

Seymour, president of Yale University; Dr. Henry M. Wriston, president of Brown University; Dr. Roswell G. Ham, president of Mount Holyoke College; Rev. William J. McGarry, S.J., president of Boston College, and Dr. Fred Engelhardt, president of the University of New Hampshire.

THE Annual Conference of Elementary School Workers met on December 3 and 4 at Teachers College, Columbia University. The subject of the conference was "Education and the Community." There were two general sessions and twelve panel discussions. Dr. William F. Russell, dean of the college, presided.

THE American Association of Museums held a conference on the general subject of museums for children on December 3 at the Waldorf-Astoria Hotel, New York City. A visit was made to the Brooklyn Children's Museum, the first of its kind in the world, established in 1899. Last year the total attendance in all divisions was 417,845. Loan material circulated through the borough was estimated in 1936 to have made

9,000,000 contacts. Miss Anna Billings Gallup was curator-in-chief until recently, when Mrs. William Lloyd Garrison 3d became her successor.

THE Autumn Conference on the Improvement of Teaching was held at the University of Denver on November 12. More than four hundred teachers took part in one or more features of the program, and three hundred visited classes and attended the discussion groups which followed. Students of the university who are at present enrolled as student teachers substituted for the regular teachers attending the conference. Fifty-five college students went out into various parts of Colorado and taught for the day, some in the primary and some in the intermediate grades and some in high schools.

THE British Institute of Adult Education and the National Institute of Industrial Psychology, London, held a joint conference to discuss the problems of leisure on November 28 at which representatives of organizations engaged in educational, recreative and social work and selected individuals were present.

SHORTER ARTICLES AND DISCUSSION

THE PLACE OF RESEARCH IN A TESTING ORGANIZATION

AT a meeting of the Educational Records Bureau held in New York City on October 28, 1937, President Conant, of Harvard University, advocated the consolidation of several of the existing examining and testing agencies. Such a suggestion brings to the fore the fundamental purposes of the proposed organization. A new organization solely for the dissemination of present knowledge concerning tests and the promotion of testing programs would be difficult to justify; an organization which advances knowledge, however, is to be desired. It is the writer's belief that the present testing movement carries the germs of its own destruction and that unless the proposed organization is set up to develop a cure for these afflictions it will retard rather than advance education.

The cure is found in research and more research. Fundamental research must become an integral part of any consolidation. From one third to one half of the total income of any

testing organization should be ploughed into research. Because research is apt to become institutionalized, not more than one half of the available funds should be allowed the organization itself, the remaining half being used to subsidize original investigations by outsiders. The provision for an extensive research program will prevent degeneration into a sales and propaganda group; provision for external investigations will prevent the research from becoming too narrow.

Since most people are deaf to the needs of research, the following plea has been written in a strident tone. The writer, along with most of his friends, is guilty on all counts enumerated in the diatribe, and he requests, therefore, that the remarks be considered as neither a personal accusation nor a confession.

Premature standardization has been a serious deterrent to the development of sound measurement. It was discovered at an early stage that norms, and norms alone, were all that was needed for selling purposes. But the very fact that the test is standardized means that it can not be

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developed, can not be changed, and that therefore any improvement is impossible.

But because of standardization, tests proved easy to sell, so that volume of business grew without excessive sales pressure. Unfortunately, from many points of view, a fairly good test and one which is much less good will give under certain conditions similar results when tested for "validity" and "reliability." Almost any academic test will correlate somewhere between .40 and .60 with the usual criteria, and will give high split-half reliabilities if it is sufficiently speeded or given to groups including a wide range of ability. The ease with which "good" results of this type were obtained deadened the ambition of those who once thought they were doing "research." Investigators in the physical or biological sciences seldom achieve success with slipshod techniques, but many testers have become known merely because their names were printed on standardized tests.

It has been characteristic of the market for tests that the users who were at first reluctant to accept the results succumbed almost immediately to the lure of numbers, letters and pictures—I. Q.'s and the paraphernalia of graphs and curves which are the salesman's standard devices. The colored beads were irresistible. In the excitement, the nature of the test and its significance were overlooked.

During the last five years the testing movement has taken a new turn. The salesmen, realizing the limitations of mere itinerant peddlers, sought the vestments of prestige—and these were not hard to get. Instead of coefficients of correlation, we now have pontifical utterances about tests and what they do, ukases from the highest authorities. The tests, however, are still about the same poor instruments that they have been right along.

We are to-day approaching the ultimate stage in which the movement may take on the aspects of a religious crusade. All that is now known is not necessarily right. New developments are still needed. To spread the present doctrine wider and wider is dangerous. Let us be on guard when the speakers no longer plead, no longer reason and argue—but intone.

What about the individual for whom all this measurement was invented? Is the particular pupil any better off? He is better off if he is

described on a meaningful test with a small standard error of estimate. This little fundamental has too frequently been overlooked. We hear a lot about individual diagnosis and "individuation" in general but with the wide errors of measurement now tolerated, the pupils might just as well be conglomerated. The pupil will gain if he is properly measured, but in the mad surge to measure two million pupils, no one is trying to describe just one pupil accurately.

One goal of research is a reduction in the standard error of estimate of an individual score. Tests are now good enough to use on groups, but there is a limit to the type and significance of information to be gained in this manner. If tests are to be used as instruments of educational diagnosis the errors must be reduced to make them serviceable.

And there remains the further goal of research to make tests serviceable to education itself. The literature of pedagogy is full of words and phrases such as "reasoning," "the power to analyze," "straight thinking." There must be several hundred words and phrases in current use referring to mysterious powers of the mind, none of which are understood. "Thinking," curiously enough, is one of the most obscure topics in psychology and education. The individual test situations may be repeated, studied and analyzed and such study will throw light on those matters in which educators are interested. This type of research promises to yield detailed information which will eventually bring even the professors of education back to earth.

Writers in the field of pedagogy develop for themselves, or borrow, some psychology of the thought processes. They begin with an exposition of the nature of mind, and having explained that thoroughly, develop the particular applications to the actual technique of teaching. The difficulty here is that there is no general body of knowledge from which to draw so that the "science of pedagogy" is merely a lot of words with a few practical tricks thrown in to make it look real. No one will deny that the magician does produce a few rabbits from the hat. The analytical approach to the study of thinking through particular test situations will tell us something about how thinking is done. It may give us a science of education.

One more great gain will result from an effort

to adjust educational measurement to the curriculum. The effort of test builders to work with curriculum makers has usually resulted in mutual advantages. The curriculum builders have been forced to locate their target on the ground—not in the stratosphere—and the testers have been forced to aim in the general direction of the target. The alleged antithesis between teaching and testing is proof that the two are merely different aspects of the same thing. The apparent conflict arose from the fact that testers having chosen their own weapons and set up their own target then told educators that this was the right one to shoot at. The business of working together on objectives and methods of measuring them has been fruitful and will continue to be so.

It seems somewhat futile to discuss the probable nature of an organization until its purposes are known. The administrative problems, although complex, would not appear to present any great difficulty. There would, of course, be a board of governors, an executive committee and an executive. Cognate with the executive committee there should be a committee on research, the general function of which would be planning projects for the organization itself and considering projects submitted by independent investigators.

The executive committee would be the board of governors in miniature with powers delegated to it from above. The executive would be the executive committee in miniature with powers delegated to him from above. The planning committee should be independent of the executive committee and have authority to allocate the research budget for the executive to put into effect. Committees with functions analogous to such a research committee are the Committee on Problems and Plans of the American Council on Education, and the Committee on Problems and Policies of the Social Science Research Council.

The governors should not be administrators, but representatives of learning. Most testers have come from the field of psychology which does not provide an adequate background for work in education, if that is broadly conceived as involving the transmission of man's cultural heritage. A few testers may be found to-day who know a little about some science other than psychology, but the humanistic tradition is conspicuously lacking. The tester's colleagues in

so-called "schools of education" also lack background. The present union between testers and educational politicians has been effective on the promotional side, but it has not stimulated research or the development of good tests.

The projected organization must incorporate in such a manner that the evils of the existing situation may eventually be corrected. Since the testers of to-day are for the most part insensitive to the nature of the things they are trying to measure, a major function of the new organization must be the training and recruitment of better personnel. As it is probably simpler to teach cultured men testing than to give testers culture, the research wing should act as a training school for promising young men drafted from the major fields of learning. Such men returning to their fields after a term of duty on leave would be doubly serviceable to their institutions. By some such method the organization could incorporate into itself the active minds of successive generations.

It is easy for a powerful organization to set up false ideals. The new organization must be so contrived that it will always remain the servant of education and never become its master. It should inquire into the nature of values but it must not determine those values.

At the present time there are men of learning who sense these values intuitively yet are unable to put them on canvas with pigments which will stand reproduction. Testing situations, when properly formulated, and with responses fully analyzed, constitute the most searching system of lenses yet contrived for photographing the canvas and making it generally available to mankind. The artist must work with the technician to get the results for which he is striving.

To-day most testers are content to buy a cheap, ready-made camera with a poor lens, fixed focus and no range finder, and to do a develop-while-you-wait business with stragglers on the sidewalk in front of the studio. Furthermore, they claim that this present camera can reproduce every detail of the completed masterpiece within—although they have merely peeped in the door and have never seen the canvas.

The new organization must plan to discard most of its present apparatus within five to ten years and approach its larger problem in a spirit of humility. The ideals of research are lofty,

but its spirit is meek. An organization with its major purpose research—and not propaganda—will be of great service to education. Education can not to-day afford to let the sidewalk vendor dictate its objectives, but it can properly help him adapt his apparatus to its own purposes. The great works of art are too closely held and seen by too few people. Let us try to make them more generally available by building better apparatus.

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STRESSING THE SOCIAL AIMS OF EDUCATION IN THE INTRO- DUCTORY COURSES

PROFESSOR WILLIAM I. PAINTER raises some fundamental questions in his discussion of "The Introductory Course in the Education Curriculum."¹ I would certainly agree with him that "the introductory course should not be a summary of all that is to be learned and that it should stand on its own merit."

This is written to defend the proposal that chief emphasis in the introductory course should be placed upon the social aims of education. Such emphasis would unquestionably give the course merit upon which it could stand. Prospective teachers should study education as one of the social sciences, as a social agency. The function of education in society and the relation of the school to other educative agencies should be brought to the attention of the student of education. Such emphasis should come early in the preparation of teachers. Furthermore, the introductory course provides the best vehicle for conveying it. In no other course in the typical professional curriculum does the student get a clear and complete picture of the school as a whole and of its place among society's institutions.

Participation in the improvement of society is the most important function of public education to-day. This is not an argument that the schools become a propagandizing agent for a new social order, but it is a plea that the schools keep their pupils informed about current social, economic and political questions. It is the very essence of democracy that the schools give attention to the needs of society and the modifications that are inevitable. How will the teachers be

¹ SCHOOL AND SOCIETY, November 13, 1937, p. 612.

able to participate in such a program if they themselves have not been prepared for the task?

During the Herbartian era in American education the emphasis was laid upon mass instruction in the fundamental skills. The John Dewey philosophy and the study of individual differences by Thorndike and others ushered in a new program with the stress upon the individual. The "child-centered school" became a current fashion. As an accompaniment of the economic disturbance and social and political unrest throughout the world we came to realize that the school's function is much broader than we had thought it to be. Now we are speaking of a "society-centered school."

The inquiry made by Professor Painter reveals that a negligible amount of attention has been paid to the "sociological view of education" and "philosophy of education," only 17 out of 1,000 examination questions being related to those two topics. On the other hand, 676 questions dealt with professional courses that came later in the curriculum, such as "history of education," "psychology of learning," "classroom management" and "the teaching process." The explanation for this situation is not difficult to find. The earliest text-books dealt mainly with the work of the teacher and attempted to glorify teaching as a career. Then there followed a number of books that were veritable encyclopedias of "pedagogy." They consisted largely of extracts from other professional courses. During the past few years we have witnessed the production of several new books which attach greatest importance to this new social emphasis. This is a good sign and a step in the right direction.

There is undoubtedly a place in the teacher-preparing curriculum for an orientation course, but it should not consist merely, nor even largely, of samples of the subject-matter of several separate and distinct courses. It should be a genuine orientation, an introduction to the study of education as a social agency, a unified and integrated study of the school in relation to the needs of society. A good case could be made for such a course to be offered as an elective for students who are not interested in specific preparation for educational work. We have been greatly encouraged at Penn State by the increasing number of students who elect the course as a cultural, broadening experience. We shall be