Controversy Called Method of Science

Science, the search for truth, is advanced by indulgence in personal prejudice and scientific controversy properly checked by persistent self-criticism, Prof. Edwin G. Boring, director of the Harvard Psychological Laboratory, contended in his presidential address before the American Psychological Association. Prejudice and controversy are considered by Prof. Boring to be symptoms of the same driving force that makes men invent and discover.

"The history of science is full of illustrations of the most violent and seemingly unreasonable controversy that have obscured the truth for long periods and only eventually led to established fact," said Prof. Boring. "Mesmer's discovery of mesmerism (or hypnotism) is a case in point and much can be said in favor of Mesmer who is generally disregarded as a charlatan. John Elliotson's rediscovery of hypnotism half a century later is a similar case where personal prejudice blocked the acceptance of discovery."

Magic and Medicine

Magic and medicine are close relatives, chiefly because the element of deception is so strong in both, declared Prof. Lynn Thorndike of Columbia University.

"If nature alone works most cures, neither magic nor medicine will admit this. A confidence game is practised on the patient, who must be cheered and distracted," said Prof. Thorndike. "Where the priest used to tell the sinner to go on a pilgrimage, the physician tells the patient to play golf or sends him to Florida."

Prof. Thorndike reminded his audience that the old magician or priest did the best he could with the available material and suggested that we should not be too scornful of magic.

"Was the world and his milieu actually more topsy-turvy and terrifying to the believer in magic, than to the modern believer in medicine?" asked Prof. Thorndike. "Or did it all seem as matter-of-fact and casual to him as tornadoes in Florida, floods on the Mississippi, germs in towels and drinking cups, and a thousand falling at our side from bootleg liquor and ten thousand at our right hand from automobile accidents, do to us?"

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"Since science is supposed to seek the truth, it would appear that its efforts should be directed toward the elimination of bias and personal prejudice wherever these factors enter into the formation of scientific However, it appears conclusions. that the greatest scientists are often the most prejudiced in maintaining their personal views, and that the personal dynamic urge that leads to violent and personal controversy is also a symptom of the driving force that makes men scientifically productive. This fact of dynamic psychology makes it appear at first as if scientific progress must depend upon individual prejudice and as if scientific truth therefore would always transcend the individual and become. after controversy, the property only of those who have not contributed to its discovery."

Prof. Boring observed that all new scientific movements are controversial in their beginnings. At the start they are not positive but negative.

Scientific psychology itself began

as a reaction against philosophical "The newest psychology," he said. movements, like Gestalt psychology in Germany and behaviorism in America, exhibit mostly this negative side. Scientific movements are therefore great prejudices that sometimes stimulate progress and sometimes prevent it. The question arises therefore as to whether movements of this sort, which are generally looked upon as constituting the milestones in scientific advances, might not hinder progress as much as they encourage it."

The personal bitterness that hinders scientific progress will be removed, Prof. Boring declared, as soon as the mental conflict essential to research is recognized and controlled. He advised psychologists to develop dissociation of personality so that after allowing personal prejudice to stimulate research, self-criticisms can be made to apply the proper checks.

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Intern System Urged for Schools

Education

The present scheme of compressing education into a few of the earliest years and of stopping it abruptly at some year in the teens was challenged in an address by Dr. A. I. Gates, of Teachers College, Columbia University, before educators attending the meeting of the American Association.

"The old notion that the teens comprise the prime of life for learning has been definitely disproved," Dr. Gates stated. "The decade from twenty to thirty is superior to any other."

To secure the advantage of education in the valuable years of the late teens and early twenties, and to make schooling more useful by relating it directly to the needs of practical life, he advocated a gradual transition from the life of school to life in the world. This method is already used and found satisfactory in medical training, where young doctors serve an internship, and Dr. Gates recommended that young people being trained to carry on the world's work and soon to take civic and social responsibilities should complete their education by a "social internship".

Recent research has dealt a blow

to the old tradition that highly abstract subjects as Latin, mathematics, and physical science are useful because of their disciplinary value to the mind, the speaker said. Prof. E. L. Thorn-dike has shown, Dr. Gates declared, that these subjects excel very slightly, if at all, such subjects as civics or biology or even stenography, manual arts, or cooking as means of increasing the student's general ability to think.

Underaged Children Make Good

In almost every community the school doors are frequently besieged by mothers asking admission for children who are just a little too young. Some of these children are mentally and physically ready for school, and it is possible to predict with reasonable accuracy whether a child of this sort will make good in kindergarten or first grade, if given his chance, Dr. Edward A. Lincoln, of Harvard University, told the educators

In an experiment conducted by Dr. Lincoln, underaged children who applied for admission to school at Winchester, Massachusetts, were given an intelligence (Turn to next page)