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*C. S. Peirce: A Short Biographical Sketch*

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**Abstract:**

This overview of the life and career of Charles S. Peirce identifies the central factors that shaped this seminal American intellect, and describes the dramatic events that turned the final decades of his professional existence into a tragedy. The purpose of this short article is to serve as a first biographical introduction to Peirce.

**Keywords:** Biography

Charles Sanders Peirce was born on September 10, 1839, in Cambridge, Massachusetts. His father Benjamin was a prominent mathematician and astronomer; his mother Sarah was the daughter of Senator Elijah Hunt Mills. From an early age, Charles exhibited an unusual aptitude for philosophical and scientific reflection. Indulged and educated by his father, he acquired an original and inquiring mindset, but also an intellectual arrogance and a disregard for the mores of polite society, which would eventually contribute to the tragic turns of his life.

Young Peirce, who was soon to denounce individualism as a "nominalistic" abomination, developed into a headstrong individualist, pursuing his own interests while largely ignoring the standard academic curriculum. After a less than stellar performance at Harvard University, Peirce graduated ranked 79th out of 90 in 1859. In the same year, he was employed by the US Coast Survey, which would turn out to be his most enduring—but often intellectually and economically insufficient—professional engagement. Encouraged by his father to pursue a career in science, Peirce entered the Lawrence Scientific School in Harvard, completing a bachelor's degree in chemistry in 1863. Later in life, he liked to emphasize this natural scientific background; in a self-biographical sketch, he stated that he had been "brought up in a circle of physicists and naturalists, and specially educated as a chemist." (MS L107) However, while the list of Peirce's concrete scientific achievements is impressive—among other things, he was the first to advocate using a wavelength of light to measure the meter, invented the quincuncial map projection, and proposed probably the first model for an electric computer ("reasoning machine")—he was frequently frustrated by the time-consuming drudgery of practical science. Peirce's principal interest lay in the general logic and methodology of inquiry, and it was against this background that he developed his semiotic and pragmatist philosophy.

According to his own testimony, his interest in philosophy and logic—which he

subsequently would recast as a general study of signs—was sparked when he read Richard Whately's *Elements of Logic* at the age of 12 or 13. Late in life, Peirce famously contended that he from then on approached any study—be it of “mathematics, ethics, metaphysics, gravitation, thermodynamics, optics, chemistry, comparative anatomy, astronomy, psychology, phonetics, economic, the history of science, whist, men and women, wine, metrology”—as an exploration of *semeiotic*. (SS 85-6)<sup>1</sup> Although undeniably coloured by Peirce's mature interests, this statement does suggest the importance of the semiotic point of view for his thought. It is at any rate true that semeiotic was an integral, although not effectively published, part of his earliest philosophy. Another key component of Peirce's approach was the early awareness that deduction and induction do not exhaust the field of reasoning; a logical account of inquiry must also accommodate the invention and discovery of ideas or hypotheses, a form of inference that Peirce named *abduction*.

Peirce's philosophical influences were wide-ranging; in the years following his seminal encounter with Whately, he investigated the logical systems of George Boole and Augustus De Morgan, studied classic ancient and modern philosophers, but also tapped more unfashionable sources such as scholasticism. Still, it was Friedrich von Schiller and Immanuel Kant, two rather unlike German thinkers whom Peirce began reading in 1855, who would turn out to be especially important for his philosophical development. From Schiller's *Briefe über die ästhetische Erziehung des Menschen*, Peirce imaginatively extracted a three-world metaphysics, which under the Kantian influence evolved into a theory of elementary conceptions (originally called *I*, *It*, and *Thou*), and which was gradually transformed into the triadic theory of categories (finally baptized *Firstness*, *Secondness*, and *Thirdness*) that permeates Peircean philosophy. The systematic and critical study of Kant also contributed to the development of Peirce's “pedestrianism,” his sometimes ponderous but often fertile method of doing philosophy by piecemeal analysis and fine distinctions.<sup>2</sup>

In 1869 Peirce gave a set of Harvard lectures on British logicians at Harvard, but in 1871 his proposal for a full course in logic was rejected by President Charles W. Eliot, whose initial, and not altogether pleasant, contact with Peirce had been as the latter's teacher of chemistry and mathematics. Eliot's negative impression was strengthened by a bitter dispute about the publication of Peirce's *Photometric Researches* (eventually published in 1878). After these incidents, Eliot to all intents and purposes blocked Peirce's entry into the Harvard faculty. Already, Peirce was developing a worrying reputation as an unorthodox, vaguely dissolute, and definitely difficult man—traits that

were not welcome in the still rather puritanical world of nineteenth-century US academia. However, some of the same characteristics were greatly appreciated by Peirce's Harvard schoolmate and future fellow pragmatist William James. Their friendship lasted from 1861 to James's death in 1910.

While Peirce's efforts to find regular employment in philosophy at Harvard were not successful, he published several key writings in the late 1860s. Of these, the essay "On a New List of Categories" (1867) and a series of epistemological articles in the *Journal of Speculative Philosophy* in 1868-69 proved to be of seminal significance. In the "New List," Peirce provided a broadly Kantian derivation for his three universal categories, at this stage designated as *quality*, *relation*, and *representation*. Peirce scholars disagree about the systematic relevance of this essay—some maintain that it provided a nearly impeccable groundwork for Peirce's entire philosophy, while others contend that Peirce in effect moved away from its Kantian approach in his later work in formal logic, phenomenology, and semeiotic—but as an original approach to the philosophical theory of categories, it was undeniably a major accomplishment, a contribution to the field on par with (and in some respects surpassing) the categorial systems of Aristotle, Kant, and Hegel. Almost as impressive were the *Speculative Philosophy* essays, in which Peirce articulated a semiotic and communal alternative to Cartesian and empiricist epistemology, eventually leading to *fallibilism*, the thesis that human beings "cannot in any way reach perfect certitude nor exactitude" (CP 1.147 [c. 1897]), and that asserts that human "knowledge is never absolute but always swims, as it were, in a continuum of uncertainty and of indeterminacy" (CP 1.171 [c. 1897]).

In 1870, Peirce printed the memoir "Description of a Notation for the Logic of Relatives," which established his standing in the logical community. However, perhaps the most consequential event of this period was the founding of the so-called Metaphysical Club in Cambridge, Massachusetts. The club was more of a casual gathering of a handful of enthusiasts than a formal association. However, the list of the club's members was impressive; it included, among others, Peirce, William James, future Supreme Court justice Oliver Wendell Holmes, Jr., and the philosopher Chauncey Wright, a firm empiricist and early advocate of Darwinism. It was in this context that Peirce introduced pragmatism as a method of conceptual analysis backed by a broadly naturalistic conception of inquiry, which has later been referred to as the doubt-belief model. The pragmatist position paper that Peirce purportedly wrote for the Metaphysical Club has not survived, but its core notions developed into the landmark pragmatist articles "The Fixation of Belief" (1877) and "How to Make Our Ideas

Clear" (1878).

In 1879, Peirce's academic ambitions seemed on the verge of being fulfilled, when he was appointed lecturer in logic at the newly founded Johns Hopkins University, the first proper research university in the US. However, in spite of an implied possibility of tenure, the position was not permanent, and he fatefully had to carry on as a full-time employee of the Coast Survey to be able to afford his rather extravagant lifestyle.

Nonetheless, things at first seemed to be progressing satisfactorily at Johns Hopkins. Peirce attracted a small but talented group of students, which included Allan Marquand (developer of a "reasoning machine" and art historian), Joseph Jastrow (psychologist famous for the duck-rabbit image), and Christine Ladd (logician and psychologist). At this time, Peirce cultivated his conception of higher academic education as a pursuit of collective research, an approach that resulted in *Studies in Logic* (1883), a collection of essays by Peirce and his students, and a pioneering experimental study of "subliminal" perception by Peirce and Jastrow (published in Peirce & Jastrow, 1885). At Johns Hopkins, Peirce's students also briefly included a young John Dewey, who as a Hegelian at the time did not appreciate his teacher's logical viewpoint, but who later in his career increasingly turned to Peirce's writings on inquiry and signs for inspiration. While at Johns Hopkins, Peirce also founded a new Metaphysical Club, this time conducted in a more ordered manner.

Tragedy struck in 1884, when Peirce was dismissed from his post as lecturer at Johns Hopkins on moral grounds. The reasons for this dishonourable discharge are still not fully clear. One cause was certainly Peirce's thorny character and often blatant disregard for duties he considered to be below his stature, traits which rendered him every administrator's nightmare. In his biography, Joseph Brent (1998) has also suggested that Peirce suffered from mental problems and drug abuse, allegations that have not been corroborated.

Be that as it may, the ostensible cause for Peirce's abrupt dismissal was a scandal of a more Puritan and Victorian nature; it was that of living openly with his future second wife before his divorce from his first spouse was finalized. Peirce had married Harriet Melusina Fay in 1863. An early feminist and social thinker, Harriet was an active promoter of new forms of communal living. Their marriage began to run into serious troubles in 1875, probably due to Peirce's frequently irresponsible behavior. They were in effect separated the following year, but did not divorce until 1883. Two days after the annulment was made official, Peirce married Juliette Pourtalai (aka Froissy), a secretive woman in whose company he had been seen for years. Simon Newcomb, an astronomer

and former student of Peirce's father, reported the transgression to the officials of Johns Hopkins, who proceeded to terminate all associations with the tarnished Peirce.

To add to his worries, Peirce's career at the Coast Survey was also in difficulties. Following investigations into misuse of funds, cuts had been made. Peirce was left without the computing aids he desperately needed, and struggled with reports he was unable to bring to a satisfactory completion. Much of his time was taken up with writing definitions for the *Century Dictionary*, and attempts to find new academic employment were not successful. Apparently, rumors of Peirce's immorality spread everywhere, and he was increasingly treated as *persona non grata*. Having inherited some money, Peirce moved to Milford, Pennsylvania, and began the construction of a large residence he named *Arisbe*.

With connections to academia severed, Peirce's thought began to advance in new and ostensibly unexpected directions. From the mid-1880s onward, he was increasingly drawn toward grand evolutionary and cosmological speculations, and he began to portray his philosophical approach as "architectonic," the aim of which was "to outline a theory so comprehensive that, for a long time to come, the entire work of human reason, in philosophy of every school and kind, in mathematics, in psychology, in physical science, in history, in sociology, and in whatever other department there may be, shall appear as the filling up of its details" (CP 1.1 [c. 1888]) The fruits of this ambitious endeavor included the unpublished book *A Guess at the Riddle*, in which all forms of inquiry were to be viewed through the lenses of his revised categories, and a series of bold metaphysical articles published in the *Monist* in 1891–93. In these essays, Peirce argued for both *tychism*, the view that there is real chance or indeterminacy in the universe, and *synechism*, the "tendency to regard continuity [...] as an idea of prime importance in philosophy" (ibid.; CP 6.103 [1892]).<sup>3</sup> In the final article, "Evolutionary Love," he also railed against the "greed-philosophy" of social-darwinistic individualism. During the same period, Peirce began to revisit his theory of signs, which had lain more or less dormant since the early 1870s, and eventually redefined logic as the philosophical study of the entire field of signs—all while continuing to make advances in more narrowly framed formal logic, which he increasingly pursued in graphical form. He also took the final steps toward a more robust realism that would eventually lead him to affirm the reality of possibilities as well as of existents and general signs.

However, in real life Peirce's misfortunes continued. In 1891, his Coast Survey employment was terminated. This was followed by a confusing period, during which Peirce announced several grandiose books on philosophy that were never completed,

started a doomed correspondence course in logic, and pursued a number of get-rich-quick schemes—while living as wastefully as before. Peirce soon found himself in serious debt, and in 1895 he had to flee Milford to New York City, where he lived in abject poverty, sometimes without a roof over his head. He was barely kept alive by irregular income from book reviews and loans.

Peirce's fortunes were never reversed; perhaps the final blow came in 1903 with the failure of a promising application to the Carnegie Institution—a rejection mainly based on a negative evaluation by Newcomb. In the end, Peirce became dependent on financial support from friends, principally organized by James. James also succeeded in procuring some sets of lectures for the distrusted Peirce, including a series on pragmatism on the Harvard campus in 1903. Much to his surprise, Peirce found himself involved in an emerging pragmatist movement, which had been initiated when James revived and transformed the Peircean approach in 1898. This association provided Peirce with some welcome outlets for his ideas; in 1905–06 he published three articles on pragmatism in the *Monist*. In the first of these, Peirce famously (or infamously) characterized his version of pragmatism as "pragmaticism," which he considered "ugly enough to be safe from kidnappers." (CP 5.414 [1905])<sup>4</sup> In this second series of pragmatist essays, Peirce corrected what he considered to be a nominalistic aberration in his original position, joined pragmatism with a version of the philosophy of common sense he dubbed "critical common-sensism," and attempted to ground pragmatism in his new logical system of existential graphs. However, the most significant developments of Peirce's final years arguably took place in his semeiotic. A 1903 series of Lowell Lectures was accompanied by a printed syllabus, in which he gave his most systematic presentation to date of what he sometimes referred to as "Logic considered as Semeiotic." In the same year, he also began corresponding with the British linguist Victoria Welby, who was probably the first to grasp the potential of his theory of signs.

Perhaps the most astonishing thing about Peirce's concluding years, which were marked by poverty and illness, was his productivity. If anything, he pursued his interests with escalating energy, leaving behind a huge mass of unpublished manuscripts. With relative modesty, Peirce now conceived of himself as a "a pioneer, or rather a backwoodsman, in the work of clearing and opening up [...] semiotic, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis." (EP 2:413 [1907]) Peirce expanded semeiotic by outlining a fuller theory of interpretative effects (*interpretants*)—partly inspired by Welby's labors—and by sketching an innovative "logic of vagueness." Simultaneously, Peirce ingeniously linked the theory of

signs and pragmatism, recasting the pragmatist principle in semeiotic terms. He continued to write on formal logic, the theory of inquiry, rhetoric, pragmatism, abduction, perception, and the philosophy of religion; but in the end, his living audience consisted mainly of James, Welby, and Josiah Royce, who late in his own life became one of Peirce's most appreciative students.

Charles S. Peirce died of cancer on April, 19, 1914, largely ignored but not altogether forgotten. Through Royce's efforts, Peirce's papers were saved from oblivion, and the systematic publication of his manuscripts started in the 1930s—a process that still continues. Gradually, as interest in pragmatism, semiotics, evolutionary epistemology, abduction, and other Peircean preoccupations has grown, Peirce—a tragic failure in own his lifetime—has been vindicated. Yet, the actual and potential contribution of his philosophy to contemporary thought is still, to a large extent, an unwritten chapter.<sup>5</sup>

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## Notes

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1. Peirce experimented with a variety of spellings for the doctrine or science of signs; "semeiotic" is one of the two most common alternatives. Although Peirce also frequently used the less idiosyncratic variant "semiotic" for this line of inquiry, I have here chosen to employ "semeiotic" in order to simply distinguish his approach from other variants of semiotics. ↩
  2. For more on Peirce's pedestrianism, see Brent (1998), p. 43. ↩
  3. Brent (1998, pp. 208-12) connects these metaphysical and cosmological principles with a purported religious awakening in the early 1890s. However, although it is true that Peirce's later writings display an increased sympathy for religion, Brent's interpretation of the mature Peirce as a "mystic" feels rather exaggerated, and ignores the fact that Peirce promoted a strong separation between autonomous, theoretical science and religious,



practical sentimentalism during the same period (see, in particular, *Reasoning and the Logic of Things* (RLT), lecture 1). In his earlier pragmatism, Peirce had dismissed the mystic's private inspiration as a variant of the "method of tenacity", and therefore lacking the conception of truth as something public (CP 5.384 [1877]). ←

4. This comment has been frequently misinterpreted as a dismissal of pragmatists such as James and F. C. S. Schiller; in fact, the "kidnappers" Peirce had in mind seem to have been journalists and writers in popular journals. At any rate, Peirce always considered himself to be a member of the larger family of pragmatism, although he did criticize James and Schiller for taking the pragmatist principle too far for his liking. ←
5. The main part of this short article has been abstracted from my essay "Charles S. Peirce: Signs of Inquiry" (2012), published in *Philosophical Profiles in the Theory of Communication* (Peter Lang). This text is reproduced in the new Commens Encyclopedia with the kind permission of the editor (Jason Hannan) and the publisher (Peter Lang). ←