

sity, to be professor of mathematics at Purdue University.

THE free lecture courses on literary, scientific and technical subjects established by the trustees of the Lowell Institute, under the supervision of the Massachusetts Institute of Technology, Boston, began on November 4th. Twenty courses are offered, each consisting of twelve lectures.

AT the annual meeting of the Chicago Alumni of Mt. Holyoke College, on October 24th, Dr. D. K. Pearson offered to give \$150,000 to the College, provided the alumni would raise an additional \$50,000.

THE Rev. H. E. Cushman has been appointed assistant professor in philosophy in Tufts College.

REV. DR. R. J. PEARCE has resigned from the chair of mathematics at Durham University to take effect next Christmas.

PROF. KÖNIG, of Göttingen, has been offered the chair of surgery at Berlin, vacated through the death of Professor Bardeleben.

THE *Naturwissenschaftliche Rundschau* states that Dr. Ernst Lecher has been appointed to a chair of physics in the University of Prague; Dr. W. Müller has been offered a professorship and the position of director of the Zoölogical Institute of the University of Greifswald; Dr. Beck, a geologist of Leipzig, has been appointed professor of geology in the *Bergacademie* of Freiberg i. S.; Dr. Günther Beck von Mannagetta, professor of botany at Vienna; Dr. Rothpletz has been promoted to an assistant professorship at Munich; and J. C. L. Wortman to a professorship in the experiment station for chemical agriculture in Geisenheim. Dr. Karl Claus, professor of zoölogy in Vienna, has been retired.

#### CORRESPONDENCE

##### EXPERIMENTAL PSYCHOLOGY IN AMERICA.

TO THE EDITOR OF SCIENCE: *The American Journal of Psychology* began a new series last

week with an 'editorial' introduction, in which some most extraordinary statements appear. As an official of Harvard University I cannot let one of these pass without public contradiction. The editorial says (on the top of page 4) that the "department of experimental psychology and laboratory" at Harvard was "founded under the influence" of some unspecified person mentioned in a list of President Hall's pupils. I, myself, 'founded' the instruction in experimental psychology at Harvard in 1874-5, or 1876, I forget which. For a long series of years the laboratory was in two rooms of the Scientific School building, which at last became choked with apparatus, so that a change was necessary. I then, in 1890, resolved on an altogether new departure, raised several thousand dollars, fitted up Dane Hall, and introduced laboratory exercises as a regular part of the undergraduate psychology-course. Dr. Herbert Nichols, then at Clark, was appointed, in 1891, assistant in this part of the work; and when Professor Münsterberg was made director of the laboratory, in 1892, and I went for a year to Europe, Dr. Nichols gave my undergraduate course. I owe him my heartiest thanks for his services and 'influence' in the graduate as well as in the undergraduate department at Harvard, but I imagine him to have been as much surprised as myself at the statement in the editorial from which I quote—a statement the more remarkable in that the chief editor of the *American Journal* studied experimental psychology himself at Harvard from 1877 to 1879.

WILLIAM JAMES.

PSYCHOLOGICAL LABORATORY,  
HARVARD UNIVERSITY, October 19, 1895.

EDITOR OF SCIENCE—*Sir*: In his truly remarkable Preface to the projected new series, the editor of the *American Journal of Psychology* puts forth the claim that the Yale psychological laboratory, like the other more prominent Eastern laboratories, was founded 'under the influence' of his pupils and of Clark University. Inasmuch as Yale University has an institutional interest in the truthfulness of this surprising claim, and inasmuch as I have reason to suppose that my influence and not President

Hall's led to the founding of its laboratory, I wish publicly to contradict him. This cannot be more effectively done than by calling attention to the facts of history.

Sixteen years ago, while at Bowdoin College and before I even knew of the existence of President Hall, I began the detailed study of the relations between the nervous system and mental phenomena. On coming to Yale, two years later, I continued diligently the same line of study, in the laboratory and with the kind assistance of Dr. James K. Thatcher, then professor of physiology in the Yale Medical School. To this line I soon added much research in the field of experimental psychology.

For several years I worked to the extent of twenty-five or thirty hours a week on a course of lectures on these subjects, which were illustrated by a small collection of material purchased by money granted for that purpose. Finally, in 1887, my 'Elements of Physiological Psychology' appeared, and in 1891 an abridged and revised treatise under the title of 'Outlines of Physiological Psychology.' Those were indeed days of small things; but the work done was honest and thorough, and it was pioneer work. As to the 'influence' of my books on the entire development of modern psychological study, in the laboratory and outside of it, in this country and in England (where several editions of them have been sold and where they have been required in examinations for a degree in medicine) and further abroad, I leave the impartial historian to discourse.

Three years ago, since my own work—especially with graduate students—had outstripped my powers, an instructor in experimental psychology and a man who could supervise the putting in order of a laboratory was sought. Dr. E. W. Scripture, on my nomination, was given an appointment for that purpose. But so far even as the fitting-up of the laboratory came under his influence, it is not true that this emanates to any appreciable extent from President Hall or from his University. For Dr. Scripture, a graduate of the College of the City of New York, spent the three long semesters from 1888 onward in Leipzig, in Wundt's laboratory, and the two intervening summer semesters at Berlin and Zurich with Zeller, Paulsen,

Diels, Ebbinghaus, Avenarius and Forel. At the time of his appointment at Yale he had indeed been, for about a year and a half, at Clark as a fellow, reading somewhat miscellaneous and using the laboratory as he chose, but without any regular instruction or supervision. His training, his instruction, his methods, are wholly from the Leipzig laboratory, and not at all from Clark University. This is, in fact, the entire extent of the 'influence' exerted by the writer of this truly remarkable Preface over the founding and development of the Yale psychological laboratory.

I will only add that two of the names mentioned in President Hall's list are much more pupils of Yale than of Clark. They belong among the twenty-three or twenty-four professors of psychology and philosophy which Yale has sent forth during the last fourteen years. Their *alma mater* is proud of them all; but not less so, because she has imparted to them a distinctly different spirit and *mordle* from that displayed in late years by the writer of this Preface.

GEORGE TRUMBULL LADD.

YALE UNIVERSITY.

EDITOR OF SCIENCE: According to an editorial statement in the *American Journal of Psychology* for September, the Laboratory for Psychology in the University of Toronto was founded 'under the influence' of pupils of Stanley Hall. This is false. The Toronto Laboratory was founded by myself, then professor there, with an appropriation gained by my exertions and influence with the educational authorities of Ontario. No pupil of Dr. Hall had any influence in the matter in any shape or form, for my early training was gained at Princeton, where Dr. Hall's influence was not large!

Moreover, the general claim made by Dr. Hall in the 'editorial' to the paternity of scientific psychology in this country is ambitious to an extraordinary degree. In Princeton alone a course in physiological psychology was given by McCosh, with practical work by Professors Scott and Osborn, as far back as 1883.

J. MARK BALDWIN.

PRINCETON UNIVERSITY.

It seems a pity that President Hall, who has accomplished so much for the advancement of

psychology in America, should claim in an editorial article in the last number of *The American Journal of Psychology* that he has accomplished nearly everything. The scientific and academic growth of psychology in America during the past fifteen years has been notable, but the cause must be sought chiefly in the progress of science as a whole and the sharper differentiation of psychology from the other sciences. Even those who have done the most are representatives of such a movement, not causes of it. In the article in question it is stated that "under the influence of these men [those who received their training under President Hall] departments of experimental psychology and laboratories were founded at Harvard, Yale, Philadelphia, Columbia, Toronto, Wisconsin and many other higher institutions of learning." Professor James introduced experimental psychology at Harvard University, Professor Ladd at Yale University and Professor Baldwin at the University of Toronto, and their names do not appear on President Hall's list of former students. I began the work at the University of Pennsylvania with the coöperation of Professor Fullerton (where it is continued by one of our former students, Professor Witmer), and at Columbia College with the coöperation of Professor Butler. I am glad to have had the privilege of studying for four months under Dr. Hall at Johns Hopkins University, but I had previously studied for two years under Lotze and Wundt and held an appointment at Johns Hopkins University for some months before Dr. Hall was called as lecturer to that University. The other men mentioned first on President Hall's list—Professors Dewey, Jastrow (who began the work at the only remaining university mentioned) and Donaldson—were also members of Johns Hopkins University before Dr. Hall.

In the same editorial article it is stated that *The American Journal of Psychology* wishes to publish especially 'the results of experimental investigations in psycho-physic laboratories,' an 'Archiv function not yet represented by any serial publication in this field in English.' It is, however, easy to verify the fact that during the past two years *The Psychological Review* has published some forty-two experimental investi-

gations in psychology whereas *The American Journal* has published but twenty-seven.

J. MCKEEN CATTELL.

COLUMBIA COLLEGE.

#### THE RADIOLARIAN EARTHS OF CUBA.

TO THE EDITOR OF SCIENCE: The occurrence of Radiolarian earths in the land structure of the West Indian region has been of special interest to geologists, owing to the fact that they probably represent profound organic sediments of the deeper floor of the sea. The discovery of these earths in Barbados and Trinidad had excited wide interest, but little light had been obtained upon the important question of their geologic age.

In my recent papers\* on the geology of the Island of Cuba, I have briefly described the geology of some interesting beds of siliceous earths which I collected from a locality in the suburbs of the town of Baracoa, and personally determined with the microscope to be composed of radiolarian remains. Through the determinations by Dr. Dall of fossils collected by me from the overlying strata, I was enabled to point out the important fact that they occurred immediately below strata containing fossils of undoubted Miocene age, and published a figure illustrating their geologic relations.

I was not aware at the time of making this publication that the existence of radiolarian beds in Cuba, much less at this particular locality, was known, as they are not mentioned in Professor Crosby's paper,† the only one previous to mine based on personal studies of the region.

In an article on the geology of the Barbados (to which Mr. J. W. Spencer has called my attention) by Mr. A. J. Jukes-Browne, published in the *Quarterly Journal of the Geological Society of London* for May 2, 1892, p. 221, the following interesting paragraph occurs:

"Cuba.—When this paper was read, Mr. J. W. Gregory was able to announce, from the examination of rocks he had obtained from Baracoa in Cuba, that radiolarian earths existed in that island; he finds them to be similar in structure

\* *American Journal of Science*, September, 1894. Notes on the Geology of the Island of Cuba. Based upon a reconnaissance made for Alexander Agassiz, Cambridge, Mass.

† On the Elevated Coral Reefs of Cuba. *Proc. Boston Society of Natural History*, Vol. XXII., pp. 124-129.