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The Fetish of Experiment

Longfellow wrote: "I shot an arrow into the air,/It fell to earth, I knew not where . . . /I breathed a song into the air,/It fell to earth, I knew not where." We like this carefree attitude, but some people who have good songs to breathe seem unable to go about the task so lightheartedly. They feel compelled to have a control group of poets who do *not* breathe songs into the air; they consider it necessary to conduct a survey to determine the differential effects of song-breathing and nonsong-breathing poets; and they need the assistance of a committee of experts to advise on the proper methods of evaluating the data obtained in the survey.

This is all well enough in dealing with matters that lend themselves to experimental study, as some social and educational changes do. The classroom use of television provides a good example. Television offers such an attractive teaching aid that a large amount of money is certain to be spent on teaching films and television material. Careful planning will make it possible to compare what is learned under one method of instruction with what is learned under another; and it may well be that the experimental data will amply justify devoting a considerable portion of our educational budget to the preparation of excellent lectures, demonstrations, and perhaps even examinations that can be presented on a motion-picture screen or a television receiver.

There are other educational changes that lend themselves to experimental study, but many of the current efforts to improve the teaching of science and mathematics do not. To give teachers a better knowledge of their subject matter seems a worth-while activity, but to obtain and analyze such evaluative data as can be secured may prove more costly than the results justify. Educational changes—desirable ones—range from those that are clearly subject to experimental study to those that clearly are not. To surround those that are not with the trappings of experimentation is foolish affectation.

The AAAS and the National Science Foundation are sending sets of books about science and scientists to more than 100 high schools, mainly to schools that have meager library facilities of their own. We can get records of how many times each book was withdrawn. We can get the judgments of teachers about the usefulness of the program. But the real purpose of the traveling libraries is to supplement the library and teaching resources of the schools and, we hope, to stimulate a few bright students and help them to decide whether or not they want to become scientists. Because we do not know any feasible method of finding out how successfully we accomplish this real purpose, we are not planning to make elaborate evaluative studies. The project seems well worth doing, but we shall have to rely on unverified judgments in deciding whether or not it is worth continuing.

Andrew Carnegie established libraries because he thought it good to have libraries. Abraham Flexner revolutionized medical education because he thought that medical education could be greatly improved. There is still room for the exercise of good judgment in attempting to bring about social and educational improvements. If we have what we think is a good song to breathe into the air, let us go ahead and breathe it, without trying to fool ourselves by pretending to be carrying out an experiment.—D. W.