Mary Keeler*
The Hidden Treasure of C. S. Peirce's Manuscripts

Abstract: This article presents a short but detailed account of the current issues facing Peirce scholarship in efforts to preserve and interpret Peirce's massive corpus archived at Harvard. The significance of Peirce's multimodal writings (including colorful graphics and text), along with his convoluted processes of inquiry in the development of his philosophy, are examined to indicate why the representational experiments in his manuscripts, and their topological continuity, defy the limitations of conventional publishing. With full and effective access to his entire corpus, scholars could trace the self-critical evolution of Peirce's ideas, from origins to mature expressions, and thereby gain a more complete understanding of his immense intellectual offering to humanity. Here, in this first article (in a series of four), we begin to identify what will be required.

Keywords: archive; continuity; inquiry; representation; self-critical

*Corresponding author: **Mary Keeler,** University of Washington (retired), Seattle, USA,
e-mail: mkeeler@uw.edu

In 1903, Peirce described the challenge that is now still ahead of us:

> All that you can find in print of my work on logic are simply scattered outcroppings here and there of a rich vein which remains unpublished. Most of it I suppose has been written down; but no human being could ever put together the fragments. I could not myself do so. (MS 302)

1 Peirce's manuscript challenge

Charles Sanders Peirce's primary ambition was to ground and expand logic as a general theory of representation, to account for the continuous nature of thought and communication working together in human experience to discover knowledge. His research as a physical scientist convinced him that absolute accuracy is unattainable, leading him to conceive pragmatism as a method for

self-corrective investigation under conditions of uncertainty, and normative science to explain the conduct required to improve our "scientific intelligence" (or capability to learn by experience) as collaborating investigators. His life's work can be seen as the struggle to gain the philosophical perspective needed to appreciate how intellectual growth is possible — in terms of our esthetic, ethical, and logical sense of self-critical control (or the examination of one's own habits of thought and expression in the conduct of inquiry). How can we apply Peirce's ideas to augment this paramount and most human capability with our instruments, to improve access to his ideas?

Peirce's philosophy (or theory of inquiry) has been recognized as a new paradigm responding to Cartesian dualism, materialism, and reductionism — the unexamined metaphysics underlying our traditional empirical theories, which cannot help us discover how technology might serve us to improve learning and research. His largely unpublished manuscript corpus even exemplifies the futility of attempting to capture the evolution of ideas in traditional print media, and records his awareness of and frustration with these limitations. Peirce's work anticipates (in nature as well as content) the subsequent development of computer-augmented media, making possible new realms and modes of inquiry.

Even a brief glance through Peirce's Harvard archive (an estimated 100,000 pages) would convince anyone of its representational complexity: text enclosed in graphical figures, graphics embedded in text, text contoured around graphics, whole pages of graphics with no text at all, and graphical figures with as many as four colors used to make critical distinctions ("since four tinctures are necessary to break the continuity between any two parts of any ordinary surface").[1] Peirce's aim to explain logic on a fundamentally new basis, within the framework of his general theory of signs, is now known as "semiotic" (though he preferred the spelling "semeotic" (see CP 8.377 [1909]). Unfortunately, most of his mature work on this theory is still available only in paper manuscript form.

As Peirce developed his philosophical perspective, he found it increasingly difficult to constrain his thought within the limitations of the conventional formats of expression: the book and the journal article. Furthermore, those aspects of his thought that he regarded as most significant (and of greatest contemporary interest) are those that editors of his own time typically would not publish because they could not imagine a readership for them. This

---

1 CSP-MS 295 [1905]: 44; see example MS pages at Harvard's website for the Peirce Collection: https://library.harvard.edu/collections/charles-s-peirce-papers.

limitation, together with his complex compositional methods, left a corpus of rich material in which the usual distinction between draft versions of a paper and the final version is all but useless. Christian Kloesel (who edited the *Writings of Charles Sanders Peirce: A chronological edition* for two decades) describes in detail Peirce's method of writing to indicate the difficulty of representing his work comprehensively in print volumes.

> Typically, if Peirce was aiming at establishing an idea, he would proceed from a certain starting point along a certain line of thought until he became aware that if he pursued the matter further in the way he was headed, he would not get to where he wanted to go, or at least not within the limits set by possible publication. He would then double back a few sentences, a page, two pages, ten pages, or fifty pages, until he found a suitable logical forking point, and move toward his goal in an alternative way from that point, until the same sort of thing happened again; whereupon he would again double back to a forking point and move toward his goal anew. Sometimes a path from a fork would itself have a fork, which is to say that in going back he would go past a fork taken earlier and find one still farther back in the direction from which he had come. Sometimes a fork on a fork would itself have a fork, and so on. Sometimes he would go back to the beginning and blaze another trail from there, still heading toward his original goal, but in a quite different way. Sometimes he would abandon that starting point and try another approach. Sometimes he would actually reach his original goal but, then, his understanding of it would have grown in the course of his trying to reach it, forcing him to redefine his objective. What is most valuable to the reader is Peirce's learning process itself, not witnessing the result (especially what was published) but joining him along the trails and side-trails he pursued. (Keeler and Kloesel 1997: 283)

Shea Zellweger has attempted to map the "topological course" of such explorations in the order of Peirce's manuscript pages (see Figure. 1.1, below; and see Keeler 1998).
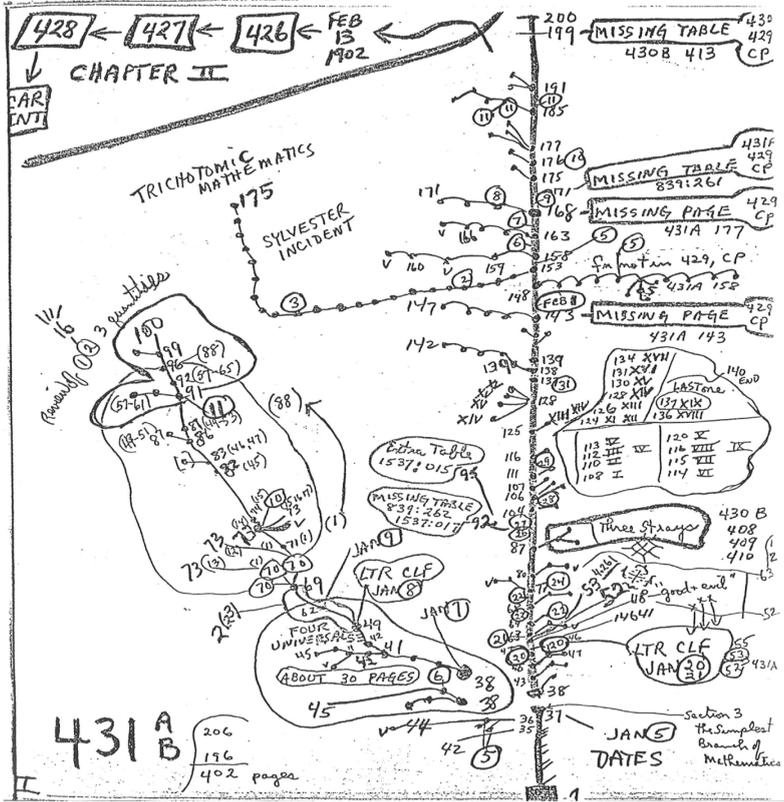
Figure 1.1: Shea Zellweger's diagram of Peirce MS 431

Peirce referred to himself as a pioneering thinker. Many of his unpublished manuscripts – some of which are several hundred pages long – are indeed like trails made through a hitherto uncharted conceptual forest, not records of random strolls here and there but rather the sort of trails left by a careful explorer. A major reason for the continuing widespread interest in Peirce's work is that the territory he explored is frequently what was only later investigated by others and staked out for settlement by one discipline or another. But what makes Peirce's exploratory method of composition exciting to read also makes them unpublishable in print and bound form. No publishers would regard transcriptions of such intellectual explorations to be acceptable as a product of their press, and the very binding of the pages would make the printed transcription less useful than the material in its original state. This material must be manipulated, rearranged, set first in one order and then in another, so

that even the awkwardness of the unbound paper page is preferable to its diminished intellectual value in conventional book format.

2 Bibliographic evidence of Peirce's expeditions

Certainly, search and retrieval of the material in print form is a nightmare, made endurable only by the quality of the content. Peirce's method of writing, particularly in his later years, was such that almost any topic might be introduced and discussed in almost any given manuscript, regardless of its nominal topic, which makes it often necessary to search through the manuscripts (in photocopy or microfilm) page by page, hoping the right guess has been made about where to search, since the manuscript labels are not usually helpful, and it is impossible to work through the entire 100,000 pages. Days can be spent in search of a dimly remembered but crucially important passage, sometimes to no avail. Much the same can be said of the *Collected Papers* edition, still the only overall presentation of his writings available to most readers; even though now in electronic form,[2] its indices and principles of arrangement are far from adequate for scholarly purposes. Its topical arrangement disrupts original series of papers, both published and unpublished. Different parts of the same manuscript appear in different volumes (to reflect the volumes' respective topics), and many of the selections are either not dated at all or dated inaccurately. Worst of all, parts of different manuscripts are sometimes grafted together (without mention), consisting of writings composed more than three decades apart. As a scholarly tool it is unreliable, obscurantist, and often entirely frustrating (see Keeler and Kloesel 1997).

A complete bibliography covering both Peirce's published writings (beginning in 1857 and ending in 1909) and his unpublished writings (beginning at age 11, when he wrote a "History of Chemistry," and ending when he died in April 1914) would indicate the continuity of his work and that it was not finished when he died (see the Stanford Encyclopedia of Philosophy; and *Wikipedia Works and Bibliography*). In his own numerous assessments, he makes clear that he did not consider a single one of his writings "finished," "definitive," or "final." Certainly, he intended to publish considerably more than he did (including several full-length books) but either he was unwilling to tailor these to publisher's demands, or publishers would not accept them

---

2 See Intelex Past Masters: http://www.nlx.com/collections/95.

because (as we know from correspondence) they were too advanced or difficult to become money-makers. Most of his writings are "works-in-progress," as he describes in a letter to Victoria Lady Welby:

> Much of my work never will be published. If I can, before I die, get so much made accessible as others may have a difficulty in discovering, I shall feel that I can be excused from more. My aversion to publishing anything has not been due to want of interest in others but to the thought that after all a philosophy can only be passed from mouth to mouth, where there is opportunity to object & cross-question & that printing is not publishing unless the matter be pretty frivolous. (SS: 44 [1909])

Another significant barrier has been that the print format could not cost-effectively present his progressively more graphical and colorful work: manuscripts filled with symbols and complicated graphics and crucially meaningful color, in both words and diagrams.[3] This limitation especially challenges publication of his most intensive theoretical work, including the Existential Graphs, produced during the last 10 years of his life (40,000 pages, or nearly half of the Houghton collection) [see Peirce's yearly productivity graphed in Figure 1.2 below].
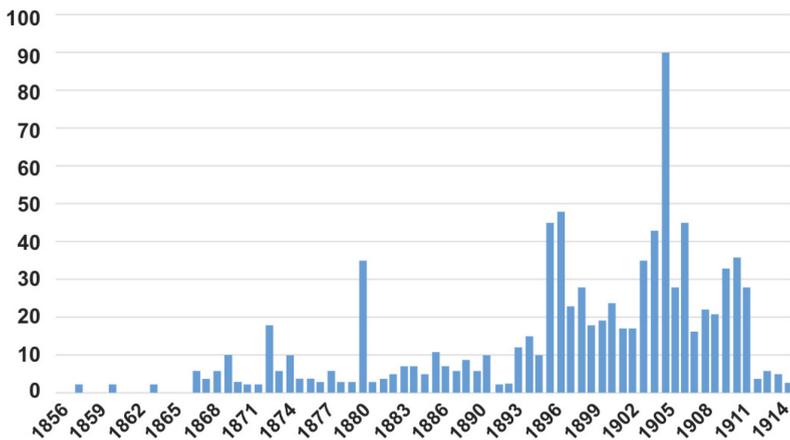

Volume of Peirce's manuscripts per year

Figure 1.2: Graph by L. John Old, 2014

---

3 See samples in a video at the Houghton Library's Peirce Collection site: https://library.harvard.edu/collections/charles-s-peirce-papers.

Most significantly, as he explains in his 1902 application to the Carnegie Institution for funding to support a comprehensive presentation of his logic:

> What has chiefly prevented my publishing much has been, first, that my desire to teach has not been so strong as my desire to learn, and secondly, that so far from there being any demand for papers by me, I have found considerable difficulty in getting them printed as a favor to myself. (L75 [1902])

Joseph Esposito's (1980: 1) investigation, *Evolutionary metaphysics: The development of Peirce's theory of categories*, finds that:

> In his later years Peirce had ample opportunity to conclude that his lifetime efforts would not be long remembered. Had he known otherwise he might have been inspired to write a short book on his conception of the task of philosophy, a table of contents for future generations to follow. Instead he proposed giant works, works far beyond the scope of a single man to complete even in a lifetime.

Sometime during his final twenty years (especially after the rejection of his 1902 Carnegie Institution grant application) he despaired of publishing comprehensive books outlining his philosophical system, but instead became concerned merely with having enough time and energy left to work out and write down that system: so that, someday somehow, others might benefit from his efforts (see MS 302s).

3 The continuity of Peirce's work

The fact that Peirce considered even his published work as "work-in-progress" is evident from his habit of marking off-prints of his published articles as "Working Copy" – and then making corrections, annotations, and comments in it, sometimes many years later. Peirce tells us in his 1903 Lowell Lectures that he has always been skeptical "with everything I have printed" [MS 465]. And in his lecture on "Multitude and continuity" given before the mathematics faculty at Harvard, he says that "No sooner is a paper of mine worked up to a finish and printed than I immediately begin to take a critical attitude toward it and go to work to raise all the objections to it big and little that I can." In an alternate version, he continues: "And the result has always been that I have found that there were other men who were far better satisfied with them than I myself have been." He concludes, "The truth is that I am far too well acquainted with the depths of my own stupidity to know what it is to be satisfied with any product of my mind" (MS 316a [1903]). In a manuscript entitled "Reason's rules," he wrote

about his work preceding actual publication: "I have always been so ardently bent upon correcting and improving my own opinions and conceptions that before I would reach the later chapters of a long book, those that I had written earliest would appear to me poor, and the whole plan of the work [...] to be unenlightened" (MS 694).

Peirce's self-criticism prevented him from publishing more than he did. He mentions that he struggled for decades with the veracity of his semiotic, for nearly thirty years with the truth of pragmatism, and for at least twenty years with his system of graphical logic (which he came to call Existential Graphs in 1897), though he had had it in mind for a dozen years. He declares (in a draft of his 1903 Pragmatism Lectures), referring to his realization that his graphical logic would provide a proof of pragmatism:

> When I first got the general algebra of logic into smooth running order [in 1884], by a method that has lain nearly twenty years in manuscript and which I have lately concluded is so impossible to get printed that it had better be burned, — when I first found myself in possession of this machinery I promised myself that I should see the whole working of the mathematical reason unveiled directly. (MS 303 [1902])

Peirce saw into print somewhat less than he intended because he regarded his work as continually in need of modification and further development. He even describes his pragmatic method of forming philosophical opinions, which exhibits not only the growth and continuity of his thought but the fact that closure, certainty, and final intentions are possible only in the long run. One detailed account appears in a lengthy paragraph in one of his 1903 Pragmatism Lectures:

> In the first place, I endeavor, as far as possible, to avoid attacking questions which seem possibly to depend upon questions which I have not already thoroughly considered at least once. I then set down my question in writing as accurately as I can, which is in itself, sometimes, a matter of difficulty and doubt. That done I write down in the briefest, but most complete and exact terms, every argument I have read heard or can imagine to be maintained, first on one side and then on the other of the question. Some of these arguments admit of brief and decisive refutations which I also set down. I then reflect upon the matter and, without entering into the merits of the case, state what the general nature of the considerations appears to me to be upon which the decision should be made to turn, with the reasons. I add the indication, or sometimes a full statement of other ways of considering the question which I know to have been employed or which might naturally be employed, and show as clearly as I can what degree of weight ought to be attributed to each and why. There usually appears to me to be but one way in which the question can be decisively discussed, and I proceed to set down the points of that discussion, together with all the doubts that may arise. If I find the question depends upon some other which I have not fully considered, I put the whole thing aside, until that

other question shall have been considered. Frequently the original question will take a new and broader form, so that I amend what I have written or begin over again. Or it may be that while a broader question is suggested and noted, the discussion is completed on the original lines. Sometimes I come upon indications that there is some other way of considering the matter without my being able to formulate that other way. In that case, I shall have a mass of tentative notes which may prove useful when I shall come [to] understand the subject better. I ultimately amend again and again reviewing every part of the argument as critically as I can. It then very often happens that besides this preferred mode of treatment some others merit some attention, especially if it turns out that they tend to modify the conclusion. I set down whatever seems worth noting respecting each. I now go back to my two lists of arguments first set down, which will by this time probably have been augmented and briefly note, in regard to each one, what seems to dispose of it in the way of acceptance or rejection. Arrived at this point, I put away my notes and pass to something else. But in process of time I shall recur to the original question, probably in a somewhat different form, and from a different point of view; and I am always disposed to be skeptical about the value of my former discussion. Indeed, what brings me back to the question will commonly be some new light in which I see, or suspect, that there is some consideration whose importance I had not appreciated, and I find myself disposed and encourage the disposition to regard my former discussion as wooden and unintelligent. I now do the whole thing over again without consulting my former notes of which I do not retain any precise recollection. Having completed this second examination, I get out my former notes, and critically compare them. Even where they agree there will sometimes be a slight difference which upon careful consideration suggests some doubt. Now it is precisely doubts that I am at this stage endeavoring to develop. Combining the two discussions, I do the best justice I can to the problem and again lay it aside. After a time, usually a long time, the matter comes up for a third time, and I now invariably find that my ideas have, as it were, become shaken down into a more compacted, connected, and generalized mass. I go over my notes once more, work out to the end any doubts that that I am able to resolve, and get a thorough grasp of my own opinions. What is not now indelibly impressed upon my mind I would rather it were disencumbered from. For now is to begin a long course of cultivation of the conceptions I have thus far gained. This process I continue to perform, for the most part, pen in hand. I draw up my statement afresh, omitting what seems to be of too little worth for preservation. I criticize it in every philosophical aspect which seems to me just. I endeavor to enlarge it and especially to make it join homogeneously with other results. In that way statements which I may print and which to readers who take them for momentary inspirations may seem decidedly brilliant are to me who remember what dozens of times they have gone through my mill, are well-known for the monuments of my stupidity that they really are. (MS 311 [1903])

4 How can we join Peirce's expeditions?

Peirce's description of his dialogic, self-critical writing method encourages the conclusion that every manuscript page – with deletions, additions, and other revisions; with references and allusions to all other unpublished and published

materials – is required to represent the evolution and continuity of his thought into the future. With full and effective access to his corpus, scholars could trace the evolution of Peirce's philosophy from its origins in his early, published essays (where they must struggle to grasp awkward forms of its expression) through its eloquent later expressions, based on his growing semiotic perspective demonstrated in diagrammatic form. His graphical logic was never completed, and we have only indications of how it contributed to his philosophical study of scientific inquiry, for improving "intelligence capable of learning by experience" (MS 798; CP 2.227 [1897]). Peirce himself described his progress in 1907:

> I am, as far as I know, a pioneer, or rather a backwoodsman, in the work of clearing and opening up what I call *semiotic*, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis; and I find the field too vast, the labor too great, for a first-comer. [MS 318: 96, "A survey of pragmaticism," an unpublished paper; CP 5.488 (1905); EP 2: 413 (1907); notice date discrepancies due to many variants of this manuscript]

In the next article in this series, we will first examine the current conditions of access to the manuscripts at Harvard, then we can explore what improvements Peirce's own ideas may lead us to develop.[4]

Note: This is the first of a series of four short articles on improving effective digital access to Peirce's manuscripts. It has been partly adapted from the in-progress online handbook *Discovering the future in the past*: *How C.S. Peirce's 19th century ideas challenge 21st century technology*, which is available on ResearchGate at:
https://www.researchgate.net/publication/335870177_Discovering_the_Future_in_the_Past.

References

De Tienne, André. 1997. The Peirce papers: How to pick up manuscripts that fell to the floor. *Text* 10. 259–282.

---

[4] For more detail on the history and condition of the Peirce papers, see André De Tienne's (1997) "The Peirce papers: How to pick up manuscripts that fell to the floor." Also see Nathan Houser's "The fortunes and misfortunes of the Peirce papers" (1992).

Esposito, Joseph. 1980. *Evolutionary metaphysics: The development of Peirce's theory of categories*. Athens, OH: Ohio University Press.

Houser, Nathan. 1992. Fortunes and misfortunes of the Peirce Papers. In Gérard Deledalle, Michel Balat, Janice Deledalle-Rhodes et al. (eds.), *Signs of humanity / L'homme et ses signes. Proceedings of the IVth International Congress / Actes du IVe Congrès Mondial. International Association for Semiotic Studies / Association Internationale de Sémiotique. Barcelona/Perpignan, March 30–April 6, 1989*, vol. 3, 1259–1268. Berlin: Berlin & Boston: De Gruyter Mouton.

Keeler, Mary & Christian Kloesel. 1997. Communication, semiotic continuity, and the margins of the Peircean text. In David C. Greetham (ed.), *The margins of the text,* 269–322. Ann Arbor, MI: University of Michigan Press.

Keeler, Mary. 1998. Iconic indeterminacy and human creativity in the C.S. Peirce's manuscripts. In George Bornstein & Theresa L. Tinkle (eds.), *The iconic page in manuscript and digital culture*, 157–194. Ann Arbor, MI: University of Michigan Press.

Keeler, Mary A., Leslie Morris, Heather Pheiffer, Uta Priss, L. John Old, and Michael Hoffmann. 2019. *Discovering the future in the past: How C.S. Peirce's 19th century ideas challenge 21st century technology*. ResearchGate, October. https://www.researchgate.net/publication/335870177_Discovering_the_Future_in_the_Past (accessed 23 December 2019).

Peirce, Charles S. 1883. A theory of probable inference. In Charles S. Peirce (ed.), *Studies in logic by members of the Johns Hopkins University*, 126–181. Boston, MA: Little, Brown, and Co.

Peirce, Charles S. 1887. Logical machines. *The American Journal of Psychology* I. 165–170. http://history-computer.com/Library/Peirce.pdf

Peirce, Charles S. 1931–1958. *Collected papers of Charles Sanders Peirce*. 8 vols. Edited by Charles Hartshorne, Paul Weiss & Arthur Burks. Cambridge, MA: Harvard University Press.

Peirce, Charles S. 1976. *The new elements of mathematics by Charles S. Peirce*. Edited by Carolyn Eisele. The Hague: Mouton & Co. B.V.

Peirce, Charles S. 1984–2008. *Writings of Charles S. Peirce: A chronological edition*. Edited by Edward C. Moore et al. Bloomington, IN: Indiana University Press.

Peirce, Charles S. 1977. *Semiotic and significs: The correspondence between Charles S. Peirce and Victoria Lady Welby*. Edited by Charles S. Hardwick. Bloomington, IN: Indiana University Press.

Peirce, Charles S. 1992. *Reasoning and the logic of things: The Cambridge Conferences Lectures of 1898*. Edited by Kenneth L. Ketner. Cambridge, MA: Harvard University Press.

Peirce, Charles S. 1997. *Pragmatism as a principle and method of right thinking: The 1903 Harvard "Lectures on pragmatism."* Edited by Patricia Ann Turrisi. Albany, NY: SUNY Press.

Peirce citing conventions[5]

CP x.y = *Collected papers of Charles Sanders Peirce*, volume x, paragraph y.
EP x:y = *The essential Peirce: Selected philosophical writings*, volume x, page y.
NEM x:y = *The new elements of mathematics by Charles S. Peirce*, volume x, page y. (Some scholars use "NE".)
PPM x = *Pragmatism as a principle and method of right thinking*: *The 1903 Harvard "Lectures on pragmatism,"* page x. (Some scholars use "HL".)
SS:x = *Semiotic and significs: The correspondence between C. S. Peirce and Victoria Lady Welby*, page x. (Some scholars use "PW".)
W x:y = *Writings of Charles S. Peirce: A chronological edition*, volume x, page y.

Bionote

Mary Keeler
Mary Keeler (b. 1948) is a retired professor of Telecommunication Media, and formerly a graphic designer and scientific illustrator. Since the early 1990s, her research includes Peirce's sign theory, logic, and pragmatism, which are applied in Knowledge Processing technology, Complex Adaptive Systems, and Game Theory. Publications include: "Revelator's complex adaptive reasoning methodology for resource infrastructure evolution" (2008) and "Complex adaptive reasoning: Knowledge emergence in the revelator game" (2009).

---

5 Supplied by Peirce Section Editor (Cary Campbell).