

PEIRCE PROJECT NEWSLETTER

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COMING ATTRACTIONS:

Peirce's Work for the Century Dictionary

How did Peirce define "continuity"? What did he mean by "abduction," "dialogism," "homogeneity," "phenomenon"? One way to find out is by studying the many manuscripts in which he wrote about or used those concepts. Another way is by consulting the *Century Dictionary*, for which he wrote or passed judgment on, by his own estimation, about 16,100 definitions (MS 1163: 2). Peirce spent many years of his life laboriously crafting definitions for the C.D., so much so that no student of his work can possibly afford to overlook such a significant resource. An important selection of Peirce's contributions to the C.D. is slated to appear in vol. 7 of the critical edition. The complexity of the available materials is such that some years of work will be required before W7 can appear, and the volume will thus be published out of sequence. This article aims to describe the scope of Peirce's dictionary work, and to explain the various editing problems awaiting us in the coming decade.

Peirce nurtured a lifelong interest in dictionaries and lexicography, and more generally in the classification of words. Knowledge of words and the ability to classify them requires long training, a truth the scholastically minded Peirce had learned quite early in his career (he developed such a respect for the history and proper usage of words that he wrote up an "ethics of terminology"). There are many documents that lay out his views about spelling, grammar, and etymology, views that are frequently relieved on a background of comparative linguistics. No word could be either explained or defined without a thorough knowledge of its history and usage, and that conviction certainly contributed to turn Peirce into one of the most thorough lexicographers of his time.

The Century Co. emerged from Scribner's & Co., a subsidiary of Charles Scribner's & Sons, and was founded in 1881 by Roswell Smith, an Indiana lawyer and a major Scribner's & Co. stockholder. Smith bought the subsidiary (renaming it in honor of New York's well known Century Club) so that he could start publishing books and not just the *Scribner's Monthly* magazine (a contractual limitation that was too profit-hampering). The magazine evolved into the very successful *Century Illustrated Magazine*. But the C.D. was to be the new company's largest and most significant undertaking. Smith had purchased the American rights to Charles Annandale's enlarged edition of John Ogilvie's *Imperial Dictionary* (based on *Webster's Dictionary*, and first published in England in 1852) from Blackie & Son of Glasgow some time in 1881 or 1882, and the Century Co. published an American edition of the *Imperial* in 1883. Early in 1882 however, Smith proposed that the Century Co. adapt the *Imperial* to American needs, turning it into the most comprehensive and detailed American dictionary ever made. Smith appointed the great philologist William Dwight Whitney as editor-in-chief, and made his own relative Benjamin E. Smith (who succeeded Whitney in 1894) managing editor. B.E. Smith was a graduate assistant at the Johns Hopkins University at the time, and although he was not Peirce's student he had presented two papers at the Metaphysical Club in February and March 1882. It seems likely that it was at Johns Hopkins, some time in 1882, that B.E. Smith recruited Peirce to become one of the main editorial contributors to the C.D. Peirce began working on definitions in 1883 and in the fall of that year, probably with the dictionary in mind, he added a new course on philosophical terminology (see Nathan Houser's Introduction in W4: lvi). Peirce was made responsible for six subject areas (only two other contributors were responsible for as many areas): logic, metaphysics, mathematics,

EDITIONS JOIN PEIRCE EDITION PROJECT IN INDIANAPOLIS

The George Santayana Papers and the Frederick Douglass Papers have joined the Peirce Edition Project in Indianapolis, making Indiana University's School of Liberal Arts at IUPUI an international center for academic editing. The Douglass Edition moved to IUPUI last summer and the Santayana Edition will move this summer. Taken together, the resources of these three editions constitute a diverse and important scholarly collection in American thought and culture and provide a unique opportunity for students and researchers.

Herman Saatkamp, Jr., Professor of Philosophy, is director of the Santayana Project and the general editor of *The Works of George Santayana*. He moved to Indianapolis to become Dean of the IU School of Liberal Arts, and he brought the Santayana Edition with him. *The Works of George Santayana* is a 20-volume critical edition published by MIT Press and supported by the National Endowment for the Humanities. Four volumes of the series have been published: *Persons and Places*, *The Sense of Beauty*, *Interpretations of Poetry and Religion*, and *The Last Puritan*.

John McKivigan, Professor of History, is director and editor of the Douglass Edition. Five volumes have been published so far, representing the best of more than 6,000 speeches delivered by Douglass. The Douglass Edition, published by Yale University Press, is also supported by the National Endowment for the Humanities.

Although the three editions are to some extent competing for the same funds, both within the university and without, their combined significance as a resource center for textual editing and for American thought should, at least in the long run, attract support. The Peirce Project welcomes the Douglass and Santayana Editions!



IUPUI Editors: Nathan Houser, Herman Saatkamp Jr., and John McKivigan

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mechanics, astronomy, and weights and measures. Mathematics was the subject to which Peirce contributed the most definitions (about 4900 by his own reckoning), logical terms coming into second place (2900 terms defined or critically examined). But Peirce contributed to many more fields than cited on the front page: he provided nearly all definitions related to universities, and composed hundreds of definitions related to color, constellations, instruments, numbers, philosophy, mathematical physics, chronology, psychology, astrology, geodesy, plus thousands of other definitions for general terms (MS 1163: 2). Peirce also supplied hundreds of quotations to serve as examples, and provided cuts for 200 illustrations (mostly curves, constellations, and instruments).

Houser has pointed out that the impact of Peirce's massive dictionary work on the evolution of his thought "was surely very significant, though it has yet to be seriously examined" (W4: lvi). Quantitatively speaking, Peirce contributed one of the largest numbers of definitions ever provided by a philosopher to an encyclopedic dictionary. From the time of his hiring, he seems to have worked steadily for nine years with few significant distractions, until 1891, when the last (24th) fascicle of the C.D. appeared (the fascicles were then bound into six volumes). It is unfortunately impossible to reconstruct even an approximate chronology of Peirce's work throughout those ten years. It has generally been assumed that Peirce composed his definitions in alphabetical order, from A to Z, working his way through the volumes of the *Imperial Dictionary*. But the surviving material is terribly incomplete. Although the extant documents mostly contain fragmentary drafts of a scattering of definitions running through the alphabet, it is apparent that Peirce also worked by topics, focussing at one time on mathematical definitions alone, and at another time on colors, on constellations, or on philosophical terms. B.E. Smith would also send Peirce definitions composed by other contributors for his input. Few of the surviving documents bear dates, and not many more can be dated with any precision by deduction from clues found in the correspondence or other manuscripts. What leaves no doubt, however, is that

Peirce's extensive and continual research had a profound impact on the general direction of his thought.

Characteristically, Peirce did not hesitate to write several drafts of his definitions, especially when they bore on significant terms. Part of the difficulty was of course to classify the many shades of meaning for any given term, and to subcategorize them accordingly so as to allow the reader to distinguish them perspicuously. As he put it, "the task of classifying all the words of language, or what's the same thing, all the ideas that seek expression, is the most stupendous of logical tasks. Anybody but the most accomplished logician must break down in it utterly; and even for the strongest man it is the severest possible tax on the logical equipment and faculty" (CSP to B.E. Smith, L80: 39-40, summer 1897).

For Peirce a good definition must do two things: it has to state the signification of the definiendum (what is essential to its conception), and it has to give an explanation of how a given kind is distinguished from all other kinds. In September 1908 Peirce jotted down the following remark in his Logic Notebook: "A dictionary definition will be (or at any rate contains) a definition proper in the case of a scientific or other exact conception; but an ordinary word needs an explanation, not a definition which almost itself needs to be expounded. . . . [A] definition proper offers as a substitute for a word whose difficulty consists in its prescissive abstractness, a composite of words more abstract still, while an "explanation" familiarizes the mind with the use of the word by bringing together in the briefest terms possible the subclasses of occasions in which it is used and giving an interpretation of it in each of them" (MS 339: 574, 576). Peirce's C.D. definition of the verb "to explain" similarly insists that the aim is to make something evident to the minds of others by analysis, description, interpretation, elucidation, and exemplification. Hence the great importance given to the selection of many quotations that show precisely the different classes of use of a definiendum—a "much superior method" (MS 339: 576) for which Peirce especially praised the *Oxford Dictionary*. Hunting for and selecting the most relevant quotations was thus one of the many activities Peirce devoted himself to (the Century editors also sent him hundreds of quotations compiled by their employees and pasted on paper slips).

Criticizing definitions and improving them was a major component of Peirce's methodological arsenal. Having spent years of his life composing definitions for the C.D., he spent years studying the dictionary almost daily. He was occasionally called upon to review other dictionaries (e.g., the Funk & Wagnalls *Standard Dictionary* in the *Nation* of 8 March 1894) or works about dictionaries (e.g., the review of R.O. Williams's *Our Dictionaries*, in the

Nation, 30 October 1890). On such occasions Peirce would invariably subject the dictionaries to statistical comparisons, notably because "one of the first questions to be asked concerning a dictionary is whether it is well proportioned in the sense of doing equal justice to different parts of the alphabet" (*Contributions to The Nation*, part 2, p. 40, 8 March 1894). He thought for instance that the space occupied by the As in the *Century* was disproportionately large. He had great respect for *Murray's Dictionary* (the future OED), but no single work gained his complete approval. He was not impressed with the increasing number of words dictionaries claimed to define: "the strenuous effort of the good lexicographer is to keep down his vocabulary. In an ordinary dictionary of reference, 25,000 words comprise all that anybody ever looks out. The rest is obstructive rubbish. Completeness is not to be thought of in any dictionary" (ibid.).

The correspondence between Peirce and the Century editors must have been vast, but unfortunately very little remains (the financial and editorial records of the Century Company, which ceased to exist in 1933 when it merged with Appleton, have apparently not been preserved), and the letters we do have mostly date from after 1891, after the first publication of the C.D. We may suppose, however, that the bulk of the correspondence consisted of notes reminding Peirce of deadlines for certain sets of definitions or for sending proofsheets back, notes asking for definition clarification, special requests (sometimes from other contributors), criticisms from Peirce regarding how entries (his or others') were being edited, etc. Peirce seems to have had occasional difficulties in getting entries as he intended them into the final publication. One particular instance involved his definition of the word "university," phrased as follows: "An association of men for the purpose of study, which confers degrees which are acknowledged as valid throughout Christendom, is endowed, and is privileged by the state in order that the people may receive intellectual guidance, and that the theoretical problems which present themselves in the development of civilization may be resolved." Century editors suggested a revision stressing that a university had been and continued to be an institution for instruction. Peirce replied that this view was badly mistaken, and that until Americans understood that a university had nothing

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"FOR THE COMMUNITY OF INQUIRERS"

EDITOR'S NOTE

I'm glad the PPNL is out to all of you.

If you encounter information that you believe would be of interest to others in the Peirce community, please send it on either to me, to Nathan Houser or just to the PEP offices at IUPUI. Also please be sure to send a copy of your books relating to Peirce for the PEP collection. —RWM

NOTE FROM PEP'S DEVELOPMENT OFFICE

As the individual directing the fundraising activities of the Peirce Edition Project, I often recall an old Frank and Ernest cartoon. In it, Frank stands clad as Moses holding the Ten Commandments and gazing heavenward. The caption reads, "What about funding?"

In the past I have used that cartoon to inform students that even the most divine and spiritual realities only exist in specific physical locations. (Indeed, one should recall that the giving of the commandments is followed by the world's first documented capital campaign as the Israelites give jewels and gold for the construction of the tabernacle and the Ark of the Covenant.) Leaving aside the question of the relative value of the Peirce Edition Project to that event, the need to pay for the intellectual, moral, and spiritual goods one values remains. It is a fact, perhaps an intractable one.

If the Chronological Edition of the *Writings of Charles Sanders Peirce* is to be completed, if the work of the PEP is to continue, then salaries have to be paid, manuscripts studied, equipment and supplies purchased, photocopies and trips made. The mere fact that we may value moral and intellectual goods more than material ones does not mean that the former exist outside of the realm of materiality. Those of us who lament the fact that Peirce labored under financial distress and wonder about how much more he could have accomplished and how much more significant his work would have been on the wider world, absent that distress, rarely conclude that he was better off without financial stability. We imagine how much better everything would have been if his situation had been different. We applaud those who gave money to ease his financial plight and deplore the behavior of those who, while outwardly lamenting his fate, did nothing, as though some university would hire him, the government pension him, or his family support him.

Too often, however, many of us manifest this attitude. We act as though because it would be more appropriate for some good to be provided from a common fund, then we need not do it. This view, even if correct, rarely accomplishes anything of value, regardless of how self-satisfied it makes us feel. It will not get the papers of Charles Sanders Peirce published, nor will it help to disseminate his ideas widely.

Those of us who care about Peirce, his work, and his legacy must be the ones to sustain them. We must demonstrate that concern through our support, both intellectual and material. Only by showing that it has value to us, can we then ask others to value it. This essentially is the meaning of the challenge grant from NEH. Such grants say, "Okay, here is some money to do your work, but you have to prove that the work is sufficiently important to others that they also will support it. Our resources are limited and numerous worthy projects clamor for them. Show us that people are so committed to what you do that we should fund you rather than another project, perhaps equally worthy."

In a world of finite resources, those of us who know Peirce's importance and the importance of the Peirce Edition Project must be those who help finance it. We must support the work, if we are to expect others to do so. Recently you should have received the annual appeal letter from the Peirce Edition Project asking you for a contribution. If you already have made your donation, thank you. If you have not yet done so, please take the time to do it now. Although we are nearing our goal for the NEH Challenge Grant, the deadline looms. Send your donation today and send the message that the legacy of Charles Sanders Peirce must be made available to the world. (Donations received too late for the NEH Challenge will be used to help build a Peirce Endowment.)

Edward L. Queen II

CD2 — Continued from page 2

to do with instruction, there would never be a university in this country. The editors yielded, and Peirce's definition was printed as he desired. But this was an exception, for the editors often made heavy revisions. The lack of surviving archives prevents us from assessing exactly the extent to which Peirce's definitions were changed. At the end of his *Monist* article "Reply to the Necessitarians" Peirce warned his readers that strict philosophical definitions were in many cases not allowed by the C.D. editors; his definitions consequently "were necessarily rather vaguely expressed, in order to describe the popular usage of terms, and in some cases were modified by proofreaders or editors; . . . they are hardly such as I should give in a Philosophical Dictionary proper."

How seriously we need to take this caveat is just one of the many problems PEP editors will face when tackling W7. There are six categories of materials that need consideration: (1) the surviving draft manuscripts and typescripts, which contain much writing that did not end up in the C.D.—such documents are the closest to Peirce's hand; (2) the first edition of the C.D.: we have a complete photocopy of Peirce's own prepublication set of the dictionary (called the interleaved copy)—Peirce used a green pencil to mark in the margin all the definitions he contributed in full or in part; (3) the interleaves of the interleaved copy, which are inserted blank sheets on which Peirce handwrote hundreds of additions, refinements, criticisms, etc., regarding definitions found on facing pages; (4) Peirce's contributions to the 1909 two-volume Supplement; (5) the correspondence and other exchanges with various C.D. participants (B.E. Smith and Alan Risteen, for instance) and critics (Simon Newcomb); and (6) the various judgments Peirce passed at different times on the dictionary, scattered here and there throughout the papers. Each of these categories comes with its own set of selection and editing problems.

Will volume 7 constitute Peirce's Philosophical Dictionary? No, that cannot be claimed. For one thing, the selected definitions will not be limited to those philosophical and logical. But even if it were, the readers would have to keep in mind that just about every definition Peirce provided was doctored by the Century editors, and that they rejected a great many of his contributions. We may of course assume that most editorial interventions did not alter the essence of Peirce's definitions, but we can never be completely sure. At the same time, it is also true that Peirce used the C.D. to propagate certain tenets of his own philosophy. Thus will we find, in the 1909 Supplement, definitions for such purely Peircean conceptions as firstness, secondness, and thirdness, phaneron, universal phenomenon, and cenopythagorean phenomenology. To what extent he had a hand in the definition of pragmatism is unclear. We know that John Dewey assisted in defining the word (and related terms) and Max Fisch speculated that Dewey used Peirce's interleaved definition when he constructed the entry. References to Peirce's work, especially his 1905 *Monist* article, are given a prominent place, and "pragmatism" has a separate entry. Peirce even planned to extract entries from the C.D. as the basis for his own philosophical dictionary. But he never brought the project to fruition, and so W7 will have to serve as an imperfect completion of his unfulfilled dream.

Jeffrey R. Di Leo & André De Tienne

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IN THE WORKS: *The Lost Report*

There have been many rewarding discoveries of Peirce manuscripts since Max Fisch began the systematized search of public and private archives in the 1950s. The 1968 discovery of Peirce's "Report on Gravity at the Smithsonian, Ann Arbor, Madison, and Cornell" (1889), known today simply as the Lost Report, represents one of the most significant finds to date. Now, nearly 30 years later (and more than a century after its suppression), the Lost Report is being edited for inclusion in Volume 6 of the *Writings*.

The 140 oversized typescript leaves of the report chronicle Peirce's decade-long attempt to obtain gravity values across North America. His pioneering refinements in the design and use of gravity pendulums—the instrument used to measure gravity since Galileo's time—were essential to the topographic and hydrographic mapping of the continent. Moreover, European geodesists were counting on Peirce to link his field stations with the international effort to establish the true figure of the earth. But Peirce was working without sufficient funding or computational support, and was only able to complete a report for his base station (the Smithsonian) and three field stations approximating an arc along the 43rd parallel.

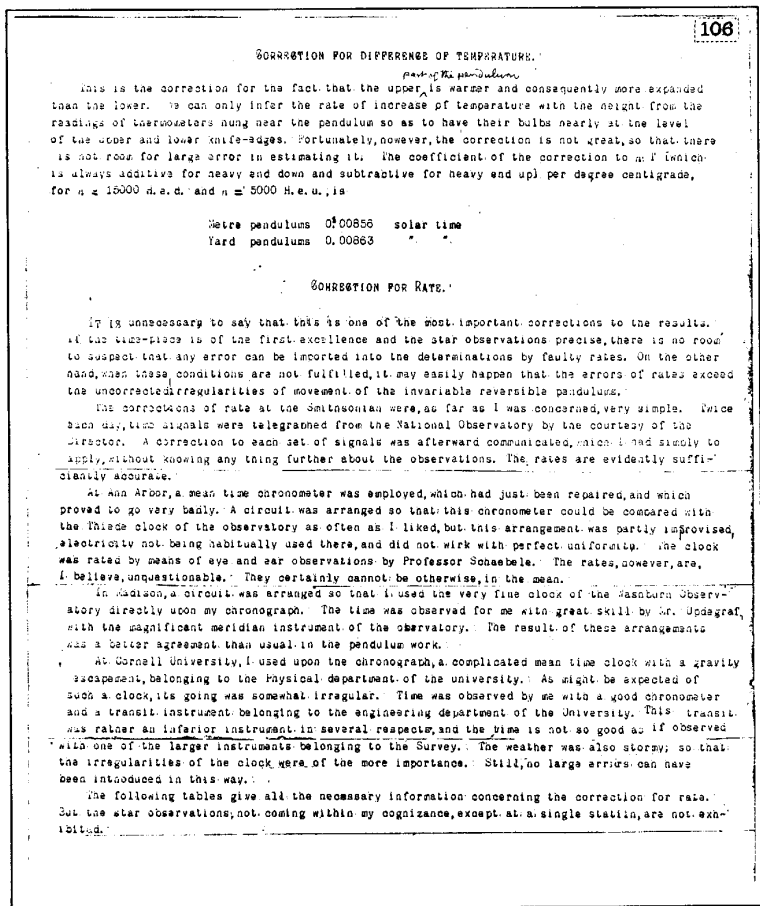
Thousands of data sheets from these stations (and from stations occupied by Peirce along a vast meridional arc from Montreal to Key West) survive in Peirce's Harvard papers and in the Coast Survey records deposited in the National Archives; these documents, as well as plentiful references to this work in Peirce's official correspondence, led University of California (Berkeley) physicist Victor Lenzen to suspect the existence of the Lost Report and to begin an exhaustive search for it. When investigations resulted in the discovery of the report by Coast Survey archivists, Lenzen became the first twentieth-century scientist to examine the document.¹ Lenzen, best known as a philosopher of science, was not unfamiliar with Peirce's work; as a young graduate student, he had actually moved Peirce's papers from Arisbe to Harvard in 1915. In his analysis of the Lost Report, Lenzen discovered that Peirce presented his procedures and station values for gravity ahead of his data, in much the same way that a modern researcher provides a descriptive abstract as overview to a scientific publication.

As it turned out, Peirce's "results first" approach provided the key to understanding why the Lost Report was suppressed. This

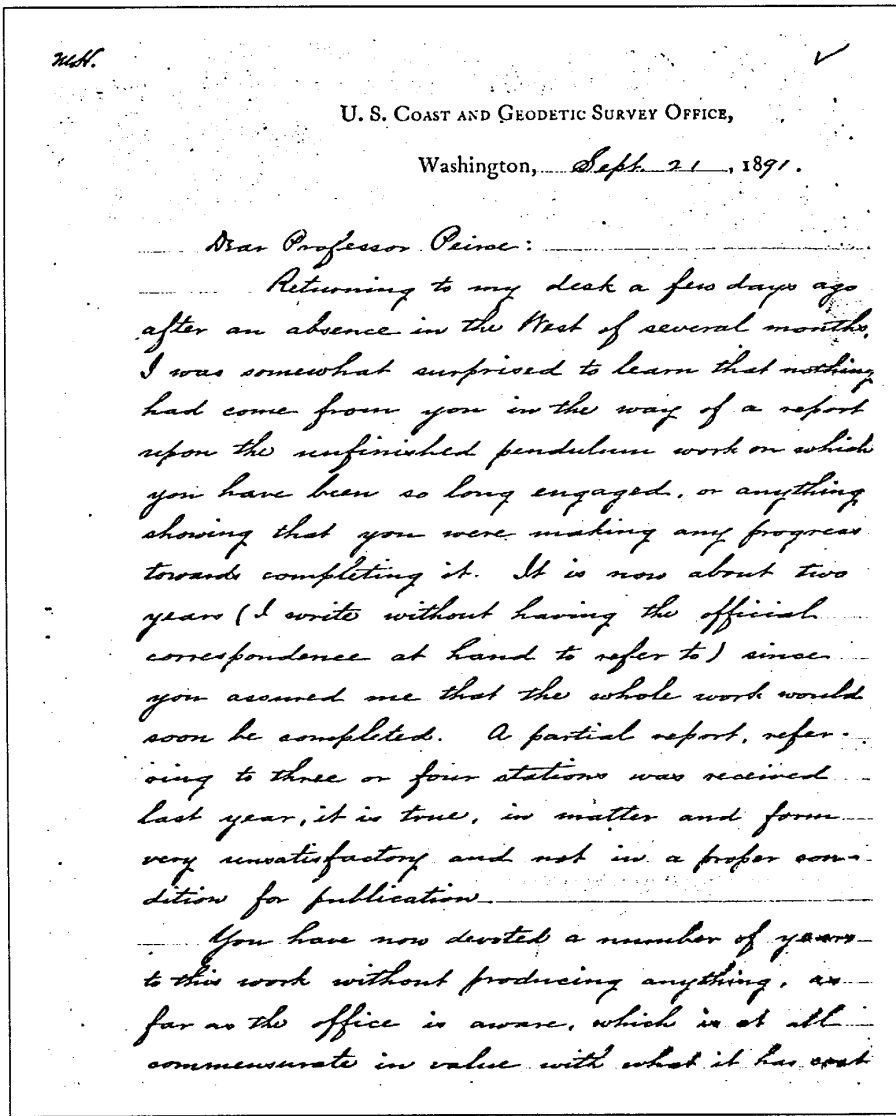
form of presentation was not favored in the last century, and Peirce was directed to rewrite the report; he was also ordered to report on his other gravity stations as soon as possible. Peirce was unable or unwilling to comply with either directive. Citing his own misgivings and the negative reports of outside reviewers (Simon Newcomb's proved least informed but most damaging), Survey Superintendent T. C. Mendenhall refused publication and, on the basis of Peirce's lack of publishable production, asked for his resignation from the Survey in 1891. Much of the report data would eventually be used by Peirce's Survey colleagues (without adequate attribution) to prepare more general reports on North American gravity stations; in 1894, Mendenhall would tell a congressional committee that Peirce's gravity determinations were, simply, inadequate.²

Peirce accepted his dismissal with uncharacteristic calm—he had known for some years that a break with the Survey was inevitable. He had fought a losing battle against a dwindling budget since 1885, and his refusal to work in Washington stretched his working relationship with successive superintendents to the breaking point. But bureaucracy is rarely the match for genius over the long haul. When Victor Lenzen studied Peirce's final value for gravity as determined in the Lost Report, he found that Peirce's results were as close to computer-age determinations as the best published values presented in Europe or America prior to the twentieth century.³

In 1977, the Lost Report was filmed as part of the Complete Published Works microfiche collection (P385, fiche 89-92). Ken Ketner's decision to film this unpublished and unedited text is a fair indication of its continuing importance to Peirce scholars. Today, the Lost Report presents some interesting editing challenges as it is prepared to appear in print for the first time. The document that Peirce turned over to Mendenhall in November 1889 was a 140-page conflation of new and old typescript carbons. It evolved from three earlier forms of the work: reductions of the raw



Leaf 106 of the final typescript, assembled by Peirce from four partial leaves of the first typescript, begins the summary of final correction factors for the gravity stations.



"You have now devoted a number of years to this work without producing anything." Coast Survey Superintendent T. C. Mendenhall's 21 September 1891 request for Peirce's resignation cited failure to resubmit the 1889 gravity report as grounds for dismissal.

LOST REPORT—Continued from page 4

data from the gravity measurement sites; a handwritten draft of the report narrative and tables; and a typescript prepared directly from the draft. In January 1888, Peirce was pressured into turning over his report materials to the Coast Survey for review, which at that time included the reductions and at least part of the handwritten draft. In January 1889, lame-duck Superintendent Frank Thorn demanded another submission for review before he himself departed with the rest of the Cleveland administration's appointees. Peirce sent in the data reductions, the handwritten draft, and a blue carbon of the first typescript draft. The package was massive and, perhaps intentionally, difficult to break down into its component parts. Each leaf was coded on the verso with a series of blue (ascending) and red (descending) numbers running from 1 to 2038. Peirce eventually supplied a Rosetta Stone of sorts—a document which identified each leaf by subject and sequence in the blue series.⁴

During 1889, corrections to the atmospheric data led Peirce to rework much of the report; his final submission of November 1889 consisted of 48 newly-typed sheets interleaved with 80 of the old purple carbon sheets and 12 cut-and-paste sheets combining pieces of both the old and new typescripts. The handwritten draft, which a 5 February 1889 Coast Survey memo identifies as leaves 1776 through 1911 of the second submission, has never been found. Most of the first typescript (leaves 1912 to 2038 of the second submission) were used to construct the final conflated text, but a total of 18 unincorporated leaves from the first typescript survive in the Harvard Peirce Papers as MS 1096. Six handwritten draft leaves for brief narrative portions of the second typescript also survive in the Harvard Peirce Papers.

For *Writings* Volume 6, copy-text will be the final submission conflation of the first and second typescripts, which includes Peirce's corrections and revisions throughout. The unincorporated leaves of the first typescript (MS 1096) include a version of the opening narrative that is very close to the final form, but Peirce's decision not to incorporate these leaves into the conflated final report relegates them to pre-copy-text status. Significant passages from these draft materials will appear in annotations. The report's tables will be abridged to eliminate repetitive data reductions, but all of Peirce's narrative text will appear as submitted to the Coast Survey more than a century ago.

Jon Eller

- 1 An account of Coast & Geodetic Survey Supervisory Archivist Albert Wimpey's discovery of the *Lost Report* appears in "News & Notes," *Transactions of the Charles S. Peirce Society* 5 (winter 1969), pp. [3]-4.
- 2 Mendenhall's testimony was printed in the 53rd Congress's publication, *Hearing Before the Committee on Naval Affairs, U. S. House of Representatives...on Bill H. R. 6338* (Washington, D. C.: GPO, 1894), pp. 153-54.
- 3 Victor F. Lenzen, "An Unpublished Scientific Monograph by C. S. Peirce," in *Transactions of the Charles S. Peirce Society* 5 (winter 1969), pp. 5-24. Mendenhall's Congressional testimony is summarized on pp. 20-21.
- 4 National Archives Record Group 23, Entry 22 includes Peirce's 1 February 1889 cover letter for 20 loose quarto books of working papers for the gravity report, his 2 February index of the blue verso number sequence arranged by gravity station and by the stages of calculations, and a 5 February internal memo identifying the two report drafts within the blue sequence.

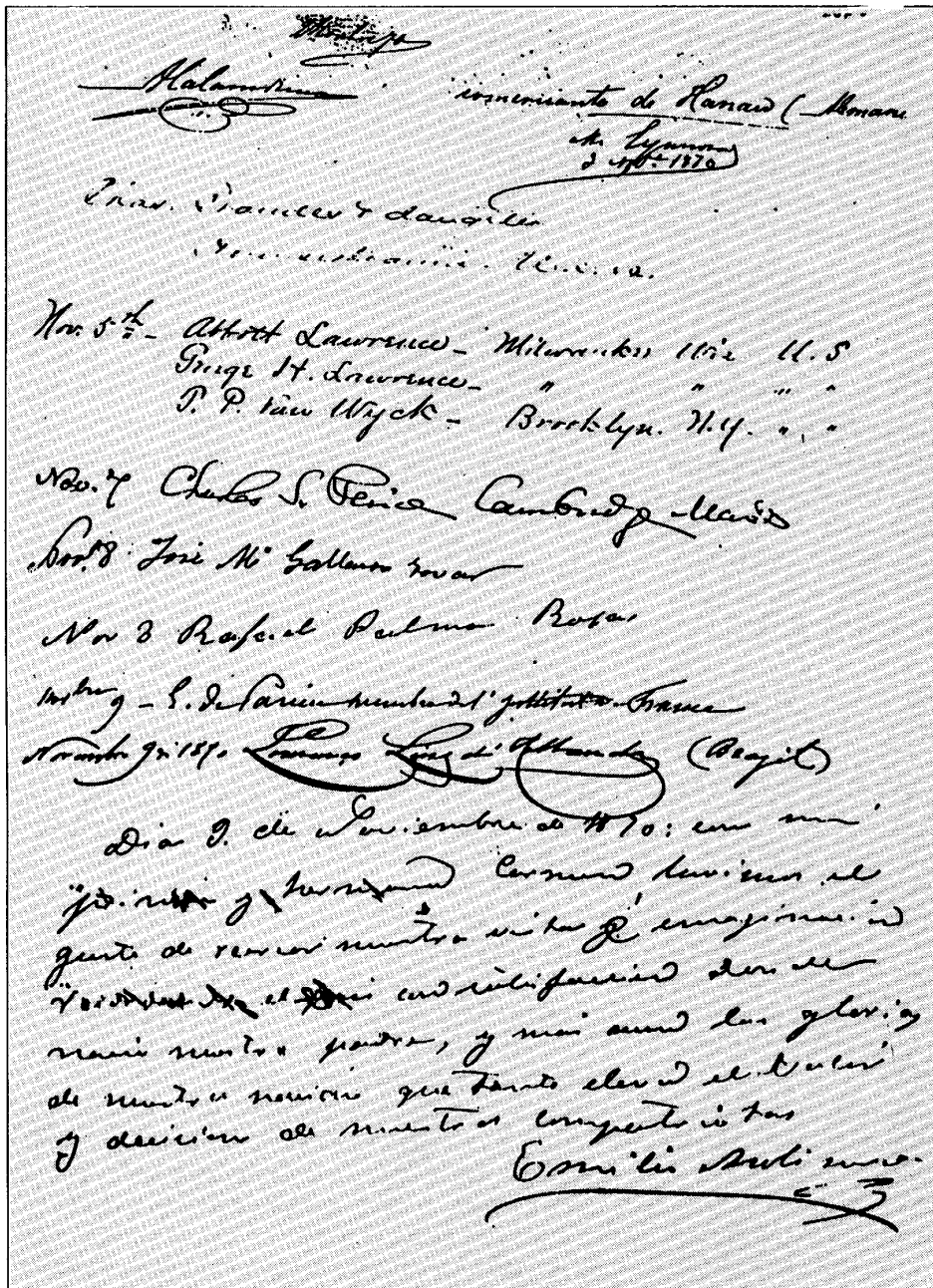
PEIRCE IN SPAIN

We learned from Max Fisch's introduction to W2 that on 18 June 1870 Peirce sailed from New York for Europe to travel along the Mediterranean path of the total eclipse that would occur on 22 December 1870. Peirce's assignment for the U.S. Coast Survey was to locate suitable sites for eclipse observation parties. One of the countries Peirce visited was Spain, but not much is known about his time there. Fortunately, Professor Jaime Nubiola, from the University of Navarra, is filling out this story: see in particular his account in a recent issue of the *Transactions* (1998, vol. 34). Through Nubiola's efforts, we know that on 7 November, 1870, Peirce visited the magnificent Alhambra in Granada, where he signed the guest book—the only visitor to sign on that day (see the accompanying illustration). Years later, in his Cambridge Conferences Lectures of 1898, Peirce would remember with pleasure and awe the mathematical complexity and beauty of the decorations of the great 14th century Moorish palace. Thanks to Professor Nubiola for providing the indexical proof of Peirce's visit.

WRITINGS ERRATA

Roger Maddux (Iowa State) alerted us to some incorrect formulas in W4. On p. 340, the last line and also the 9th line from the bottom, the conversion cup has been omitted from the term on the left-hand side of each equation. On the following page, p. 341, the final el in the 3rd line from the bottom (the el in the 3rd formula down in the 3rd column of "twelve propositions" at the bottom of the page) should be complemented (should have a straight line over it). Prof. Maddux wondered whether these errors were Peirce's. It turns out that the missing conversion cups on p. 340 were not only in Peirce's manuscript, but were also in our printer's copy and galleys, but were dropped by the printer at some later stage. Unfortunately, we didn't catch the mistake in our subsequent proofreadings. The complement bar over the el, on p. 341, was left out by Peirce and, therefore, should be added in the text and to the list of emendations. Thanks to Prof. Maddux for these corrections.

We welcome corrections to the *Writings* and will pass them along to the readers of the Newsletter.



Libro de Firmas de la Alhambra, 9.V.1829-20.I.73

BOOK NOTES

In this section we publish short descriptive notices of new books about Peirce or subjects likely to interest our readers. We cannot survey all new publications or prepare critical reviews, so we notice only those books sent by authors and publishers. When available, we reprint notices supplied with the books (often edited and supplemented with text from prefaces or introductions); otherwise we prepare our own brief announcements. Please note: we notice books only if they are sent as review copies to be deposited in the Project library. Prices and ISBNs are given when available.

His Glassy Essence: an Autobiography of Charles Sanders Peirce

Kenneth Laine Ketner.
Vanderbilt University Press, 1998. 416 pp.
ISBN 8-8265-1313-1

This is the first of a planned three-volume life of Peirce; it deals mainly with Peirce's first twenty-eight years and focuses on little-known aspects of his life. Inspired by Walker Percy, who himself was absorbed by the life and writings of Peirce, Ketner adopts a narrative strategy that lets Peirce tell his own early life story. Ketner weaves the voluminous components of an intellectual biography that are scattered throughout Peirce's published and unpublished writings into a novelistic account that reads like a mystery. There is a lot here for the seasoned Peirce scholar as well as for the student and general reader. Some manuscript texts and many letters are published for the first time. Ketner's solutions to some of the puzzles of Peirce's life, while sure to create some controversy, are always fascinating and stimulating. Ketner warns his readers to beware of Peirce's "transforming power" and it seems clear that he hopes his book will be an instrument for the conveyance of that power. Interested readers should give Ketner's book a chance by reading it straight through as it was written, neither skipping the sometimes lengthy quoted passages nor ignoring the thought experiments readers are asked to perform. The book is intended to present Peirce in a new light.

Philosophy in Experience; American Philosophy in Transition

Richard E. Hart and Douglas R. Anderson (eds.)
Fordham University Press, 1997,
xi + 281 pp. \$30.00; \$18.00
ISBN 0-8232-1630-6 (Cloth)
ISBN 0-8232-1631-4 (Paper)

This collection of essays aims to make explicit the transition into which American Philosophy is currently engaged, so as to mark out its place as philosophy enters the twenty-first century. The volume, which appears in the American Philosophy Series, contains thirteen essays, and concentrates on the themes of self, community, meaning, interpretation, and metaphysics. Included with essays by the editors are ones by Thomas Alexander, Gary Calore, James Campbell, Vincent Colapietro, Robert Corrington, Carl Hausman (the introduction), Felicia Kruse, Armen Marsoobian, John Ryder, John Stuhr, and Kathleen Wallace. There is no index.

The Metaphysics of Experience; A Companion to Whitehead's Process and Reality

Elizabeth Kraus
Fordham University Press, 1998 (2nd revised edition), xxi + 200 pp. \$35; \$17
ISBN 0-8232-1795-7 (Cloth)
ISBN 0-8232-1796-5 (Paper)

Kraus refers to her book as a "sherpa guide" to Whitehead's *Process and Reality*. She begins with a presentation of the nature of process philosophy and of the linguistic difficulties surrounding *Process and Reality*. Chapter two presents an overview of Whitehead's initial, non-technical formulation of the philosophy of organism in *Science and the Modern World*. The remainder of the book closely follows the structural divisions of *Process and Reality*, so that it can be read concurrently with it.

The Metaphysics of Experience is not a "Whitehead made easy." Anyone who wants to confront *Process and Reality* still should prepare for some serious climbing. With Kraus as a guide, however, one definitely gets to climb with the best.

Woman Philosophers

Mary Warnock (ed.)
Charles E. Tuttle Co., Inc., 153 Milk Street,
Boston, MA 02109-4809, 1996. xxvii +
301 pp. \$8.50
ISBN 0-460-87721-6 (Paper)

This collection of selections from seventeen women philosophers begins with Ann Conway (1631-1679) and ends with Susan Haack (1945-). Among those included are Mary Wollstonecraft, L. Susan Stebbings, and G. E. M. Anscombe. Peirce scholars will be pleased by the incorporation of The Hon. Victoria Lady Welby.

Warnock's criterion for identifying a woman as a philosopher is concern for matters of significant generality together with being at home among abstract ideas. She takes David Hume as a good example of such a person from mainstream philosophy. Despite his never having held a position as an academician, he passionately confronted the ideas of other philosophers, arguing for his own theories. Warnock argues that the women herein included are philosophers cut from Hume's cloth — generalizing, explaining and arguing rationally.

Also of particular interest is Warnock's parallel chronologies of the lives of women philosophers and of the cultural and historical events. One almost-humorous chronological match, for example is the publication of Susan Haack's *Deviant Logic* (1974) opposite "(1974) Watergate scandal."

Pragmatism, an Annotated Bibliography (1898-1940)

John R. Shook
Rodopi, 1998, xxx + 615 pp. \$ 155
ISBN 90-420-0269-7 (Cloth)

This valuable volume contains no less than 2,794 bibliographical entries (not including reviews), most of which are annotated. The annotations range from three lines to about five pages for James's *The Varieties of Religious Experience*. They also contain references and summaries of reviews of the entry. The book comes with a thorough author and subject index. The former shows that 33 articles by Peirce are included (including reviews); the latter that he is mentioned in only 80 entries/annotations. There are about 90 entries for writings of William James (again including reviews) and he is mentioned in over 250 entries/annotations.

The bibliography comes with an introduction describing the criteria for selection, research method, as well as short accounts of the development of pragmatism in Cambridge, Chicago, Britain, Italy, France and Germany.

Signum um Signum; Elizabeth Walther-Bense zu Ehren

Udo Bayer, Karl Gfesser, and Jukiane Hansen (eds.)
Agis-Verlag, 1997, 383 pp.

A Festschrift dedicated to the seventy-fifth birthday of Elisabeth Walther-Bense, and contains a bibliography of her work. Four essays discuss aspects of Peirce's semeiotics: Gérard Deledalle, "Peirce, Les Catégories et les Signes;" Georg Nees, "Die Blindschleichen, das Eisenerz und die Zeichen;" Frue Cheng, "Neue Darstellung der Zeichenoperationen;" Hariss Kidwaii, "Die Basistheorie der Semiotik und die Kleine 'Matrix;" and, Karl Herrmann in "Anwendung semiotischer Vorstellung zur Erzeugung erkenntnistheoretischer Modelle." Cheng seeks to develop a visual representation of the three operations of the sign (adjunction, superisation, and iteration), by using the Chinese alphabet, Chinese opera, and garbage disposal at subway stations as examples. The paper contains an extensive discussion of Peirce's categories. Herrman begins by regrouping Kant's system in terms of triads, after which he uses these triads to analyze and schematize the reactions of Fichte, Schelling, Hegel, and Marx to the Kantian philosophy.

BOOK NOTES (cont.)

Irreversibility and Evolution in Peirce's Cosmology

Andrew S. Reynolds. Ph.D.
Dissertation. University of Western
Ontario, 1997

This dissertation explores Peirce's attempts to explain irreversible processes and the evolutionary development of complexity and order within the universe as a whole. It uncovers two distinct models of irreversible behavior in Peirce's thinking. One is based upon the law of large numbers of probability theory and statistics; the other, which is better known in Peirce scholarship, is called by Peirce the law of mind or, equivalently, the law of habit. Both of these models describe a type of teleological process. That which is described by the law of large numbers is a comparatively weak stochastic telos. The law of habit involves a much stronger notion of final cause characteristic of conscious and deliberate goal-seeking behavior. Peirce's attempts to explain how the stronger version arises from the weaker version is investigated, with special attention being paid to his attempt to give a molecular theory of protoplasm based upon the principles of the statistical mechanical theory of matter.

The claim is made that the two distinct models of evolutionary phenomena found in Peirce's cosmological theory are in tension with one another. This tension is formulated here as two separate problems: a problem of redundancy and a problem of incompatibility. Moreover it becomes apparent that there is related ambiguity in Peirce's thinking about the evolution of natural laws. While the law of large numbers seems suitable as an explanation of law in the sense of a mere statistical uniformity, it has definite shortcomings as an account of the growth of dynamical (i.e. causal) law. For this topic the law of habit naturally suggests itself as a superior hypothesis. Yet Peirce never makes the distinction between the two models explicit and even appears to offer both as accounts of the very same phenomena. In summary, Peirce apparently failed to realize that he was relying upon two distinct models and so was unaware of the difficulties which their combination entails.

Logik, Mathesis universalis und allgemeine Wissenschaft; Leibniz und die Wiederentdeckung der formalen Logik im 19. Jahrhundert

Volker Peckhaus
Akademie Verlag, Berlin, 1997, 412 pp.
ISBN 3-05-003111-5 (Cloth)

This masterful treatise centers exactly on the topic expressed in its subtitle: Leibniz and the re-discovery of formal logic in the nineteenth century. It addresses the

bridging role that Leibniz's view of a *mathesis universalis* played in the second half of that century in the face of the dramatic progress exhibited in science and mathematics. It argues that the changes in logic through this time were prepared for by changes in philosophy and mathematics. The account begins with the early treatments of Leibniz by C. Wolff, J. H. Lambert, and G. Ploucquet and sets the stage for the post-Hegelian context in which the key two-volume Erdmann edition of Leibniz's works appeared in 1839 and 1840. The heart of the work is the study of Boole, Jevons, and Schröder. Schröder in 1877 credited Leibniz with having foreshadowed the logical calculus that was getting underway at this time. Thus the turn of the century saw a major re-treatment of Leibniz's work, principally by Louis Couturat, that made explicit the presence of Leibniz's spirit in the latest developments. Peckhaus brings out fundamental connections in Schröder's work to mathematics—in particular "absolute algebra"—and thereby counters the common historical view that the algebra of logic of Peirce and Schröder had no essential connections with mathematics. The view of Peirce given by Peckhaus is essentially the view as seen through Schröder. There are only passing references to Peirce's works and Schröder's remark about the abstractness of Peirce's "Algebra of Logic" (1885)—"sehr abstrus anmutenden Abhandlung" (p. 279)—stands without further comment as the only hint of why Peirce does not figure more prominently in this history.

Pragmatism as a Principle and Method of Right Thinking. The 1903 Harvard Lectures on Pragmatism, by Charles Sanders Peirce

Patricia Ann Turrissi, ed.
State University of New York Press,
Albany, 1997. xi + 305 pp.
ISBN 0-7914-3265-3 (Cloth)
ISBN 0-7914-3266-1 (Paper)

The philosophical significance of the 1903 Harvard Lectures can hardly be overstated. Peirce was unable to publish them when he was alive, and, until Turrissi's edition, the fifth volume of the *Collected Papers* was for about sixty years the only textual source scholars could conveniently access. The lectures represent a considerable editing challenge, for many of them exist in several drafts, and Peirce kept revising them until the last second before presentation. What to publish and how to edit it constitute two very difficult practical questions, and they allow for different strategies. It had long been known that the CP text did not do sufficient justice to the lectures, and so Turrissi's

answer to the challenge deserves a warm welcome, and indeed much scholarly gratitude. She decided to publish as much as was feasible, as a result of which we have the pleasure of being able to read three of the drafts of lecture 2, for instance. Unlike their more recent publication in *Essential Peirce 2*, Turrissi tried to reproduce the lectures as Peirce actually delivered them, and she thus relegated most of the passages Peirce skipped for lack of time into the notes instead of restoring them into the running text. Her edition begins with an introduction that ably explains the historical circumstances of the organization of the lectures. An 80-page long commentary follows, in which Turrissi moves from one lecture to the next exploring various Peircian philosophical themes. The lectures themselves take up about half the book and are textually quite reliable. Most of the endnotes consist of additional Peirce text. The work ends with a good conceptual index.

The Quest for Reality: Charles S. Peirce and the Empiricists

Cornelis de Waal, Ph.D. Dissertation.
University of Miami, 1997.

Locke's, Berkeley's, and Peirce's conceptions of reality are analyzed, using Peirce's distinction between nominalism and realism as a guideline. These three authors are chosen, first, because Peirce declares for realism in his 1871 review of Berkeley and does so in opposition to both Berkeley and Locke, and second because Peirce's criticism of nominalism runs roughly parallel to Berkeley's criticism of Locke. It is shown that all three conceptions of reality are hypotheses, which provides the criteria to compare and evaluate them: the hypothesis must be either required, or at least useful, for explaining the origin and regularities of those ideas that are not of our own making. This leads to the following result: Locke's conception of reality fails on both counts. Berkeley's alternative, though also not required, is explanatory, but as it appears, this results entirely from a strong presupposition that does all the explaining for him. It is further shown that his approach is based on a denial of matter that is untenable, and that it ultimately fails for the same reasons as Locke's. Peirce's view of reality as the object of a final opinion, though not required either, can be defended as being explanatory, but needs some modification, since some things will be real but not part of the final opinion. This leads to a new conception of reality, called the hypothesis of hypothetical realism, by way of a conclusion. This hypothesis is explanatory, and is safe from the criticisms raised against the previous conceptions.

BOOK NOTES (cont.)

Pragmatism: a Reader

Louis Menand, ed.

Vintage Books, 1997. xxxiv + 522 pp.
\$16.00.

ISBN 0-679-77544-7 (Paper)

Thanks to Louis Menand, we now have a thick new collection of seminal writings on pragmatism that begins with Peirce's 1868 "Consequences" paper—but only with a mere fragment of it where Peirce outlines his new program for philosophy—and that carries us forward well into the 1990s with selections from Richard Posner and Richard Poirier, and with a chapter called "The Future of History" by Joyce Appleby, Lynn Hunt, and Margaret Jacob. Peirceans will be disappointed with Menand's treatment of Peirce in his introduction where Peirce's role in the pragmatist movement is undervalued, but they will be amused to find that Menand's selections from Peirce's writings undermine his argument. For balance, teachers using Menand's book may want to assign H. S. Thayer's introduction to his 1970 collection on pragmatism. Overall, Menand's selections are excellent, clearly the result of some careful thinking, although the great leap forward from Mead to Rorty skips the entire development of pragmatism within modern analytic philosophy. It is noteworthy that Menand presents pragmatism as a vital force in contemporary culture and it is gratifying that his book has been published in such an accessible and respected series.

"We Pragmatists . . .": Peirce and Rorty in Conversation."

Susan Haack. *Partisan Review* (1997), pp. 91-107

In a fanciful moment one might muse, "Ah, if only Charles Peirce and Richard Rorty could be brought together to discuss philosophy and, more specifically, pragmatism—and we could witness their conversation!" Thanks to Susan Haack this conversation *has* taken place and is now in print for our pleasure and instruction. With herself as the astute and timeless interviewer, she has resurrected Peirce to debate Rorty in a lively and sometimes acid give and take. While we must confess that there is some make-believe in the mix, she has put no words in their mouths and has managed skillfully to convey the very spirit one might expect. This is a gem for classroom use. Haack's "Conversation" also appeared in *AGORA: Papeles de Filosofía* (1996) pp. 53-68 [ISSN 0211-6642] and in her recent book, to be noticed in our next issue, *Manifesto of a Passionate Moderate; Unfashionable Essays* (Chicago 1998), pp. 31-47.

The Rule of Reason; The Philosophy of Charles Sanders Peirce

Jacqueline Brunning and Paul Forster (eds.)
University of Toronto Press, 1997,
x + 316 pp. \$ 80.00; \$ 24.95
ISBN 0-8020-0829-1 (Cloth);
ISBN 0-8020-7819-2 (Paper)

The Rule of Reason is an excellent collection of essays with a slight accent on logic. Jaakko Hintikka discusses Peirce's place in the history of logical theory, Isaac Levi directs attention to the relation between inference and logic, Helmut Pape discusses Peirce's search for a logic of mental processes, and Robert Burch and Jay Zeman each make important contributions to existential graphs. The collection further contains papers by Sandra Rosenthal (derivation of the categories), Richard Robin (the proof of pragmatism), Paul Forster (indeterminism), Carl Hausman (the origin of interpretation), Christopher Hookway (sentiment and self control), Douglas Anderson (political dimensions of fixing belief), Susan Haack (the first rule of reason), Vincent Colapietro (the deliberative subject), and Tom Short (hypostatic abstraction). The collection comes with a very good introduction, and is dedicated to the memory of David Savan. There is no index.

William James, Charles Peirce, and American Pragmatism.

(The Audio Classics Series: The World of Philosophy.)

Nashville, Tennessee: Knowledge Products, 1996. (Box 305151, Nashville, Tennessee 37230).

Two audio cassettes. 2.5 hours.

This audio recording turns out to be much more fun to listen to on a long car journey than one might think. First this introduction to the origins of pragmatism, though prepared by professors, is actually delivered by people pleasant to listen to. Lynn Redgrave, the narrator, pauses on many occasions to let other voices render the original writers. The unidentified portrayer of Peirce brings out the fact that much of his writing does have to be delivered out loud in a certain authoritative, if not demanding, tone in order to parse it meaningfully. There are equally distinctive and seemingly true-to-life voices of others, including James, Dewey, Morris Cohen, Max Fisch, William Kingdon Clifford, and H.S. Thayer. Starting with the squirrel anecdote ("Does the man go round the squirrel or not?"), this two-and-a-half hour presentation moves from Peirce, through the differences with James, to a synthesis in Dewey. No background in logic or mathematics is needed; the main purpose is to convey just why this American philosophy is important for anyone who wishes to think about thinking. There seems to be a slight favoritism

shown to James to the extent that he comes across as somewhat more humane than Peirce, but the script, prepared by James Campbell and edited by John Lachs and Wendy McElroy, is generally a balanced and edifying production. This audio presentation would provide a lively and useful introduction to a course on pragmatism.

The Continuity of Peirce's Thought

Kelly A. Parker.

Vanderbilt University Press, 1998, xvi + 268 pp., \$ 39.95

ISBN 0-8265-1296-8 (Cloth)

In this book Parker shows how the principle of continuity functions in phenomenology and semeiotic, two of the philosophical sciences—the ones most examined by Peirce—that mediate between mathematics and metaphysics. Parker does a very good job in showing how Peirce's studies in mathematics shape his metaphysics. The book begins with an outline of Peirce's architectonic philosophy and an analysis of Peirce's views on the nature of mathematics. Next he compares Peirce's concept of infinitesimals with that of Cantor, and shows how and for what reasons Peirce disagrees with him. In the following three chapters Parker discusses Peirce's phenomenology and semeiotic. The concluding chapter contains a discussion of Peirce's scientific metaphysics. Parker's book is partly intended as an introduction into Peirce's philosophy. This makes Peirce's notion of continuity, which is difficult to grasp, more accessible, especially for readers without a background in mathematics. Parker succeeds well in showing the systematic character of Peirce's philosophy.

The Role of Pragmatics in Contemporary Philosophy

Paul Weingartner, Gerhard Schurz, Georg Dorn (eds.)

Contributions of the Austrian Ludwig Wittgenstein Society, vol. VI, bd. vi, 1997, pp. 51-1064.

Two of the ninety papers for 20th international Wittgenstein Symposium in Kirchberg am Wechsel, 1997, on the role of pragmatics in contemporary philosophy, address Peirce. In "Peirce's Rejection of the Unknowable as a common ground for Pragmatists" (598-603), Gianmatteo Mameli argues that Peirce's definition of reality as potential intelligibility can be seen as the common ground for all pragmatists, and that the pragmatist vs. antipragmatist controversy amounts to the question whether it makes sense to think there are truths that are in principle inaccessible to intelligent minds. In "Peirce, Putnam und die Wahrheit" (876-882), Richard Schantz shows that Putnam's internal realism can be seen as a continuation of Peirce's epistemic conception of truth.

BOOK NOTES (cont.)

Hermann Günther Grassmann (1809–1877):
*Visionary Mathematician, Scientist and
Neohumanist Scholar*

Gert Schubring, ed.
Boston Studies in the Philosophy of
Science, vol. 187.
Kluwer Academic Publishers, Dordrecht,
1996, xxix + 359 pp.
ISBN 0-7923-4261-5 (Cloth)

Peirce was typical of those mathematicians and logicians who discovered the genius of Hermann Grassmann only in the 1870s, late in Grassmann's life. He saw a number of ideas of his own and his father's anticipated by Grassmann's work from the 1840s. This conference collection treats the many aspects of Grassmann's wide-ranging contributions to crystallography, colorimetry, and linguistics, as well as to mathematics. It also brings to the fore the even less-well-recognized work of his brother Robert in logic. For the most part Peirce is mentioned only in passing in a few papers, notably in Ivor Grattan-Guinness, "Where does Grassmann fit in the history of logic?" (pp. 211–16) and in Volker Peckhaus, "The influence of Hermann Günther Grassmann and Robert Grassmann on Ernst Schröder's algebra of logic" (pp. 217–27). Peirce plays a prominent and unusual part, however, in the paper by the Danish professor of engineering Ole Immanuel Franksen, "Invariance under nesting—an aspect of array-based logic with relation to Grassmann and Peirce" (pp. 303–35). Franksen presents aspects of his pioneering work in applying Trenchard More, Jr.'s theory of nested arrays to a formalization of logic and using this in technological applications. One of the key concepts is here developed using Peirce's detailed presentation of the matrix representation of quaternions as given in his letter to (of all people!) William James, 26 February 1909 (Eisele, *New Elements of Mathematics*, III/2, pp. 836–66).

*The Philosopher of Free Religion; Francis
Ellingwood Abbot, 183–1903.*

W. Creighton Peden
Peter Lang, 1992, 207 pp.
ISBN 0-8204-1747-5 (Cloth)

An intellectual biography in which Peden portrays Abbot as a radical Janus figure in the American Freethought tradition. The first chapter covers Abbot's early years, including his time as a student at the Harvard Divinity School, and what Peden calls his religious crisis. After a discussion of Abbot's early philosophy, Peden attends to the period when Abbot was editor of *The Index*. The book concludes with a discussion of the years after 1880, in which Abbot returns to graduate school at Harvard and writes his *Scientific Theism*, a book that greatly impressed Peirce. Peden's biography contains no name or

subject index, but gives an extensive bibliography of Abbott's work.

Beyond the Psychoanalytic Dyad; Developmental Semiotics in Freud, Peirce and Lacan

John P. Muller
Routledge, 1996, ix + 230 pp.
ISBN 0-415-91068-4 (Cloth)
ISBN 0-415-91069-2 (Paper)

Drawing upon the relation between Lacan's registers of experience (the imaginary, the symbolic, and the Real) and Peirce's categories, Muller seeks to employ Peirce's triadic structure of the sign to recover Lacan's notion of the Real (capitalized by the author), a notion he believes Lacan interpreters find particularly difficult to come to grips with (p. 8). It must be said that it is not altogether clear how this works. The Real, Muller argues, corresponds with Peirce's category of firstness (p. 32). This suggests that "beyond the psychoanalytic dyad" advocates a reinstatement of firstness as a basic category. Secondness, Muller argues, is governed by the imaginary register, and thirdness by the symbolic register (*ibid.*). However, in his rather vague conclusion, Muller suggests that his view avoids dichotomic thinking by taking into account also Peirce's category of *thirdness*, not firstness. Muller's main source of inspiration remains the work of Lacan, and his discussion contains many examples drawn from empirical research, especially with young children. Despite his rather cursory discussion of Peircean semeiotics, this makes the book a valuable read.

The Philosophy of C. S. Peirce

Risto Hilpinen, ed. *Synthese*, Vol. 106, No. 3,
1996, pp. 299–430.

This special volume of *Synthese* contains four papers on Peirce, and an extensive review by Tom Short of the first five volumes of the *Chronological Edition*. Joseph Brent begins with an autobiographical sketch of the Peirce biographer, after which he elaborates upon some aspects of Peirce's life. Randall Dipert examines iconicity, representation, and resemblance in the light of Peirce's theory of signs, Goodman's views on resemblance, and modern philosophies of language and mind. Finally, Robert Schwartz opposes the tendency in studies of mind to assume that the properties and principles of linguistic forms of representation must also hold for forms of thought. In his review article, Short uses the chronological presentation of Peirce's ideas as found in the *Chronological Edition* to challenge Max Fisch's well-known account of Peirce's progress from nominalism to realism.

Pour une pragmatique de la signification

Jean Fiset
XYZ éditeur, Montréal, Québec; coll.
"Documents", 1996, 299 pp. (in French)
ISBN 2-89261-165-2 (Paper)

How can we apply Peirce's semeiotic to literary analysis? Fiset's book is an excellent and highly suggestive exploration of that difficult question. The first of three parts establishes the theoretical ground with an original discussion of some "elementary" semiotic concepts. These include semiosis in relation to text, interpretance and interpretation in relation to pragmatistic foundations, and representamen/sign/ground, a controversial trilogy among Peirce interpreters (Fiset tries to do justice to all three terms, with a distinctive, Savan-inspired, preference for "ground"). The second part explores the variable connections between signs and objects, with much help from weathercocks and sunflowers. In the midst of many fascinating moves, Fiset subjects the Peircean analysis of representation to the powerful test of non-figurative art (where iconicity is found to be a key element), and he illuminates the process of signification with a penetrating analysis of passages from Jung, Andersen, and Dostoyevsky, among others. The third part offers a rich discussion of iconicity (icons and hypoicons), metaphor, enlarged sign, and movement of thought, with constant illustrations from and confrontations with the work of poet and painter Saint-Denys Garneau. This important book ends with an able translation of seventeen essential fragments extracted for the most part from the *Collected Papers*, plus a translation of an interesting letter from David Savan to the author. There is a bibliography, but no index.

The Thought and Character of William James

Ralph Barton Perry.
Vanderbilt University Press, 1996,
xvii + 402.
ISBN 0-8265-1279-8 (Paper)

This is a new paperback edition of Perry's classic biography of William James, which originally appeared in 1935. It should be noted, however, that, although there are no signs of this on the cover, this is actually a reprint of the *abbreviated* edition of 1947. Despite more than half a century of James scholarship after the appearance of the book, this biography remains a work of considerable value. The biography is thorough, well written, and allows James to speak for himself through many letters and related documents. The new edition comes with an introduction by Charlene Haddock Seigfried.

BOOK NOTES (cont.)

Claves del Pensamiento de C.S. Peirce Para el Siglo XXI

Jaime Nubiola (ed.)

Anuario Filosófico, vol. XXIX, no. 3, 1996, pp. 1131–1440, \$15.

ISSN 0066-5215

A selection of Spanish essays with short English summaries at the beginning of each paper. The selection begins with a Spanish translation of Walker Percy's Jefferson Lecture. This is followed by a historical section: Mauricio Beuchot (Mexico) studies a central aspect of Peirce's relation with the Schoolmen; Eduardo Forastieri-Braschi (Puerto Rico) draws a relation between Peirce and Baltasar Gracian; Carlos Ortiz de Landazuri (Navarra), following Apel, studies the move from Kant to Peirce; Uxia Rivas (Santiago) discusses the links between Peirce and Frege; Gregory Pappas (Texas) discusses Peirce's affinity with Ortega y Gasset on the issue of basic beliefs; and Moris Polanco (Bogota) gives an account of some links between Peirce and Hilary Putnam.

The historical section is followed by a more systematic one: Gonzalo Genova (Navarra) discusses the three types of inference; Fernando Andacht (Montevideo) the place of the imagination in semiotics; and Armando Fumagalli (Milan) the role of the index in Peirce's philosophy.

The third section explores the reception of Peirce and the influence of his thought. Wenceslao Castañares (Madrid) and Guy Debrock (Nijmegen) study the use of Peirce's thought for the development of communication and information theories; Toni Gomila (La Laguna) for the foundation of cognitive science; and Joan Fontrodona (Barcelona) for management theory. With regard to linguistics, Carmen Llamas (Navarra) gives an account of the reception of Peirce's thought in Spanish linguistic studies, and Dinda Gorlée (Amsterdam) applies some of Peirce's ideas to translation. The collection is concluded with Susan Haack's (Miami) "The Ethics of the Intellect," and a partial translation into Spanish of MS 1334 of 1905 by Sara F. Barrena. Copies of the volume can be ordered at: *Anuario Filosófico*, Edificio de Bibliotecas, Universidad de Navarra, E-31080 Pamplona, Spain.

The Collected Essays of Francis Ellingwood Abbot (1836–1903), American Philosopher and Free Religionist

W. Creighton Peden and Everett J. Tarbox, Jr. (eds.).

The Edwin Mellen Press, 1996, 4 Vols, 407 + 445 + 485 + 453 pages, \$109.95 each, ISBN 0-7734-9007-8 (Vol. 1); 9009-4 (Vol. 2); 9011-6 (Vol. 3); 9013-2 (Vol. 4). (Cloth)

The four volumes, which appear in the *Studies in American Religion* series, contain 169 of Abbott's essays, which is about a fourth of the number of essays listed in the bibliography. The order of the papers is alphabetical. Volume 1 contains Ace-Dem; volume 2 Des – Is; volume 3 Jes-Pub; and volume 4 Pur-Wor. Volume 4 also contains a letter from Max Müller and one from Mr. Wasson. Most of the papers are contributions Abbott made to *The Index* while he was editor of the journal. The first volume contains a 21-page introduction into Abbott's life and work, which is reprinted in each subsequent volume. The introduction is written by Peden, who also authored *The Philosopher of Free Religion; Francis Ellingwood Abbot, 1836–1903* (Peter Lang, 1992). This collection makes accessible an important set of writings of a philosopher who is known to have influenced Peirce.

Process Metaphysics; An Introduction to Process Philosophy

Nicholas Rescher.

State University of New York Press, 1996, vii + 213pp. \$ 12.95

ISBN 0-7914-2818-4 (Paper),

This is an accessible and compact exposition of process philosophy. Rescher begins with a brief historical background running from Heraclitus to Wilmon Sheldon (1875–1981). One section is devoted to Peirce, where it is noted that his leading metaphysical ideas (tychism, spontaneity, synechism) are all fundamentally processual and that Peirce's pragmatism endows his theory of truth and reality with the dynamical aspect characteristic of process thought. Next, Rescher discusses the basic ideas of process philosophy and the relation between processes and particulars and universals respectively. The remainder of the book is devoted to applications in the philosophy of nature, logic, epistemology, scientific inquiry, and theology. The book concludes with a synopsis of process philosophy and a discussion of its legitimacy.

Science and Religion in Charles S. Peirce

Rolando T. Panesa

Dissertation, University of Navarre, 1996, ix + 501 pp.

Panesa begins by describing the person of Charles Peirce within the context of his cultural background. Next he discusses Peirce's pursuit of giving a scientific basis to philosophy. The third part of the dissertation deals with Peirce's conception of God, his religious thought, and his idea of community and Church. Panesa next discusses how Peirce's scientific inclinations and his religious beliefs come together. In this he analyzes Peirce's mystic experience and the shift in his position on transsubstantiation. The dissertation is concluded with a discussion of the similarities between Peirce's views on the relation between science and religion and the views expressed in Vatican II.

The New England Transcendentalists.

A Bride Howard production for Films for the Humanities & Sciences. (27 minutes, color)

Filmed in Concord, Massachusetts, principally at Walden Pond, this video exhibits an attractive nature setting conducive to conveying the transcendentalist message. The featured transcendentalists are Ralph Waldo Emerson, Margaret Fuller, and Henry David Thoreau, and while the presentations of their views are brief they are effective. In addition to its fine setting, the video includes some excellent portrayals and effective readings. Readings from Emerson include passages from "Self-Reliance" and "Nature"; from Fuller, *Women in the Nineteenth Century*; and from Thoreau, *Walden and Civil Disobedience*. Generally, the video focuses more on the lives of the transcendentalists and on their literary contributions than on philosophy, but the transcendentalists' focus on individual life as the ground for social reform is clearly conveyed, as is their sense of mission in transforming their Puritan heritage into something more suitable for the new America. Peirceans who view this video may be reminded of Peirce's remark that he supposed he might have contracted in his youth some bacilli of transcendentalism which, after long incubation, began to infect him in later years. One of the unifying ideas of transcendentalism, that some truths must be perceived instinctively rather than sensually, is a likely candidate.

A General Introduction to the Semeiotic of Charles Sanders Peirce

James Jakób Liszka.

Indiana 1996. xi + 151 pp.

ISBN 0-253-33047-5 (Cloth).

Here is a welcome book. There has long been a need for an account of Peirce's theory of signs that (1) sticks as close as it can to Peirce's view of things, (2) treats the full scope of semeiotic, including speculative rhetoric, and (3) is suitable for the classroom. Liszka's book fills the bill and more. In addition to meeting these conditions, Liszka has added thirty pages of notes in which he treats, or at least raises, many of the unsettled questions about Peirce's theory. This will no doubt be *the* introduction for some time to come.

BOOK NOTES (cont.)

Classic American Philosophers

Max H. Fisch, ed.
 Fordham, 1996. xiii + 501 pp.
 \$30.00 cloth, \$17.00 paper.
 ISBN 0-8232-1657-8 (Cloth)
 ISBN 0-8232-1658-6 (Paper).

This is a slightly updated reprint of the much-acclaimed 1951 collection by Fisch. His general introduction is a masterpiece still of immense value for students of American philosophy. Six philosophers are treated with key selections from their writings and with separate introductions by the section editors: Peirce with an introduction by Arthur Burks; James with an introduction by Paul Henle; Royce with an introduction by Otto Kraushaar; Santayana with an introduction by Philip Rice; Dewey with an introduction by Gail Kennedy; and Whitehead with an introduction by Victor Lowe. This is the book that launched American philosophy as a vital field of study. It remains one of the best anthologies for college courses in classic American philosophy. The Fordham edition is from the American Philosophy Series started by Vincent Potter and now edited by Vincent Colapietro. It was prepared for Fordham by Nathan Houser, who adds a short preface and who made corrections as indicated by Fisch.

The American Pragmatists: C. S. Peirce, William James, John Dewey

A BBC production for Films for the Humanities & Sciences. (43 minutes, color)

In this program, Columbia University professor Sidney Moranbesser discusses classic American pragmatism with Bryan Magee. In lively dialog, Moranbesser and Magee debate the distinguishing features of the pragmatic thought of the principal pragmatists, Peirce, James, and Dewey, and reflect on the characters of these three great philosophers. Emphasis is placed on Peirce's fallibilism and his idea of truth as the final opinion of a community of inquirers; on James's idea of truth as contextualized by useful or satisfying conceptual schemes; and on Dewey's rejection of the spectator view of knowledge and on his theory of inquiry as the attempt to acquire warranted beliefs. Moranbesser and Magee conclude rather abruptly with a brief discussion of Dewey's views on education. Although mainly a "talking heads" video—with occasional still photographs of the philosophers being discussed or of book covers—it is a good production and well-worth showing in a course on pragmatism or American philosophy.

Rorty & Pragmatism, The Philosopher Responds to His Critics

Herman J. Saatkamp, Jr.
 Vanderbilt University Press, 1995,
 xvi + 258 pp.
 ISBN 0-8265-1263-1 (Cloth)

A nice collection of nine essays. Two of them are written by Rorty, and each of the others is followed by his often revealing response. Peirce is most extensively discussed by Richard Bernstein ("American Pragmatism: The Conflict of Narratives"). Rorty himself gestures to Peirce in the replies to his former thesis advisor Charles Hartshorne's "Rorty's Pragmatism and Farewell to the Age of Faith and Enlightenment," and to Susan Haack's "Vulgar Pragmatism: an Unedifying Prospect." In the first he confesses to having been more impressed by the Peirce of "Evolutionary Love" than by the Peirce of "The Logic of Relatives;" and in the second he briefly presents his view on "The Fixation of Belief" and opposes it to Haack's. The collection further includes essays by Thelma Lavine, James Gouinlock, Allen Hance, and Frank Farrell. The volume comes with a helpful introduction by Herman Saatkamp and contains a good index.

Pragmatism, Reason, & Norms; A Realistic Assessment

Kenneth R. Westphal (ed.)
 Fordham University Press, 1998,
 xiv + 353 pp. \$39.00; \$19.95
 ISBN 0-8232-1818-x (Cloth), ISBN 08232-1819-8 (Paper)

The essays in this collection all address the philosophy of Frederick L. Will (1909-), a colleague of Max H. Fisch at the University of Illinois. Their central theme is the discussion of norms and social practices both in epistemology, and in moral and social philosophy. The authors address issues in epistemology (realism, perception, testimony), logic, education, foundations of morality, philosophy of law, the pragmatic account of norms and their justification, and the pragmatic character of reason itself. The collection is a valuable addition to *Pragmatism and Realism*, a collection of Will's essays which is also edited by Westphal and appeared last year (Rowman & Littlefield, 1997).

La renovacion pragmatista de la filosofia analitica (The Pragmatist Renewal of Analytic Philosophy)

Jaime Nubiola
 Ediciones Universidad de Navarra, Pamplona (Spain), 1996 (2nd. edition), 132 pp.
 ISBN 84-313-1402-8

Contrary to what is often stated about the end of analytic philosophy, in this book Nubiola argues that the views of the later Wittgenstein and the rediscovery of Charles S. Peirce have been key elements in a renewal of the analytic tradition. Following mainly the lines suggested by Hilary Putnam, this renewal has a strong pragmatist flavor, which encourages the unity of philosophy and the responsibility of philosophical work. In contemporary philosophical reflection, a multilateral approach to the understanding of language and of our communicative practices has taken the central place formerly held by logic.

THE MYSTERY OF ARISBE

On Peirce's 159th birthday, 10 September 1998, the National Park Service held an open house to celebrate the completion of a four-year renovation of Arisbe, Peirce's Milford, Pennsylvania home. Joseph Brent delivered the main address to Park Service employees, local dignitaries and historians, and a few Peirce scholars who made their way to Milford for the ceremony. Although not a restoration, the Park Service attempted to maintain the character of Peirce's long-time domicile. Arisbe now houses the Research and Resource Planning Division of the Delaware Water Gap National Recreation Area. It is a tribute to Peirce that his home is the site of ongoing scientific work. Although no part of Peirce's home was reserved for a museum or memorial, visitors will be welcomed. Perhaps in the future the conference room, which occupies the place of Peirce's study, can be restored and used for Peirce Society gatherings. PEP contributed a copy of Peirce's quincuncial map for display at Arisbe.

This attention on Peirce's home provides an occasion to reflect on the mystery of its name. Why did Peirce choose to name his house

Arisbe, known principally as an obscure city in the Troad, near Abydos? Max Fisch explored different possibilities, having to do with the occurrences of the word in the *Iliad* and a connection with Arisbe the woman, the first wife of Priam; but what Fisch came to regard as the most significant was the fact that Arisbe was a colony of Miletus, the home of the first philosophers of Greece who first had sought the *Archê*, the First Principle of all things. "Of Peirce's three categories, it was Firstness that had given him the greatest difficulties, and it was only when Epicurus had helped him to a partial solution of them that he was ready to join the Greek cosmologists, and that his Arisbe too became a colony of Miletus."

Alan J. Iliff has speculated that "Arisbe" was an allusion to a passage from Book 9 of the *Aeneid*, in which Aeneas's besieged son Ascanius promises to reward two of his companions with two well wrought bowls Aeneas had taken when he conquered Arisbe, if only they could find Aeneas and bring him to their rescue. "The death of Peirce's father was not only personally devastating to

PROBING THE COMMUNAL MIND

Several persons contributed answers or research leads to the questions asked in the last issue of PPNL. In particular, we want to recognize Don Hebert, Director of Theatre at Texas Baptist University, for valuable information about Steele MacKaye (Qu. 6), as well as Joseph Brent and Stephen Pollard. Thanks! Here are some solutions or suggestions.

Qu. 8. The mysterious fragment page (547: 12) that was the object of this question has now been identified. In it Peirce was criticizing a certain author for some faulty logical conceptions. We asked for an identification of that author and got several leads from our readers: the names of Leibniz, Ulrici, and Bradley were suggested. But it turns out that our original suspicion was the correct one: Peirce was criticizing Kant. We recently found the leaf that immediately follows 547: 12 in 839: 161, in which Peirce is clearly alluding to Kant. That other page had already been filed previously at the back of PEP MS 555, after pages 1368: 2-4, three pages that constitute Peirce's first draft of an unpublished review of Kant's *Introduction to Logic*, and his *Essay on the Mistaken Subtlety of the Four Figures* translated by Thomas Kingsmill Abbott with a few notes by Coleridge (republished by Greenwood Press, 1963, 1972); that draft was published in W5: 258-59 (Fall-Winter 1885). The two pages 547: 12 and 839: 161 form an incomplete alternative draft of this book review. The paper they are written on is identical, and both versions, although very different in what they address, end on a short paragraph about Kant's *Essay on the Mistaken Subtlety*.

A reading of Kant's *Introduction to Logic* confirmed this identification. In section VII, Kant indeed explains that the formal criteria of truth in logic are the principle of contradiction, which determines the logical possibility, and the principle of sufficient reason, which determines the logical actuality, of a cognition (p. 42). Kant identifies on the next page the three principles that serve as the universal logical criteria of truth: (1) the principle of contradiction and of identity by which the intrinsic possibility of a cognition is determined for problematical judgments, (2) the principle of sufficient reason on which the logical actuality of a cognition depends (making it usable in assertorial judgments), and (3) the principle of excluded middle on which the logical necessity of a cognition is based; it is the principle of apodictic judgments (pp. 42-43). It is precisely those assertions that Peirce criticizes in pages 547: 12 and 839: 61 (says Peirce: "the book abounds with similar instances of perverse ingenuity."). Page 547: 12 has now been added to PEP MS 555, just before 839: 61.

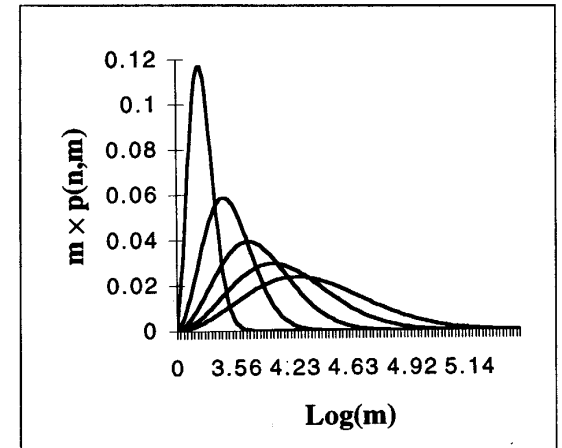
Qu. 11. We quoted excerpts of two versions of the sixth chapter, "The Triad in Biological Development," of "A Guess at the Riddle," in one of which Peirce refers to a diagram showing curves of distribution of wealth among players at the end of the 100th, 400th, 900th, 1600th, and 2500th throws of a die. We asked whether anyone could try to recreate the missing diagram. We were very happy to receive an excellent contribution from Prof. Stephen Pollard, Truman State University (Missouri), who sent us on 22 May 1996 an elaborate document with his proposed solution. What follows is a form of Prof. Pollard's chart, with a brief explanation. Readers who are interested in the full explanation may contact us.

The five successive curves (from highest to lowest) indicate the distribution of utility after 100, 400, 900, 1600, and 2500 throws. Since dollar amounts are not the best way to measure the utility of

money (1 dollar has more utility for a poor man than for a rich man), the utility (x coordinate) is represented by the logarithm of the dollar amount. Peirce's "moral wealth" differs from this utility only by a change of scale. Having transformed the x coordinates in this way, we have to modify the y coordinates too, since Peirce intended the curves to represent probability density functions. To do so, we only need to replace $p(n,m)$ by m times $p(n,m)$, where $p(n,m)$ is the probability that

a player has m dollars after n rounds of the game. As the number of rounds increases, the curves widen and flatten, while their maxima move further and further to the right. The widening represents an increasing disparity between the richest and poorest players.

This does not mean that the wealth is distributed ever more unequally. The game can be shown to produce an increasing degree of equality among richer and richer survivors as long as losers are somehow made to disappear.



Qu. 13. This is from Joseph Brent: It seems unlikely that the 15 May 1890 *Nation* review attacking Abbot's *The Way Out of Agnosticism* is by Peirce—except superficially—for the following reasons: 1. It shows no understanding of and makes no reference to Abbot's *Scientific Theism* (1885), whose definitions of realism Peirce used in the *Century Dictionary* (published the year before in 1889) and elsewhere. Furthermore, Peirce was a sympathetic friend of Abbot's who, knowing the tragedies of his life, was not likely to use such a sarcastic tone with him as the review exhibits. 2. Peirce strongly defended Abbot against Royce's attacks on him and *The Way Out of Agnosticism* in the pages of the *Nation* in November 1891 (see my biography pp. 215-19). 3. The last sentence of the first paragraph of the review, "The 'way out,' when sifted down to its real meaning, is simply 'feeling,' which is to stick to certain time-honored beliefs—no matter what facts, science, and the limits of human knowledge may say about our inability to take a rational attitude towards them one way or the other," is Cartesian, not Peircean, in its radical division of mind from body. Furthermore, "feeling" is an odd word to use for Abbot's scientific realism and its experiential basis. 4. In the second paragraph, the sentence, "Those who are in agnosticism generally remain, and those who come out of it generally defy the philosophy which tries to hold them in doubt, and so decide their convictions by sheer force of will," sounds like cocktail party Schopenhauer, Nietzsche, or James, but not like Peirce. 5. The reviewer uses "intuition" and "insight" much like Cartesian direct acts of knowledge which are self-evident truths we cannot doubt, as in the sentence in the third paragraph, "religion comes by insight, if it ever comes at all; and . . . philosophy does less to supply new truth than to supervene upon knowledge already acquired." At the time of the review,

PROBING — Continued on page 13

ARISBE — Continued from page 11

him, but it was also politically and socially a very great loss; it is this sentiment of missing his father that is uppermost in Peirce's allusion to this passage." While interesting, Iliff's solution fails to bring a complete cessation of our doubts.

Why, after all, would Peirce have chosen the name of a place that played no significant historical role, or of a woman about whom nothing of interest is known? This is all the more puzzling in light of the fact that Peirce bought his house in Juliette's name, and that Juliette had little reason to care for a name like Arisbe. We know from the correspondence that for several weeks Peirce considered naming his house "Sunbeam," because Juliette was the sunbeam of his life, as he tells her in a letter of December 1889 at the top of which he drew the contour of kissing lips. So why would he have abandoned a name that breathed his love for his wife? Could it be that Peirce actually did not give up that intention at all but decided to fulfill it somewhat less visibly? Peirce loved conundrums and plays on words. Some time in 1890, no doubt to the French lady's amusement, he found that a piece of pedantry would be a good way to hide an amorous anagram, and that Arisbe would forever and secretly commemorate their first "baiser."

PROBING — Continued from page 12

Peirce was suffering from a profound spiritual crisis, which was, at least partially, resolved two years later (April 24, 1892) by a mystical experience, of which he said afterwards (1898) "If . . . a man has had no religious experience, then any religion not an affectation is as yet impossible for him; and the only worthy course is to wait quietly till such experience comes. No amount of speculation can take place of experience" (1.655). This account is not one of Cartesian intuition. The idea that the practice of philosophy is not the place to look for "new truth" is not the view of Peirce, for whom abduction, the beginning of philosophy, is the only way to originate or advance knowledge.

NEW QUESTIONS

Question 14.

On several occasions Peirce stresses that we should not underestimate the power of science. In an article written for *The Christian Register*, "On Science and Immortality" (reprinted as CP 6.548–556), he writes: "The history of science affords illustrations enough of the folly of saying that this, that, or the other can never be found out. . . . Legendre said of a certain proposition in the theory of numbers that, while it appeared to be true, it was most likely beyond the powers of the human mind to prove it; yet the next writer on the subject gave six independent demonstrations of the theorem." (CP 6.446, 1887). Shortly after, Peirce repeats the same point in the unpublished "Reflections on the Logic of Science," where he again cites Legendre as an example: "Legendre in his *Théorie des nombres*, after penetrating more deeply into the higher arithmetic, and after having studied the nature of mathematical proof more accurately than any man before him had ever done, gave it as his opinion that the demonstration of a certain proposition,—though the proposition itself seemed to be true,—was probably beyond the powers of the human mind. Yet the very next important book on the subject published a few years later gave six proofs of this theorem, resting upon as many different principles" (MS 246. 4:1889).

Now here is the problem. The proposition in question is most likely the law of quadratic reciprocity of which Carl Gauss provides six proofs in his 1801 *Disquisitiones arithmeticae*. This proposition first surfaces in Legendre's "Recherches d'Analyse Indéterminée," which appeared in *Hist. Acad. Roy. des Sciences*, 1785, pp. 513–17. According to its English translation, however, Legendre's claim is a far cry from the extreme statement ascribed to him by Peirce. Legendre simply writes that the proposition is "quite difficult to prove," and that "I content myself with outlining the means for proving the theorem" (see *The History of Mathematics: A Reader*, edited by John Fauvel and Jeremy Gray. New York: Macmillan Press, 1988, p. 500). The translation not only suggests that Legendre believed that the proposition was provable, but also that he had at least some idea of how to prove it.

To make matters even more interesting, there are good indications that Legendre actually formulated the proof well before

Gauss did, perhaps even in his 1785 paper. So far we have only been able to examine the 1808 edition of the *Essai sur la Théorie des Nombres*. There Legendre writes in the "Avertissement" to the second edition, that the proof of the law of quadratic reciprocity is slightly perfected (a été perfectionnée à quelques égards), clearly suggesting that the proof has been given in the first edition. On the next page Legendre notes that much of what he wrote in the first edition finds a close analogue in Gauss' *Disquisitiones*, including a "direct and very ingenious demonstration" of the law of reciprocity, which he includes in the new edition. Moreover, in the reprinted preface to the first edition, Legendre refers to his 1785 paper, noting as one of its three main accomplishments the demonstration of the law of reciprocity: "la démonstration d'une loi générale qui existe entre deux nombres premiers quelconques, et qu'on peut appeler loi de réciprocité."

This account, contra Peirce's, is confirmed by W. W. Rouse Ball (*A Short Account of the History of Mathematics*, 4th ed., 1908, pp. 423–24), who writes: "The law of quadratic reciprocity, which connects any two odd primes, was first proved in this book *Théorie des Nombres*, but the result had been enunciated in a memoir of 1785 'Recherches d'Analyse Indéterminée.' Gauss called the proposition 'the gem of arithmetic,' and no less than six separate proofs are to be found in his works."

This leaves us with the following questions. First, did Legendre indeed claim at one point that proving the theorem was beyond the powers of the human mind, as Peirce claims he did? It might be that some of the force of his language got lost in the translation. Admittedly, on page 393 of the second edition, Legendre does speak of "almost insurmountable difficulties" ("des difficultés presque insurmontables"). Second, who was the first to provide the proof? Third, was there a persistent rumor, still very much alive in the 19th century, that Legendre made the claim Peirce ascribes to him? Perhaps Legendre made the claim when he was still a young man, and that he proved himself wrong in 1785. Or is this a case of a mistaken identity and is the statement made by another mathematician around this time? We would also be interested in photocopies of Legendre's 1785 paper and of the relevant section of the first edition of the *Essai sur la Théorie des Nombres*, as we have not yet been able to lay hands on these.

Question 15.

In a short piece entitled "Notes on the Question of the Existence of an External World" (in MS 971), Peirce makes a reference to W.K. Clifford. Peirce writes the following:

"But what evidence is there that we can immediately know only what is 'present' to the mind? The idealists generally treat this as self-evident; but, as Clifford jestingly says, 'It is evident' is a phrase which only means 'we do not know how to prove.'"

Can someone help us identify the source of this quotation?

RESEARCH GROUP ON SEMIOTIC EPISTEMOLOGY AND MATHEMATICS EDUCATION

University of Bielefeld

The Research Group is a part of the Institut für Didaktik der Mathematik at the University of Bielefeld. It studies the development of knowledge in historical and epistemological perspectives. The main interest is the relation between social and object-centered aspects of learning processes. One important thesis is that the process of learning mathematics can be used as a paradigm for discussing major problems of epistemology. The theoretical framework is provided by the philosophy of Charles S. Peirce and, in particular, by his considerations on the concept of sign, the process of generalization, and the role of continuity within the latter. The following projects are in progress. (1) Learning as a process of generalization (Michael Otte, Michael Hoffmann). (2) Peirce's philosophy of mathematics in the context of his evolutionary realism. The Peircean principle of continuity (Otte, Hoffmann). With respect to the philosophy of mathematics, the thesis is that Peirce's emphasis on the reality of generals, together with his semiotic model of the processuality of generalization, offers the possibility for a mathematical realism which is not reducible to the distinction of logicism, formalism, and intuitionism. And with respect to philosophy, the thesis is that the Peircean approach to the mathematical process of generalization can be understood as a paradigm which may be of special interest for problems of epistemology, ontology, and the development of social communities. Insofar as the concepts of processuality and evolution are based on the possibility of continuity, a main problem is the role of the concept of continuity in Peirce's philosophy. (3) The symmetry of subjectivity and objectivity in scientific generalization. Studies concerning the foundation of scientific rationality in the mathematical philosophy of Charles S. Peirce and his followers (Otte, Thomas Mies, Hoffmann). (4) Didactical aspects in Wittgenstein's philosophy of mathematics (Norbert Meder). (5) The Axiomatization of Arithmetic (Mircea Radu). (6) The interdependence of logic, ethics and aesthetics (Otte, Hoffmann).

For more information see <http://www.uni-bielefeld.de/idm/arbeit/agsem.htm> or contact Prof. Dr. Michael Otte or Dr. Michael Hoffmann, Institut für Didaktik der Mathematik, Universität Bielefeld, Postfach 100131, D-33501 Bielefeld. E-mail: michael.otte@post.uni-bielefeld.de, or: michael.hoffmann@post.uni-bielefeld.de.

DIRECTOR'S REPORT

More than two years have passed since I used this column to let you know how things are going at PEP, although through other means many of you will have learned about the most significant recent happenings. Let me run through them in quick review.

First in importance for the health of the edition was NEH's decision to award PEP a grant in 1997. It was our first federal grant since 1991, and along with some additional support from IUPUI and private contributors, it enabled us to return to a full production staff—and it is an excellent staff. Volume 2 of the *Essential Peirce* was published in the spring of '98 as a PEP publication—its preparation provided the training necessary for the new staff members hired in '97. Since then we have been making good progress with volumes 6 through 10 of the chronological edition. W6 will be published this summer and vols. 8, 9, and 10 are on track for completion in one-year intervals after that. W7, which will be devoted to Peirce's work for the *Century Dictionary*, will be a special volume to be completed out of sequence at some later time. This production schedule depends on continuing funding at present levels. Our current NEH grant expires at the end of June and we will not know for a few weeks whether we will receive new funding. If we aren't successful, our production schedule will have to be significantly cut back.

We have a new advisory board. The new board is composed of the following members: John D. Barlow, Professor of English & German and former Dean of the School of Liberal Arts, IUPUI; Lucia Santaella Braga, Professor of Semiotics, Universidade Catolica de Sao Paulo, Brazil; Joseph L. Brent, Professor Emeritus of Intellectual History, University of the District of Columbia; Arthur W. Burks, Professor Emeritus of Philosophy, Electrical Engineering & Computer Science, University of Michigan; Vincent Colapietro, Professor of Philosophy, Penn State University; Don L. Cook, Professor Emeritus of English, Indiana University; Joseph Dauben, Professor of History of Science, CUNY; Gérard Deledalle, Professor Emeritus of Philosophy & Semiotics, University of Perpignan, France; Randall Dipert, Professor of Philosophy & English, United States Military Academy, West Point; Umberto Eco, Professor of Semiotics, University of Bologna, Italy; John Gallman, Director, Indiana University Press; Susan Haack, Professor of Philosophy, University of Miami (Florida); Karen Hanson, Professor of Philosophy, Indiana University; Peter Hare, Professor of Philosophy, SUNY at Buffalo; Robert H. Hirst, Director, Mark Twain Project, University of California at Berkeley; Christopher Hookway, Professor of Philosophy, University of Sheffield, England; Paul Nagy, Professor of Philosophy, Indiana University Purdue University Indianapolis; Klaus Oehler, Professor Emeritus of Philosophy, University of Hamburg, Germany; Helmut Pape, Professor of Philosophy, University of Hannover, Germany; Hilary Putnam, Professor of Philosophy, Harvard University; Don D. Roberts, Chair, Professor Emeritus of Philosophy, University of Waterloo, Ontario; Richard Robin, Professor Emeritus of Philosophy, Mount Holyoke College; Sandra Rosenthal, Professor of Philosophy, Loyola University; Israel Scheffler, Professor Emeritus of Philosophy & Education, Harvard University; Thomas A.

Sebeok, Distinguished Professor Emeritus of Linguistics & Anthropology, Indiana University; Thomas L. Short, Professor of Philosophy, Titusville, NJ.; William A. Stanley, Chief Historian, Retired, National Oceanic & Atmospheric Administration; Paul Weiss, Sterling Professor Emeritus of Philosophy, Yale University. PEP is extremely grateful to the board members who retired in 1998, after years of dedicated service: Professors Jo Ann Boydston, Carolyn Eisele, Charles Hartshorne, Kenneth L. Ketner, and Richard A. Tursman. These individuals helped see the Peirce Project through some difficult times.

In April, a meeting of the Executive Committee of the Board recommended that PEP establish an official research center to house the edition and to serve as an international center for Peirce scholarship. Such a center is expected to help with fund raising and, also, to continue to make PEP resources available to scholars after the edition is completed. This is in process.

There are some staff changes to report. André De Tienne, whom many of you know, was put on tenure track in March 1997 as an Assistant Professor of Philosophy at IUPUI. He was also promoted to Associate Editor for the critical edition. Last year, Cornelis de Waal joined our editorial staff as a Post-Doctoral Fellow/Visiting Assistant Editor and has an appointment as Adjunct Assistant Professor of Philosophy. Adam Kovach, a Project Research Associate, successfully defended his Ph.D. dissertation and is now a Post-Doctoral Research Associate.

At the level of school administration we have a new Dean. Last summer, Herman Saatkamp, Jr., editor of the George Santayana Edition, became Dean of our School of Liberal Arts. This summer he will move the Santayana Edition to Indianapolis. The Peirce Project and the Santayana Project held a joint reception at the World Congress in Boston. A third edition, the Frederick Douglass Papers, also moved to IUPUI's School of Liberal Arts. Together, these three editions form an unusual concentration, which is likely in the long run to work to the benefit of the Peirce Project. The impact in the short run, however, is uncertain. All three editions are funded by NEH and all three have applications pending.

I wish to extend my deepest appreciation to retired Dean John D. Barlow, who has been a strong advocate for the Peirce Project, and who has agreed to continue his support, even in his retirement, by serving on our advisory board.

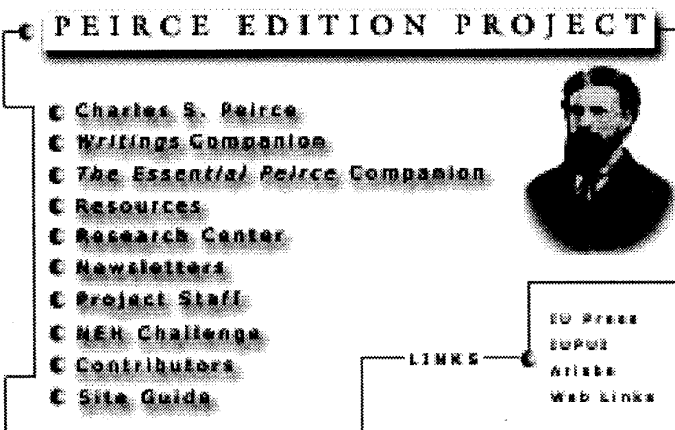
Many of you helped us with our \$80,000 NEH matching funds challenge. We have raised about \$75,000 of the \$80,000 we had to match—which leaves only \$5,000 to be raised by April. Thank you! See Edward Queen's accompanying note for how you can help us finish this match. In a forthcoming issue of the Newsletter, Dr. Queen will report on plans to establish an endowment fund to ensure that we can keep a full production staff in place during hard times, and to keep a Peirce Center going after the edition is finished.

Finally, thanks to Richard Miller, our Newsletter editor, for reviving this means of communication.

—Nathan Houser

PEIRCE EDITION PROJECT ON THE WEB

The Peirce Edition Project Web Site, promised in the last issue of the *Peirce Project Newsletter*, is now available for public use. Accessible via <http://www.iupui.edu/~peirce>, the site provides information about PEP publications, projects, research resources and staff. The online visitor can learn details of the current NEH Challenge or read a brief biography of Peirce. There are back issues of the PPNL. Information about each of the published volumes of the *Writings*, including their introductions and



tables of contents, is just a click away. One can learn how the PEP critically edits each volume and what the standards are as set by the Committee on Scholarly Editions. Similar information is provided about both volumes of *The Essential Peirce*.

In addition to specific materials relating to the Peirce Edition Project, there are specific links to IUPUI, to the IU Press, and to the Arisbe site, as well as more than three dozen links to Peirce-related, general philosophical and critical edition web sites.

Enjoy your virtual visit to the PEP!