THE NEW TOOLS OF PEIRCE SCHOLARSHIP, WITH PARTICULAR REFERENCE TO SEMIOTIC.

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In the concluding section of a recent essay on "Peirce's General Theory of Signs" (in *Sight, Sound, and Sense*, ed. Thomas A. Sebeok [Bloomington: Indiana University Press, 1978], pp. 31-70), Fisch enumerates eight unfinished tasks of Peircean semiotic scholarship. The first and most important of these is described as follows:

Most needed, and perhaps even a prerequisite to the rest, is an annotated bibliography of Peirce's own relevant writings, published and unpublished, followed by a bibliography of the secondary literature and by a lexicon that quotes Peirce's best definitions or explanations of the terms he uses and that gives references to other relevant passages in his writings and in the secondary literature. (p. 64.)

The present paper, a rough first draft of a primarily bibliographic overview, does not complete this task, but begins the process that will eventually lead to its completion. Our paper is intended for semioticians who have as yet little first-hand knowledge of Peirce's writings, but have become accustomed to hearing of him as one of the founders, perhaps the founder, of their science and wish to examine his most relevant writings and those of his best interpreters; it is intended also for seasoned Peirce scholars who have not yet found occasion to focus on his theory of signs. For Peirce wrote on so many topics in philosophy, logic, mathematics, and the sciences that one may be quite at home in his writings and in the secondary literature, and may even have contributed to that literature, without ever approaching him by way of semiotic, or the

general theory of signs.

A bibliographic overview such as this seems to us necessary for several reasons. (1) The writings Peirce himself published are as scattered as they are extensive, and only a few of the major research libraries have any considerable portion of them. (2) The eight-volume Collected Papers contain many of Peirce's best and most relevant published papers, but others are not included; the indexes, moreover, are incomplete. (3) The bulk of Peirce's unpublished papers dealing with the theory of signs is greater than that of those he did publish; and the Collected Papers contain only a small selection from the unpublished papers. (4) The recently published microfiche edition contains nearly all that Peirce is known to have published, and Carolyn Eisele's New Elements of Mathematics consists almost entirely of previously unpublished writings, including many important passages on the theory of signs. Unfortunately, the indexes of the latter are inadequate for our purposes, and the former lacks a topical index altogether. (More about both editions below.) (5) Even if primary and secondary bibliographies were complete and topically indexed, they still would not be fully adequate—because the theory of signs is so fundamental to and pervasive in all of Peirce's thinking. (6) Finally, although at least one anthology of Peirce's writings on the theory of signs is in preparation, by Douglas Greenlee, it may be several years before it becomes available. (We note with sadness that Greenlee died this past January; his wife, however, plans to complete the anthology.)

For several reasons, this paper has been difficult to write. Because it has three authors, and because there are certain topics on which we do not entirely agree, more than the usual discussion and coordination were required, and three writing styles needed to be combined into one. And, lest it be said that we are telling others how to go about their scholarly business, we wish to emphasize that this is not the spirit in which this paper was written. We merely want to report on the status of Peirce scholarship in a period of its rapid and exciting expansion, especially as that has relevance to semiotic.

1.

In a long letter to Lady Welby, dated 23 December 1908, Peirce indicates clearly how we should confront and review his writings:

You, with your life-long study of "significs" must surely have important teachings about the three Interpretants for me, whose studies have been diluted through the whole subject of semeiotic; and what I have succeeded in assuring myself of in significs has chiefly concerned Critic of Arguments, upon which the question you propound on the first page of your letter makes me think you are not at your best. But I smiled at your speaking of my having been "kindly interested" in your work, as if it were a divergence—I should say a deviation, from my ordinary line of attention. Know that from the day

when at the age of 12 or 13 I took up, in my elder brother's room, a copy of Whately's "Logic," and asked him what Logic was, and getting some simple answer, flung myself on the floor and buried myself in it, it has never been in my power to study anything,—mathematics, ethics, metaphysics, gravitation, thermodynamics, optics, chemistry, comparative anatomy, astronomy, psychology, phonetics, economic, the history of science, whist, men and women, wine, metrology, except as a study of semeiotic. (Quoted in Semiotic and Significs: The Correspondence Between Charles S. Peirce and Victoria Lady Welby, ed. Charles S. Hardwick [Bloomington: Indiana University Press, 1977], pp. 85-86.)

In a postscript that Peirce wrote five days later, but did not mail, he says (apologizing, as it were, for his long letter):

Well, dear Lady Welby, you deserve this infliction, for having spoken of my having "always been kindly [!!!] interested in the work to which my life is devoted," when I have myself been entirely absorbed in the very same subject since 1863, without meeting, before I made your acquaintance, a single mind to whom it did not seem very like bosh. (L463: ISP sheet 145; published at *Collected Papers* 8.376.)

(We shall not pursue the question of to how many contemporary minds Peirce's semiotic still seems "very like bosh.") The two quotations tell us a number of things. Peirce's interest in logic and/or semiotic (the two are nearly synonymous in much of Peirce's later work) originated about 1851 or 1852; he became entirely absorbed in it in 1863, two years before his first writings on the subject; and most important, nearly all his writings, no matter on what subject, are relevant to his semiotic. Further, especially in the former quotation we discern a natural distinction to be made. It is one thing to see mathematics, chemistry, or any other subject through semiotic spectacles, and quite another to construct or to inquire into the construction of such a set of spectacles. We shall mention those of Peirce's writings that are most helpful in gaining an understanding of both sides of this distinction. To prepare for this, we shall first give—by means of a chronologically ordered review, beginning with Peirce's early life and finding our way to the present—a kind of publication history of and "road map" for Peirce's writings.

2

Contrary to popular opinion, Peirce published an *enormous* amount of material, enough to equal the output of several publishing scholars. At present we know of well over 800 publications running to roughly 12,000 printed pages. (Peirce is not the sole author of material on some pages.) As further evidence enables us to identify anonymous materials, these

numbers will undoubtedly increase. Peirce's first known published piece, a short article on Shakespeare's Taming of the Shrew, appeared in The Harvard Magazine for 1858, during his junior year; the last item he is known to have submitted for publication, "Some Amazing Mazes: A Second Curiosity," appeared in The Monist for 1909, five years before his death. To find one's way through the mass of Peirce's intervening publications required, until recently, the use of several bibliographies and bibliographic supplements, as well as visits to several different libraries and rare book rooms. Many publications containing Peirce contributions are preserved in a single location, and on film or in copies that are nearly illegible. But since May of 1977, Peirce's lifetime publications have been available in a single set, in microfiche form, under the title Charles Sanders Peirce: Complete Published Works, Including Selected Secondary Materials (Greenwich, Ct.: Johnson Associates). This microfiche edition (hereafter Microfiche) is accompanied by a 337-page book-form bibliography of all known Peirce publications and of approximately 2.000 secondary studies, published under the title A Comprehensive Bibliography and Index of the Published Works of Charles Sanders Peirce, with a Bibliography of Secondary Studies (hereafter Bibliography). Both Microfiche and Bibliography, which may be ordered separately or as a companion set, were cooperative projects of members of the Institute for Studies in Pragmaticism at Texas Tech University.

His publications aside, Peirce wrote a great deal more that is preserved in various forms. Shortly after his death in 1914, the Philosophy Department at Harvard University acquired Peirce's manuscripts through the cooperation of his widow Juliette. (For a moving account of this event, see Victor F. Lenzen's "Reminiscences of a Mission to Milford, Pennsylvania," Transactions of the Charles S. Peirce Society, 1 [1965], 3-11; see also W. F. Kernan's "The Peirce Manuscripts and Josiah Royce—A Memoir, Harvard 1915-1916," Transactions of the Charles S. Peirce Society, 1 [1965], 90-95.) We will probably never know exactly how many items Harvard acquired. The present collection, housed in the Houghton Library at Harvard University (where it may be inspected upon permission of the Philosophy Department), numbers some 80,000 sheets. Since the early years saw numerous instances of items strayed, lost, or stolen, we can assume that the present collection is somewhat smaller than it was in 1914. Unfortunately, we can further assume that a good many more Peirce manuscripts never reached Harvard at all; that some were lost during Peirce's frequent peregrinations as an Assistant in the Coast Survey; and that others were never returned to him by publishers, editors, and friends. We know also that some of his best work was done in private letters and that only a small portion of these have so far been found.

The first published attempt at gaining a bibliographic overview of Peirce's writings was made by Morris Cohen, who is not as well known as a Peirce scholar as he deserves to be. His "Charles S. Peirce and a Tentative Bibliography of his Published Writings" (Journal of Philosophy, 13

[1916], 726-737) was the first bibliography to appear after Peirce's death, and his Chance, Love, and Logic, by Charles Sanders Peirce (New York: Harcourt, Brace and Company, 1923) was the first anthology of Peirce's writings. In the meantime, several attempts to organize and publish portions of Peirce's papers had failed at Harvard, until the task was taken up by Professors Hartshorne and Weiss in the late 1920's. (For accounts of how they became editors of the Collected Papers of Charles Sanders Peirce [6 vols., Cambridge: Harvard University Press, 1931-1935, vols. 7-8 ed. Arthur Burks, 1958], see Irwin C. Lieb's and Richard Bernstein's interviews with the editors in the Transactions of the Charles S. Peirce Society, 6 [1970], 149-188.) Arthur Burks' extensive bibliography in the last volume of the Collected Papers has been the basis for all later efforts to achieve a more complete picture of Peirce's works. Over the years, Fisch and his associates have published several supplements to Burks' bibliography. All previously published bibliographic findings, together with more recent and hitherto unpublished findings, are now available in one volume, the Bibliography described above. Several anthologies have appeared since Cohen's Chance, Love, and Logic, and all of these have used the Collected Papers as their primary source.

3.

The Collected Papers are organized, in the original six as well as in the last two volumes, along thematic lines. Such an organization was almost certainly the best possible some fifty years ago, and it will continue to have certain values. However, it tends to be misleading in either of two ways. On the one hand, it has encouraged Peirce scholars to think that their philosopher was building one great system and that he was under the illusion that everything he said anywhere was consistent with everything he said elsewhere (except in those cases in which he explicitly rejected or corrected what he had previously said). On the other hand, because the editors often broke up series of papers, or even single papers, and distributed parts of them into pigeonholes of their editorial arrangement, sometimes in two or more volumes, and since they marked by ellipses their omission of passages which have proved to be more important than they took them to be, other Peirce scholars have been led to regard their philosopher as fragmentary, incomplete, inconsistent, and obscure.

We must remember, however, that the editors of the Collected Papers worked under adverse circumstances, and especially that volumes one through six came out during the Great Depression. Moreover, we must be forever grateful to the editors for bringing before the (scholarly) public—and in many cases, actually introducing for the very first time—America's most original and profound, albeit most neglected and misunderstood, philosopher and logician. Also, it is probably true that the thematic organization of the Collected Papers attracted readers who were interested only in particular aspects of Peirce's work and who might have shied away

from a more complete and chronologically arranged edition; it is for readers of this sort that the *Collected Papers* will continue to be of value. For serious scholars, however, the *Collected Papers* alone cannot be an adequate basis for understanding and properly interpreting Peirce's work. In place of—or rather, in addition to—the *Collected Papers*, the sources that have recently become available must form the foundation of any serious study of Peirce, especially his semiotic. These sources, moreover, may very well revolutionize the direction and general character of Peirce scholarship.

Between 1963 and 1966, the Photographic Service department of the Harvard University Library prepared a thirty-five millimeter microfilm of most of Peirce's manuscripts in Harvard's possession, entitled The Charles S. Peirce Papers, Microfilm Edition, Thirty Reels, with Two Supplementary Reels Recently Added (Cambridge: Harvard University Library Photographic Service, 1966) (hereafter Microfilm). The filming project. which was made possible in part by a grant from the University of Illinois, was directed by Fisch, who was assisted by Richard Robin, Ruth B. Fisch, Don Roberts, and Carolyn Eisele. Access to the Microfilm is facilitated by an extensive and important catalogue, Richard S. Robin's Annotated Catalogue of the Papers of Charles S. Peirce (Amherst: University of Massachusetts Press, 1967) (hereafter Catalogue). In 1969, a number of "strayed" Peirce manuscripts were discovered in the Houghton Library at Harvard. Robin, again with the help of Ruth Fisch. Max Fisch. and Carolyn Eisele, prepared "The Peirce Papers: A Supplementary Catalogue" (Transactions of the Charles S. Peirce Society, 7 [1971], 37-57) (hereafter Supplement). Next to the Microfiche, the Microfilm (with the two works, Catalogue and Supplement, which exhibit its arrangement and summarize its content) represents the basic publication for serious Peirce study. Peirce's professional correspondence is not included in the thirty-two reels of the Microfilm, but is also available from Harvard in a separate six-reel set. In any case, any serious student of Peirce-whether of semiotic or any other aspect—must, simply must, study his unpublished manuscripts, whether through the Microfilm, the actual manuscripts at Harvard, or one of the hard-copy sets of these manuscripts now available at a few other locations to be mentioned below.

4

In the summer of 1974, a team of researchers from the Institute for Studies in Pragmaticism—composed of Fisch, Ketner, Kloesel, and Joseph Esposito, with a couple of weeks of assistance from Thomas Cadwallader and one week from William Fisch—prepared an annotated xerographic copy of the Peirce Papers at the Houghton Library. First, an electroprint copy of the *Microfilm* was organized, in separate folders, according to the manuscript numbers in the *Catalogue* and *Supplement*. Then, each sheet in each folder was painstakingly compared with the originals. (Unfortunately, some of the large fragment folders and some of the correspondence

folders, for want of time, had to be left unchecked.) Dim and missing copy was filled in; color of ink, size and quality of paper, and watermarks were recorded on a "watermark sheet"; and generally, anything was noted that could be seen on the original but not on the copy. We found numerous discrepancies between originals and copies; pages had been missed or placed improperly in the filming process, and sometimes an entire folder had not been filmed. The annotations and other bits of information are highly significant; for they give us a copy that includes all that Peirce himself put on his manuscripts, and they enable us to move, or move back, to their correct location those pieces of manuscripts that have been or have become separated. After the work at Harvard, the annotated copy (hereafter Copy) was shipped to Lubbock, where it now occupies sixteen drawers in four letter-size file cabinets in the Institute archive. Shortly after its arrival, another feature was added to the Copy that has proved, and will continue to prove, invaluable. Each sheet in the Copy was given an identifying number, so that the Catalogue or Supplement manuscript number is followed by a number representing the actual sheet in a given folder (with sheet 1 always being the "watermark sheet"). For example, a sheet might bear the number "381 00004." This would be the fourth physical sheet in the folder containing all the sheets for MS 381. We would refer to this sheet as MS 381: ISP 4. This system of numbering represents a considerable advance, especially as it solidifies a basic order in the manuscript set that will not be destroyed even when sheets are found actually to belong to other folders. The Copy may be inspected upon permission of the Institute Director (Ketner). Another copy of the Copy is deposited at the Peirce Edition Project at Indiana University-Purdue University at Indianapolis. It is to be hoped that if further copies are authorized and if more scholars find access to these, the numbering system of the Copy will, especially for those manuscripts that are without Peirce's own pagination (and even for those containing no page not numbered by Peirce, but including several drafts and therefore several pages with the same Peirce numbers), become standard for students of Peirce's manuscripts—although eventually the Copy, too, will have to be modified.

It will have to be modified, or renumbered, because it retains several of the shortcomings of the Catalogue and Supplement. These are, like the Collected Papers, arranged thematically, an arrangement that for many of Peirce's manuscripts is too restrictive and not at all representative. Worse is the fact that the arranging and ordering of the Peirce Papers, which came to a halt with the printing of the Catalogue and Supplement, is far from complete. It is true that, as the Papers themselves contain numerous gaps, their arrangement and rearrangement will never lead to a collection in which every manuscript is complete; but already there have been great improvements over the Robin arrangement. Preparing the Papers for the new edition to be brought out by the Peirce Edition Project (entitled Writings of Charles S. Peirce: A Chronological Edition), Kloesel has moved literally thousands of pages to their proper places. Some of these changes

or relocations may be minor—like the hundreds of (discarded) draft pages hitherto located in the so-called "fragment folders" (MSS 278, 839, 1574, S-25, and so on). But other changes are major, especially those that complete hitherto incomplete manuscripts. Thus, pages 2-3 and 5 of MS 698 complete (pages 1 and 4 of) MS 365. Under MS 18, the *Catalogue* reader is referred to MS 78, but its two pages (3-4) are actually part of the missing pages in MS 16. MS 796 should go with MS 404, of which it is a draft; MS 1101 with MS 831; MS 791 with MS 594; MS 1215 with MS 1434; and MSS 538-542 with MS 478. MS 1281 (pp. 1-14) is not complete, for pp. 15-22 in MS 1285 continue not p. 14 in that manuscript but p. 14 in MS 1281. And MS 1043 does not follow MSS 1041-1042, even if these had been completed; instead, it is the Note that should "be printed in small type at the end of the article" consisting of 282:7 (a title page that bears the same title, but no mark, as the remainder of MS 282) followed by pp. 2-20 in MS 908. Many similar examples could be given.

The other serious shortcoming of the Catalogue and Supplement, a shortcoming that has plagued Peirce scholars for years, consists in the fact that more than half the Peirce manuscripts remain undated, or are dated incorrectly. Of the 1,748 manuscript numbers in the Catalogue and Supplement MSS 1-1644 and S-1 to S-104, only 717 bear a date; 1.031 thus remain undated. Of the dated manuscripts, four are "early" and ten "late." 249 bear an approximate ("circa"), 454 a "straight" date, although in both categories a question mark sometimes follows the date. The majority of the 454 manuscripts with "straight" dates were dated by Peirce himself, while the remaining dates were derived, not always correctly, from internal or external evidence. "Early" and "late" may be vague, but like "circa" they are helpful. The greater number of these "circa" dates (many of which were suggested by Hartshorne, Weiss, Burks, and Fisch) are approximately correct; but as with the "straight" dates, some are definitely wrong. The most glaring example is MS 1262, for which the Catalogue gives "1892-94"; but the paper used, the handwriting (a very important factor in the dating of Peirce manuscripts), and correspondence between Peirce and J. M. Cattell prove that Peirce actually wrote the manuscript in 1904. MSS 98 and 99, same paper, handwriting, and subject matter, are dated, somewhat curiously, "c. 1870-71?" and "c. 1875-76"; yet the two manuscripts were undoubtedly written within days of each other, perhaps even on the same day, and most probably in 1871. MSS 209 and 210, dated "c. 1899" and "c. 1895," were both written about 1897. The first part of MS 179 was not written in "1893," but three or four years earlier. MS 1036 is not "c. 1890?" but 1895; MS 736 not "1893?" but 1896; MSS 1269-1273 not "c. 1892" but almost certainly 1898. Again, many other examples could be given. The point we wished to make is that the very incomplete, and sometimes incorrect, dating of the Peirce manuscripts is a major shortcoming of the Catalogue and Supplement: and together with the incomplete arrangement of the manuscripts, a major hindrance to serious Peirce scholarship. But relief is in sight. For in two or three years, Kloesel will publish a new catalogue of the Peirce Papers. On account of the complete rearranging and reordering of the Papers, it will contain new but fewer manuscript numbers. Every manuscript will bear a date, and the catalogue will be arranged chronologically (with topical indexes at the end). After its publication, the Institute Copy (and perhaps even the originals at Harvard) will be reordered and renumbered—and will then, as now, be as useful as the originals themselves.

5.

Other new tools have already been published. Foremost among these is Carolyn Eisele's *The New Elements of Mathematics by Charles S. Peirce* (The Hague: Mouton, 1976), four-volumes-in-five. This voluminous work, consisting almost entirely of previously unpublished manuscripts, will influence all areas of Peirce studies for years to come. It was known that Peirce was a mathematician; but on the basis of *The New Elements of Mathematics* a convincing argument can be made that Peirce was a master mathematician and that his mathematical thought is extremely important for philosophers and students of semiotic alike.

A set of materials in process of publication is Charles Sanders Peirce: Contributions to The Nation (Lubbock: Texas Tech Press, 1975-1979), edited by Ketner and James Cook. This comprises three separate volumes that reproduce approximately 300 contributions, primarily book reviews (some of which are extremely important), which Peirce wrote for The Nation from 1869 to 1908. Each item in this set is annotated by the editors, and the items are arranged chronologically. Volume 1 appeared in 1975, volume 2 in 1978, and the third volume in 1979. A fourth volume of indexes and appendices is in preparation.

During the later years of his life, Peirce engaged in an extensive correspondence with Victoria Lady Welby of England. The principal topic of their letters is semiotic (or as Lady Welby called it, "significs"). An earlier edition, containing only letters from Peirce to Lady Welby (and not even all of these) and printed in a relatively small quantity, was prepared by Irwin C. Lieb and published by Whitlock's of New Haven in 1953. On the basis of recent advances in and improvements of the fundamental tools of Peirce scholarship, Charles S. Hardwick has prepared a new, enlarged edition of both sides of the Peirce-Lady Welby correspondence. Excluding a few of the incomplete drafts that Peirce did not send, but otherwise faithfully reproducing all that Peirce and Lady Welby wrote for each other, this new edition is published as Semiotic and Significs: The Correspondence Between Charles S. Peirce and Victoria Lady Welby (Bloomington: Indiana University Press, 1977). (Perhaps we should mention at this point that, unfortunately, we take little account in this paper of Peirce's correspondence. Besides the letters to Lady Welby, many of which are contained in L 463, there are numerous others of great significance for students of semiotic. The most important of these is L 75, the

"Carnegie Application." Other important letters dealing with semiotic may be found in L 67, L 224, L 387, and L 477, to mention only a few. Just as noteworthy is the fact that most of Peirce's letters to other people are still to be found, and we hereby urge readers of this paper to assist in the search. For an incomplete preliminary list of Peirce's correspondents, see the *Transactions of the Charles S. Peirce Society*, 1 [1965], 26-31. In any case, semiotic as it appears in Peirce's correspondence is a subject that will need to be dealt with in another paper.)

Hardwick's Semiotic and Significs brings us to the present and it leaves but three works in progress we should mention, each relevant to the theme of this paper. First, there is the twenty-volume new edition of Peirce's writings being prepared in the Peirce Edition Project at IUPUI under the direction of Fisch, Edward Moore, Kloesel, and Lynn Zeigler. This edition, Writings of Charles S. Peirce: A Chronological Edition, will emphasize Peirce's philosophical and logical (and thus semiotic) writings, and it will be of great interest to students of semiotic. Each item included in the edition will be supervised by a scholar specializing in that aspect of Peirce's work, and the edition as a whole will conform to the editorial standards of the Center for Scholarly Editions. The second work in progress is Carolyn Eisele's edition of Peirce's rather extensive work as a student of the history of science. We confidently predict that another set of pleasant surprises will be perceived when this edition is completed. The final work to be mentioned promises great usefulness for those interested in any or all of the facets of Peirce's work; this is a computer-assisted concordance of the entire Peirce corpus. Unfortunately, it will be a few years before this work, an Institute project supervised by Ketner and David Pfeifer, can be published.

6.

It is time to turn, more specifically, to writings by Peirce that are relevant to semiotic. We shall divide these writings into (1) printed items that Peirce published during his own lifetime either signed, anonymously, or pseudonymously, and (2) holographic and typewritten items contained in the Peirce Papers at Harvard. In the latter category, we shall refer to the Copy as informed by the Catalogue and Supplement, even though a particular item may have been published after Peirce's death. In the former category, we shall give short titles and refer the reader to the numbering system utilized in the Bibliography. (Numbers preceded by P list Peirce publications; O numbers indicate relevant publications by authors contemporary with Peirce; S numbers represent secondary literature appearing after Peirce's death.)

Published items of interest to students of semiotic begin early in Peirce's life with a series of five connected articles that Peirce read before the American Academy of Arts and Sciences in 1867 and that were published in 1868 in the Academy's *Proceedings* for 1867. The central place in that series is occupied by "On a New List of Categories," which is also

the most interesting as far as semiotic is concerned. But the reader should also consult "Boole's Calculus of Logic," the "Natural Classification of Arguments," the "Logic of Mathematics," and "Logical Comprehension and Extension," all four of which supplement as well as complement the "New List" (see P 30-34). In 1868 and 1869, Peirce published another important series of articles in The Journal of Speculative Philosophy. "Ouestions Concerning Certain Faculties Claimed for Man." "Some Consequences of Four Incapacities," and "Grounds of Validity of the Laws of Logic" (P 26, 27, and 41) together form one of the best accounts of semiotic as such. The three articles should be read as a unit, and helpful background information for them may be found in "Nominalism versus Realism" (P 25), "What is Meant by 'Determined'" (P 28), W. T. Harris' "Intuition vs. Contemplation" (O 29), and D. A. Wasson's "Being and Nothing" (O 42). The next work of relevance to semiotic is Peirce's long review of the works of Berkeley in The North American Review for 1871 (P 60). There is then a six-year gap in relevant published items, until 1877 sees the beginning of the six-article "Illustrations of the Logic of Science," which appeared in 1877 and 1878 in The Popular Science Monthly, a journal that was then similar to our present-day Scientific American. These six articles (P 107, and P 119-123), which attempt to describe a subject similar to that of the Journal of Speculative Philosophy series, lack overt references to, or the technical terminology of, semiotic and signs, because Peirce knew he was writing for a nontechnical and popular audience. The first two articles ("Fixation of Belief" and "How to Make Our Ideas Clear") were also published in French in 1878 and 1879, in the leading philosophical journal of the time, the Revue Philosophique de la France et de l'Etranger (P 129 and 162), and all six were summarized by G. Stanley Hall (O 144) in Mind for 1879, a prominent journal for European scholars. In the fourth year of his lectureship at The Johns Hopkins University (1879-1884), Peirce edited a volume of Studies in Logic (P 268) which contains three contributions by him relevant to our theme. With Joseph Jastrow he wrote an important paper in 1884 (P 282) that was published, under the title "On Small Differences of Sensation," in the Memoirs of the National Academy of Sciences the following year (P 303).

Peirce was one of the most prolific contributors to the six-volume Century Dictionary, which was published between 1889 and 1891. The reader should consult the Bibliography (P 373, pp. 43-83) for the alphabetical list of words whose definitions Peirce contributed, and then check the definitions relevant to semiotic in the Microfiche. Beginning with "The Architecture of Theories" in 1891 (P 439), Peirce becomes a fairly frequent contributor to The Monist, edited by Paul Carus. Much of what Peirce published in that journal is more or less closely connected with the subject of this paper. The most important items are "The Doctrine of Necessity Examined" (P 474), "The Law of Mind" (P 477), "Man's Glassy Essence" (P 480), "Evolutionary Love" (P 521), "Reply to the Necessi-

tarians" (P 525), "The Regenerated Logic" (P 620), "The Logic of Relatives" (P 637), "What Pragmatism Is" (P 1078), "Issues of Pragmaticism" (P 1080), "Mr. Peterson's Proposed Discussion" (P 1124, which should be read in conjunction with O 1081), and "Prolegomena to an Apology for Pragmaticism" (P 1128). The last of these items appeared in 1906.

Some fourteen years earlier, Peirce had published another set of important articles in *The Open Court*, which was also edited by Paul Carus. These articles, especially the two parts of "The Critic of Arguments" (P 511 and 513), bear particularly on the logic of relatives, and they are thus essential to an understanding of the sign *relation*.

The last published item to be mentioned here is the *Dictionary of Philosophy and Psychology*, whose two parts were edited by J. M. Baldwin and were published in 1901 and 1902. Peirce contributed a good many, sometimes encyclopedic, articles on a wide range of philosophical and logical topics. The reader should peruse the *Bibliography* for 1901 and 1902 (starting with P 761) so as to identify Peirce's contributions, and then consult the *Microfiche* for the definitions.

7.

If we took literally what Peirce said in his letter to Lady Welby quoted above, ideally we should—in order to fully understand Peirce's semiotic—examine not only all his published writings but each and every one of his unpublished manuscripts as well. But this is not an ideal world. For that reason we shall, in what follows, offer a few practical remarks about those manuscripts that deal either partially (but specifically) or exclusively with the various aspects of Peirce's general theory of signs. The reader will find that in nearly all these manuscripts Peirce—to repeat the metaphor used earlier—not only constructs a set of semiotic spectacles but looks through these spectacles at other subjects.

Perhaps the single most interesting, extensive and comprehensive, and valuable manuscripts among the Peirce Papers is MS 339, the so-called "Logic Notebook," in which Peirce wrote intermittently from 1865 to 1909. Of the nineteen years represented in this Notebook, at least fourteen contain, to a lesser or larger (and sometimes even exclusive) degree, materials on semiotic. The years 1898, 1901, 1905-1906, and 1908-1909 offer the most extensive, interesting, and fruitful passages; but nearly as interesting and fruitful are those for the years 1865-1867, 1891, 1899-1900, and 1903-1904. In any case, it is fair to say that, in a way, the Logic Notebook mirrors Peirce's entire semiotic career—an assumption that finds support in the chronological list of important manuscripts appended to this paper.

In the above-quoted Postscript to Lady Welby that Peirce did not send, he indicated that he had been "entirely absorbed" in semiotic since 1863. The earliest manuscript, however, that deals with specifically semiotic matters dates from about two years later. MSS 346 (which should contain MS 758) and 802 were written in April and May of 1865. The latter

manuscript, consisting of only four pages, contains some very interesting material. There are several relevant manuscripts among the 1866 Lowell Lectures; there are several more during the years following, some of the best of which are part of the "Logic of 1873." Then followed twelve years during which Peirce seems to have concentrated on his scientific work in the Coast Survey, to the apparent neglect of manuscripts dealing with semiotic topics. In 1885 and 1887, Peirce wrote several manuscripts that are of interest to the student of semiotic. His period of greatest creativity in matters semiotic begins some six years later. Between 1893 and 1902, there is not a single year in which Peirce did not write at least one manuscript relevant to semiotic. Yet 1903 marks the beginning of the peak period of Peirce's creative career, semiotic and otherwise, a period that starts to decline only about 1911. It is during this period, in particular, that Peirce most closely connects logic with semiotic (see especially MSS 336, 337, 478, 693, and 792). The last manuscript in which Peirce discusses and applies semiotic topics and theories is MS 12, dated 5 February 1912. What lies between MS 802 and MS 12—again, we refer the reader to the chronological list of manuscripts appended to this paper—very clearly establishes Peirce as one of the founders of and leading figures in modern semiotic (and if taken in connection with his published writings, perhaps as the founder and the leading figure). In nearly all these manuscripts, Peirce is found to be both constructing and utilizing his semiotic spectacles—through which every serious student of semiotic, whether Peircean or otherwise, should learn to look and must look to understand and properly apply this very intriguing, albeit difficult, general theory of signs.

8.

The serious student of Peirce's semiotic must, very obviously, be familiar with the primary literature, but should also know the secondary studies, especially as these may serve as a guide to the former. In the remainder of the paper we shall offer some suggestions concerning these secondary studies.

No doubt some future historian of ideas will wonder why, from early in Peirce's philosophic career to the present day, there have been only a few truly sound studies of his semiotic. Peirce believed that there was something in the ordinary way of conceiving things that tended to prevent persons from grasping his particular insights, unless of course the attempt to understand his insights was accompanied by much hard work and by a flexible and open mind. He may well have been correct in that view; and if he is correct, only time and patience will bring about a more widespread and thorough understanding of his truly remarkable and revolutionary work. We do not claim to have succeeded in our own attempts, but for those who desire to begin work along these lines, we offer these suggestions.

During Peirce's own lifetime, only a handful of people seemed—accord-

ing to what Peirce himself says—to be able to comprehend his efforts in semiotic and other closely related matters. The people he mentions are Francis Ellingwood Abbot, Victoria Lady Welby, and Josiah Royce; and to a lesser degree, William James and Christine Ladd-Franklin. On the issue of what Peirce means by the term "nominalism" the work of Abbot is quite important, and especially his Introduction to his Scientific Theism (Boston: Little, Brown and Company, 1885). (For an account of Abbot's life and philosophy, see William Jerome Callaghan, The Philosophy of Francis Ellingwood Abbot, Diss. Columbia 1958.) Although Fisch intends some day to publish an article illustrating that, in one sense, Peirce was a lifelong nominalist, we believe that from a relatively early period he was a lifelong antinominalist, and that to understand the meaning and importance of this is to understand a great deal of Peirce's semiotic. The relevant material from Lady Welby is contained in Semiotic and Significs (S 616), the introduction to which is helpful. And Royce's importance has been pointed out in Fisch's "Peirce's General Theory of Signs" (S 492).

Several recent studies relevant to the entire scope and nature of semiotic considered as a central coordinating theory (not as "semiotic of x," but as "semiotic per se") should be mentioned at this point. Jarrett Brock has solved the problem of Peirce's "logic of vagueness" (what we might regard as his "logic of interpretation") in his dissertation of the same title (S 170). Brock has followed up on some of those important findings in his "Peirce's Concept of Semiotic" (S 171) and in his contribution to a review symposium on Douglas Greenlee's Peirce's Concept of Sign (S 587; Brock's article is S 172). Joseph Ransdell's work on Peirce's idea of representation (S 1143) is probably the best single work in this area. He has continued to present articles on Peircean semiotic and phenomenology and on Peirce's place in the history of philosophy (see S 1144-1150). The continuing studies by Fisch, which bear upon the numerous aspects of Peirce's life and work, are quite relevant to our subject in a number of important ways (see S 465-497). Don Roberts' study of Peirce's existential graphs (S 1201) is important for understanding that part of Peircean semiotic. Three studies now making their way through the press as part of the forthcoming Proceedings of the C. S. Peirce Bicentennial International Congress are illuminating; these are David Savan's "Peirce's Semiotic Theory of Emotion" (S 1276), Klaus Oehler's "Peirce contra Aristotle: Two Forms of the Theory of Categories" (S 1053; see also S 1051) and Hanna Buczynska-Garewicz's "The Idea of Object of Knowledge in Peirce's Theory of Signs" (S 205). Richard Rorty's essay on Peirce's categories (S 1210) has long been recognized as an outstanding account of that very important subject; in conjunction with this essay, the reader should also look at Donald Buzzelli's article on the "New List" (S 225; see also S 226, his dissertation). Greenlee's book, which we mentioned above, has been a stimulating, if controversial, work in this area, and should be read together with the special review symposium that was held by the Charles S. Peirce Society (see Transactions of the Charles S. Peirce Society,

12 [1976], 97-147; see also Oehler's review of this book in the same journal at 10 [1974], 185-189). An equally important book is John Fitzgerald's *Peirce's Theory of Signs as Foundation for Pragmatism* (S 508); Fitzgerald hopes to complete an expanded revision, which also takes account of Peirce's unpublished writings, in the summer of 1979. For those who seek a general introduction to Peirce's philosophy, and logic and semiotic, we particularly recommend Manley Thompson's *The Pragmatic Philosophy of C. S. Peirce* (S 1416) and W. B. Gallie's *Peirce and Pragmatism* (S 534).

We urge persons pursuing studies of Peirce's semiotic to steer free from the dangerous shoals of what might be called "the doctrine of Peirce as an interesting failure." This doctrine, popular until recently and probably even now, has urged, under various guises, that what Peirce "attempted" was indeed interesting but that his "attempts" were unfortunately unsuccessful. Its advocates admit that no one is perfect but hold that, unfortunately again, Peirce was rather seriously imperfect. This doctrine is quite clearly brought forth in Murray Murphey's The Development of Peirce's Philosophy (S 1001), Thomas Goudge's The Thought of C. S. Peirce (S 565), Rulon Wells' "Peirce's Notion of the Symbol" (S 1507), Solomon Bochner's "Mathematical Reflections" (S 134), Elisabeth Walther's Allgemeine Zeichenlehre (S 1481), and Bense and Walther's Worterbuch der Semiotik (S 90). Disconfirmations of this all-too-popular doctrine have been pointed out in Eisele's and Fisch's responses to Bochner's article (see S 409 and S 489), in Ketner's and Moore's papers given at the Peirce Congress (see S 752 and S 967), in Ransdell's comments on Murphey's thesis (S 1145), and in Ketner and Kloesel's review of Bense and Walther's Worterbuch (S 754). If more time and space were available, numerous other examples of such disconfirmations could be given.

There are three works in progress that we should cite here, and express the hope that they may appear soon. One is Hanna Buczynska-Garewicz's book on Peirce's theory of knowledge as seen through his theory of signs, second is David Savan's monograph on the theory of signs, tentatively entitled An Introduction to Peirce's Semiotic System, and the third is Klaus Oehler's book on Peirce and ancient philosophy which will be particularly concerned with Peirce's reception of Greek semiotic theories and their integration into his philosophy. Perhaps we should also mention Gérard Deledalle's recent publication, Charles S. Peirce: Ecrits sur le signe (Paris: Editions Seuil, 1978), which unfortunately does not contain any of Peirce's unpublished manuscripts. Finally, in addition to the Transactions, all serious Peirce students should consult the following six journals, several of which have devoted entire numbers to Peirce's semiotic: Semiotica, ars semiotica, Versus, Kodikas/Code, Semiosis, and the most recent, Zeitschrift für Semiotik.

9.

We began this paper by alluding to Fisch's eight unfinished tasks of Peircean semiotic scholarship, and we end it by noting that although it has not completed even the first of these tasks, it has suggested those tools that are now available but still too little used. Naturally, the task of improving and adding to these tools is not ended, and additional items will continue to appear. Persons interested in semiotic need to stay abreast of these tools and of other ongoing projects. Moreover, they should realize that these tools have been coordinated through continuous consultations and that they supplement and complement, rather than duplicate, one another. To put it another way: Because nearly all the materials described earlier are the result of an ongoing coordinated process, lacking even one of them means lacking an important part of the whole. Even the new edition, to date the most ambitious project, will not be able to provide a comprehensive picture of Peirce's work. We shall continue to have to make use of the Microfilm and Copy; the Catalogue and Supplement; the Microfiche and Bibliography: Eisele's New Elements of Mathematics and Hardwick's Semiotic and Significs; Ketner and Cook's Nation; and the new edition. Kloesel's new catalogue, and Ketner and Pfeifer's concordance. These are the productions of cooperative Peirce scholarship, and we trust that this cooperative spirit will continue to bring us all—whether primarily semioticians, or philosophers and historians—the welcome benefits of its gentle thirdness.

* * *

Below are listed, in chronological order (and in a few cases, tentatively), all those Peirce manuscripts that, either partially or completely, contain specific discussions of the nature and meaning of signs or of the general theory of signs. A number in parentheses indicates that that manuscript properly belongs to the manuscript whose number immediately precedes the parenthesis. A number followed by either a or b indicates that that is a new folder, made up of the manuscript given in the parentheses that follows.

1912: 12

PEIRCE MANUSCRIPTS CONTAINING SPECIFIC DISCUSSIONS OF SEMIOTIC

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1865: 339, 346, 724, 769 (728, 729), 802
1866: 339, 357, 359, 720, 732 (809), 734 (730)
1867: 339
1868: 931
1869: 584, 585
1870: 587
1871: 531 (810)
1873: 373, 379, 380, 381, 381a (388, 389), 382, 383
1885: 901, 911, 1369
1887: 527, 537 (S-59)
1891: 339
1893: 404 (796)
1894: 423
1895: 595 (739), 717 (29, 716, 718, 903, 950), 787 (804, 805)
1896: 16, 518, 520, 521, 522, 524, 900
1897: 735, 798 (738)
1898: 339, 439
1899: 142, 339
1900: 339, 1147 (913)
1901: 339
1902: 425, 425a (1579), 599, 1461
1903: 304, 307, 308, 312, 339, 449, 452 (447), 462, 465, 470, 477, 478
      (538-542, 799, 808, S-45), 491, 492, 792, 800
1904: 4, 7, 8, 9, 10, 11, 336, 337, 339, 515, 517, 530, 693 (S-26, S-75)
      774 (775-777), 1476, 1603a (914, L 107)
1905: 145, 284, 289a (1338), 339, 939, 1334, 1493a (Supplement)
1906: 283, 292a (292), 292b (295), 298, 330, 339, 498, 499, 602, 793,
      795, 803
1907: 200, 277, 318, 319, 320, 321, 773
1908: 277, 300, 339, 609a (801), 610, 611, 612, 794, 806, 842
1909: 277, 339, 632 (631), 633, 634, 636, 637 (638), 640 (639), 641
      (642), 643
1910: 646, 654, 667
1911: 669, 670, 675, 676, 846 (854), 849
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