

## MATHEMATICS AT THE INTERNATIONAL CONGRESS OF PHILOSOPHY, PARIS, 1900.

THE first international congress of philosophy was held at Paris, August 1-5, 1900, under the presidency of M. E. BOUTROUX, professor at the Sorbonne. The proceedings of the third section, devoted to logic and history of the sciences, are of especial interest to mathematicians. The deliberations of this section were directed by Professor JULES TANNERY. In his inaugural address as president of the section, after the usual felicitations and customary acknowledgments, Professor Tannery emphasized the union between science and philosophy, a union which, he said, is better designated by the term unity. Any separation between scientists and philosophers is only apparent. The savants of the present century have set most important results before philosophers for speculation. Count the powerful geniuses who from the beginning of the century to its end have attacked the notion of space; measure how much the critique of this notion has done for the problem of knowledge. What illumination has been thrown upon the notion of function and, ascending farther, on the notion of number, by the revision of the principles of analysis! Will not the theory of ensembles show somewhat how we ought to think of infinity? Will not mathematical logic furnish us a sure instrument for the discernment and transformation of the data of intuition? Will not the algebra of logic enable us to penetrate deeper into the mechanism of deduction? Every hope seems legitimate, after what has been accomplished in the foundations of geometry. What surprises may be in store for us in the study of the principles of mechanics! Before turning aside from the mathematical sciences, Professor Tannery called attention to the import for philosophy of those works which had been devoted to the evolution and history of these sciences.

Among the papers which were presented to this section the following deal more or less directly with questions mathematical. They are given in the order of presentation. The résumés of the papers and the discussions occasioned by them are drawn from the number of the *Revue de Métaphysique et de Morale*, for September, 1900, which is specially devoted to the congress of philosophy.

G. VAILATI, "The classification of the sciences."

G. MILHAUD, "On the origins of the infinitesimal calculus."