality and citizenship contributions to make; only a clearly revealed conviction that science can have nothing to do with "ideals"; that indeed it is potentially dangerous to human values. The dangers have to be watched, the values have to be guarded by men nurtured in the liberal arts. Scientists—not to be trusted really; liberal arts men—the hope of the world.

This attitude, as anyone knows who knows anything about the history of education, has long been standard stuff. It was standard stuff with the Greeks, who quite regularly put description ahead of observation; it was standard stuff with medieval thinkers, who loved to speculate on the number of angels able to stand on the head of a pin; it was standard stuff with the people who persecuted Galileo and reviled Newton; it has always been standard stuff with those who put words before facts, theories before operations, mind before senses. It is, alas, standard stuff in many quarters today....

"Great" literature can be especially dangerous because—

backed up by the resounding and "immortal" names of Plato, Dante, Shakespeare, Milton, Blake, Shelley, Emerson, Poe—it carries impressive "authority." These men, it is so easy for us to say or imply (and for students to believe), spoke for all the ages; they were wise and profound and what they revealed was fitting not only for their own times and their own cultures, but for our times and our culture—and for all times and all cultures to come. Before we know it we are glibly talking about universal principles, eternal verities, and categorical imperatives, and being quite sure that we know exactly what we mean and that all men of good will and good sense must agree with what we mean. . . .

Many institutions seek to control both students and teachers by a careful "selection" of authors and works. . . In many institutions not all books studied are necessarily in line with the official attitude, but one must be extremely naïve to suppose that, except in the hands of a maverick teacher, these get anything like the sympathetic understanding and interpretation accorded to those safe within the main tendency. The special biases of many colleges—especially the smaller colleges, which, incidentally, are largely of the liberal arts type—are a fact well known to anyone who has made serious observations of higher education in this country. The fact should at least serve to challenge the notion that whatever bears the liberal arts label is therefore and thereby "liberalizing" in its effects on students. . . .

All of which makes me considerably less sanguine than I used to be about the grand claims made automatically for the liberal artshumanities tradition. All of which makes me feel slightly uncomfortable when the spokesmen for our tradition cavalierly dismiss the physical sciences as good only for physical ends. It would be good for them—and for all of us in education—at least to pause and consider these words of John Dewey: "It is impossible to say how much of the remedial suffering in the world is due to the fact that physical science is looked upon as being merely physical. It is impossible to say how much of the unnecessary slavery of the world is due to the conception that moral issues can be settled within conscience or human sentiment apart from consistent study of facts and application of specific knowledge in industry, law, and politics. . . . Each sign of disregard for the moral potentialities of physical science drafts the conscience of mankind away from concern with the interaction of man and nature which must be mastered if freedom is to become a reality. It diverts intelligence to anxious preoccupation with the unrealities of a purely inner life, or strengthens reliance upon sentimental outbursts of affection."2

Strong words—too strong, perhaps, for most of us, oriented as we are. But at least serving notice from one serious thinker that the sciences have more than purely physical contributions to make. Dewey is saying, indeed, that a workable morality can emerge *only* from a scientific attitude of mind. Now this attitude, as I understand it, eventuates in such habits as these:

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¹Stabley, R. R., "Character training: Liberal arts vs. science," Bull. Am. Assoc. Univ. Profs., 38, 625 (1952-53).

² Quoted from "Human Nature and Conduct" with permission of the publishers, Henry Holt and Co.