

Chapter 2 Putting Aside One's Natural Attitude—And Smartphone—To See What Matters More Clearly

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Abstract Peirce and Husserl both realized that our habits and habitual conceptions, though vital to the success of most activities, nevertheless occlude large portions of the experiential canvass. So, unless preparatory work puts us in the right mindset, we risk perceiving the world—not as it is—but rather as we expect it to be. While Peirce and Husserl were predominantly concerned with supplying a better observational basis for inquiries like science, semiotics, and mathematics, I draw on their phaneroscopic/phenomenological tools to combat the addictive and mind-narrowing effects of technology. I go over several examples to show how, when we (try to) rid ourselves of presuppositions and relax the pursuit of efficiency, we enable contemplative possibilities conducive to flourishing and the pursuit of meaning. My overall message is that, in an age when we increasingly depend on devices like Smartphones (and soon VR) to form flat and one-sided worldviews, re-establishing an unmediated contact with our everyday surroundings can have tangible existential benefits, nipping in the bud tyrannical trends as well as wasted lives.

2.1 Introduction

The pandemic's mandated lockdowns resulted in a lot of us spending more time with our immediate families. It has also brought increased opportunities to waste away one's hours browsing a Smartphone. VR goggles are poised to worsen this. Our cognitive resources are limited, so devices designed to capture our attention necessarily divert us from other—potentially more rewarding—concerns. It would be nice, then, to have in one's toolbox a discipline that halts those ordinary reflexes. I want to use phenomenology to accomplish just that.

Avoiding the distractions of technology is not anything that phenomenology's founders, Charles Sanders Peirce and Edmund Husserl, explicitly argued for. They

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were principally interested in grounding fields like mathematics, semiotics, and logic. Still, I think a certain kind of distance from technology—and appreciative return to the mundane—follows from their ideas.

I could have made my point in a purely abstract way, but anchoring the discussion to a case study will, I think, make the ideas at hand more relevant and tangible. I agree with the MIT sociologist Sherry Turkle that "[w]hen we are at our best, thinking about technology brings us back to questions about what really matters" (2011, 295). I thus want to share what I have learned from the phenomenological method(s) pioneered by Peirce and Husserl.

2.2 You Don't Know What You're Missing

Here is how I motivate phenomenology in introductory courses. For starters, I ask students to place a sheet of paper before them and draw a circle on it. Next, they are told to shade half of that circle's surface. We then pause in order to watch a brief video. In preparation for that video, each student is given a card, distributed randomly. Half the class gets a card saying "If you get the number right, you get an extra 2%;" while the other half gets a card that reads "Don't bother counting. Just pay careful attention." I then play a 20-s video showing two basketball teams, one dressed in white and the other dressed in black. The video begins by asking viewers to count the number of passes thrown between teammates dressed in white. Given the cards distributed beforehand, half of the students have a tangible incentive to follow the video's instruction; whereas the remaining half are told to disregard that so as to instead focus on what(ever) transpires. The basketball drill is then shown (the original video used by researchers Simon and Chabris (1999) can be found here, but I prefer using this video).

Once the video is over, students are asked two questions. First, *how many passes did the team in white make?* Second, *did you see the dancing gorilla?*

Rare exceptions notwithstanding, students who had an incentive to count the passes tend to answer the first question correctly, but they are dumbfounded by the second question. Conversely, students who were told to put aside the concern with counting are usually unable to pinpoint the number of passes, but the trade-off is that most notice the gorilla (in fact, keeping their chuckles in check when the person in a costume first appears is my biggest worry). To prove that there was no trickery, we watch the video again. Although this second viewing generates amusement, many are agitated to find that they counted incorrectly or weren't offered extra marks. So, to soothe such apprehensions, all students are immediately given 2%. Once everyone in the room exhales, our goal is to unpack what philosophical moral we can learn from the event.

On the one hand, we could say that a person's goals filter what that person notices or fails to notice. This influence is not merely mnemonic; it colours our very awareness. Intent on earning extra marks, students became blind to the dancing gorilla. This would be the standard psychological gloss (see for example Mack 2003; and the

literature on inattentional blindness). Yet, there is also a neglected *phenomenological* gloss, which stresses how those who let go of their normal goal-driven concerns *were* able to see the unusual intruder. This shows that the blindness of inattention is not mandatory and can be remedied. To be sure, being told to "pay attention" does not suffice to qualify one as a phenomenologist. Still, if any slogan captures the spirit of the phenomenological method, surely this does.

Consider this additional example. As the first words of this chapter appeared, one's initial concern was likely to determine whether to keep reading. This is because reading is something one *does*; and like most doings, it is done with a *purpose*. A mix of accidents and intentions may bring one in contact with a text, but interpretation is pulled rather than pushed. We are always looking *for* something. We rarely just see. As a result, we foreground some aspects of experience at the expense of others. Pausing the machinery of such goal-driven perception is the mission of phenomenology.

"Phenomenology is usually characterized as a way of *seeing* rather than a set of doctrines" (Moran 2002, 1). Indeed, "[p]henomenology may be characterised initially in a broad sense as the unprejudiced, descriptive study of whatever appears to consciousness, precisely in the manner in which it so appears" (ibid.). This distinctive way of experiencing the world requires us to abandon our ordinary concerns and tendencies. This is because, at almost every moment, preoccupation with what we *want* partially occludes what we *have*, right before us.

It is relatively easy to notice this limitation in classroom or clinical settings that are doctored to highlight just that. The predicament, however, is pervasive. There are dancing gorillas all around us, and some of them might benefit us in untold ways. Alas, in real life, we never get to press the rewind button and go over what we have missed. The most we can achieve is to observe the stream of consciousness more carefully, as if in slow-motion. We therefore need a "science which, in consequence of its most radical essential peculiarity, is remote from natural thinking" (Husserl [1913] 1982, xvii).

2.3 The Practical Benefits of the Non-practical

Compounding two or more simple tasks reduces our perceptual, cognitive, and motor resources (Simons and Chabris 1999). Rational exercises are even more engrossing (Kahneman 2013). However, our projects and forecasts do not always pan out as planned, so the brute fact of error makes us wax and wane between belief, doubt, inquiry, and—when things go well—the restoration of belief. Importantly, solutions to our problems might reside in those portions of the experiential spectrum that we routinely discount. Phenomenology trains us to harvest possible solutions. This is why Peirce, the founder of pragmatism, put phenomenology at the core of his philosophical account.

Peirce writes that "the method of Pragmatism is to consider what thought is *for*, and to take no step in reflection that is not required by that *purpose*," yet he immediately

adds that "[n]o more definite statement of the distinctive character of Pragmatistic Philosophy is possible until we can examine into Thought and see what it does. That is to say that Pragmatism first of all requires us to begin philosophical reflection with the study of Phenomenology" (2020–24, vol. 2, book 2, 381). Scholars used to wonder "how have pragmatism and phenomenology each, via divergent paths, arrived at a crossroad within the context of the contemporary American scene" (Rosenthal and Bourgeois 1980, 1). If, however, we go back to the source, we see that phenomenology was wedded to pragmatism from the beginning.

Humans, Peirce would say, have "[a] habit of acquiring habits" (1976, vol. 4, 140). Habits, however, limit our worldview. If, in a hurry, we have to name a colour, to name a tool, and to picture a fish, we (Westerners) tend to gravitate uncritically toward "red," "hammer," and an almond-shaped animal roughly as long as the width of one's shoulders. For a host of contingent reasons, "maroon," "sandpaper," and a lengthy eel don't pop up into our minds as easily—especially when we are busy. Of course, there are exceptions to this. A carpenter who routinely handles tools will perceptually discriminate between different kinds of hammers (Tanaka and Taylor 1991). This is because habit bundles include, not only language, but also skills. Yet, observation is a ladder to the abstract which is rapidly discarded. Once we have transitioned from outsider to insider and fully entered a culture (Everett 2016, 122), we identify *what* a thing is—"Oh, I know this (type)"—without attending to *how* a (token) thing is. This neglect afflicts laypeople and experts alike. The medical researcher who uses an fMRI machine might, for instance, completely forget how intimidating it can seem to a patient. We inhabit our habits.

Habits explain our failure to extract all we can from perception. Due to evolutionary pressures, any behaviour pattern which shows durability probably shows utility as well. However, nothing in this probable inference addresses other (potentially more useful) behaviour patterns that aren't instantiated. For example, it is clearly beneficial to wash one's hands regularly. Yet, for a long stretch of human history, this helpful pattern of action did not show up on anyone's radar. Content with the status quo, we will simply not look for better. The main advantage of habits, then, is that they are mindless: we needn't consciously attend to them (see West and Anderson 2016). However, the main disadvantage of habits is that they are mindless: if we don't suspend them once in a while, we will never detect what we are missing. Phenomenology can thus be conceived as a corrective to unchecked pragmatism.

The membership cost of living in a group is that we henceforth live in a crayonpicture world of our own collective making, where the grass is always green, the tree bark is always brown, the sky is always blue, and flying birds are reduced to a pair of black arcs. Edmund Husserl called this family of expectations the "natural attitude" ([1913] 1982, 51–53; see Luft 2002). As Shaun Gallagher explains, "[w]e are all familiar with the natural attitude, even if we don't know it. Being in the natural attitude means simply taking for granted everything that we do take for granted" (2012, 41). The concepts we inherit presumably survived some kind of selection, so they could be seen as "largely accurate summaries of the world" (Murphy 2010, 13). Importantly though, the natural attitude replicates falsehoods as easily as truths all while atrophying our ability to tell the difference. Phenomenology combats this atrophy by reminding us how impoverished our ready-made assumptions really are.

2.4 The Abstention of Belief

Habits have a strong hold on our perception, thinking, and imagination, so we need an equally strong way to dislodge them. Doubt can help us do this. Peirce is famous for insisting that "[w]e cannot begin with complete doubt" (CP 5.265). The goal of phenomenology is not to doubt everything, but rather to use doubt as an instrument for reconnecting with anything. Hence,

If I am perceiving or judging, for example, then whether these activities are veridical or not, whether they have objects that exist or not, it is nonetheless clear that I am perceiving this or that, or judging this or that. [...] In this manner we are able to find a way to focus on what appears to us, just as it appears. (Tieszen 2010, 9)

Phenomenology, Peirce says, seeks to describe "whatever is before the mind in any kind of thought, fancy, or cognition of any kind" (2019, vol. 2, 436). To attain this unrestrained outlook, we need to let go of our ordinary concern with truth and falsehood. We normally think that we know what exists, but phenomenology requires us to bracket this epistemological and metaphysical hubris.

Husserl called this technique the *epoché*, the Greek word for abstention. What happens when we do the *epoché* is telling. Even if you suspend belief in the existence of, say, the computer screen before you, "it remains right there in front of you and you can describe how it appears in your experience" (Gallagher 2012, 44). Since this involves doubt and doubt is usually associated with skepticism, care must be taken to properly characterize the technique (see the case discussed in Overgaard 2008).

Certainly Husserl's notorious *epoché* is meant to establish a radical detachment from the world and its charms. But [...] [t]he phenomenological stance is neither purposeless nor scornful of ordinary worldly purposes. Phenomenology suspends our everyday and even scientific interests in things, but [...] *Husserl advocates a detachment from the world precisely in the service of a greater devotion to the world*. (McCarthy 1994, 148; emphasis added)

Consider the question "I wonder if ______ is really the case?" Whatever one plugs in the vacant slot, surely it is the case that *that* shows up. This is what Husserl meant when he called for a focus on the "things themselves" (Husserl [1900] 2001, 168). Such contents are the raw matter out of which all theories are (fallibly) built. Science may check the merit of theories, but phenomenology endeavours to ensure that those scientific edifices are not built on crayon-like assumptions. As Husserl explains, "[n]atural cognition, even positive science, can begin by [...] devising methods in naively enacted self-evidence. [...] The philosopher, however, [...] for reasons of principle, cannot come into being in naive cognitive activity [...]" (Husserl [1920–5] 2019, 209–211).

Nothing in this method results in scepticism about the "external world." On the contrary, whoever diligently carries out phenomenological observations and descriptions will come to appreciate how our immediate environment is not a fictional spectacle. As Peirce puts it:

The chair I appear to see makes no professions of any kind, essentially embodies no intentions of any kind, does not stand for anything. It obtrudes itself upon my gaze; but not as a deputy for anything else, not "as" anything. It simply knocks at the portal of my soul and stands there in the doorway. It is very insistent, for all its silence. It would be useless for me to attempt to pooh-pooh it, and say, "Oh come, I don't believe in the chair." I am forced to confess that it appears. Not only does it appear, but it disturbs me, more or less. I cannot think the appearance is not there, nor dismiss it as I would a fancy. I can only get rid of it by an exertion of physical force. It is a forceful thing. Yet it offers no reason, defence, nor excuse for its presence. It does not pretend to any right to be there. It silently forces itself upon me. (CP 7.619–621)

This obstinacy explains why, suitably adapted/interpreted, "phenomenology [...] might spawn a radical version of externalism" (Rowlands 2003, 56), insofar as "to be conscious *of* something is to be confronted with a concrete and full presence which is not consciousness" (Sartre [1943] 1978, lx).

Some philosophies may regard the world as a conclusion and not a premise, but phenomenological honesty reveals how silly this is. By redirecting our attention to the here and now, it seeks to reinstate a child-like ability to see the world for the first time—if by "child" we mean a person who has not yet been schooled or learned a language. It is a ladder back to the concrete. What presents itself in actual (i.e., unprejudiced) experience is often not what we expect. Peirce gives this example:

When the ground is covered by snow on which the sun shines brightly except where shadows fall, if you ask any ordinary man what its color appears to be, he will tell you white, pure white, whiter in the sunlight, a little greyish in the shadow. But that is not what is before his eyes that he is describing; it is his theory of what *ought* to be seen. The artist will tell him that the shadows are not grey but a dull blue and that the snow in the sunshine is of a rich yellow. That artist's observational power is what is most wanted in the study of phenomenology. (CP 5.42)

To see the snow as it truly presents itself, one must forget what one learned about it, since almost everything we are taught pertains to snow-in-general. Such abstract knowledge is valuable, but our bodily transactions are only with particular snow.

Because the influence of habitual conceptions is persistent, phenomenology discloses a hard-to-reach experiential layer. It is a bit like trying to see a figure in a stereogram. Normally, our eye lenses focus on what they are pointing at, but stereograms appear only when we interrupt this habit. Stare directly at the picture's surface and all you see is gibberish. Unfocus your eyes and all you see is a blur. But, when you aim your focal point beyond the image's surface, previously hidden forms are revealed that are really there. Like viewing stereograms, the change of perspective called for by phenomenology is difficult to achieve. It is a discipline that requires discipline. Peirce acknowledged that phenomenology requires "very peculiar powers of thought, the ability to seize clouds, vast and intangible" and confessed that "[t]he mere reading of this sort of philosophy, the mere understanding of it, is not easy" (CP

1.280). Similarly, Husserl insisted that "phenomenology, like mathematics, requires [...] certain 'strenuous studies,' without which a philosopher should not even be allowed to comment on phenomenological matters" (Livingston 2002, 243).

This movement away from our regular tendencies demands a significant investment of time and effort. But, as we shall gradually see, the payoff may be even more significant.

2.5 Phenomenology's Two Founders

Like discerning stereograms, those unable to do phenomenology usually fail to understand what all the fuss is about—thus contributing to the "cultural apartheid" (Vrahimis 2013, 110) that plagues academic philosophy (see Champagne 2015b). Luckily, Husserl and Peirce were "[w]riting before the continental–analytic split eventually ossified" (Pietarinen et al. 2019, 4). Husserl's thinking, the story goes (Rollinger 1999, 13–68; Spiegelberg 1981, 14–18), picked up where Franz Brentano's ([1874] 2005) work on "aboutness" left off. As for Peirce, he "is not explicit about from whom he takes the name phenomenology, but in 1903 he clearly states that it is Hegel and indicates how his own conception differs from Hegel's" (Atkins 2018, 73).

Like Husserl, Peirce tended to coin his own terms, so "[i]t is the hair's breadth between his own conception of phenomenology and the associated conceptions of his predecessors and contemporaries that leads him to coin the term phaneroscopy" (Atkins 2018, 73).

Should we employ Peirce's neologism "phaneroscopy"? That depends. Certainly, if we want to signal a difference with Hegel, the difference is significant enough to warrant a different label. However, the word "phenomenology" is nowadays associated with Husserl, not Hegel, so the worry that initially prompted Peirce to coin a new name has become less relevant. Atkins surmises that "what likely primarily motivates Peirce's preference for the suffix –scopy over –logy is his insistence that phenomenology abstains from answering the question of whether what is 'present to the mind' represents the way the world of fact is independently of mind" (2018, 90). While "[w]e should not [...] expect to find any easy one-to-one translatability between Peirce's conception of phenomenology is [...] of a piece with Husserl's" (2018, 90).

As Stjernfelt notes, "the two of them did in fact know the other's work—albeit not, unfortunately, to a degree sufficient to reveal the crucial convergences to any of them" (2007, 141; see the list of convergences on 144–145). Husserl was not acquainted with Peirce's mature work. Very few people were. Thankfully, as Peirce's unpublished manuscripts started to appear in the twentieth century, things started to change. The term "Phenomenology" eventually "rose to prominence due to Hartshorne and Weiss' edition of [the *Collected papers of Charles Sanders Peirce*] where they picked it as

a headline term—Hartshorne having studied by Husserl in Freiburg in the 1920s" (Stjernfelt 2007, 142).

The tradition that has grown out of Peirce's writings, though modest by comparison, challenges the commonplace view that the history of phenomenology consists of a series of Husserlian heresies (Ricoeur 1987, 9). When Susan Haack, for example, stresses that philosophy and science must be grounded in neutral observations "requiring special attention to features of experience so ubiquitous as to go almost unnoticed" (1993, 213), she is deriving her outlook from Peirce, not Husserl. Similarly, when the Peircean philosopher John Deely develops the notion of *Lebenswelt* or "life world," he acknowledges the root in Husserl (Deely 2009b, 81) but proceeds independently of Husserl's work (as testified by Deely 2007). On the commentary side, we can cite the work of Peirce scholars André De Tienne (1993) and Richard Kenneth Atkins (2018).

As we come to terms with the fact that phenomenology had two founders, a handful of conclusions are emerging as stable. One thing we can say with confidence is that "Peirce's interest in mathematics is much more thorough and encompassing than Husserl's" (Hartimo 2019, 128). Another thing we can be confident about is that Husserl's interest in phenomenology is much more thorough and encompassing than Peirce's.

Despite their different predilections, Husserl and Peirce were both convinced that a careful description of appearances could reveal the invariant structure of those appearances. In a manner akin to universal generalization in predicate logic, Peirce and Husserl held that, so long as there is nothing special about the particular experiences being described, those descriptions will pick out features present in all experiences. As Peirce explains,

Phaneroscopy is the description of the *phaneron*; and by the *phaneron* I mean the collective total of all that is in any way or in any sense present to the mind, quite regardless of whether it corresponds to any real thing or not. If you ask present *when*, and to whose mind, I reply that I leave these questions unanswered, never having entertained a doubt that those features of the phaneron that I have found in my mind are present at all times and to all minds. (CP 1.284)

In order to license this inference from the particular to the universal, phenomenology "religiously abstains from all speculation as to any relations between its categories and physiological facts, cerebral or other" (CP 1.287). This desire to strip away accidents is at the root of Peirce and Husserl's shared aversion to psychology (see Colapietro 2003; Stjernfelt 2013; Lanfredini 2017; Mohanty 2003).

Peirce and Husserl were impressed with the ability of mathematics to reach robust conclusions without making any psychological assumptions. Peirce's exposure to mathematical rigour came originally via his father, Benjamin, while Husserl studied with Karl Weierstrass, Leopold Kronecker and Ernst E. Kummer. Hence, "[d]uring their early apprenticeships they were exposed to mathematicians of first magnitude" (Mullin 1966, 301). These formative years left a lasting trace on Peirce and Husserl's thinking. Peirce describes his approach as follows: "We must begin by getting diagrammatic notions of signs from which we strip away, at first, all reference to the mind; and after we have made those ideas just as distinct as our notion

of a prime number or of an oval line, we may then consider, if need be, what are the peculiar characteristics of a mental sign, and in fact may give a mathematical definition of a mind [...]" (1976, vol. 4, 54). There is a difference, however, between emulating the demonstrative rigour of mathematics (Husserl [1900] 2001, 13–14) and emulating mathematics. As we are about to see, this can generate confusion about which discipline depends on which.

2.6 Phenomenology, Mathematics, and the Vexed Question of Which Comes First

"Foundationalism" may now be unfashionable, but the truth is that Husserl and Peirce both turned to phenomenology in search of foundations (see Berghofer 2018; Short 2000; Kemple 2019, 36). Husserl took phenomenology to be the bedrock upon which all the natural and social sciences rest (Ströker 1997). Up to a point, Peirce would agree. He held that "the authority of consciousness must be valid within the consciousness [...] for every science supposes that and depends upon it for validity" (Peirce 1982, 73). It is worth stressing though that, "[o]n Peirce's view, phenomenology truly is first philosophy, and the only science that precedes it, the only science from which it may derive its principles, is mathematics, a part of formal logic" (Atkins 2018, 3).

It is somewhat confusing to describe phenomenology as "first philosophy" only to remark that, truth be told, it doesn't really come first. In any event, Peirce's rationale for privileging mathematics is as follows. Peirce held that "[a]ll knowledge whatever comes from observation; but different sciences are observational in such radically different ways" (CP 1.238). Because tokens of certain (iconic) signs can convey generality (Wilson 2012), we can perceive necessary relations. Armed with this idea, Peirce thought he could "distinguish three classes" of sciences, "all resting upon observation, but being observational in very different senses" (CP 1.238). These are, in order: mathematics, philosophy, and the special sciences (CP 1.240–242). Peirce regarded mathematics as "the only one of the sciences which does not concern itself to inquire what the actual facts are, but studies hypotheses exclusively" (1992, 114).

As Peirce puts it, "[t]he mathematician [...] snaps his fingers at experience and at this little universe: what he means to pronounce upon relates to any and every universe in which the antecedent of his proposition might be true. [...] The mathematician alone does not unconditionally assume or assert anything at all" (Peirce 2020–24, vol. 1, 497). Since, by contrast, "[w]e must begin with all the prejudices which we actually have when we enter upon the study of philosophy" (CP 5.265), the presuppositionless status of mathematics makes it more primitive than anything found in philosophy. Given that phenomenology falls under philosophy (CP 1.280), we get the result that mathematics is prior to phenomenology. In fact, for Peirce, "our understanding of truth and reality reflects a prior grasp of mathematical necessities" (Hookway 1992, 140).

The confusion about "first philosophy" can thus be clarified. While phenomenology comes first *within* philosophy, philosophy itself is *not* in first place. Mathematics is. Peirce could not be clearer about this: "Phenomenology [...] must, if it is to be properly grounded, be made to depend upon the Conditional or Hypothetical Science of *Pure Mathematics* [...]" (Peirce CP 5.40; emphasis in original).

I disagree with this account. To be clear, "Peirce never admits that the building blocks of a philosophic architecture occupy their fixed and never changing places in the whole," so his "speculative architectonic may very well fit into a laboratory philosophy" where all agree "not to block the road of inquiry" (Mora 1955, 358). With that in mind, let me juxtapose two arguments. On the one hand, one could argue that mathematics is prior to phenomenology because mathematics makes even fewer presuppositions than phenomenology. On the other hand, one could argue that phenomenology is prior to mathematics because whatever happens in a given mathematical inquiry must perforce appear before (some)one. Peirce's confident pronouncements notwithstanding, it is not obvious why the first argument should trump the second. In fact, I find the inevitability of *appearing to be* decisive. In even the best logical demonstration or argument, you have to take stock of what is being demonstrated (Champagne 2016b).

Consider, for a first example, the case of conjunction (i.e., "and"). This is a crucial logical relation in any field because, in order to make a claim in any domain, one must conjoin signs in a structure akin to the subject-predicate structure (Stjernfelt 2014). So, even if one bars features "that are peculiar to the human mind" (Pietarinen et al. 2019, 12), one will not succeed in expressing a conjunction without some experiential juxtaposition of a claim's two parts. "To be sure, there are propositions in which something is said to be false, to be rejected by someone, to be invalid, etc." (Pietersma 1985, 77). However, adopting those assorted attitudes requires, at minimum, that both parts of a proposition "show up"—in the most noncommittal sense of that expression.

Irrespective of whether it employs diagrams, symbols, or whatnot, mathematics is not exempt from this requirement of joint appearance. The boundaries of consciousness may be fuzzy, but entry into and departure from a phenomenal field—which we might call "experiential liminality" (Everett 2009, 129)—is a precondition for making sense of any inquiry (for an extended discussion, see Champagne 2019b and Stjernfelt 2019). No discipline is better suited to track such entry and departure than phenomenology.

Consider the case of proofs in plane geometry. Leila Haaparanta believes that "the geometrical model [...] is fruitful whether we want to understand Husserl's or Peirce's phenomenology" (1994, 38). As she explains, when "[s]olving geometrical problems in Euclid's geometry [...] one takes that which is sought *as if* it were admitted and moves from it via its consequences to something that is admitted" (Haaparanta 1994, 44; emphasis in original). Yet, something as elementary as Euclid's first postulate makes no sense without some appeal to appearances. Indeed, why should one find acceptable or even meaningful the claim that it is always possible to draw a line (let alone a straight line) from one point to another? Peirce writes that "[t]he mathematician [...] simply states what is *evident*" (Peirce 2020–24, vol. 1, 498; emphasis in

original). The natural attitude may find this obviousness obvious. Phenomenology, however, must realize that this obviousness stems precisely from the fact that the points and lines that one contemplates indeed conform to what is being claimed. A phenomenologist cannot and would not "snap his fingers" at experience, since it is the last court of appeal.

Peirce correctly describes the situation as follows: "We say, 'Here, mathematician, suppose such and such to be the case. Never you mind whether it is really so or not; but tell us, supposing it to be so, what will be the consequence'" (CP 1.133). Rationalists might gloss this activity as independent of experience. But, if the results of any deductive inference must be observed, as Peirce (1976, vol. 3, part 2, 968) and Peirceans (Legg and Franklin 2017) claim, then mathematics cannot possibly be prior to phenomenology—in any sense of the word "prior" except perhaps the temporal one (insofar as people are usually taught mathematics before they learn about phenomenology). Diagrammatic reasoning may be able to forgo specific senses like sight (Pietarinen 2010; Champagne 2015e), but it cannot forgo experience (of *some* sort).

Scholars debate whether Peirce and Husserl lived up to their anti-psychologistic ideals (Pietarinen et al. 2019; Tiercelin 2017), but what tends to be missed is that the abstention of belief which enables anti-psychologism dislodges *all* inquiries from their positions of power. In other words, what makes phenomenology anti-psychological is that it is *ante*-psychological (Stjernfelt 2007, 142). John Sowa writes that, "[b]y avoiding any assumptions about the psyche, Peirce avoided psychologism" (2015, 279). Phenomenology does not put aside the assumptions of psychology just to satisfy some pet peeve or disciplinary one-upmanship. Rather, phenomenology puts aside psychology because it puts aside assumptions, full stop. There is no room in such abstention for favourites. So, when you bracket, you bracket everything—mathematics included.

As Peirce himself said, the phenomenologist "is not to be influenced by any tradition, any authority, any reasons for supposing that such and such ought to be the facts" (CP 1.287). While Peirce and Husserl "[b]oth speak of phenomenology as an antidote to the psychologistic tendencies of their time" (Kemple 2019, 25), it is unclear whether Peirce, who saw himself as upholding his father's privileging of mathematics (Peterson 1955; Peirce 2010, 91), was willing to pay that stance's full price and dislodge that discipline from its pride of place.

I am not the first to remark that, "with respect to our mathematical beliefs, Peirce's confident anti-dogmatism seems to falter" (Haack 1979, 37). Peirce held that "[t]here is [...] nothing to surprise one in the (theoretical) *infallibility* of mathematics" (Peirce 2020–24, vol. 1, 498; emphasis added). Infallibility is not a notion one finds often defended in Peirce. His reasoning—unconvincing, by my lights—is that "we are fallible only with respect to our factual beliefs" whereas mathematical inferences yield only hypothetical beliefs (Haack 1979, 37). This segregation cannot work. By "making no distinction between what is illusory and what is real, Peirce performs the *epoché* or phenomenological reduction, in a manner similar to Husserl" (Rosensohn 1974, 2). One consequence of such bracketing, to use Peirce's language, is that "matters of fact" (CP 2.663) get converted into "hypothetical states of things" (CP

2.778)—thereby flattening that very distinction. Having levelled the playing field, hypothetical states of things can be seen as matters of fact in their own right. This has to be the case, otherwise, how could hypothetical states of things ever suggest themselves in an actual world? Unicorns may not exist, but the picture I draw or entertain in ideation certainly does.

We see, then, that "seeming presupposes being, and in two ways. On the one hand, seeming is often, if not always, precisely, a seeming *to be*; to understand a seeming *as* a seeming is to understand it in relation to an actual or possible being. On the other hand, seemings *are* beings; whether they turn out to be objects or properties or events or relations, they are in any case *not nothing*" (Carman 2007, 99). Replace every occurrence of the word "seeming" with "hypothesis" in this passage and the moral holds. Accepting *whatever* presents itself *as it presents itself* is thus a radical move—more radical, at times, than even its founders realized.

2.7 Observing the Materials Needed for General Reasoning—And Life in General

By Peirce's own account, the business of phenomenology "is simply to draw up an inventory of appearances without going into any investigation of their truth" (CP 2.120). So, if "mathematics deals exclusively with hypothetical states of things" (CP 4.232), then far from being outside phenomenology's remit, it finds itself smack in the middle of the phenomenologist's crosshairs.

Husserl initially developed phenomenology to account for the truths of arithmetic. Moving away from his early psychological account under the weight of reflection (see Mohanty 1974) and criticisms (see Føllesdal 1958), he sought to do justice to the fact that "the sea is something real and a number is not; but this does not prevent [a number] from being something objective" (Frege [1894] 1972, 337). Husserl's view(s) on this subject went through several revisions and expansions. The through-line, though, is that one must access experiences in an untainted way and that such an untainted access is impossible unless one first neutralizes a host of ordinary beliefs and habits (see Brainard 2002).

The full consequences of this outlook can take a while to sink in. So, "[w]hile Husserl's own 'concrete' analyses were initially focused primarily on the foundations of arithmetic and logic, [...] gradually he and his followers broadened phenomenology to address the a priori structures of consciousness in general, including affective, volitional, practical, evaluative, aesthetic, religious, legal, political and other forms of conscious awareness of meaning grasping and meaning articulating" (Moran 2001, xxv). As his thought evolved, Husserl came to see that, "for scientists and the educated generally," mathematics "*represents* the life-world, *dresses it up* as 'objectively actual and true' nature," but this generates a temptation to "take for *true being* what is actually a *method*" (Husserl [1936] 1970, 51; emphasis in original). Husserl was aware that "*the ideal of 'mathematization'* [...] has great significance for the cognitive practice of all the 'exact' eidetic disciplines," but he insisted that "this mathematical ideal cannot be universally valid—in particular, not for phenomenology" ([1913] 1982, 17; emphasis in original). By the time we get to *The crisis of European sciences* (Husserl [1936] 1970), we are confronted with a *Lebenswelt* teeming with meaning and value (d'Ippolito 2002).

Whereas "Husserl renounces formal logic in favour of the possibility of gleaning some protological evidence from intuitions" (Bobrova and Pietarinen 2019, 45), Peirce "articulated logical representation systems to support his reasoning" (Pietarinen et al. 2019, 13; see Peirce 2020–24). Indeed, one could say that "[t]he peculiarity of Peirce's project lies in the fact that antipsychologism pushed him towards formalism more visibly than it pushed Husserl" (Nowak 2003, 149). One consequence of this approach is that Peirce took it as "beyond question [...] that a certain very short list comprises all of these broadest categories" (CP 1.286) of experiences, whereas Husserl deemed it misplaced "to claim beforehand that 'a short list' [...] could be established," in so far as a genuine phenomenological inquiry "should be free from any prior presuppositions" (Sonesson 2017, 86–87). Not only does Peirce "take for granted that we have to arrive at a small list of categories," he "even seems to anticipate which these categories are going to be" (Sonesson 2017, 87).

Determining an outcome in advance is the cardinal sin of phenomenology. As a result, "[t]here are two ways of looking at Peircean phenomenology from a Husserlean standpoint: either it is not free from presuppositions, or it starts out without any presuppositions, as Husserl requires, arriving at the end at the result that all deeper meanings take the form of the trichotomies" (Sonesson 2019, 260). I do not think Peircean phenomenology is free from presuppositions.

Peirce uses diagrams to vindicate his emphasis on triadic relations (see Atkins 2018, 59–69; Burch 1991, 125–136). However, this observational path to the categories came later, as Peirce avers that his short list "grew originally out of the study of the table of Kant" (CP 1.300; see Gava 2015; Atkins 2018, 8–56). Although Peirce checked his account against experience, the results were arguably set in advance (Ransdell 1989). The timeline is telling: Peirce's categories were basically arrived at in 1867 (CP 1.545–559) and his mentions of "phenomenology" start in 1902 (Fuhrman 2013), one year after Husserl's first prominent mention of the term (Husserl [1901] 2001, 112; Spiegelberg 1981, 27).

Rosensohn (1974) argues that while Aristotle built his categories out of an analysis of grammar and Kant built his categories out of an analysis of judgments, Peirce crafted his categories "neither with logic nor language but 'experience' itself" (Rosensohn 1974, 37). It would be great if this were the case. However, the hagiographic claim that Peirce had recourse to "no previous philosophizing at all" (Rosensohn 1974, 37) is hard to reconcile with Peirce's comment that his "three categories are nothing but Hegel's three grades of thinking" (CP 8.213; see Stern 2009, 209–326). Nothing guarantees a neat triadic outcome, so Peirce's preoccupation originated, not from phenomenology per se, but from the history of philosophy.

In fairness, Peirce and his descendants are open about the fact that "phaneroscopy is not presuppositionless" (Short 2007, 70). Hence, "in Peirce's manner of speaking,

it is impossible to achieve the aims of the eidetic reduction established by Husserl, even if it is possible to use this reduction as a certain (but not never-failing) technique of experiencing" (Nowak 2003, 144). This seems right. Yet, also in fairness, it is inaccurate for Peirceans to say that Husserl "thought it possible for phenomenologists to bracket *all* their preconceptions and natural beliefs" (De Tienne 1993, 287; emphasis added). Certainly, few of his pupils believed this. As Merleau-Ponty put it, "[t]he most important lesson of the reduction is the impossibility of a complete reduction" ([1945] 1974, xiv). In any event, a pragmatist is ill-placed to go from the premise 'X cannot be done perfectly' to the conclusion 'X cannot be done.'

As I see it, the only beliefs and habits that can be tolerated within a phenomenological exercise are (a) those that must be in place to communicate one's results (if, that is, one wishes to communicate them—ineffable contentment is perfectly fine) and (b) those that genuinely fail, despite one's best effort, to be bracketed. Since in phenomenology "words are used to direct the reader to his own experience" and since the "purely formal vocabulary that Peirce drew from" came from "the algebra of relations" (Short 2007, 71), a handful of assumptions might need to be retained to meet (a). This indispensability, however, does not justify placing mathematics below phenomenology in an architectonic. One might as well cite the fact that no one can learn mathematics without speaking to others in a natural language as a reason to place linguistics below mathematics.

In addition to grounding mathematics, phenomenology can lend support to semiotics. The world is always a world *for* somebody or something, so grab anything at random and I will show you how it is a *sign*. Working in a Peircean tradition, I have suggested that even a simple quality like yellow can be glossed in a way that makes it conform to the triadic model of the sign (Champagne 2015a, 537). I have also suggested that, because an embodied subject stands to gain or lose from what transpires in its environment, values are embedded in triadic relations of assessment (Champagne 2011). I have also used the Peircean category of Secondness to explain why the brute sense of effort escapes phenomenological description (Champagne 2014a). These are not, however, theses that would have occurred to me with my semiotic training bracketed. Like mathematics, semiotics cannot be prior to phenomenology. Nothing can.

2.8 Phenomenology as a Truly Radical Inquiry

The switch of attitude called for by phenomenology changes everything. Consider the desire to know snow-in-general. Inductive generalization becomes better as its sample grows, so there is a built-in incentive to collect more specimens. Given that new specimens can confirm or falsify probable conclusions, induction "is selfcorrective in the long run" (Bellucci 2017, 206). However, none of this applies to particular snow. Unlike the scientist, the phenomenologist or "artist who sees [...] the apparent colors of nature as they appear" (CP 5.42) can never gather any forward momentum, since performing a situated observation faithfully on one occasion does not spare one from having to do so all over again the next time (see for example Monet's *Les meules à Giverny*).

This phenomenological openness to the concrete is radical for two reasons, one widely acknowledged, the other less so. First, it is radical because it involves what William James called "radical empiricism," an acceptance that the "directly apprehended universe needs [...] no extraneous trans-empirical connective support, but possesses in its own right a concatenated or continuous structure" ([1909] 1975, 7). It is also radical because the reasons/motives that lead one to adopt the phenomenological attitude might not survive phenomenological inquiry. One could turn to phenomenology in order to justify the epistemic authority of some science or scientific claim—only to find out in the course of one's phenomenological descriptions that this preoccupation no longer grips one and should in fact be relinquished. In regular inquiry-the kind that has a truth-seeking purpose-one might lead an expedition to the South Pole (say) with the hope of empirically justifying some computer-assisted model. That model might or might not be satisfied by the world, so the goal is to obtain an observational verdict. Phenomenology can help such observations be unbiased. However, phenomenology is unlike regular scientific observation since it requires bracketing one's aims and habits-including the aims and habits that prompted one to do phenomenology in the first place. So, one could drill ice cores only to find out that one should be playing the cello instead.

The verdicts rendered by conscious experience are thus more sweeping than those rendered by the natural world, since they can show that our questions are not worth asking and our projects are not worth pursuing. As Hanne Jacobs explains,

If a continued phenomenological reflection and description does provide a fundamental insight about the world [...], it becomes more plausible that this reflection could change the way in which we continue to live in this world after reflection. That is, it becomes more plausible that the insight [...] makes a simple return to the life before phenomenological reflection impossible. (Jacobs 2013, 361)

To bracket something is to put it aside, not destroy it. Hence, "[i]n the reorientation of the epoché nothing is lost, none of the interests and ends of world-life, and thus also none of the ends of knowledge" (Husserl [1936] 1970, 176). While a loss of interest in one's initial preoccupations doesn't *have to* happen, it is nonetheless something that one must be open to—on pain of no longer being a good phenomenologist.

Atkins explains that, "[o]n Peirce's view, the phenomenologist does four things. First, she observes the phaneron. Second, she describes the phaneron. Third, she analyzes the phaneron. Fourth, she evaluates the accuracy and adequacy of her descriptions and analyses" (2018, 106). My suggestion is that, if one properly carries out the first step, one might lose interest in the remaining steps. As we are about to see, such a loss of interest is not always a bad thing.

2.9 Reconnecting with the Mundane

Whatever their differences, Husserl and Peirce both believed/hoped that phenomenology could/would reveal something important. It is normal to prize originality, so one persistent worry of scientists and philosophers is that an attentive description of experiences might have nothing interesting to report. What important discoveries, a critic might ask (e.g., Bunge 2003), have phenomenologists made? It seems that, if the answer is none, then phenomenology as a project has failed. Yet, why should we think this? Flirting with Luddite sentiments, I have elsewhere pleaded for a renewed appreciation of *inefficiency* and wondered what would happen if we "gave ourselves the right to [...] adopt what might be called the *contemplative* stance" (Champagne 2016a, 48; emphasis added). I want to keep exploring that theme.

Phenomenology may or may not be capable of fulfilling the hopes that Peirce and Husserl originally had for it. In my estimate, though, the most worthwhile contribution of phenomenology lies not in its intended function(s), but rather in its ability to make us comfortable with the mundane.

In Peirce's hands, "[t]he phaneron provides only an inroad to the categories" of Firstness, Secondness, and Thirdness (Rosenthal and Bourgeois 1980, 78). This is, I think, a viable goal. In other works (e.g., Champagne 2018), I have endeavoured to clarify our ability to "seize upon [a] particular feature of the lived phaneron and, as it were, pull it out of the flux of seemings and appearances so that we can subject it to phenomenological analysis" (Atkins 2018, 107). Importantly though, such a "philosophic abstraction from, felt experience, is not an observational discipline or a description of what is observed" (Rosenthal and Bourgeois 1980, 78). Hence, our ability to analyze experience into three discernable-but-not-distinct components should not make us lose sight of the fact that the "lived phaneron" (De Tienne 2000) is "originally one, a synthetic unity" (Atkins 2018, 213). Talk of "Firstness" may be apt in some contexts, but it risks muddling what indeed comes first. The stream of consciousness is where Peirce had to start and it is where we must start too.

What the stream of consciousness reveals is my home, currently strewn with books, toys, and clothes. Despite being the actual center of my daily life, this familiar familial setting does not show up (or show up centrally) in the official worldview that I learn from books. In the view from nowhere (Nagel 1986), I have no address. Yet, what do I *care*, literally, about the orbits of the planets, say (Champagne 2021b)? Such knowledge may benefit me in remote ways. However, the most vital contribution of phenomenology, in my estimate, is not that it grounds the sciences (Ströker 1997) and/or paves the way for some profound insight into the mind's structure (Dreyfus and Hall 1982), but rather that it lets us become at peace with the humdrum grind of daily life.

Several preoccupations risk occluding this. Some Peirceans have argued that Husserl's "understanding of scientific insight runs counter to the general theory of inquiry as it emerged from the perspectives of Peirce," insofar as "[t]he priority of the subject and its constituting acts stand in opposition to a pragmatic perspective which

would place such a 'subject' within the larger horizon of communal and natural transactions" (Corrington 1987, 1). The pragmatist who turns to phenomenology clearly wants phenomenology to confirm some basic conclusions. Notably, to confirm the aggregation of findings in collective inquiry, phenomenology "must yield a notion of human self of whom it makes sense to say 'he has a purpose'" (Wells 1981, 34). Yet, what if phenomenology does not live up to this philosophical expectation?

It is becoming more comfortable (fashionable?) to champion the unthinking (see Dreyfus 2007; Legg 2003; or the literature on enactivism in cognitive science). However, few champion the aimless. Peirce's talk of "the end of inquiry" (Misak 2004) certainly implies a grandiose teleology—one that a Husserlian might be sympathetic to (Zahavi 2017, 126). But, what if an unbiased description of what(ever) appears reveals a large swath of the experiential spectrum devoid of any purpose? What if, moreover, phenomenology establishes that these experiences devoid of purpose are in some sense the most important experiences one could undergo? At the risk of being incautious, let me now explore this possibility.

2.10 The Existential Benefits of the Non-practical

Peirce enjoins his readers to "actually repeat my [phaneroscopic] observations and experiments for himself, or else I shall more utterly fail to convey my meaning than if I were to discourse of effects of chromatic decoration to a man congenitally blind" (CP 1.286). I want to suggest that such first-hand acquaintance, which is indeed necessary (Jackson 1986; Champagne 2019a), has intrinsic value quite apart from its ability to buttress arithmetic truths, semiotic categories, or anything else. That value stems in part from the repetitive character of phenomenological observations. The call "Look, all experiences are this way" enjoins one to constantly redo the description of experience, whereas "Look, all experiences *must be* this way" allows that such a description could in principle be done, once and for all. Although both approaches are feasible, I want to argue that there is something salutary about constantly redoing the description of experience.

In the sequel to his invisible gorilla study, Daniel Simons (2010) designed another experiment that nicely illustrates why phenomenological description must constantly be redone. The gorilla dancing amid the basketball players is now so well known that any results obtained from the original set-up are tainted. Far from invalidating the original test, Simons exploited this desire of current participants to spot the gorilla. In the new experimental design, viewers bent on proving their cleverness miss background curtains that magically change colour midway and that basketball players exit the scene. Because the attempt to overcome human limitations only shifts those limitations elsewhere, the site-specific achievements of phenomenology must be re-earned, over and over.

As I argued at the outset, the ability to put aside our usual reflexes lets us think outside the box when fresh solutions to our problems are needed. Yet, I also insisted that some of those problems might lose their purchase once such bracketing has been performed. Peirce writes that phenomenology "endeavors to combine minute accuracy with the broadest possible generalization" (CP 1.287). What is left, then, when the minute accuracy is retained but the desire to attain broad generalizations is relinquished? Another reason to do phenomenology, I argue, is to stave off absurdity.

Bracketing, Merleau-Ponty said, represents an attempt to recapture "wonder' in the face of the world" ([1945] 1974, xiii). He was quoting approvingly Husserl's assistant Eugen Fink, whose phenomenological investigations sought to resist "a strange secularism that deprives us of imagination, and enframes and industrializes our minds without transcendental wonder" (Alvis 2019, 104). Meaning—the "meaning of life" kind that nourishes the soul—is often inconspicuous, so phenomenology becomes indispensable for anyone wishing to live a meaningful life. By hugging the concrete, it lets us see that the little things no one writes about—folding laundry, sipping coffee, carrying the groceries home—matter more than we normally suspect.

The value of these mundane events can be hard to discern. It certainly doesn't help that we now spend large parts of our days staring at lit displays roughly the size of a credit card. "Indeed, considering the number of hours that many people spend engaging with media in contemporary life, the body-screen relation in particular may be one of our most significant human-technology relations" (Richardson 2012, 135). Handheld devices provide only a tiny window on the world (Wellner 2016, 91–95). As if this wasn't enough, the social networking technologies (Nazri and Latiff 2019) conveyed on those screens essentially put the natural attitude on steroids. Humans have shown a "canny and subtle" (Richardson and Wilken 2009, 31) ability to adapt to such technologies. Still, Martin Heidegger, Husserl's ablest pupil, warned that "the approaching tide of technological revolution [...] could so captivate, bewitch, dazzle, and beguile man that calculative thinking may someday come to be accepted and practiced as the only way of thinking" ([1959] 1966, 56). I share that worry.

Smartphones are just the beginning. Soon, networked brain implants will enable one to see others in "augmented reality," weaving face-recognizing filters and lenses into our very perception to remove a wart on one's face or change one's skin colour, say. Unlike a tattoo, people might change their appearance settings several times in a given day. A user might have control over those settings too. The ethical questions raised by such perceptual alterations are numerous. Focusing only on the phenomenological questions, we may ask: would phenomenology require one to turn off such a device?

Strictly speaking, no. One could use the *epoché* to gain a more honest understanding of what such mediated experiences are like. Technology is an important part of the human condition, so Merleau-Ponty ([1945] 1974, 143) did not suddenly stop phenomenology when he reflected on the use of a cane. So, to ask a better question: does *philosophy*—using phenomenology as a method—recommend turning off such a device?

I would say yes. Certainly a contrast with real reality would be mandatory to assess whether a perception-altering implant is as life-enhancing as tech companies claim. Such a contrast with the real would show that, when we switch on our devices, much is gained—but much is lost.

At the risk of stating a truism, every moment looking at a computer screen is a moment not paying attention to one's "actual" environment. We are becoming more adept at creating various visual, auditory, and tactile simulacra. But, for reasons that we are only beginning to appreciate (Dreyfus 2009, 67–68), there is no substitute for the real thing (Champagne 2021a). Despite this, robots and "deepfakes" are continually being improved, while individual human identities are being encoded in ways that facilitate profiling and data-mining. Indeed, "we seem determined to give human qualities to objects and content to treat each other as things" (Turkle 2011, xiv). It may seem benign that many young persons prefer posting their meals to tasting their meals. Yet, since staged exaggerations are more attention-grabbing than carefully-expressed truths, digital technologies that tailor themselves to our rapid preferences (Alter 2017) can have significant societal consequences (Deibert 2020).

Social networks may give us more "friends" than ever (Cocking and Matthews 2000), but psychologically feelings of isolation, depression, anxiety, and meaninglessness are also on the rise (e.g., Lin et al. 2016; Twenge et al. 2018). Culture poses a cap on the kinds of lives we can imagine living (Everett 2016), but when all the items on a given cultural menu are impoverished, something in (some of) us viscerally rebels. Since we humans need meaning just as much (or more than) we need food (Kesebir and Pyszczynski 2014), the experiences we undergo—or don't undergo—affect our wellbeing (Elhai et al. 2016, 509–510). One may not know *what* one is missing; but one can nevertheless get an inchoate sense *that* one is missing something. Indeed, "if the clothes on the rack all presume to dress the human body in suits of armor and corsets of steel, then nothing much of the animal body is going to be detectable to resist those fashions other than the mystifying hurt they cause" (Bernstein 2000, 295–296).

Fortunately, there are ways to intimate (some of) what we may be missing. My classroom activity, you will recall, began by asking students to draw a circle and then shade half of it. After watching the basketball video a second time to confirm the missed gorilla, students are asked to hold up their initial drawing, so that everybody can see. Mostly, what we find are circles cut down the middle, with one side shaded. Yet, by design, I never instructed students on how to distribute the shaded area. Despite this leeway, almost everyone follows the path of least resistance and sunders the circle with a straight line intersecting its center. Caught in our usual attitude to the world, a mindless habit takes over our actions. Here, the habit in question has merit, since it is quite economical. Still, I ask my students, what are some other ways that one might shade half the surface of a circle? In a pedagogical exercise that combines Husserl's eidetic variation (Michels 2020) and Peirce's diagrammatic reasoning (Paavola 2011), students experiment with the blank circle to discover its nested affordances. It takes a while for imaginations to get into gear, but eventually we sketch a variety of legitimate possibilities. My personal favourites are cow skin patches and the yin and yang symbol. Like the gorilla that our eyes overlooked, these are shapes that our minds overlooked.

Receptivity to such less-obvious possibilities is voluntary because, like a stereogram, one cannot confirm what one will glean in advance of gleaning it. It is therefore impossible to rid a phenomenological foray of risk and discomfort. The natural attitude—which can be understood as doing what everyone else is doing—will always be the path of least resistance. My students thus "assume, like everyone else, that technology is a fact of life—the air they breathe, the water in which they swim, like it or not" (Jones 2006, 2). The natural attitude lets contingent cultural shifts that are sometimes only a few years old masquerade as eternal constants. So, if one uncritically adopts whatever is trending in "technological somnambulism" (Winner 2014, 50), one will not be in a position to assess the harm incurred.

Some "postphenomenologists" (e.g., Ihde 2016) have argued that the "classical" phenomenological framework is unable to address current technological developments. Just as classical phenomenology could be accused of hiding a Luddite agenda, postphenomenology could be accused of hiding a transhumanist agenda (Ihde 1995; Rosenberger and Verbeek 2015; Aagaard et al. 2018). It remains to be seen by which camp Peirce will be appropriated. A pragmatist could conceivably enlist technology to combat the harmful effects of technology (e.g., Howells et al. 2016), but the conclusion I draw from the whole situation is more radical. We can spend a lifetime perfecting our online profiles, but it is only when we stop worrying about our electronic footprint that we become grounded. Indeed,

We discover what kind of beings we are when the content of our lives is temporarily suspended, similar to the way Husserl's bracketing reveals consciousness' noetic acts [...]; but one of the features we discover is that we are entirely of this world. Attempts to surpass it [...] constitute something like Sartre's bad faith, that is, the endeavor to settle the unsettling aspects of our being such as mortality and the lack of metaphysically approved ways of living. (Braver 2012, 45)

2.11 Turning to Phenomenology for Existential Solace

Peirce and Husserl obviously did not comment on today's technological predicament, but they did talk about science and mathematics as fields that any rational mind must study. The whole strategic value of placing a discipline lower in an architectonic is that it makes this discipline mandatory for all others above it (Stjernfelt 2015, 21–22). Yet, irrespective of who stacks the disciplines in the right way, each of us must *decide* whether to devote time to a given pursuit (Champagne 2015c). That is why Husserl ([1936] 1970, 391–395) realized near the end of his life "that he could not continue to dream of a scientific philosophy without embracing the very 'existentialism' he excoriated" (Crowell 2016, 68; for a reconstruction of his reflections, see MacDonald 2001). Foundationalism, for those of us (e.g. Champagne 2015d) who care about such things, is one selling point. However, because it has the power to call into question our very questions, phenomenology can accomplish much more.

Unsurprisingly, Husserl's phenomenology has spurred the thought of existential thinkers—the works of Beauvoir ([1948] 1976) and Sartre ([1943] 1978) spring to (my) mind. Peirce's vision of a "quasi-necessary, or formal, doctrine of signs" (CP 2.227) has also been immensely fertile (see Champagne 2014b), but the American polymath's influence on existentialist thought has been minimal. Peirce figures in

Eero Tarasti's "existential semiotics" (Tarasti 2000). Kemple (2019) presents a comparative study of Peirce and Heidegger. More references, however, are hard to find.

According to Peirce, "[t]he first and foremost" faculty that a phenomenologist must develop is "the faculty of seeing what stares one in the face, just as it presents itself, unreplaced by any interpretation, unsophisticated by any allowance for this or for that supposed modifying circumstance" (CP 5.42). This outlook is in part what leads Peirce to embrace qualia (Champagne 2016a). But, unlike Husserl, who left us "painstaking investigations of various concrete phenomena" (Zahavi 2017, 1), Peirce never offers any guidance on how we can put aside our habits to grasp the rich yellow of snow in the sunshine (CP 5.42). Instead, whenever Peirce calls on phenomenology, it is with the intent of showing that "[w]e can distinguish in the phenomenon three kinds of elements which cannot be entirely separated from one another" (2020-24, vol. 2, book 1, 209). Due to Peirce's narrow ambition, Kemple believes that "[t]hough this phaneroscopy bears some similarity to the phenomenological approach of Husserl, the science advanced by Peirce aims at a different object altogether" (2019, 23). Certainly, if Peirce's phenomenology "uncovers the three categories—indeed, that is its sole role" (Hookway 1992, 78; emphasis added), then it falls dramatically short of its full promise/potential. This may explain why, "compared to Husserlean phenomenology, the phenomenology [...] of Peirce seems to be frozen in time" (Sonesson 2016, 283; compare the works of Tarasti and Kemple with the major Husserlian figures assembled in Moran and Mooney 2002). Using the label "phaneroscopy" to keep it at arm's length from regular phenomenology might therefore have some warrant after all.

Remarking on the relative absence of Peirce from mainstream phenomenology, Ahti-Veikko Pietarinen and Jelena Issajeva insist that "[t]here is no real reason—other than some historical accidents and general unfamiliarity and unavailability of the key textual sources—why this has been so" (2019, 200). Unfamiliarity and unavailability are surely part of the explanation, but there are more substantial reasons. When Richard Rorty, the bogeyman of Peircean pragmatists, remarks that he wasted irreplaceable years of his life trying to plumb the mysteries of Thirdness (Rorty 1992, 93), he strikes a nerve, because he suggests that Peirce's sophisticated account of long-term "practical bearings" (CP 5.402) might sometimes divert our gaze from (what ought to be) more pressing concerns. This is a principled criticism, so "[w]hen, later in his career, Rorty turned away from Peirce, it was not a turn born of ignorance" (Gross 2008, 142). Hence, Peirce's framework may be unable, in the final analysis, to bear the weighty issues that I am broaching.

I don't know whether it is appropriate to burden phenomenology with supplying *ataraxia* in the face of our mortal worries. All I know is that, if phenomenology is not called upon to satisfy our basic human craving for meaning, religion (Champagne 2020) or ideology (Aron 1962) gladly will. Phenomenology, by contrast, has no agenda to peddle. At any rate, it should be designed in such a way that, if one ever front-loaded a dogma, the alarms of improper bracketing would automatically go off. Appeals to authority should also be pre-empted by the call to experience things for

oneself. Phenomenology is thus poised to accomplish something no other discipline can.

Interestingly, Husserl eventually arrived at similar conclusions, insisting that "the total phenomenological attitude and the *epoché* belonging to it are destined in essence to effect, at first, a complete personal transformation, comparable in the beginning to a religious conversion, which then, however, over and above this, bears within itself the significance of the greatest existential transformation which is assigned as a task to mankind as such" ([1936] 1970, 137). Husserl came to see this only near the end of his life, but perhaps much is gained by seeing it earlier.

2.12 Don't Miss Out

The progress of science and/or decline of religion in the twentieth and twenty-first centuries have been felt by many to leave behind a void (Taylor 2007, 307). One way to fill the gap is to return to what is closest to us. Although phenomenology has been a "prominent defender of a rehabilitation of immediate experience, it has been preceded and joined in this respect by other philosophies" such as "Bergson's defense of the immediate data of consciousness, Peirce's phaneroscopy, William James's radical empiricism, John Dewey's 'experimentalism,' and Whitehead's critique of classical science," such that "phenomenology is only one more wave superimposed on the groundswell of a much vaster historical movement" (Spiegelberg 1975, 59). Whether or not this movement can reinfuse enchantment into our experience, the world certainly looks different when seen with phenomenological eyes.

A dice, to pick a handy example, always hides a backside (Husserl [1931] 1960, 39–45; Sokolowski 2000, 17–21). Of course, as we toy with the object, we quickly form a habitual expectation of what we shall see next. In the natural attitude, we reify this habit and call it a cube. There is nothing inherently wrong with such a shortcut. As Peirce said, "[t]he true precept is not to abstain from hypostatization, but to do it intelligently" (CP 1.383). Yet, even if a reification or hypostatization is warranted, no amount of spinning the dice between my fingers or asking "other Egos who see better and further" (Husserl [1913] 1982, 119) will let me experience all six sides at once. A more faithful (and philosophically interesting) description of the situation would instead be that "an actual experience refers back to another experience which is not given in actuality and will not be actualized" (Schutz 1962, 125). My hold on even the simplest things thus remains incomplete. Husserl held that "if something is or exists, it can in principle become the intentional object or correlate of a *fulfilled* conscious experience," but he also held that "our perceptual awareness of things is, in principle, suffused with presumptions that at this moment do not (and never will) enjoy such fulfillment" (Jacobs 2013, 364-365). Talk of cubes is justified, but we experience the cubic form as a "horizon" (Geniusas 2012), in the same way that the line separating ground and sky exists but recedes whenever it is approached.

We can contemplate ideals and idealizations, but we must also gauge the ineliminable distance that separates those projections from our present situation. Over time, gauging that distance instils a sense of epistemic humility. The world is intelligible, but it always hides surprises, so total confidence in one's judgements is rarely, if ever, warranted. Of course, this partial grasp and concomitant humility apply not just to dice, but to social situations as well. No conversation or Google search will ever let one have another person all figured out. The phenomenological call to "pay attention" is thus also a call to *listen* (Champagne 2020, 69). We saw earlier how we normally identify what a thing is—"Oh, I know this (type)"—without attending to *how* a (token) thing actually is. This tendency, which is fine when handling things, becomes ethically deplorable when dealing with people. It can be counteracted by interacting with individuals *as* individuals.

It all starts with a commitment to turn off one's Smartphone. Participants in a five-day summer camp that bans all electronic devices reported that "they were more interested in their summer friends than in their friends at school. They thought the difference was that at home they talk with their friends about what's on their phones; at camp, they talk to each other about what's on their minds" (Turkle 2015, 317–318). Experiencing the here and now in its plenitude doesn't come easily (for an educated adult, at least). Still, if we are too absorbed in our tasks, we will turn the people around us into invisible gorillas.

Naturally, maximal openness to one's environment is an achievement that can be sustained for only so long. Sooner or later, one must interpret one's experiences and thereby foreground some aspects while neglecting others. Like the practical demands of daily life, the flow of sign-action rarely, if ever, halts. Semiotics and pragmatism provide us with powerful tools to understand why that is (Champagne 2018, 46–47); while phenomenology curbs this inborn tendency to march forward, as efficiently as possible, just because.

It could be argued that such a Luddite and "quietist interpretation runs counter to Husserl's philosophical ambitions" (Zahavi 2017, 64). Celebrating phenomenology's ability to provide a *Wissenschaftslehre* that serves as a foundation for the sciences (Husserl [1900] 2001, 16), Michael Barber worries that "the final unintentional result" of an approach like mine "may be to pitch philosophy against natural science as its 'enemy'" (Barber 2010, 449). I don't see how that follows. I also don't see why anyone should accept without argumentation that science/technoscience isn't the enemy. In some instances, it very well could be (Bostrom 2019)—and scientists can sometimes be the first to admit this (Edgerton 2011). It would therefore be misplaced to regard optimism on this issue as an axiom.

Husserl and Peirce each built into their system regions where systematizing is prohibited. Far from being romantic lapses of otherwise rigorous thinkers, I regard these moments of pause as of the utmost importance. It may be that "[f]eelings, in the sense in which alone they can be admitted as a great branch of mental phenomena, form the warp and woof of cognition" (CP 1.381), but we do not have endless fabric to work with. As Peirce rightly noted, "[f]ate means merely that which is sure to come true, and can nohow be avoided. It is a superstition [...] to suppose that the word fate can never be freed from its superstitious taint. We are all fated to die" (CP 5.407). Common expressions like "Publish or perish" make it seem as if, with enough productivity, we can work our way out of mortality. We cannot. Humans may earn

their cognitive living by anticipating (Clark 2013) and anticipate best when they gloss over the actual world. Unchecked, though, this lifestyle risks leaving individuals with a livelihood but a life not worth living.

We already know that the distractions of technology can have life or death consequences. Not only is texting while driving disastrous (Yannis et al. 2016), even certified commercial pilots absorbed in reading their gauges fail to notice a "startlingly large" airplane obstructing their runway (Haines 1991, 173). Like the gorilla video, "when he was shown the videotape of this run, Pilot D said, 'If I didn't see it (the tape), I wouldn't believe it. I honestly didn't see anything on that runway" (ibid., 174). The existential dangers that concern me are arguably just as hard to detect and just as tragic. Indeed, a parent browsing archived pictures might exclaim that, despite being present physically, they missed large swaths of their child's childhood. Absorption in technological use can thus make us miss, not just startlingly large objects, but startlingly large events. While this is inevitable to a certain degree, it would be nice to take in one's environment with as little loss as possible.

How, concretely, can one reconcile the practical demands of daily life with a life of contemplation? The combination can seem hard to achieve. Indeed,

Whoever is familiar with the history of philosophy will tend, even on the basis of his prejudices, to separate phenomenological and pragmatic thought and place them at opposite poles. These poles could be designated approximately as follows: on the one hand there is an appeal to intuitive evidence [...] and the radical absence of presuppositions; on the other hand there is an appeal to the ability to make or do something, an operational theory of meaning. [...] How is a mediation between Pragmatism and Phenomenology possible under these conditions? (Apel 1981, 110–111)

This is a genuine tension. One must invest oneself in one's projects in order to make/find meaning (Beauvoir 2004, 89–149; Champagne and Gladstein 2015). But, if one *only* invests oneself in those projects, meaninglessness ensues. Ostensibly, one can train oneself to accept either consequence. Even so, the mindless pragmatism of go-getters and sappy mindfulness of mystics both remain dead ends.

Faced with this conundrum, my solution—unsophisticated as it is—is to diversify my philosophical portfolio by making time for both. The deepest solace lies in a situated understanding that cannot be commodified or verbally expressed (Champagne 2019a). Indeed, some experiences are so delicate that they are spoiled by anything more involved than a gentle smile or silent nod of assent. It may not be clear what I gain from putting aside my natural attitude—and Smartphone—to pay greater attention as my children play. Still, I submit that whatever existential salvation one can muster in the face of an indifferent universe resides in such episodes.

2.13 Conclusion

As I suspend platitudes and take stock of who I am in an honest way, I find myself to be a creature who can tell *now* what I will regret *later*. I also gather that life does not afford me the luxury of a rewind button. Flourishing is not immediate pleasure, so only the "final interpretant" (CP 8.184) on my deathbed will settle whether it was wise to devote time for moments of heightened attention devoid of any practical relevance (for science or anything else).

While this postponed verdict makes it seem like the choice to put aside one's Smartphone currently rests on nothing more than voluntarism (which is fine), I think some phenomenological evidence in its favour can be adduced. If, as some have suggested, "signs work as an influence of the future upon the present" (Deely 2009a, 207), then perhaps an unprejudiced inventory of what(ever) appears includes a faint voice from my future self enjoining me to sweep aside technological distractions so as to observe what really matters in slow-motion.

Verbal argument alone will never "prove" that experience indeed includes such a faint voice and moments meriting silent contemplation. Mine certainly does. So, all the phenomenologist can do is "tell the reader which way to look and to see what he shall see" (CP 2.197).

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References

- Aagaard, J., J.K.B. Friis, J. Sorenson, O. Tafdrup, and C. Hasse, eds. 2018. Postphenomenological methodologies: New ways in mediating techno-human relationships. Lanham: Lexington.
- Alter, A. 2017. *Irresistible: The rise of addictive technology and the business of keeping us hooked*. New York: Penguin.
- Alvis, J.W. 2019. God's playthings: Eugen Fink's phenomenology of religion in play as symbol of the world. *Research in Phenomenology* 49 (1): 88–117.
- Apel, K.-O. 1981. Charles S. Peirce: From pragmatism to pragmaticism, trans. J.M. Krois. Amherst: University of Massachusetts Press.
- Aron, R. 1962. The opium of the intellectuals, trans. T. Kilmartin. New York: W. W. Norton.
- Atkins, R.K. 2018. Charles S. Peirce's phenomenology: Analysis and consciousness. Oxford: Oxford University Press.
- Barber, M.D. 2010. Phenomenological Wissenschaftslehre and John McDowell's quietism. In Advancing phenomenology: Essays in honor of Lester Embree, ed. T. Nenon and P. Blosser, 433–454. Dordrecht: Springer.
- Bellucci, F. 2017. Peirce's speculative grammar: Logic as semiotics. New York: Routledge.
- Berghofer, P. 2018. Why Husserl is a moderate foundationalist. Husserl Studies 34 (1): 1–23.
- Bernstein, J.M. 2000. Re-enchanting nature. *Journal of the British Society for Phenomenology* 31 (3): 277–299.
- Bobrova, A., and A.-V. Pietarinen. 2019. Thoughts, things and logical guidance. In *Peirce and Husserl: Mutual insights on logic, mathematics and cognition*, ed. M. Shafiei and A.-V. Pietarinen, 43–58. Cham: Springer.
- Bostrom, N. 2019. The vulnerable world hypothesis. Global Policy 10 (4): 455-476.
- Brainard, M. 2002. Belief and its neutralization: Husserl's system of phenomenology in Ideas I. Albany: State University of New York Press.

- Braver, L. 2012. *Groundless grounds: A study of Wittgenstein and Heidegger*. Cambridge: MIT Press.
- Brentano, F. [1874] 2005. *Psychology from an empirical standpoint*, ed. Oskar Kraus, trans. A.C. Rancurello, D.B. Terrell, and L.L. McAlister. London: Routledge.
- Bunge, M. 2003. Philosophical dictionary. Amherst: Prometheus.
- Burch, R.W. 1991. A Peircean reduction thesis: The foundations of topological logic. Lubbock: Texas Tech University Press.
- Carman, T. 2007. Dennett on seeming. Phenomenology and the Cognitive Sciences 6 (1-2): 99-106.
- Champagne, M. 2011. Axiomatizing unwelt normativity. Sign Systems Studies 39 (1): 9-59.
- Champagne, M. 2014a. Just do it: Schopenhauer and Peirce on the immediacy of agency. *Symposium: Canadian Journal of Continental Philosophy* 18 (2): 209–232.
- Champagne, M. 2014b. Semiotics. In Oxford bibliographies in philosophy, ed. D. Pritchard. https:// doi.org/10.1093/OBO/9780195396577-0179
- Champagne, M. 2015a. A less simplistic metaphysics: Peirce's layered theory of meaning as a layered theory of being. *Sign Systems Studies* 43 (4): 523–552.
- Champagne, M. 2015b. Analytic philosophy, continental literature? Philosophy Now 109: 21-23.
- Champagne, M. 2015c. Don't be an ass: Rational choice and its limits. *Reason Papers* 37 (1): 137–147.
- Champagne, M. 2015d. Experience and life as ever-present constraints on knowledge. *Metaphilos-ophy* 46 (2): 235–245.
- Champagne, M. 2015e. Sound reasoning (literally): Prospects and challenges of current acoustic logics. *Logica Universalis* 9 (3): 331–343.
- Champagne, M. 2016a. Can pragmatists believe in qualia? The founder of pragmatism certainly did... Cybernetics and Human Knowing 23 (2): 39–49.
- Champagne, M. 2016b. Tracking inferences is not enough: The given as tie-breaker. *Logos and Episteme* 7 (2): 129–135.
- Champagne, M. 2018. Consciousness and the philosophy of signs. Cham: Springer.
- Champagne, M. 2019a. Consciousness and the philosophy of signs: A new précis. *The American Journal of Semiotics* 35 (3–4): 443–462.
- Champagne, M. 2019b. ______ is necessary for interpreting a proposition. *Chinese Semiotic Studies* 15 (1): 39–48.
- Champagne, M. 2020. Myth, meaning, and antifragile individualism. Exeter: Imprint Academic.
- Champagne, M. 2021a. The mandatory ontology of robot responsibility. *Cambridge Quarterly of Healthcare Ethics* 30 (3): 448–454.
- Champagne, M. 2021b. Other stars, other planets, and other life: A primer that goes two-thirds of the way. *Metascience* 30 (1): 153–156.
- Champagne, M., and M.R. Gladstein. 2015. Beauvoir and rand: Asphyxiating people, having sex, and pursuing a career. *The Journal of Ayn Rand Studies* 15 (1): 23–41.
- Clark, A. 2013. Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral and Brain Sciences* 36 (3): 181–204.
- Cocking, D., and S. Matthews. 2000. Unreal friends. *Ethics and Information Technology* 2 (4): 223–231.
- Colapietro, V.M. 2003. The space of signs: C. S. Peirce's critique of psychologism. In *Philosophy*, psychology, and psychologism: Critical and historical readings on the psychological turn in philosophy, ed. D. Jacquette, 157–179. New York: Kluwer Academic.
- Corrington, R.S. 1987. Introduction and reflection. In *Pragmatism considers phenomenology*, ed. R.S. Corrington, C. Hausman, and T.M. Seebohm, 1–35. Washington: University Press of America.
- Crowell, S. 2016. Husserl's existentialism: Ideality, traditions, and the historical apriori. *Continental Philosophy Review* 49 (1): 67–83.
- de Beauvoir, S. [1948] 1976. The ethics of ambiguity, trans. B. Frechtman. New York: Citadel.
- de Beauvoir, S. 2004. *Philosophical writings*, ed. M.A. Simons, M. Timmermann, and M.B. Mader. Urbana: University of Illinois Press.

- Deely, J.N. 2007. Intentionality and semiotics: A story of mutual fecundation. Scranton: University of Scranton Press.
- Deely, J.N. 2009a. The full vista of the action of signs—From semiosis to semioethics. *Chinese Semiotic Studies* 1 (1): 171–222.
- Deely, J.N. 2009b. Purely objective reality. Berlin: Mouton de Gruyter.
- Deibert, R.J. 2020. Reset: Reclaiming the internet for civil society. Toronto: House of Anansi Press.
- De Tienne, A. 1993. Peirce's definitions of the phaneron. In *Charles S. Peirce and the philosophy* of science, ed. E.C. Moore, 279–288. Tuscaloosa: University of Alabama Press.
- De Tienne, A. 2000. Quand l'apparence (se) fait signe: La genèse de la représentation chez Peirce. *Semiotic Inquiry* 20 (1–3): 95–144.
- Dreyfus, H.L. 2007. Detachment, involvement, and rationality: Are we essentially rational animals? *Human Affairs* 17 (2): 101–109.
- Dreyfus, H.L. 2009. On the internet. London: Routledge.
- Dreyfus, H.L., and H. Hall, eds. 1982. Husserl, intentionality, and cognitive science. Cambridge: MIT Press.
- Edgerton, D. 2011. In praise of Luddism. Nature 471 (7336): 27-29.
- Elhai, J.D., J.C. Levine, R.D. Dvorak, and B.J. Hall. 2016. Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use. *Computers in Human Behavior* 63: 509–516.
- Everett, D.L. 2009. Don't sleep, there are snakes: Life and language in the Amazonian jungle. New York: Vintage Departures.
- Everett, D.L. 2016. *Dark matter of the mind: The culturally articulated unconscious*. Chicago: University of Chicago Press.
- Føllesdal, D. 1958. Husserl und Frege, ein Beitrag zur Beleuchtung der Entstehung der phänomenologischen Philosophie. Oslo: Aschehoug.
- Frege, G. [1894] 1972. Review of Dr. E. Husserl's *Philosophy of arithmetic*, trans. E.W. Kluge. *Mind (New Series)* 81 (323): 321–337.
- Fuhrman, G. 2013. Peirce's retrospectives on his phenomenological quest. Transactions of the Charles S. Peirce Society 49 (4): 490–508.
- Gallagher, S. 2012. Phenomenology. New York: Palgrave Macmillan.
- Gava, G. 2015. Pragmatism, Kant, and transcendental philosophy. London: Routledge.
- Geniusas, S. 2012. The origins of the horizon in Husserl's phenomenology. Dordrecht: Springer.
- Gross, N. 2008. Richard Rorty: The making of an American philosopher. Chicago: University of Chicago Press.
- Haack, S. 1979. Fallibilism and necessity. Synthese 41 (1): 37-63.

Haack, S. 1993. Evidence and inquiry: Towards reconstruction in epistemology. Oxford: Blackwell.

- Haaparanta, L. 1994. Charles Peirce and the drawings of the mind. *Histoire Épistémologie Langage* 16 (1): 35–52.
- Haines, R.F. 1991. A breakdown in simultaneous information processing. In *Presbyopia research: From molecular biology to visual adaptation*, ed. G. Obrecht and L.W. Stark, 171–175. New York: Plenum.
- Hartimo, M. 2019. Husserl and Peirce and the goals of mathematics. In *Peirce and Husserl: Mutual insights on logic, mathematics and cognition*, ed. M. Shafiei and A.-V. Pietarinen, 125–137. Cham: Springer.
- Heidegger, M. [1959] 1966. *Discourse on thinking*, trans. J.M. Anderson, and E.H. Freund. New York: Harper & Row.

Hookway, C. 1992. Peirce. London: Routledge.

- Howells, A., I. Ivtzan, and F.J. Eiroa-Orosa. 2016. Putting the 'app' in happiness: A randomised controlled trial of a smartphone-based mindfulness intervention to enhance wellbeing. *Journal* of Happiness Studies 17 (1): 163–185.
- Husserl, E. [1900] 2001. Logical investigations, vol. 1, trans. J.N. Findlay, ed. D. Moran. London: Routledge.

- Husserl, E. [1901] 2001. *Logical investigations*, vol. 2, trans. J.N. Findlay, ed. D. Moran. London: Routledge.
- Husserl, E. [1913] 1982. *Ideas pertaining to a pure phenomenology and to a phenomenological philosophy, first book: General introduction to a pure phenomenology, trans. F. Kersten. The Hague: Martinus Nijhoff.*
- Husserl, E. [1920–5] 2019. *First philosophy*, trans. S. Luft, and T.M. Naberhaus. Dordrecht: Springer.
- Husserl, E. [1931] 1960. *Cartesian meditations: An introduction to phenomenology*, trans. D. Cairns. The Hague: Martinus Nijhoff.
- Husserl, E. [1936] 1970. The crisis of European sciences and transcendental phenomenology, trans. D. Carr. Evanston: Northwestern University Press.
- Ihde, D. 1995. *Postphenomenology: Essays in the postmodern context*. Evanston: Northwestern University Press.
- Ihde, D. 2016. Husserl's missing technologies. New York: Fordham University Press.
- d'Ippolito, B.M. 2002. The concept of *Lebenswelt* from Husserl's *Philosophy of arithmetic* to his *Crisis*. In *Phenomenology world-wide: Foundations, expanding dynamics, life engagements*, ed. A.-T. Tymieniecka, 158–171. Dordrecht: Springer.
- Jackson, F. 1986. What Mary didn't know. Journal of Philosophy 83 (5): 291-295.
- Jacobs, H. 2013. Phenomenology as a way of life? Husserl on phenomenological reflection and self-transformation. *Continental Philosophy Review* 46 (3): 349–369.
- James, W. [1909] 1975. *The meaning of truth: A sequel to 'Pragmatism'*. Cambridge: Harvard University Press.
- Jones, S.E. 2006. Against technology: From the Luddites to neo-Luddism. New York: Routledge.
- Kahneman, D. 2013. Thinking, fast and slow. New York: Farrar, Straus, & Giroux.
- Kemple, B. 2019. *The intersection of semiotics and phenomenology: Peirce and Heidegger in dialogue*. Boston: Walter de Gruyter.
- Kesebir, P., and T. Pyszczynski. 2014. Meaning as a buffer for existential anxiety. In *Meaning in positive and existential psychology*, ed. A. Batthyany and P. Russo-Netzer, 53–64. New York: Springer.
- Lanfredini, R. 2017. Anti-psychologism and neutrality: The radical empiricism of Husserl and James. *European Journal of Pragmatism and American Philosophy* 9 (1): 1–13.
- Legg, C. 2003. This is simply what I do. Philosophy and Phenomenological Research 66 (1): 58-80.
- Legg, C., and J. Franklin. 2017. Perceiving necessity. *Pacific Philosophical Quarterly* 98 (3): 320– 343.
- Lin, L.Y., J.E. Sidani, A. Shensa, A. Radovic, E. Miller, J.B. Colditz, B.L. Hoffman, L.M. Giles, and B.A. Primack. 2016. Association between social media use and depression among U.S. young adults. *Depression and Anxiety* 33 (4): 323–331.
- Livingston, P. 2002. Husserl and Schlick on the logical form of experience. *Synthese* 132 (3): 239–272.
- Luft, S. 2002. Husserl's notion of the natural attitude and the shift to transcendental phenomenology. In *Phenomenology world-wide: Foundations, expanding dynamics, life engagements*, ed. A.-T. Tymieniecka, 114–119. Dordrecht: Springer.
- MacDonald, P.S. 2001. Husserl's preemptive responses to existentialist critiques. *Indo-Pacific Journal of Phenomenology* 1 (1): 1–13.
- Mack, A. 2003. Inattentional blindness: Looking without seeing. Current Directions in Psychological Science 12 (5): 180–184.
- McCarthy, J.C. 1994. Some preliminary remarks on "cognitive interest" in Husserlian phenomenology. *Husserl Studies* 11 (3): 135–152.
- Merleau-Ponty, M. [1945] 1974. Phenomenology of perception, trans. C. Smith, and F. Williams. London: Routledge & Kegan Paul.
- Michels, R. 2020. Husserlian eidetic variation and objectual understanding as a basis for an epistemology of essence. *Logos and Episteme* 3 (11): 333–353.

- Misak, C.J. 2004. *Truth and the end of inquiry: A Peircean account of truth.* Oxford: Clarendon Press.
- Mohanty, J.N. 1974. Husserl and Frege: A new look at their relationship. *Research in Phenomenology* 4 (1): 51–62.
- Mohanty, J.N. 2003. The concept of "psychologism" in Frege and Husserl. In *Philosophy*, *psychology, and psychologism: Critical and historical readings on the psychological turn in philosophy*, ed. D. Jacquette, 113–130. New York: Kluwer Academic.
- Mora, J.F. 1955. Peirce's conception of architectonic and related views. *Philosophy and Phenomenological Research* 15 (3): 351–359.
- Moran, D. 2001. Introduction. In *Logical investigations*, ed. E. Husserl, xxi-Lxxii. London: Routledge.
- Moran, D. 2002. Editor's introduction. In *The phenomenology reader*, ed. D. Moran and T. Moody, 1–26. London: Routledge.
- Moran, D., and T. Mooney, eds. 2002. The phenomenology reader. London: Routledge.
- Mullin, A.A. 1966. C. S. S. Peirce and E. G. A. Husserl on the nature of logic. Notre Dame Journal of Formal Logic 7 (4): 301–304.
- Murphy, G. 2010. What are categories and concepts? In *The making of human concepts*, ed. D. Mareschal, P.C. Quinn, and S.E.G. Lea, 11–18. Oxford: Oxford University Press.
- Nagel, T. 1986. The view from nowhere. New York: Oxford University Press.
- Nazri, S.M., and Z.A. Latiff. 2019. Exploring desires and maneuvering on Instagram life: A phenomenology study. In Proceeding of the 5th conference on communication, culture and media studies, 301–305.
- Nowak, A. 2003. Peirce's phaneroscopy and Husserl's phenomenology. *Reports on Philosophy* 21: 141–150.
- Overgaard, S. 2008. How to analyze immediate experience: Hintikka, Husserl, and the idea of phenomenology. *Metaphilosophy* 39 (3): 282–304.
- Paavola, S. 2011. Diagrams, iconicity, and abductive discovery. Semiotica 186: 297–314.
- Peirce, C.S. 1931–1958. Collected papers of Charles Sanders Peirce, 8 vols., ed. C. Hartshorne, P. Weiss, and A.W. Burks. Cambridge: Harvard University Press (cited as CP by volume and paragraph number).
- Peirce, C.S. 1976. The new elements of mathematics, 4 vols., ed. C. Eisele. The Hague: Mouton.
- Peirce, C.S. 1982. *Writings of Charles S. Peirce: A chronological edition*, vol. 1, ed. E.C. Moore et al. Bloomington: Indiana University Press.
- Peirce, C.S. 1992. *Reasoning and the logic of things*, ed. K.L. Ketner. Cambridge: Harvard University Press.
- Peirce, C.S. 2010. *Philosophy of mathematics: Selected writings*, ed. M.E. Moore. Bloomington: Indiana University Press.
- Peirce, C.S. 2020–24. *Logic of the future: Writings on existential graphs*, 3 vols., ed. A.-V. Pietarinen. Berlin: Walter de Gruyter.
- Peterson, S.R. 1955. Benjamin Peirce: Mathematician and philosopher. *Journal of the History of Ideas* 16 (1): 89–112.
- Pietarinen, A.-V. 2010. Is non-visual diagrammatic logic possible? In *Studies in diagrammatology* and diagram praxis, ed. O. Pombo and A. Gerner, 73–81. London: College Publications.
- Pietarinen, A.-V., and J. Issajeva. 2019. Phaneroscopy and theory of signs as theory of cognition. In *Peirce and Husserl: Mutual insights on logic, mathematics and cognition*, ed. M. Shafiei and A.-V. Pietarinen, 199–219. Cham: Springer.
- Pietarinen, A.-V., M. Shafiei, and F. Stjernfelt. 2019. Mutual insights on Peirce and Husserl. In *Peirce and Husserl: Mutual insights on logic, mathematics and cognition*, ed. M. Shafiei and A.-V. Pietarinen, 3–15. Cham: Springer.
- Pietersma, H. 1985. Assertion and predication in Husserl. Husserl Studies 2 (1): 75-95.
- Ransdell, J. 1989. Peirce est-il un phénoménologue? Études Phénoménologiques 5 (9-10): 51-75.

- Richardson, I. 2012. Touching the screen: A phenomenology of mobile gaming and the iPhone. In Studying mobile media: Cultural technologies, mobile communication, and the iPhone, ed. L. Hjorth, J. Burgess, and I. Richardson, 133–151. New York: Routledge.
- Richardson, I., and R. Wilken. 2009. Haptic vision, footwork, place-making: A peripatetic phenomenology of the mobile phone pedestrian. *Second Nature: International Journal of Creative Media* 1 (2): 22–41.
- Ricoeur, P. 1987. À l'école de la phénoménologie. Paris: Vrin.
- Rollinger, R.D. 1999. Husserl's position in the school of Brentano. Dordrecht: Kluwer Academic.
- Rorty, R. 1992. The pragmatist's progress. In *Interpretation and overinterpretation*, ed. S. Collini, 89–108. Cambridge, UK: Cambridge University Press.
- Rosenberger, R., and P.-P. Verbeek, eds. 2015. *Postphenomenological investigations: Essays on human-technology relations*. Lanham: Lexington.
- Rosensohn, W.L. 1974. The phenomenology of Charles S. Peirce: From the doctrine of categories to phaneroscopy. Amsterdam: B. R. Grüner.
- Rosenthal, S.B., and P.L. Bourgeois. 1980. Pragmatism and phenomenology: A philosophic encounter. Amsterdam: B. R. Grüner.
- Rowlands, M. 2003. Externalism: Putting mind and world back together again. Montreal & Kingston: McGill-Queen's University Press.
- Sartre, J.-P. [1943] 1978. Being and nothingness, trans. H.E. Barnes. New York: Simon & Schuster.
- Schutz, A. 1962. Collected papers 1: The problem of social reality, ed. M. Nathanson. The Hague: Martinus Nijhoff.
- Short, T.L. 2000. Was Peirce a weak foundationalist? *Transactions of the Charles S. Peirce Society* 36 (4): 503–528.
- Short, T.L. 2007. Peirce's theory of signs. Cambridge: Cambridge University Press.
- Simons, D.J. 2010. Monkeying around with the gorillas in our midst: Familiarity with an inattentional-blindness task does not improve the detection of unexpected events. *i-Perception* 1 (1): 3–6.
- Simons, D.J., and C.F. Chabris. 1999. Gorillas in our midst: Sustained inattentional blindness for dynamic events. *Perception* 28 (9): 1059–1074.
- Sokolowski, R. 2000. Introduction to phenomenology. Cambridge: Cambridge University Press.
- Sonesson, G. 2016. Thirdness as the observer observed: From habit to law by way of *habitus*. In *Consensus on Peirce's concept of habit: Before and beyond consciousness*, ed. D.E. West and M. Anderson, 283–295. Cham: Springer.
- Sonesson, G. 2017. Mastering phenomenological semiotics with Husserl and Peirce. In Semiotics and its masters, vol. 1, ed. K. Bankov and P. Cobley, 83–101. Boston: Walter de Gruyter.
- Sonesson, G. 2019. Elements of Peircean phenomenology: From categories to signs by way of grounds. *Semiotica* 228: 259–285.
- Sowa, J.F. 2015. Signs and reality. Applied Ontology 10 (3-4): 273-284.
- Spiegelberg, H. 1975. Doing phenomenology: Essays on and in phenomenology. The Hague: Martinus Nijhoff.
- Spiegelberg, H. 1981. The context of the phenomenological movement. Dordrecht: Springer.

Stern, R. 2009. Hegelian metaphysics. Oxford: Oxford University Press.

- Stjernfelt, F. 2007. Diagrammatology: An investigation on the borderlines of phenomenology, ontology, and semiotics. Dordrecht: Springer.
- Stjernfelt, F. 2013. The generality of signs: The actual relevance of anti-psychologism. *Semiotica* 194: 77–109.
- Stjernfelt, F. 2014. Natural propositions: The actuality of Peirce's doctrine of dicisigns. Boston: Docent Press.
- Stjernfelt, F. 2015. Phenomenology and logic in Peirce. Journal Phänomenologie 44: 21-38.
- Stjernfelt, F. 2019. Co-localization as the syntax of multimodal propositions: An amazing Peircean idea and some implications for the semiotics of truth. In *The Bloomsbury companion to contemporary Peircean semiotics*, ed. T. Jappy, 419–458, 482–485. London: Bloomsbury Academic.

Ströker, E. 1997. The Husserlian foundations of science. Dordrecht: Springer.

- Tanaka, J.W., and M. Taylor. 1991. Object categories and expertise: Is the basic level in the eye of the beholder? *Cognitive Psychology* 23 (3): 457–482.
- Tarasti, E. 2000. Existential semiotics. Bloomington: Indiana University Press.
- Taylor, C. 2007. A secular age. Cambridge: Harvard University Press.
- Tiercelin, C. 2017. Was Peirce a genuine anti-psychologist in logic? *European Journal of Pragmatism and American Philosophy* 9 (1): 1–21.
- Tieszen, R. 2010. Mathematical realism and transcendental phenomenological idealism. In *Phenomenology and mathematics*, ed. M. Hartimo, 1–22. Dordrecht: Springer.
- Turkle, S. 2011. *Alone together: Why we expect more from technology and less from each other.* New York: Basic Books.
- Turkle, S. 2015. Reclaiming conversation: The power of talk in a digital age. New York: Penguin.
- Twenge, J.M., T.E. Joiner, M.L. Rogers, and G.N. Martin 2018. Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science* 6 (1): 3–17.
- Vrahimis, A. 2013. Encounters between analytic and continental philosophy. London: Palgrave Macmillan.
- Wellner, G.P. 2016. A postphenomenological inquiry of cell phones: Genealogies, meanings, and becoming. Lanham: Lexington.
- Wells, C. 1981. *Peirce on logic: Phenomenology as the basis for normative science*. Dissertation, University of California, Berkeley.
- West, D.E., and M. Anderson, eds. 2016. Consensus on Peirce's concept of habit: Before and beyond consciousness. Cham: Springer.
- Wilson, A. 2012. The perception of generals. *Transactions of the Charles S. Peirce Society* 48 (2), 169–190.
- Winner, L. 2014. Technologies as forms of life. In *Ethics and emerging technologies*, ed. R.L. Sandler, 48–60. New York: Palgrave Macmillan.
- Yannis, G., A. Laiou, P. Papantoniou, and C. Gkartzonikas. 2016. Simulation of texting impact on young drivers' behavior and safety on motorways. *Transportation Research Part F: Traffic Psychology and Behaviour* 41: 10–18.
- Zahavi, D. 2017. *Husserl's legacy: Phenomenology, metaphysics, and transcendental philosophy.* Oxford: Oxford University Press.