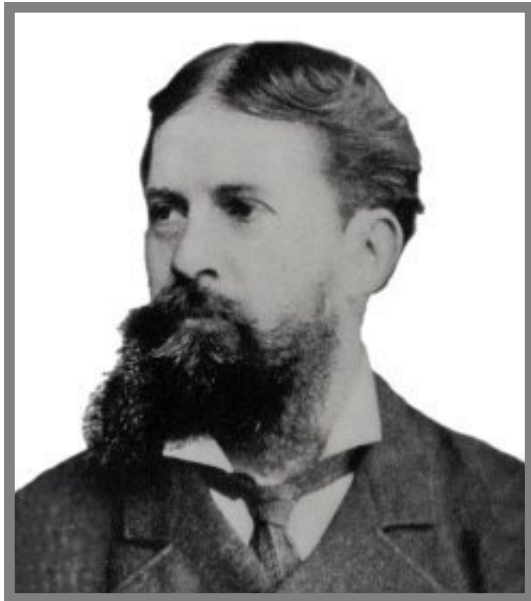


How I Study C.S. Peirce

by Mike Bergman - Tuesday, August 29, 2017

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A Man of Depth and Context Demands Many

Perspectives

In my [last article](#) I explained some of the reasons why I study [Charles Sanders Peirce](#) as an authority on knowledge representation. Now, I would like to complement that piece by describing *how* I study Peirce. My approach has been gained after a decade of study of Peirce. It has taken me that long to assemble a relatively complete library of his writings and writings about him. I'm sure there are many ways to approach such study, but I would have personally enjoyed getting some tips when I was starting out.

I will cut to the quick chase first. In a comment to that last article, I was asked to recommend some starting resources for learning more about Peirce. I replied:

I actually have plans to lay out sources and how I read Peirce (“purse”) in a future article. But the quick version is: 1) start with the [Charles Sanders Peirce](#) article and [category](#) on Wikipedia; it is a remarkably good starting point; 2) then I would read [The Essential Peirce, Vol 1](#), with attention to Nathan Houser’s great introduction; and 3) for a complete view, and one which offers (I believe) one of the fairest and well-reasoned views of Peirce, I really like Murphey’s [The Development of Peirce’s Philosophy](#). There are many other useful sources and I don’t mean to slight them by not mentioning them here.

That is still the best summary, I think, about how to proceed. But now I'd like to complete my plan to provide additional advice and sources about how to study Peirce.

Begin with Wikipedia

My first recommendation to begin learning about Peirce is to start with Wikipedia. Wikipedia's entry on [Charles Sanders Peirce](#) is actually quite good and rather complete. There is an [entire category](#) dedicated to Peirce on Wikipedia, with some 40 articles listed. I think the articles on [semiosis](#), [abductive reasoning](#), and [pragmatism](#) are some of the better ones. Unfortunately, the article on Peirce's [universal categories](#) is pretty weak. To compensate, however, the [Peirce bibliography](#) is a very good reference source.

Try an Early Introduction

Peirce is hardly easy to read, and most of what is written about him is also pretty dense. Though those seasoned in Peirce studies might find it covering standard ground, the 2013 Cornelis de Waal [guide to Peirce \[1\]](#) is possibly the most accessible introduction to Peirce and his contributions available. I find I no longer consult it for facts or details, but as an intro it is helpful and a relatively quick read. If this piques your interest, then it is probably worth your time to start exploring Peirce in more depth. I also like de Waal's labeling of the "doctrine of the categories".

Editorial Compilations of Peirce's Writings

Of course, all of the material up to this point is others writing about Peirce, and not Peirce in his own words or form. The only way to find out what is in a house is to enter it, explore it, and poke into various corners. For this, it is necessary to read Peirce directly.

The earliest known compilation of Peirce's writings was by [Cohen in 1923 \[2\]](#), nearly a decade after Peirce's death, and is both a good intro and starting compilation. An even better starting compilation is that of [Buchler \[3\]](#). However, I personally did not start with either of these, nor with de Waal, because my initial research discovered that searchable PDF versions of the first "complete" compilations of Peirce's writings could be obtained for free online [\[4\]](#). These *Complete Papers* have also been [posted online](#), which is easier to read than the PDF versions, and can also be searched [\[see 5\]](#). The problem with these sources, however, is that the editorial order of CP is not chronological, gaps exist because of the sources initially chosen, and the formatting and editorial decisions are not equal to later standards. The online version is better for learning and reading purposes, but the lack of editorial oversight hurts CP irrespective of format. However, DO get a local copy of the online PDF for your serious library shelf because it is an important way to be able to electronically search large portions of Peirce's writings.

[There was a CD library at one time that provided even a broader, searchable coverage of Peirce's writings, but that is unfortunately only now being maintained for prior purchasers [\[6\]](#). If you ever see a copy available, it is perhaps worth looking if the price is reasonable.]

There are, of course, many different editor's compilations of Peirce's writings. In mathematics, you likely want to focus on the fantastic four-volume series from [Eisele \[7\]](#), which can often be found for free online. As a non-mathematician, I found Volume 4 to be the most useful. For my own interests in logic and knowledge representation, I have found Vol 1 of [The Essential Peirce \[8\]](#) to be the best single compilation of relevant writings. In fact, you can re-assemble the entire contents of EP (as it is abbreviated) from free, online PDFs (see further below), and I have, but that also means you lose the

fantastic Nathan Houser introduction and the nice packaging and portability of an actual paperback book. There are, of course, many other compilations also available (see the various [bibliography sources](#)).

I almost uniformly find the introductions by the editors of these compilations to be some of the most useful insights about Peirce. The introductions often weave in relevant personal details to help evaluate Peirce as a person. The editors bring a perspective and context about Peirce's accomplishments, since they are being offered from an external vantage. Under the category of editorial compilations, I especially like Nathan Houser's introduction to EP. But, from different perspectives, I also think the intros by both Brent and Murphey (see below) helped in a similar way to make Peirce come more alive.

Comprehensive Studies

After this kind of a dive into Peirce's own writings, again usefully supported by the editor's intros, I find I want a big picture of Peirce, that covers his motivations, circumstances, discoveries and maturation. I suspect these are the hardest of the books about Peirce to write. It requires a breadth of familiarity and a deep understanding of (at least what the author thinks are) Peirce's intentions. There also are wrinkles of this kind of approach, sometimes shading into only specific slices (such as religion [\[9\]](#)) or even further into specific academic perspectives.

The online [Arisbe, the Peirce Gateway](#), lists some 210 books published on these kinds of topics since 1995 or so, with 114 published [since 2006](#) alone. The site further lists [357 doctoral dissertations](#) about Peirce, most in the last few decades. Note, many of these sources are not in English, since Peirce is studied worldwide, with a strong contingent from Latin America, especially Brazil and Colombia. The Arisbe site is helpful in that most entries are accompanied by at least a paragraph of description, and often with links to longer online excerpts. This is a good resource should specific topics pique your interest while studying Peirce.

Amongst the comprehensive studies covering the entirety of Peirce's life work, I will mention two. The first is the book from [Kelly Parker in 1998 \[10\]](#) that focuses on Peirce's emphasis on continuity (synechism). Parker writes well, is lucid, and has an excellent notes section. The second compilation, and one of my favorite Peirce reads, is the earlier [1993 book by Murphey \[11\]](#) on the development of Peirce's philosophy. Some other scholars, notably Hillary Putnam, have suggested that Murphey's interpretations are often controversial. Murphey did, indeed, change some of his opinions of Peirce, especially with regard to continuity, in the second edition. But, I find Murphey's analysis of the phases of Peirce's developments to conform to my own sense. The latter section of his book is really excellent. I find it strange that many other general recommendations for Peirce readings tend to overlook this book. Perhaps a bit of this neglect came from Putnam's early comments, but Murphey is one of the resources I most often consult.

When first learning about Peirce, it is striking how dominant semiosis and his theory of signs (and logic) pervade many of the resources. To be sure, these are important Peircean topics, but I find that it took me a while to probe beyond these topics into others I find even more fascinating. I have clearly focused on Peirce's universal categories of Firstness, Secondness and Thirdness. But I have also been studying abductive reasoning, language grammars, the link between logic and mathematics, and how Peirce's views dovetail into current topics in topology and category theory. With regard to these last topics, I recommend [Fernando Zalamea \[12\]](#). Zalamea's scholarship is quite advanced and perhaps is not a good

starting point, but after some exposure to Peirce I like the synthetic view that Zalamea brings to the table. His scholarship clearly shows that Peirce continues to bring major insights to modern logic and mathematics.

Peirce Biographies

Louis Menand won a Pulitzer prize for his recounting of the birth of pragmatism in the US [13]. He told the story through the lens of the major participants in the Metaphysical Club, really more of an informal grouping of intellectuals. William James, Chauncey Wright, and Oliver Wendall Holmes figured prominently in that group, but none perhaps more so than Peirce. (Peirce and James were lifelong friends, but Wright was tremendously respected by Peirce for his insight and intellect and they were very close friends; Wright unfortunately died young at 45.) What is great about this book is that the movement to pragmatism is framed through the prism of slavery and abolition, the Civil War, and rapid intellectual and technological change. This is a really good read because it does such a marvelous job of placing Peirce into the context of his times, as well as providing equivalently fascinating looks at his very accomplished colleagues. However, this is not the single book to read if you want to probe deeply into Peirce's theories and world view.

My favorite biography of Peirce, whose publication is a pretty astonishing story in its own right, is [Brent's life biography of C.S. Peirce](#) [14]. Brent first began his biography of Peirce to answer the question of who invented the US philosophy of pragmatism, triggered by clues in a biography of Peirce's friend, William James. He completed his dissertation in 1960 and intended to publish it, but ran into permission difficulties from Harvard, which was still acting poorly with regard to Peirce's archival papers. Brent had to drop the project and moved on to other things. Then, in 1988, Thomas Sebeok, himself a then emerging-Peirce scholar, encountered a description of the dissertation in a footnote in another book. He was able to get the dissertation through interlibrary loan and finally read it in 1990. He was astonished with what he learned and the quality of the work, and set out to find Brent, whom he finally tracked down in Washington, DC. Through Sebeok's catalyst, a publisher was found, Brent agreed to update his 30-year old dissertation, itself an effort of considerable labor, and the work was finally published in 1993. Brent provides an unvarnished and fair look at Peirce the person and shows great insight into his accomplishments and unique ways of thinking about the world. Brent tackled head on all of Peirce's foibles and weaknesses as well. The resulting biography is a masterpiece, what Sebeok termed a "tragicomic thriller." Brent himself came to believe "in philosophy [Peirce] was one of the most original thinkers and system builders of any time, and certainly the greatest philosopher the United States as ever seen." Brent came to feel "deep affection" for his subject, despite those foibles and weaknesses.

The Brent biography is an incredibly intelligent treatment of an incredibly intelligent man. As might be expected from a work that began as a dissertation, it is thorough and well referenced. As might not be expected from a dissertation, it is really well written. Brent uses Peirce's own "[architectonic](#)", a term new to me then but studied by me now, a term drawn from Aristotle but modified by Kant and then Peirce, as a way of framing his own treatment. Brent is also attuned to shifts in Peirce's thinking over time, a great boon to better understand the development of his theories. Since I believe Peirce will be studied for centuries, as with other great thinkers of humankind, Brent's biography will be a must-include companion to Peirce's own writings also over those centuries. As I note in the close to this article, Brent and Sebeok are but two of the hundreds of individuals that have made it their life's work and passion to better understand Peirce, what he was trying to tell us, and to bring awareness of him to broader audiences.

There is also a [fictionalized biography](#) of Peirce's mysterious second wife, Juliette, that has some voyeuristic interest, but is an unsuitable source for any reliable information about either Charles or Juliette [\[15\]](#).

The Academic Perspective

The bulk of commentary, of course, about Peirce may be found in the academic literature. I often find when studying Peirce that a new topic (or one that finally gets my attention) will arise that I want to learn more about. As with all such topics, I first consult Wikipedia for a starting article, if one exists, to get a bit of background and then some key links. But my real focus in such investigations centers on Google Scholar.

Google Scholar contains nearly [40,000 articles](#) about or discussing Peirce, with the bulk, perhaps 70%, in English [\[16\]](#). When searching Scholar, I always use "peirce" as one of my keywords and keep that search term in quotes (without the quotes, Scholar will also give you results from "pierce" since it seems to assume "peirce" is a misspelling). Since I am not affiliated with an academic institution and do not have ready access to interlibrary loan, I tend to focus on those articles that show a PDF link in the right column. (For articles of keen interest without such a link, I click on the 'all xx versions' link if it displays; occasionally, a PDF version will then show up.) I also tend to click off the citations and patents options to eliminate superfluous results for my purposes. If I really, really need the paper in full, I will also conduct a standard search using the last name of the author and the paper title in quotes as the query string. Sometimes PDFs may also be found on the standard Internet, independent of the academic sources indexed by Google Scholar. Or, I may ask a colleague to obtain the paper for me from interlibrary loan.

If I discover a paper of repeat interest, I save it. For papers of keen importance, I will also click the link 'Cited by xx' link on Scholar and do a secondary inspection of those to find other interesting papers that have cited the one of interest. This latter technique is particularly helpful when I'm not sure what all of the terms of art may be for my topic of interest, or if I want to trace how a topic has evolved. Inspecting multiple papers is one way to learn the terminology to improve query precision.

I have been following this approach to the academic literature on Peirce for nearly a decade. I keep all of my PDFs under a single root directory (Peirce). I add and expand folder sub-topics as needed. Prior to saving, I also tend to alter many of the Web URIs to a more descriptive label, since many PDFs are indexed under cryptic or numeric handles. This technique makes it easier to find articles later on my file system. After 10 years of following this approach, I now have about 650 papers in my local electronic Peirce library, organized into over 60 sub-topics. The PDFs currently take up about 500 MB of storage. Of course, when I am working on a given topic, I first consult and then add to this electronic library as I continue my research.

Web Sites About Peirce

This little guide to sources is obviously not the first such set of resources on the Web for Peirce. There are, in fact, dozens of useful ones I have found. I outline some of these in this section.

There are many writers whose Web sites tend to emphasize, if not exclusively focus upon, Peirce. I have

often mentioned the influence of [John Sowa](#) in first getting me interested in Peirce, so his site (with [query specific to Peirce](#)) is a good one to include on your list. Sowa tends to focus on existential graphs, knowledge representation, logic and natural language understanding. A good source for Web writers on Peirce may also be found on the [Arisbe site](#); check out the blogroll on the left column. Of course, I, too, write not infrequently about Peirce. You may obtain my Peirce articles under my blog's [Peirce category](#). There are perhaps another dozen or so who write often on Peirce.

In terms of broad electronic resources on Peirce, probably the best is [Arisbe](#), noted already. (See here for the [history of the term Arisbe](#) as used by Peirce for his Pennsylvania home.) Two high-quality, online philosophy sites, the [Stanford Encyclopedia of Philosophy](#) and the [Internet Encyclopedia of Philosophy](#), are often good introductory resources when beginning to learn about a new topic. Many of their Peirce articles are written by one of the authoritative scholars for that subject area. A site which has not been updated since the early 2000s, but which has some unique and high-quality articles by outside experts, is the [Digital Encyclopedia of Peirce](#). If you lack the electronic sources I noted above, a useful site to see some different uses of specific Peircean terms may be found on the [Commens](#) Web site. Besides the dictionary, there are some Peirce articles and a narrower (and higher quality) listing of academic articles than what Google Scholar provides.

Some tens of thousands of Peirce's handwritten pages have not yet been transcribed for broad use. The [Charles S. Peirce Project](#) was established in 1976 to continue the mission of making Peirce's writings available, started by the *Collected Papers* (CP) project [4] going back to the 1930s. The Project continues to produce a multi-volume chronological and critical edition of Peirce's writings. Traditionally, this is expensive work in terms of vetting and cross-referencing manuscripts, all the while trying to maintain the highest editorial quality. Progress has been slow. More recently, efforts to broaden participation with crowdsourcing and more modern technology are attempting to speed up the release of Peirce's written backlog [17] and make information digitally searchable. Note that the Project, like the Arisbe gateway, is managed by Indiana University, which has taken the lead role globally in many areas of Peirce resources and writings.

Peirce's theory of semiosis began with three categories, which could be interpreted as six categories [by including what Peirce called the "degenerate" forms for Thirdness (2) and Secondness (1)], but then he expanded to 10, and after the turn of the 1900 century pushed for 28- and 66-category schema. These latter were some of the last substantive contributions made by Peirce to his semiotic theory, and were clearly in a state of flux with many changes in Peirce's last notes. The extension of the sign categorization is exciting, however, and various attempts have been made to try to complete Peirce's thinking or inductively argue for certain additions and schema. One of the funnest to work with is from Romanini's [Minute Semeiotic Web site](#). The 66-sign schema is reasonably argued, and the Web interface is cool (requires Flash).

A useful piece of information if you study Peirce further, given that so much of his writing appeared long ago or has been transcribed or compiled by editors, is how to decipher the citation schemes used. Good sources on Peirce citation standards are [Wikipedia CSP abbreviations](#), the [Robin catalog](#) for citing papers and manuscripts, and the abbreviations listing in [1]. There is a [Peirce Society](#), established in 1946, to encourage study of and communication about the work of Peirce and its ongoing influence. It has an annual meeting and conducts an annual essay competition.

Since first established by Joe Ransdall in 1993, there is a dedicated discussion list, [Peirce-L](#), with often lively discussion. That link will allow you to search archives going back to 2011 and to subscribe to the list. The archives go back for years (I have not tried to retrieve from as far back as 1993!) and can be searched for (often) salient commentary on Peirce topics of interest. (Actually, if you have been on the list for some years, as I have, some topics keep returning like waves breaking on the shore.) Consult [Arisbe](#) for archives earlier than 2011. Most users are lurkers, but the list attendees are really good about answering questions or providing assistance. There is a similar mail list group in [biosemiosis](#), another field that Peirce played no small role in helping to gestate.

A Man of Complexity, Unlikely to be Fully Plumbed

Though obviously many intellectual giants of history were recognized as such in their own times -- Newton, Einstein, Darwin and Aristotle come to mind -- all of us like the story of the genius unjustly ignored in his own lifetime [\[18\]](#). In science, famous examples include Copernicus, Galileo, Wegener and Mendel. Charles Sanders Peirce fully belongs in this pantheon as well, a possible outcome I think he realized himself [\[19\]](#). Ill, in poverty, and shunned by the establishment of his time, Peirce worked feverishly in his last years to get down on paper as much as he could, pretty much laboring alone and in obscurity. We are still plumbing these handwritten papers, gaining new insights and perspectives of what we think we know about Peirce's philosophy and perspectives.

In the early days after Peirce's death, it was his wife Juliette and his colleague Josiah Royce who saved his papers, unfortunately to a shaky initial trusteeship by Harvard. Royce died himself soon thereafter. It was a decade before the first editorial compilation of Peirce was published [\[2\]](#) and nearly twenty years until initial release of his (flawed) *Collected Papers* [\[4\]](#). Meanwhile, largely lacking students to survive him nor a standard history of academic publications, others appropriated his discoveries and work with no or inadequate recognition. Notable names in mathematics and philosophy may have been guilty to one degree or another of these sins.

One of Peirce's most famous admonitions is "there follows one corollary which itself deserves to be inscribed upon every wall of the city of philosophy: Do not block the way of inquiry." (CP 1.135). Slowly at first, and then growing after publication of the *Collected Papers*, there has been a legion of researchers and academics who have labored to preserve, understand and explicate Peirce's insights. Virtually every author and name mentioned in this article has played such a role, with hundreds more, some even more active than those cited, contributing their part to Peirce's growing legacy. And the army keeps growing.

Yet, given Peirce's own constant questioning and revision of his theories, plus the fragmented nature of the written record he left behind, I think it fair to assert that we will never come to fully understand Peirce's "truth". On the other hand, I also think we are only just beginning to understand how Peirce's insights can continue to inform our understanding of the world and our own role in it.

Lastly, please do let me know if I missed what you think are some of the most noteworthy Peirce resources.

[1] Cornelis de Waal, 2013. *Peirce: A Guide for the Perplexed*, Bloomsbury Academic, London.

[2] Morris R. Cohen, ed., 1923. *Chance, Love, and Logic: Philosophical Essays*. Harcourt, Brace and World, New York, NY. Reissued by Bison Books,

University of Nebraska, 1998.

[3] Justus Buchler, ed., 1940. *Philosophical Writings of Peirce*, Routledge and Kegan Paul Ltd., reissued by Dover Publications, New York NY, 1955.

[4] See the [electronic edition](#) of *The Collected Papers of Charles Sanders Peirce*, reproducing Vols. I-VI, Charles Hartshorne and Paul Weiss, eds., 1931-1935, Harvard University Press, Cambridge, Mass., and Arthur W. Burks, ed., 1958, Vols. VII-VIII, Harvard University Press, Cambridge, Mass. The citation scheme used for these sources is commonly seen in Peirce scholarship, and is volume number using Arabic numerals followed by section number from the collected papers, shown as, for example, CP 1.208.

[5] You can use a Google site search to search within the [textlog.de](#) site, even though it is in German and does not have its own search function, by using a query similar to the following: https://www.google.com/search?hl=en&as_q=peirce+abduction&as_sitesearch=www.textlog.de. Note, include 'peirce' in the request, because there are other philosopher papers on the [textlog.de](#) site. Also note this approach is tailored for English, with the example querying for "abduction"; replace your own search query in the query string.

[6] InteLex, *The Writings of Charles S. Peirce -- A Chronological Edition. Electronic Edition*. ISBN: 978-1-57085-015-8. See the [InteLex site](#) for an older listing. In 2011 InteLex shifted to an online model serving institutions, with the CDs no longer available.

[7] C.S. Peirce, *The New Elements of Mathematics by Charles S. Peirce, 4 volumes in 5*, Carolyn Eisele, ed., Mouton Publishers, The Hague, Netherlands, 1976; these may be found online in PDF for download from [uberty.org](#): [Vol 1](#), [Vol 2](#), Vol 3, and [Vol 4](#).

[8] Nathan Houser and Christian Kloesel, eds., 1992. *The Essential Peirce, Vol (1867-1893)*, Indiana University Press, Bloomington, IN,

[9] Michael Raposa, 1993. *Peirce's Philosophy of Religion*. Indiana University Press, 180 pages

[10] Kelly A. Parker, 1998. *The Continuity of Peirce's Thought*. Vanderbilt University Press, Nashville,

[11] Murray G. Murphey, 1993. *The Development of Peirce's Philosophy*. Hackett Publishing Company, Inc., Indianapolis.

[12] Fernando Zalamea, 2012. *Peirce's Logic of Continuity: A Conceptual and Mathematical Approach*, Docent Press, Boston, 182 pp. Short of purchasing a book to start, there are two useful papers online in PDF to cover the gist of this book, one mostly on [existential graphs](#), the other somewhat longer with discussion of [category theory](#).

[13] Louis Menand, 2001. *The Metaphysical Club: A Story of Ideas in America*, Farrar, Straus and Giroux, New York, NY.

[14] Joseph Brent, 1998. *Charles Sanders Peirce: A Life (2nd edition)*, Indiana University Press, Bloomington.

[15] Mina Samuals, 2006. *The Queen of Cups*, Unlimited Publishing LLC, Bloomington.

[16] Here is an example query: [https://scholar.google.com/scholar?q=\"peirce\"+abduction](https://scholar.google.com/scholar?q=\). Substitute your own topic keywords for 'abduction' in the example query string.

[17] I could post the links here, but the editors in charge of these transcription efforts are naturally desirous to maintain quality and keep participation manageable. However, if you are seriously into Peirce, it is quite informative to contribute to the process. If you think you'd like to contribute, do some searching on transcribe and Peirce to find these projects on your own, or contact me directly for sources.

[18] It is not only scientists, but writers, artists and musicians sometimes also do not achieve lasting fame until after their deaths. See <https://www.google.com/search?q=genius+recognized+after+death>.

[19] I am helping to transcribe "Significs and Logic" (MS 641-642, 1909), a late, unpublished, handwritten manuscript, wherein Peirce states, "I am striving with all my might to set them [his analyses of the relations between semiotic and logic] in a book so that they may be critically examined; but whether my powers hold out for so great a task is dubious." This sense of racing against the clock pervades his last writings.