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MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-on-Hudson, N. Y

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
SECTION K—PHYSIOLOGY AND EXPERIMENTAL MEDICINE.

EXECUTIVE PROCEEDINGS.

OFFICERS elected for 1906–1907:

Vice-president and Chairman of the Section—Simon Flexner.

Secretary—William J. Gies.

Member of Council—Alexander C. Abbott.

Sectional Committee—W. T. Sedgwick, vice-president, 1905–'06; Simon Flexner, vice-president, 1906–'07; William J. Gies, secretary, 1905–'07; Frank Baker (one year), C. S. Minot (two years), J. McK. Cattell (three years), Ludvig Hektoen (four years), Graham Lusk (five years).

Member of General Committee—James Carroll.

SCIENTIFIC PROCEEDINGS.

Morning Session.

Vice-presidential Address—*The Experimental Method in Sanitary Science and Sanitary Administration:* WILLIAM T. SEDGWICK. (Presented by A. L. Metz.)

Symposium on Yellow Fever and other Insect-borne Diseases.

Introductory remarks by the acting chairman, Alexander C. Abbott.

GARY N. CALKINS: 'The Protozoon Life Cycle.'

HENRY B. WARD: 'Filariasis and Trypanosome Diseases.'

J. H. WHITE: 'The Practical Results of Reed's Findings on Yellow Fever Transmission.'

Afternoon Session.

QUITMAN KOHNKE: 'Difficulties of Recognition and Prevention of Yellow Fever.'

Henry Clay Weeks: 'The Practical Side of Mosquito Extermination.' (Presented by A. C. Eustis.)

James Carroll: 'Without Mosquitoes there can be no Yellow Fever.'

H. A. Veazie: 'Æstivo-autumnal Fever—Cause, Diagnosis, Treatment and Destruction of Mosquitoes which spread the Disease.'

Discussions of the various papers by Messrs. James Carroll, G. N. Calkins, L. O. Howard, J. H. White, S. E. Chaillé, A. C. Abbott, A. L. Metz, H. B. Ward, Quitman Kohnke, A. C. Eustis and others.

Wm. J. Gies,
Secretary.

THE EXPERIMENTAL METHOD IN SANITARY SCIENCE AND SANITARY ADMINISTRATION.[1]

The value of experimentation in all branches of inquiry is now generally recognized; its philosophical significance and its limitations are less often understood and appreciated. In the present paper I propose to show that there is no hard-and-fast line between the results of experiment and those of experience, and that in the field of sanitation, in which of necessity laboratory experiment is difficult when not impossible, the data of experience carefully studied and rigidly verified are capable of yielding results no less valuable than those derived in some other subjects by experiment.

To avoid confusion let us understand clearly at the outset exactly what we mean by the terms *experiment, experience* and *observation.* Originally signifying much the same thing as experience, namely, both the processes and the results of trial or test, the word *experiment* has in recent times come to be used chiefly for a prearrangement, and an artificial arrangement, of conditions in such a way that specific questions shall be answered; while the term experience has come to be used most often to describe a result rather than a process—a result, moreover, obtained without prearrangement, and under natural or unpremeditated, rather than artificial or premeditated, conditions. We speak, for example, of an *experiment* upon the strength of materials and an *experience* with a broken rail, or railway bridge. The term *observation* requires no special comment. Without this, both scientific experiments and scientific experience are worthless. *Verification* is, of course, the checking, controlling or testing of the data and results of experiments or experiences, in order to determine their accuracy or degree of truth; and we are still indebted to George Henry Lewes for his striking exposition of the fundamental and indispensable function of verification in all sound and scientific inquiry.

Now a little reflection will show that experiment, in the somewhat narrow sense here laid down, is necessarily comparatively limited, and very likely to be confined largely to the laboratory, for the reason that any prearrangement of conditions which shall be actual tests or trials of natural phenomena must oftenest be made under cover, in limited space, with comparatively few objects, and at comparatively small cost. Hence it has come to pass that the experimental sciences have been chiefly those which could be advantageously pursued in laboratories and workshops, and upon the small, rather than the large, scale. There can be little doubt that this fact has tended to magnify the importance of subjects or parts of subjects lending themselves readily to laboratory experimentation, and has served to draw off attention from, and thus to hinder, the development of other sciences, or portions of sciences, quite as important as those capable of advancement by laboratory experimentation. In physics, for example, we may well suspect that materials at hand, such as air or water,

[1] Address of the vice-president and chairman of Section K, American Association for the Advancement of Science, New Orleans, December, 1905.