

**Dinh Huyen My, *Charles S. Peirce on the Continuity of Thought*
Bachelor's Thesis: Opponent's Review**

The bachelor's thesis "Charles S. Peirce on the Continuity of Thought" by Dinh Huyen My aims at presenting an analysis of "Peirce's concept of the continuity of thought in light of his approach to time." (p. 9) It is divided into two long chapters. The first chapter gives account of Peirce's phenomenological categories with the goal of showing how continuity is an essential feature of experience. The second chapter explicates the already expounded continuity of experience as being of temporal nature.

The thesis is in many respects exceptional, highly exceeding the standards and requirements usually expected of a bachelor's thesis. The very fact that the author has chosen to Peirce's philosophy as the focus of their research needs to be appreciated—Peirce's writings are notoriously hard to understand; one has to read a good bunch of them (and get familiar with a lot of commentary literature) in order to get a glimpse of what Peirce has to say. Not to mention that unlike other more approachable thinkers, reading Peirce presumes that one is sufficiently familiar with at least selected fields of higher mathematics and logic, has a firm grasp of the whole history of philosophy, and possesses great talent for both minutely analytical as well as sweepingly synthetical thinking. I applaud the author for managing all that. As their thesis clearly shows, they have solid familiarity with Peirce's writings across the whole of his career, including seminal works such as "On a New List of Categories", the 'Cognition Series' papers, "A Guess at the Riddle", or "The Law of Mind", among others—as well as knowledge of the classical and celebrated works of Peircean scholarship (e.g., works by Murphey, De Tienne, Ibri, Colapietro), as witnessed by the thesis' bibliography.

Author's erudition is manifest in the style of their writing. They write with confidence, ease, and natural flow, as if the thoughts they put down on paper were obvious and trivial, which they are not. This, however, is also a certain drawback of the thesis. While someone familiar with Peirce's work and its interpretation has no problem following the text, it could be, I think, rather hard to read for the uninitiated. That is to say, the meaning of the terms and conceptions employed (such as 'prescision', p. 13-14; 'phaneron', p. 13; Peirce's 'metaphysical realism', p. 21; or 'reducing the manifold to unity', p. 27) should be better explained, or defined, in some instances. The same holds for certain thoughts presented in the thesis, for instance, Peirce's claim that "ideas are living realities" (p. 43), which may appear striking to the non-Peircean. Also—figuratively speaking, behind every explicitly treated thesis, argument, idea, presumption, or premiss, there is a myriad of others which needed to be left out, or assumed, for the overall argument to work. It is not author's fault. On the contrary, they are clearly well aware of that. The interconnections and interdependencies between various parts of Peirce's philosophy are so numerous that they are simply impossible to be all included in a single work. No wonder that many Peircean monographs have somewhere in their introductory pages included a reminder of all that which had to be left out. This is just another way of saying that when writing about Peirce, one can either attempt at presenting a single thesis and argument for it, as detailed and analytically precise as possible, or focus rather on the ways in which various Peircean ideas work together, and developing their consequences. The bachelor's thesis reviewed here is more of the latter kind. That is to say, its aim is not so much to construct a demonstration that the statements it presents are true, but rather to show, how they relate to each other, and what their meaning and consequences are. In other words, it is concerned more with explanation than defense or proof.

What is the thesis about, then, more concretely? The way I understand it, the author holds the following statements: (i) Peirce's phenomenological categories (i.e., the irreducible elements present in every experience, resulting from the analysis thereof) presuppose continuity; (ii) this

continuity of experience consists in Thirdness' mediating between the Second and the First; (iii) since this mediation occurs in time, time is itself continuous, and the nature of continuity of experience is temporal, hence Peirce's "temporal synechism" (e.g., p. 38). On the one hand, neither of the theses is entirely original, all have in some form already appeared in the literature, as also referred by the author. But, on the other hand, when put together, the theses make up quite an intriguing argument, which could be easily published in the form of a research article. The author in fact presents a full-fledged philosophical position, when they claim that it is synechism, which is at the center of Peirce's whole philosophical endeavor—and their exposition of the continuity of experience and of its temporality, leading up to the conclusion of the durational nature of immediate consciousness can be seen as an argument of the truth of that claim, albeit partial. True, the statement of the central position the doctrine of continuity occupies in Peirce's thought seems to function (as it appears to me) rather like a premiss than conclusion. But even then the inquiry carried on in the text offers an inductive confirmation of that premiss considered as a hypothesis. Besides, the whole thesis is organized into chapters and sub-chapters with remarkable precision, one part follows from the other in a logical and coherent way. In the case of the first chapter, its organization seems obvious to the Peircean, i.e., in what other way should one treat the categories than by first introducing the scope and character of Peirce's Phaneroscopy, then give account of the features of the three categories, and conclude with the explanation of how they are connected in experience? The author proceeds precisely along this line. As regards the second chapter, they first introduce the concept of continuity, then proceed to analyze the durational character of consciousness, supplemented by the account of the continuity of inference (because thought and thus consciousness is in signs, that is, fundamentally, in inferences), concluding by the glimpse at Peirce's evolutionary cosmology as a sort of great synthesis of the presented doctrines.

In the course of this intellectual journey, the author presents an abundance of brilliant insights, observations and arguments, especially in the second chapter. They also exhibit a great talent for asking the most pertinent questions (see, e.g., p. 35) and deep familiarity with Peirce's works—not just in the sense of knowing what Peirce has written but in the sense of having insight into Peircean philosophical questions, problems, and solutions, including possible objections and replies to them, and .

The thesis is not entirely without flaws. However, they are mostly formal and I consider them to be minor when measured against the overall high quality of the thesis' content.

The major shortcoming of the thesis is its loose work with references. In a number of instances, the author makes a claim (e.g., that perception is inferential for Peirce [p. 10] or that "[t]he principle of continuity was already evident from his [Peirce's] early anti-cartesian papers on cognition" [p. 40]) without giving references to the exact loci in Peirce's writings containing or supporting the claims. The same is true for certain conceptions and terms (like Peirce's pragmatic maxim, p. 36), which are used without reference, proper definition, or both. This criticism, however, is nitpicking. I never had any trouble recognizing what the author's sources are—they are always stated in some form (or at least) indicated and recognizable—and I was always able to distinguish between author's own statements and those which belong to Peirce or his commentators. Also, in most instances, references are not missing, they are just loose. A typical case can be found on pages 32-4, where the author glosses over Peirce's paper "The Law of Mind". Some references to Peirce's statements contained in the said paper are given precisely, while the others (like the reference to where exactly in the paper is one supposed to find Peirce's account of 'infinitesimal duration') are lacking.

Also there are a few typos. Word "coenopythagorean" is misspelled on multiple occasions (pp. 10, 38, 46). "Interpreter" is used instead of "interpretant" (e.g., p. 24)—but since no one who has ever read Peirce would commit such mistake, I suppose the autocorrect function is here to blame.

Sometimes, an awkward (or incorrect) grammatical construction appears (e.g., pp. 23, 27). Titles of Peirce’s papers should be in quotation marks on p. 12. Superfluous spacing appears throughout the text (e.g., pp. 10, 18). Finally, I would recommend including the year of publication/composition in every reference to Peirce’s text and having a separate bibliography of all Peirce’s text referred to, i.e., not just editions. Speaking of editions, *Writings* or *Essential Peirce* should be preferred over the *Collected Papers*, the former two being more authoritative and reliable than the latter, speaking of course of cases when the given text appears both in the modern editions and the *Collected Papers*. It is not a mistake that the author does not follow this practice (not all Peirce scholars do), but it is definitely friendlier to the reader.

Questions for defense.

(1) Can you elaborate upon what do you mean by the assertion that “Peirce’s conception of infinitesimals does not allow for division, to do so would counter his whole notion of continuity” (p. 32)? If the meaning is that Peirce’s conception of continuity (sic) does not consist in infinite divisibility (unlike Kant’s, as remarked earlier in the text, p. 30) then the statement is correct, albeit formulated in a confusing way. But if the meaning is that infinitesimals according to Peirce are not divisible, then it is problematic—and that on two levels, (i) on the one concerning specifically Peircean notion of the infinitesimal, and (ii) the one concerning the same notion in other than Peirce’s mathematics. Regarding (i), how did you arrive at that statement? Where do you find support for it in Peirce’s writings? Is not the thesis that infinitesimals are indivisible contradicted by Peirce’s assertion that any infinitesimal interval of immediate perception is followed by another and that the latter begins in the middle of the former (p. 34 [Peirce 1892, CP 6.111])? In fact, it seems to me that on the contrary, Peirce’s theory of continuity presupposes that infinitesimals be divisible (I leave the argument out on purpose). As for (ii), maybe it is sufficient to point to secondary literature such as Wenmacker (2018: 322) stating simply that “infinitesimals are not atoms or indivisibles: they are infinitely divisible, just like any standard real number is”. For Leibniz, infinitesimals obey the same laws as ordinary numbers (Bell 2017) and there seems to be no evidence that Peirce thought otherwise (see, e.g., Herron 1997: 613).¹

(2) You write that “Peirce had idealist inclinations expressed in the *a priori* nature of the categories”, but also that “the three categories of experience are the result of *a posteriori* generalization of their characteristics” (p. 45). I agree that Peirce’s categories (if the term is taken to cover all theories and derivations Peirce had developed throughout his career) have both *a priori* and *a posteriori* features. Could you elaborate on the relation between these *a priori* and *a posteriori* features of the categories? In what sense are categories *a priori*, in what sense *a posteriori*, and how can both kinds be related to each other in a consistent way?

Summary

Leaving aside the aforementioned formal marginalia, the thesis is truly exceptional, brilliant, and insightful, and a way above the level usually expected of a bachelor’s thesis. If the text was more polished in respects pointed out in this review (and included more extensive discussion of the literature together with an account of closely related topics such as Peirce’s reduction thesis or more

¹ To support these claims by portions of more recent mathematics, in Robinson’s non-standard analysis, “[e]very mathematical notion which is meaningful for the system ... of real numbers is also meaningful in the non-standard model of analysis” (Robinson 1974: 49, 55), i.e., division (multiplication by reciprocal) is defined on infinitesimal as well as on real numbers. Likewise, in Conway’s system of surreal numbers (Conway 1976, Knuth 1974), infinitesimals such as $\varepsilon/2 = \{0 \mid \varepsilon\}$ can be constructed by transfinite induction. (Here ε is an infinitesimal and is defined as a multiplicative inverse of the ordinal transfinite number ω , i.e., $\varepsilon = \omega^{-1}$. More properly, according to the construction rule of surreal numbers, $\{0 \mid 1, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \dots\} = \varepsilon$.)

detailed treatment of the mathematical theory of the continuum) it could, in my opinion, pass as a diploma thesis or even dissertation in many respects. I recommend the author to revise the thesis accordingly and publish it in the form of a journal article, in *The American Journal of Semiotics*, or *Transactions of the Charles S. Peirce Society*. I congratulate them to writing this excellent piece and hope they continue conducting research on Peirce.

I recommend the thesis for defense and propose it to be graded as **excellent (A)**.

Prague, August 28, 2021.
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