PROFESSOR BOOLE'S MATHEMATICAL THEORY

being attached by him to the predicate. But an affirmative judgment is nothing else than an assertion, through immediate comparison, of the identity of concepts. Suppose, therefore, that we are required to express the judgment, "Some stones are precious." Let x denote stones; and y, precious. The proposition means, that some stones are identical with some precious things. Consequently, its symbolical expression [see (1)] is,

vx = vy.

If the judgment to be represented had been, "Some stones are not precious," its expression would [see (6)] have been

$vx = v \ (1 - y).$

These examples in the meantime may suffice. More complicated forms will present themselves afterwards.

With the few simple preliminary explanations which have been given, and which were necessary to render intelligible some of the criticisms presently to be offered, we are now prepared to state the view which our author takes of the science of Logic. Logic he regards as the science of Inference; and the problem which it seeks to solve is this: Given certain relations among any number of concepts (x, y, z, &c.), it is required to find what inferences can be drawn regard. ing any one of these or regarding a given function of any one of them. A properly constructed science of Logic would require to solve this problem adequately, and by a definite and invariable method. Now, Professor Boole claims that the view which he presents of the problem which Logic has to solve, is both deeper and broader than that commonly taken; and he claims at the same time that he has devised an adequate method, different from all existing methods, for solving this problem, and that his method is one of definite and invariable application.

The objections brought against the logic of the schools, that it is neither sufficiently deep nor sufficiently broad, will probably take our readers by surprise. It is not difficult to understand how a question might be raised as to the practical utility of the scholastic logic; but most persons who have examined the subject will be ready to admit, both that the scholastic logic is well founded, and that, when properly developed from its first principles, it forms a complete and perfect system. In the opinion of our author, however, it is so defective in its foundation, and so incomplete in its superstructure, as not to be entitled to the name of a science. "To what final conclusions of the s science, a system the four

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