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NOTES

Attributed to Peirce by Fisch in *First Supplement*. Peirce and Halsted were in correspondence (see MS L 181). On 15 January 1892, Halsted wrote that he would be sending his translation of Bolyai in a few days. This note is unassigned in Haskell's *Index to The Nation*, vol. 1.

Prof. George Bruce Halsted, whose valuable translation of Lobatchevsky's 'Non-Euclidian Geometry' we noticed the other day, has now published a translation of Bolyai's celebrated work on the same subject. The translator says in his introduction: "This strange Hungarian flower was saved for the world, after more than thirty-five years of oblivion, by the rare erudition of Prof. Richard Baltzer. In the second edition of his 'Elemente der Mathematik,' in 1867, Dr. Baltzer called attention to this remaking of geometry, and the name Bolyai was at last given its place in the history of science. Before that, the father, Wolfgang Bolyai, seems to have been the only person who really appreciated the work of his son John Bolyai." We are told that "Bolyai, when in garrison with cavalry officers, was challenged by thirteen of them at once. He accepted all, stipulating only that between each two successive duels he might play a bit on his violin. He was victor thirteen times." He left a manuscript of a thousand pages which has never been examined by a competent mathematician. The work now translated will be seen by most of those who are specially interested in the subject, for the first time. It is historically of the deepest interest, but, as an introduction to the subject, is inferior to the work of Lobatchevsky. Prof. Halsted's publication confers, however, an even greater boon upon mathematicians than his other translation.

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CSP, identification: Haskell. *Index to The Nation*. See also: Burks, *Bibliography: List of Articles*.

—Prof. William James has produced an abridgment of his important treatise upon Psychology, with some additional matter for the use of beginners (Henry Holt & Co.). His "natural science" method, which consists of ignoring all general doubt, is carried even further in the briefer than in the fuller work. An epilogue is appended for the further defence of this method, but to no avail. Students of molecular physics presume, for reasons that seem good to them, that certain things are absolutely true of the universe in every part, such as the tridimensionality of space, its infinity, the law of action and reaction, the principle of energy, and the like. These universal truths, as they are held to be, have a basis in experience, but are extended so far beyond the domain of observation as to be fairly termed metaphysical. In many branches of physics it is easy to show that they are near enough true for practical purposes; but in molecular discussions the question of the truth of such things has to be sifted to the bottom, on pain

of leaving a grave doubt over the whole subject. In psychology the same thing is far more true. The list of metaphysical positions is longer, and they are far more dubious; so much so that students of psychology have hitherto considered metaphysical discussions as unavoidable. Such discussions have by no means been omitted by physicists, although the present unsatisfactory state of molecular theory is in part owing to the small aptitude of laboratory men for the kind of thinking requisite for the solution of such problems. Prof. James's method practically comes to keeping the most general questions out of the focus of distinct apprehension and thus entrapping himself, or at least the reader, into confident but dangerous and unexamined assumptions. To have pointed these out all along would not have made the book much longer nor seriously harder for the student.

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A Treatise on the Geometry of the Circle, and some Extensions to Conic Sections by the method of Reciprocation. With numerous examples.

By William J. McClelland, M.A. Macmillan. 1891.

CSP. Identification: Haskell. *Index to The Nation*. See also: Burks. *Bibliography: List of Articles*. MS 1375 (draft).

Of the smaller and outlying branches of mathematics which have received attention of late years, none is more interesting than that of the remarkable lines, points, and circles of a triangle, which really forms the principal subject of this little treatise; and it is a subject in which any person skilled in elementary geometry and trigonometry can take pleasure. Mathematicians will welcome a convenient compendium of the theorems connected with Brocard's, Taylor's, and a dozen other circles, as to which they are now all expected to be *au fait*.

The methods of the book are rather promiscuous, the nomenclature is not always good (as when the well-known theorem of Matthew Stewart is called "Euler's theorem," a designation applied already to half-a-dozen different propositions), the enunciations are sometimes not clear, and the writer throughout has consulted his own comfort rather than the reader's. But, notwithstanding such relatively unimportant faults, the book is acceptable.

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NOTES

CSP. identification: MS 1365. See also: Burks. *Bibliography*: MS 1375a(s). This note is unassigned in Haskell's *Index to The Nation*, vol. 1.

Every mathematician who proposes to carry his studies beyond the college curriculum will be glad to learn that Prof. F. N. Cole has published a translation of Netto's well-known 'Theory of Substitutions,' which can be obtained by enclosing three dollars to the Register Publishing Company, Ann Arbor, Mich. If not a great classic, it is a standard treatise; and the student who is not thoroughly familiar with its contents (which can nowhere else be so conveniently