

is conscious or of which men as a whole are conscious, the methods which are employed to investigate facts of consciousness themselves must apply equally to every science. Each science may go farther in the details of the methods but the general principles remain unchanged through all. The discussions to which reference is here made concern themselves with such processes as scientific analysis, definition of terms, experiment, etc. These same topics may be studied under the name of logic if they be studied in themselves, but a psychologist can hardly avoid discussing them in his work to-day without serious loss of clearness.

This is hardly the place, and if it were, there is not the time necessary to say what might well be said on this particular subject. There is, however, probably no part of the teacher's general culture which is designed to exercise so potent an influence for good in the work of the school-room. The insight into scientific method gives one a wholesome spirit in one's outlook that must be beneficial not only to the teacher but, perhaps, quite as much to his pupils.

In the third place, psychology is of value to the teacher in that it gives him a detailed knowledge of the actual operations occurring in himself and the pupil in the process of teaching and learning.

We cannot here pause to discuss the contribution of psychology to our knowledge of the thought-process. It is true that these significant discoveries by the use of experiment are as yet but few years old and the works of Kuelpe, Watt, Ach and others dealing explicitly with them are not readily accessible to the English reader since no translation of them exists*. This fact of itself, however, offers no possible basis of criticism of the conclusions reached below, since, no matter how reached or by whom, the knowledge of the facts of consciousness is calculated to be of use in the directions indicated.

The scientific knowledge of the thought-process must be the only ultimately valid basis on which to construct our theories as to methods of teaching. All merely empirically-established methods have value in that one can state that such procedure has been found to give good results, but on the basis of use alone one may only conclude that such methods are better than certain other methods and not that these methods have a firm psychological foundation. In teaching and learning it is exactly as with the

*In my evening experimental lecture on "Recent Investigations of the Thought-process," the methods used in these researches were illustrated and some of the more important conclusions reached discussed in outline.