

SCIENCE

VOL. 83

FRIDAY, MAY 8, 1936

No. 2158

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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal
Lancaster, Pa. Garrison, N. Y.
Annual Subscription, \$6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

COMMENTS ON CLINICAL INVESTIGATION¹

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I HAVE been sorely tempted to follow the becoming example of a predecessor and forego the generalizations which are expected to serve as a forerunner to the serious purpose of these meetings. However, I can not refrain from taking this opportunity to comment briefly upon certain considerations of clinical investigation which are assuming progressively greater importance. These criticisms and pleas are primarily directed towards laboratory investigation, although they incidentally also apply to those phases of clinical research which deal with bedside observation and the statistical study of clinical material. Moreover, my remarks are concerned only with those endeavors

which are genuine and sincere. Investigation undertaken either consciously or subconsciously for the purpose of advertising or for personal aggrandizement is not worthy of comment before this group.

Keeping pace with the spirit of abandon which characterized the florid twenties, clinical investigation ran riot, recognizing no bounds, philosophical, intellectual, technical or financial. With apparently unlimited financial resources, the business man's concept of mass production tended to creep into academic medical circles without due appreciation of the differences in the aims of business and of science. Under this spell of enthusiasm it seemed reasonable to expect that with organized groups of investigators, spacious laboratories, endless equipment and technical assistance the mysteries of medical science must bow before the concerted onslaught and how promptly. Medical students and young graduates, without consideration

¹ From the Department of Medicine, College of Physicians and Surgeons, Columbia University, and the Presbyterian Hospital, New York City. Presidential address delivered before the American Society for Clinical Investigation, on May 4, 1936.

of "Geist" or other qualifications, were urged to enter laboratories. They might cooperate in the contemplated discovery of the etiology of cancer or they might be set the task of counting paving blocks—it was immaterial, but all in the name of science.

The sobering effect of the economic crash upon industrial and financial structures has had far-reaching repercussions and has been seriously felt in most of the clinics of this country. The problem of curtailment and economy has involved all those interested in clinical investigation and we are now confronted with the inevitable and healthy task of taking account of stock and separating the wheat from the chaff. In other words, we must decide what, out of this great orgy of clinical investigation, is most worthy of salvage.

There is no doubt that what we desire to save above all else is that backlog of solid and profitable research which has continued to advance medical science and which may be defined as a product of thoughtful and critical curiosity supported by ingenuity in experimentation. Whether or not the results are of immediate practical value is relatively unimportant, but that the stimulus to investigation should be a query either of fundamental or of practical significance is vital. Of two general approaches to research, experience has shown time and again through the ages that the outstanding advances in the realm of science have resulted from the efforts of individual investigators possessing the spark essential for creative work. To be sure, in this approach the full harvest of results may frequently be reaped only through the subsequent cooperation of others better versed in various technical aspects of the problem, but the fact remains that it is the individual investigator whose creative force furnishes the opening wedge. It is, consequently, this rare individual who above all is to be treasured and who deserves the support necessary to enable him to exercise his powers to the full.

The largest group interested in clinical research is composed of individuals, many of whom are the clinical teachers responsible for the development of critique and a point of view among students of medi-

cine. These investigators share in common one characteristic, namely, that of intellectual curiosity; they perceive the significance of fundamental observations and are frequently able to extend them, but their capacities for critical and thoughtful experimentation naturally cover a range so wide that the products of their scientific endeavors, while often good, are more frequently indifferent and occasionally very bad. Nevertheless, the progress of medical science is greatly enhanced by these gleaners. Consequently they, too, deserve encouragement and should continue to receive financial support. However, the time has come when the qualifications of the recruits for this class of investigators should be scrutinized meticulously, because it is the futile efforts of the many lesser lights among these gleaners which lead to untold waste.

Another approach to clinical investigation has been developed in recent years and lies in sharp contrast to that already described. This is the *research project* which demonstrates in its point of view total ignorance of the means by which science has advanced. It attempts to force progress through regimentation of workers who lack the essential critical curiosity in the subject under investigation and it stifles the untrammelled play of imagination which often seizes upon a most significant by-product in the course of individual research. It is not the product of creative thought, but is usually initiated by energetic and misguided promoters inspired by the effectiveness of mass production in big business. It involves the wasteful expenditure of large sums of money. In other words, it assumes that scientific knowledge can be bought, and that dollars give birth to ideas. The research project in clinical medicine has proven consistently barren and has resulted in the disbursement of funds which, if applied to the endowment of individual investigators or university departments where creative thought is fostered, may reasonably be expected to further the progress of science. Hence I make my plea for the support of those individuals engaged in fruitful research, for the reapportionment of the limited funds available for clinical investigation and for their direction into recognized productive channels.

THE HISTORY OF SCIENCE SOCIETY AND THE DAVID EUGENE SMITH FESTSCHRIFT

By FREDERICK E. BRASCH and LAVADA HUDGENS

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IN January there appeared before the intellectual world another of those unique historical works known as a Festschrift, a term which ordinarily connotes a collection of essays, written by scholars commemorating the service of another scholar. In America we

do not follow this procedure as much as scholars in Europe have done. Nevertheless, it is indeed an excellent expression of appreciation and method of honoring those to whom honor is due.

On January twenty-first, the seventy-sixth anniver-