

In regard to what I have called 'reflective bashfulness' I am convinced by various reports from correspondents that my own children developed earlier than many do in this respect. In new editions of both my volumes I am giving 'three years and later,' instead of 'in the second and third years,' in describing this epoch. As this 'reflective bashfulness' is what goes on to develop into self-conscious modesty, its existence sooner or later cannot be in question. The point on which more light is needed is as to the existence of an intermediate period of relative friendliness—which both my children showed—between the earlier and the later exhibitions of bashfulness.

In conclusion I may especially thank Professor Tufts for the subtle compliment implied in the words: "But I am convinced that few children develop in such a favorable moral atmosphere as that of the children observed by the author!"—that is if he do not spoil it by saying he did not know the children were my own!

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#### PROFESSOR MUNSTERBERG ON 'THE DANGER FROM EXPERIMENTAL PSYCHOLOGY.'

In an article with the above title in the *Atlantic Monthly*, for February, Professor Münsterberg maintains three theses, from all of which I dissent. These are: (1) that a recent book by Dr. Scripture is 'a climax of blunders;' (2) that mental processes cannot be measured; and (3) that experimental psychology is useless to the teacher.

Dr. Scripture's 'The New Psychology' seems to me to be a good and useful book, and this is the opinion of competent reviewers in several journals. The book, it is true, covers only a part of psychology in which the author is especially interested and to which he himself has made valuable contributions. But such monographs are, perhaps, more needed at the present time than compendiums of the whole science. As a matter of fact Professor Münsterberg's only criticism of the book is to the effect that it claims to give the results of psychological measurements and classifies them under the magnitudes measured. I think that I am to some extent responsible<sup>1</sup> for the method of classification followed by Dr. Scripture, and I am quite prepared to defend it. Professor Münsterberg himself uses the magnitude measured in naming his separate articles 'Zeitsinn,' 'Augenmass,' 'A Psychometric Investi-

<sup>1</sup> *Mind*, 1888; *Philosophical Review*, 1893; and elsewhere.

gation of the Psycho-physic Law,' etc., and in giving a review of such experimental work the same classification can be conveniently maintained. Classification is a matter of convenience, all our classifications being to a certain extent arbitrary and artificial. Thus, when mental processes are classified into cognitions, feelings and volitions, or into sensations and perceptions, the student is apt to get an idea of sharp distinctions that do not exist. In a system of psychology an author will naturally use the method of classification that he regards as best expressing his system; in an exposition of laboratory work an objective classification has many advantages, both practical and theoretical. Certainly objections may be urged against such a classification, but Professor Münsterberg's article will scarcely tend to a solution of the problem either for the psychologist or for the lay reader.

Professor Münsterberg has published numerous measurements made by a psychologist in a psychological laboratory for the analysis of psychological processes. Whether these should be called physical or psychological measurements is to a certain extent a matter of nomenclature. The epistemological questions involved are important, but are such as psychology as a natural science can ignore. They would be quite unintelligible to most readers of the *Atlantic Monthly*, and have no connection with the value of experimental psychology to the teacher. When Professor Münsterberg says that the unmeasurable character of psychological facts is a fundamental presupposition of psychology, he must mean of his own system of psychology. Most psychologists will agree with Kant that mental processes have time as a dimension. Otherwise how is genetic psychology possible? And if Professor Münsterberg thinks that the time of mental processes cannot be measured, why does he entitle one of his papers 'A Psychometric Investigation, etc.'? Whether mental processes have a measurable intensity and extensity is a complex question which I have elsewhere discussed and to which I intend to return. Professor Münsterberg has himself said, and in italics, '*eben weil die Grundlage dieselbe ist, kommt der psychischen Intensitätsmessung auch dieselbe Berechtigung zu wie allen physikalischen Messungen.*' (Beiträge zur exp. Psychol., 3, p. 23.)

Professor Münsterberg says to the teacher: "This rush toward experimental psychology is an absurdity. \* \* \* Do not expect that it will help you in your work as teachers more than astronomy or geology would help you," etc. Now, the practical importance of experimental psychology for the teacher has doubtless been overestimated on occasion, but this scarcely seems an adequate reason for writing in a popu-

lar journal that it has no use whatever. Professor Münsterberg and I probably agree in holding that experimental psychology is not a separate science, but a method in psychology. I fail therefore to understand, in spite of the further explanation in the *Atlantic Monthly* for June, why the experimental method is thought to be of no use to the teacher, unless it is also of no use to psychology. I myself believe that the experimental method and its results have been useful in many ways, among others in making psychology more real and profitable to the teacher. I think that psychology has much the same relation to the profession of the teacher as physiology has to medicine. Teaching, like medicine, is an art dependent largely on insight and natural aptitude, but it is well both for the teacher and for the physician to know well one science, and for each to choose that science most nearly related to his profession. Professor Münsterberg opened his first article published in America with the sentence: "The experimental study of memory, important both for psychology and for pedagogics, is, as yet, only begun." This seems to me a more correct attitude than that of the *Atlantic Monthly* articles. The experimental study of the senses, of memory, attention, habit, fatigue, etc., has enriched psychology in a direction of special interest to pedagogy. The practical applications are limited, but we hope that they will increase, and in the meanwhile the subject is profitable and stimulating to the teacher.

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