

My dear Mr. Peirce,

... I feel bound to say that, according to my notion of such a work—one, to be sure, very commonplace in comparison with that which you entertain—an article in a cooperative dictionary such as this should not be devoted to pioneer work, however eminent the writer of it, but to the exposition of what is either fairly well established and current or, if not, is capable of being so expressed within the necessary limits as to be intelligible to the ordinary properly-equipped reader. Now, the views which you lay down in your article seem to me absolutely to require for their adequately intelligible presentation far more space than you have given to them, and, *a fortiori*, far more space than the dictionary can spare.

Very faithfully yours,  
F. FRANKLIN.

MILFORD, PA., 1900, Nov.

My dear Franklin:

Your letter is at hand. I asked of you a disagreeable thing, and I thank you for having done it so faithfully. Would there were more courage between friends! You give me wholesome counsel, and I shall follow it, notwithstanding the suggestions of the Evil One.

Yours faithfully,  
C. S. PEIRCE.

This same advice, might, I have no doubt, have been repeated to advantage under later letters of the alphabet.

If Charles S. Peirce had happened to have a longer period of activity at the Johns Hopkins University—if the years had not been cut off during which he was kept upon the solid ground of intelligible reason by discussions with a constantly growing group of level-minded students,—there is no doubt that his work would have been of more certain value than it can be affirmed to be now; it is probable, for instance, that his grateful pupil, William James, would not have found his generously provided for Lowell lectures too incomprehensible to be printed at the time. At the meetings of the Philosophical Congress in Göttingen, in 1908, Peirce had two warm defenders of his views, as against the James form of pragmatism, in the Italian philosophers, Calderoni and Vailati. Vailati, a man of most acute intellect, is no longer living; Calderoni would no doubt be able to throw much illumination—more perhaps than any other living writer—upon the real bearing of the philosophical views of Mr. Peirce.

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CHRISTINE LADD-FRANKLIN.

### CHARLES S. PEIRCE AS A TEACHER

TO record an impression of Charles S. Peirce as a teacher is a grateful opportunity. A deep conviction of the significance of the problems presented and a mastery of the intellectual processes were his sole and adequate pedagogical equipment. The logical quality was the dominant trait of his thinking; rectitude became a rational virtue. In the deductive field where premises were sharply defined and under control, the orderly development of conclusions was the true function of the well-trained mind, and the mark of the scholar. The "Algebra of Logic" was an expert tool usable only by the expert, and extending the scope of the logical grasp. Deeply mathematical, his thinking had not the trace of a scholastic quality; there was no love of the tool for its own sake, but an admiration of its cutting edge as the issue of human care and skill. His interests were comprehensive, though not scattered. In the field of inductive problems the fertility of his resources imparted a breadth to his treatment that brought to the student the constant leadership of a rich mind. His knowledge never gave the impression of a burden, but of strength. His command of the history of science was encyclopedic in the best sense of the word. The hypotheses of the great thinkers of the past were transformed into logical exercises for the present-day student. The great advances of science were due as much (if not more) to an increased hold over the logical instrument as to an enlarged realm of observation. The history of science was a record of man's growth in logical stature. In dealing with the more fluid and versatile considerations of induction, as in the more rigid and closed systems of deductive reasoning, the skilled focusing of his mind excited admiration. The irrelevant was discarded, the significant composition revealed. The chips fell away and the statue in the block appeared. This sense of masterly analysis accomplished with neatness and dispatch—all seemingly easy, but actually the quality of the highest type of keen thinking—remains as the central impression of a lecture by Professor Peirce.

When I came to the Johns Hopkins University in the autumn of 1882, Mr. Peirce's career was well established. He had inspired a remarkable group of young men, now leaders in intellectual affairs; a group to which is to be added the name of Christine Ladd-Franklin, whose exceptional abilities secured for her exceptional privileges. The "Studies in Logic" by "Members of the Johns Hopkins University" appeared in 1883. The concluding paper which Mr. Peirce contributed to the volume on "A Theory of Probable Inference" exhibits the qualities of his teaching and the charm and lucidity of his

language, and remains an admirable example of the construction of his thought and the finish of his art. I refer to it because it reflects the interplay of logical and psychological trends, which he developed as a fertile principle of interpretation. Logic was an emanation of habit; the trend was biological, the product required the schooling of discipline and the inspiration of genius. It was this side of his teaching that gave the humanistic value; out of it grew the insight that made him the father of pragmatism. The doctrine had a distinct pedagogical value; it made the student feel the reality of the discussions by adding a moderate insight to a growing capacity. "In point of fact a syllogism in Barbara virtually takes place when we irritate the foot of a decapitated frog." After developing the idea, he concludes: "Although these analogies, like all very broad generalizations, may seem very fanciful at first sight, yet the more the reader reflects upon them, the more profoundly true I am confident they will appear. They give a significance to the ancient system of formal logic which no other can at all share."

My predilections at that formative period were, I must confess, rather negative. My college course had left me with a series of dislikes, not violent, but distinctive. By elimination I enrolled as a student in philosophy. Mr. Peirce's courses in logic gave me my first real experience of intellectual muscle. Though I promptly took to the laboratory of psychology when that was established by Stanley Hall, it was Peirce who gave me my first training in the handling of a psychological problem, and at the same time stimulated my self-esteem by entrusting me, then fairly innocent of any laboratory habits, with a real bit of research. He borrowed the apparatus for me, which I took to my room, installed at my window, and with which, when conditions of illumination were right, I took the observations. The results were published over our joint names in the *Proceedings of the National Academy of Science*. The demonstration that traces of sensory effect too slight to make any registry in consciousness could none the less influence judgment, may itself have been a persistent motive that induced me years later to undertake a book on "The Subconscious."

As a further illustration of his fertile suggestiveness and use of cooperative stimulus I mention his study of great men. He prepared an elaborate question-sheet regarding the ancestry, qualities of mind and body, mode of work, stages of growth, etc., of the great men of all times. He invited a small group of students to join him in reading the chief biographies of great men and extracting the data that might furnish the entries for the syllabus. We then held conferences for the discussion and tabulation of the results. The project was

never completed. A number of years later, I was permitted to formulate two rather simple conclusions, the one relating to "Longevity," the other to "Precocity." This was done at a time when such studies were not general, though Galton's work was known. Such a conclusion as that later associated with Dr. Osler's misquoted verdict regarding the correlation of early manhood with germinal ideas, was anticipated in this study. Such were his methods.

Mr. Peirce's personality was affected by a superficial reticence often associated with the scientific temperament. He readily gave the impression of being unsocial, possibly cold, more truly retiring. At bottom the trait was in the nature of a refined shyness, an embarrassment in the presence of the small talk and introductory salutations intruded by convention to start one's mind. His nature was generously hospitable; he was an intellectual host. In that respect he was eminently fitted to become the leader of a select band of disciples. Under more fortunate circumstances, his academic usefulness might have been vastly extended. For he had the pedagogic gift to an unusual degree, had it by dower of nature, as some men handle a pencil and others the bow of a violin. It may be an inevitable result of the conventional system of education, but it is none the less a sad one, that his type of ability does not flourish readily in an institutionalized atmosphere; and no university had a more wholesome atmosphere than had Johns Hopkins in those days. The moral, if there be one, is that systems must give way to personalities, if the best talents of the best men are to be available.

The young men in my group who were admitted to his circle found him a most agreeable companion. The terms of equality upon which he met us were not in the way of flattery, for they were too spontaneous and sincere. We were members of his "scientific" fraternity; greetings were brief, and we proceeded to the business that brought us together, in which he and we found more pleasure than in anything else. This type of cooperation and delegation of responsibility came as near to a pedagogical device as any method that he used. One instance of it stands out with embarrassing clearness. To my consternation I was informed by Mr. Peirce that he would be absent at the time of the next lecture in logic, and that he would like me to present the next stage in the development of his topic to the class of graduate students. About half the hour was over, when Mr. Peirce walked in, took his place and insisted upon my concluding the exercise. I know of no more enlightening comment upon the atmosphere of the place and the day than that the procedure was accepted naturally by all concerned except myself.

It should be mentioned that during these years Mr. Peirce was

continuing his work in the Geodetic Survey and was thus carrying on a considerable range of scientific work of quite different scope. He came of a family of exact scientific men with academic traditions. It needed no change of manner or interest to set his activities in the professorial direction. By those who knew him in other relations I am confirmed in my impression that he had more pleasure in the academic pursuits. To these he turned when he retired, recognizing in his work as a scholar surveying broadly the field of intellect, the strongest bent of his versatile mind. To those who believe that for the training of the leaders of men, nothing is more inspiring and more helpful than training by example—than the privilege of association in the cooperative spirit with a master mind—the example of Charles S. Peirce will continue to remain a cherished memory. An educational policy that makes it possible to find a place for such men as Peirce in the faculties of the great universities is a worthy ambition for those who control the educational future of America.

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JOSEPH JASTROW.

#### CHARLES S. PEIRCE AND A TENTATIVE BIBLIOGRAPHY OF HIS PUBLISHED WRITINGS

THOUGH I have not stood in any peculiar relation to Charles S. Peirce, and can not speak authoritatively on the various phases of his extraordinarily diversified intellectual activity, I can not refuse the editors' courteous invitation to add a few words of "philosophic piety" in tribute to one of the few great seminal minds that America has produced.

Many and diverse are the minds that form the philosophic community. There are, first and foremost, the great masters, the system builders who rear their stately palaces towering to the moon. These architectonic minds are served by a varied host of followers and auxiliaries. Some provide the furnishings to make these mystic mansions of the mind more commodious; while others are engaged in making their façades more imposing. Some are busy strengthening weak places or building much-needed additions, while many more are engaged in defending these structures against the impetuous army of critics who are ever eager and ready to pounce down upon and destroy all that is new or bears the mortal mark of human imperfection. There are also the philologists, those who are in a more narrow sense scholars, who dig not only for facts or roots, but also for the stones which may serve either for building or as weapons of destruction. Remote from all these, however, are the

intellectual rovers who, in their search for new fields, venture into the thick jungle that surrounds the little patch of cultivated science. They are not gregarious creatures, these lonely pioneers; and in their isolation they often completely lose touch with those who tread only the beaten paths, so that no one learns of their green pastures or knows their final burial ground. Those that return to the community often speak of strange things or use strange words; and it is but seldom that they arouse sufficient faith for others to follow them and change their trails into high roads.

Few nowadays would question the great value of these pioneer minds; and it is often asserted that universities are established to facilitate their work, and prevent it from being lost. But universities, like other well-managed institutions, can find place only for those who can work well in harness. The restless, impatient minds, like the socially or conventionally unacceptable, must thus be kept out, no matter how fruitful their originality. Charles S. Peirce was certainly one of these restless pioneer souls with the divine gift of seeing the hitherto invisible. In his early papers, in the *Journal of Speculative Philosophy*, and in his later papers, in the *Monist*, we get indeed glimpses of a vast philosophic system on which he was working with an unusual wealth of material and apparatus. He had, indeed, one of the most essential gifts of successful system builders, the power to coin an apt and striking terminology. But I am not certain that he could ever have completed this work, i. e., I can not in my own imagination see how the various lines of his thought can be made to meet. However, that his was a mind unusually fruitful in strikingly original suggestions, no careful, open-minded reader of his writings will deny. That these writings have been so sadly neglected—that even now no collected edition of them is available—is to be accounted for only by the fact that isolation and neglect are the penalty for those who stray from the beaten path and refuse to bow to the reigning idols.

In one respect Peirce has certainly been most fortunate. Two such gifted and powerful minds as those of William James and Josiah Royce have been able to follow some of the directions from his Pisgah heights and have thus conquered rich philosophic domains. That further domains await those who can decipher other of his cryptic directions can, of course, only be a question of faith.

Of Royce's indebtedness to Peirce an eloquent testimony is contained in the preface to the "Problem of Christianity." In view, however, of Professor Howison's misunderstanding of that passage and its motive,<sup>1</sup> a student of Professor Royce may be allowed to

<sup>1</sup> *Philosophical Review*, May, 1916, p. 240.