SCIENCE

FRIDAY, JULY 8, 1921

The University and Research: Dr. Vernon Kellogg	19
The Metric System in Japan: Howard Richards, Jr	23
Scientific Events:-	
The Paris Academy of Sciences; The Iowa	
Lake Side Laboratory; The Jennings Anni-	
versary Celebration	24
Scientific Notes and News	2 6
University and Educational News	27
Discussion and Correspondence:-	
The Cannonball Lance Formation: Dr. W.	•
D. MATTHEW. Newcomb on Extra-mundane	
Life: Dr. George C. Comstock	27
Quotations:—	
Cooperative Indexing of Scientific Litera-	٠
ture	30
Special Articles:—	
The Motions of the Planets and the Rela-	
tivity Theory: Professor Charles Lane	
Poor	30
The American Chemical Society: Dr. Charles	
L. Parsons	34

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

THE UNIVERSITY AND RESEARCH 1

THE main sources of research in America have been, and must continue to be, the universities. We have a few first class special research institutes; and we have a good many laboratories of industrial research and development. There are more of these than is popularly known; five hundred, perhaps, counting many small ones. But their work is directed more towards the attack of specific problems of development in the special industries which support them, and less towards the fundamental science that underlies these industries. In some of the larger of these industrial research laboratories, however, able investigators are at work and fundamental research of a high quality is carried on. But in all of the few special institutes and the many industrial laboratories taken together the research output is much less than that which comes from the universities. In addition, of one thing very important to the maintenance of research in the country these special institutes and industrial laboratories do almost nothing at all. That is the development and training of new research workers. This is done almost exclusively in the universities and colleges. Anything, therefore, which lessens the interest and activities of the universities in research, and hence reduces their actual output of research and research workers, is a menace to our national strength and well-being. For this strength and well-being depend, in a very large measure, on scientific research and discovery.

The conspicuous role played by science in the war from its very beginning, and the pressing necessity for solving serious war problems involving scientific investigation, brought very

¹ A paper read at the educational conference, May 13, 1921, held at the University of Minnesota, in connection with the inauguration of President L. H. Coffman.