

THE SEMIOTIC MIND:
A FUNDAMENTAL THEORY OF CONSCIOUSNESS

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ABSTRACT

One of the leading concerns animating current philosophy of mind is that, no matter how good a scientific account is, it will leave out “what it’s like” to be conscious. The challenge has thus been to study or at least explain away that qualitative dimension. Pursuant with that aim, I investigate how philosophy of signs in the Peircean tradition can positively reshape ongoing debates. Specifically, I think the account of iconic or similarity-based reference we find in semiotic theory offers a more promising variant of the “phenomenal concept strategy.” Philosophers who endorse this strategy think that the difficulties we have fitting conscious “qualia” into a scientific picture may owe to the peculiar nature of indexical concepts. They point to the fact that, when we try to convey the feel of our experiences, we employ context-dependent gestures and/or utterances that are “indexed” to perspectives unique to each person. However, according to the theory I defend, there are three ways signs can refer, namely by convention, causal contact, and similarity. Since similarity is not reducible to proximity, I argue that a theory of reference that turns on shared quality can bypass some of the implausible consequences that plague indexical accounts. In the first chapter, I describe the apparatus needed to make sense of this claim. In the second chapter, I present my account of iconic reference. In the third chapter, I justify my reliance on a distinction that is less than real yet more than nominal. In the fourth chapter, I sketch a “trinitarian” metaphysics well-suited to house the foregoing account of qualia.

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TABLE OF CONTENTS

Abstractii
Acknowledgements	iii
List of Figures	vi
Foreword	vii
Introduction	1
Chapter I	
Explaining the Qualitative Dimension of Consciousness: Precision Instead of Reification	17
I.I Chapter Introduction	17
I.II What It’s Like	19
I.III Recovering a Discarded Patrimony	25
I.IV Tone-Deaf No More	42
I.V A Fork in the Road	61
I.VI Carving Consciousness at the Joints Too Deeply	67
I.VII What It Could Be Like	82
I.VIII Tentative Excursus in Ontology	93
I.IX Chapter Conclusion	99
Chapter II	
Referring to the Qualitative Dimension of Consciousness: Iconicity Instead of Indexicality	102
II.I Chapter Introduction	102
II.II The Indexical Phenomenal Concept Strategy	105
II.III Removing Relations	118
II.IV Referring to Something by “Being Like” that Thing	138
II.V Searching for the Icon.	147
II.VI “Being Like” a Quality by “Being” that Quality	161
II.VII Transparency and Opacity	165
II.VIII Chapter Conclusion	177

Chapter III	
Does the Mind Have an “Undo Button”?	
Precission Demystified	180
III.I Chapter Introduction	180
III.II Ned Block and the Sperling Results	183
III.III Experiencing Icons	193
III.IV The Fidelity of First-Person Reports	200
III.V A Slow-Motion Sperling Test	205
III.VI Chapter Conclusion	216
Chapter IV	
Locating the Qualitative Dimension of Consciousness:	
Trinitarianism Instead of Panpsychism	218
IV.I Chapter Introduction	218
IV.II Qualities as Primitive Instead of Emergent	222
IV.III Peirce’s Three Categories versus Popper’s Three Worlds	240
IV.IV A Less Simplistic Semantics	244
IV.V Classifying the Classification	260
IV.VI A World of Complex Patterns	268
IV.VII Complexity Subsumes Simplicity	280
IV.VIII Trinitarianism Does Not Face a Combination Problem	293
IV.IX Chapter Conclusion	295
Conclusion	298
Bibliography	304

LIST OF FIGURES

Figure 1: Trichotomy of sign-vehicles	54
Figure 2: Explored and unexplored dialectic options	65
Figure 3: The alleged incommunicability of qualitative experience	107
Figure 4: Depiction of the three semiotic categories	123
Figure 5: Three sign-vehicles constraining three relations to objects	143
Figure 6: Zippy the metareflective Pinhead	181
Figure 7: Example of actual stimulus materials used by Sperling . . .	185
Figure 8: Imprinting of a map-like shape on a macaque brain	195
Figure 9: The three Peircean trichotomies	248
Figure 10: The tone / icon / rheme	253
Figure 11: The token / index / dicisign	254
Figure 12: The type / symbol / argument	255
Figure 13: Real patterns in the Game of Life	269

FOREWORD

The title of my dissertation is a nod to David Chalmers' *The Conscious Mind: In Search of a Fundamental Theory* (1996). I want to say that semiotics is exactly the sort of theory Chalmers has been searching for. As such, my dissertation could also have been titled "Semiotics and the Philosophy of Mind," as a nod to Umberto Eco's *Semiotics and the Philosophy of Language*. In that widely-read work, Eco motivated an inquiry that, in contrast with the mainstream philosophy of language of the time, places a distinct value and importance on *synthesis*. Specifically, Eco (1986b, p. 8) aimed to show that conventional meaning (e.g., words), inference from evidence (e.g., symptoms), and pictorial representation (e.g., maps) all "concern a unique theoretical object," namely the "sign" writ large. This perspective involves the idea—originating in the Medieval period (Eco and Marmo 1989) and later articulated by Charles Sanders Peirce (1992; 1998)—that all varieties of sign-action exhibit a common (triadic) structure which can and ought to be studied in its own right. This is the approach I take in this dissertation.

What has been said of cognitive science can also be said of semiotics, namely that it has "a very long past but a relatively short history" (Gardner 1985, p. 9). John Locke introduced the word semiotics in the penultimate paragraph of his *Essay Concerning Human Understanding*, where he surmised that semiotic inquiry "might present us with a sort of logic and criticism

different from what we have encountered up to now” ([1690] 2007, book 4, chap. 21, para. 4; see Deely 2003b). Indeed, as Paul Bouissac writes in his introduction to Oxford’s *Encyclopedia of Semiotics*:

Semiotics represents one of the main attempts—perhaps the most enduring one—at conceiving a transdisciplinary framework through which interfaces can be constructed between distinct domains of inquiry. Other endeavors, such as the unified science movement of the 1930s or cybernetics and general systems theory in the 1950s and 1960s, met with only limited success. By contrast, semiotics remains a credible blueprint for bridging the gaps between disciplines and across cultures. (1998, p. ix)

In the estimate of many, Eco included, no one has done more to evince that blueprint than Peirce. Hence, like many semioticians, I hold that, at present, “[t]here is no such thing as non-Peircean (or non-Sebeokian) semiotics, just as there are no non-Einsteinian physics or non-Darwinian biology” (Kilpinen 2008, p. 217). Semiotics, however, is bigger than Peirce, and Peirce—with his lifelong emphasis on the communal nature of inquiry—would not have had it any other way. Peirce saw himself merely as “a pioneer, or rather a backwoodsman, in the work of clearing and opening up what I call semiotic, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis”—a field he considered “too vast, the labor too great, for a first-comer” (Peirce 1931–58, vol. 5, para. 488). As such, he would undoubtedly be delighted to witness the disciplinary vitality currently on display in the semiotic literature.

There is a belief—expressed by the Russian cultural theorist Juri Lotman and subsequently defended by Thomas Sebeok (Deely 2009c, p. 484)—that “semiotics is a field that one should not begin with” (Kull, Salupere, and Torop 2009, p. xi). Thus, for better or worse, academic degrees in semiotics are awarded mainly at the graduate level. The Ph.D. program at UQAM, from which I graduated in 2008, was established in 1979. Charles W. Morris was in all likelihood the first to explicitly teach a university course in semiotics in Chicago in the 1930s (Sebeok 1991a, pp. 75, 123). The inquiry gained further institutional form at a 1964 conference in Bloomington, Indiana, where scholars from varied fields rallied under a common semiotic banner (Rey 1984, p. 92). The *International Association for Semiotic Studies* (IASS) held its first world congress in 1974, publishing its proceedings ever since. Although one has to select them wisely, reliable encyclopedias (Cobley 2010; Sebeok and Danesi 2010) and textbooks (Deely 1990; Savan 1987) in semiotics are now available, and the inquiry attracts a growing number of scholars who publish in established peer-reviewed journals like *Semiotica*, *Sign Systems Studies*, *Semiotic Inquiry*, and *The American Journal of Semiotics*.

So, when Eco wrote *Semiotics and the Philosophy of Language*, he did not have to fabricate his theoretical resources whole cloth, but could instead help himself to a rich semiotic literature which, in spite of its international and multidisciplinary character, was increasingly consolidating its many streams into a common Peircean paradigm. If this was true for Eco’s work, it is all the

more so for mine, as in the intervening decades semiotic inquiry has kept progressing (the contribution of Thomas Sebeok to this growth cannot be overstated; see Copley et al. 2011). For a reliable cartography of the field, one can consult the annotated bibliography of 80 entries I have prepared for Oxford University Press' online *Bibliographies in Philosophy* series.

Another advantage that benefited Eco's book was that it took one of analytic philosophy's dearest topics—language—as its starting point. In arguing that language is sign-use and that sign-use has features besides those than can be found in a system of conventions, he was essentially saying something genial to those who had read the work of Austin or Wittgenstein. If we follow Richard Rorty (1980) and Robert Brandom (1994) and construe “pragmatism” narrowly, as an account of how linguistic communities “do” things with language, then absorbing the ideas of Peirce in the canon of philosophy of language seems a natural move. Unfortunately, such absorption would obscure more than it would reveal. Peirce did not belittle language, but he was emphatic that symbols are but one sort of sign among others. There may be legitimate methodological reasons to limit a given empirical or philosophical inquiry to language. But, as Thomas Sebeok (1991b) brought out with sustained ferocity, one has to neglect all those other signs which aren't symbols (and all those sign users which aren't human) in order to claim the prediction for language somehow marks a metaphysical boundary.

Somewhere along the way, a lot of twentieth century thinking fell prey to a pair of alarmingly fallacious inferences (see Austin 2001, pp. 30–31): words *need not* resemble their objects, therefore words *never* resemble their objects; and words (the *species*) never resemble their objects, therefore signs (the *genus*) never resemble their objects. Consider, for example, Ferdinand de Saussure’s claim that conventional imputations are the paradigmatic exemplars of semiosis: “Signs that are wholly arbitrary realize better than the others the ideal of the semiological processes [...]” [1916] 2011, p. 68). This is a dogma, pure and simple. Although a study of linguistic symbols can definitely yield insights (Holdcroft 1991), such conventional signs are a proper subset of a much broader class of signs, and failure to recognize this leads to a fallacy of composition, wrongly assuming that a property of one or more of the parts of a whole is also true of that whole (Deely, Williams, and Kruse 1986; Sebeok 1988; Deledalle 2000, pp. 100–113; Deely 2001a, pp. 669–688).

Because Saussure ([1916] 2011, p. 16) saw the study of signs as a part of social psychology, semiology had little or nothing to say about signs outside of culture. Louis Hjelmslev had published his formal development of Saussure in 1943 (Hjelmslev [1943] 1969). When Roland Barthes met with the linguist A. J. Greimas in Egypt in 1949, Greimas informed him of (or created?) trends to come by telling him how “one cannot not know Saussure” (see Dosse 1997a, p. 68). Barthes later drew on the ideas of Saussure and Hjelmslev in his short “Éléments de sémiologie” ([1964] 1977), which was widely used in literary

circles. However, it was Maurice Merleau-Ponty who, in a prominent 1951 lecture (reprinted in 1964, pp. 84–97), introduced Saussurean ideas into the philosophical mainstream. Paradoxically, Merleau-Ponty's pioneering work in embodied cognition ensured that arbitrariness and convention would never be the last word on meaning. Under the force of philosophical critiques, French semiologists like Greimas have reluctantly had to acknowledge the presence of non-symbolic meaning (see the anecdote in Broden 2009, pp. 577–578), but they have tended to relegate such events to phenomenologists (Ablali 2004).

In comparison with semiology, the semiotic tradition has travelled down a very different path. Instead of limiting signs to language and human customs, Thomas Sebeok (2001a, p. 10) held that “The criterial mark of all life is semiosis” and that “Semiosis presupposes life,” so he allowed animals, plants, and even single cells to use signs (see El-Hani, Queiroz, and Emmeche 2006). Looking at the literature, “[t]he lowering of the semiotic threshold in semiotics during the last decades [...] went parallel with the rediscovery of Peirce's broad concept of semiosis” (Nöth 2001, p. 15). Peirce (1998, p. 394) held that reality itself is, in some fundamental way, made of signs. I was present at the first ever session of the Semiotic Society of America (in October 2008) devoted to discussing the possible existence of semiosis in the inorganic realm. In much the same spirit as the yearly “Toward a Science of Consciousness” conferences (often held in Tuscon), semioticians are currently trying to craft a worldview in which the human use of signs does not seem out of place. For reasons I outline

in Champagne (2013b), I do not think the project has yet succeeded, but I can at least see why it is being pursued.

Many who admire the work of Peirce feel ambivalent about his metaphysical views (for a recent survey of the camps, see Johnston 2012, p. 1fn1). Philosophers like John Deely (1994b; 2001b) and Lucia Santaella (2009) are currently working to make the Peircean ontology tenable, but most follow Sebeok in holding that semiosis begins with life. Clearly, we have moved beyond Saussure's narrow fascination with conventional signs. A biological turn may be under way in philosophy of mind (e.g., Thompson 2007), but in semiotics the Sebeokian idea that life and semiosis are co-extensive has been discussed for four decades now (see Favareau 2010). In a way, semiotic inquiry has returned to its roots, since, as Sebeok was fond of pointing out, the first signs ever to receive theoretical attention were medical symptoms (see the remarks by Marcel Danesi in Sebeok 2001b, pp. xi–xvi).

A telling—if admittedly imperfect—parallel can help to give a preliminary sense of the proper scope of semiotic inquiry. In an attempt to iron out what he took to be an ambiguity in the common usage of the word “mean,” H. P. Grice (1957) called attention to the difference between sentences like “Those spots mean (meant) measles” and “Those three rings on the bell (of the bus) mean that the ‘bus is full’” (1957, p. 377). Clearly, we notice a dissimilarity between these two claims. Considering the first statement, one cannot say “Those spots

meant measles, but he hadn't got measles," whereas for the second statement, it would make more sense for one to say "But it isn't in fact full—the conductor has made a mistake" (Grice 1957, pp. 377–378). Both sentences are in the business of relating: the first binds spots and measles, the second ringing bells and filled buses. Yet, the latter relation is liable of being mistaken in a manner that the second is not, insofar as the effect that ringing bells have on people's conduct "must be something within the control of the audience, or at least the *sort* of thing which is within its control" (Grice 1957, p. 386). This led Grice to distinguish between what he called "natural meaning" and "nonnatural meaning."

Grice's work spawned a better understanding of the many nuances of language. His distinction also reflected lay usage. Indeed, Grice remarked, quite rightly, that "[t]his question about the distinction between natural and nonnatural meaning is, I think, what people are getting at when they display an interest in a distinction between 'natural' and 'conventional' signs" (1957, p. 379). Grice's work nevertheless left unanswered—or rather, unasked—a crucial question: why do we speak of "meaning" in both natural and nonnatural cases? The stock assumption seems to be that this plurality is an artifact of linguistic confusion, which a more rigorous analysis could in principle redress. That is certainly one hypothesis. Still, there is another way of viewing the situation: What if the kinship at hand is not a conflation but rather has a basis in fact?

Without diminishing the differentia that separates bells and measles, what if natural and nonnatural meanings are species of a common genus?

What we have in twentieth century philosophy of language are two sorts of significant relations, both placed under a single super-ordinate class of “meaning”—but the revolutionary implications of recognizing this kinship are not reaped but dismissed (see for example Harman 1977). Philosophy of signs, by contrast, strives to systematically unpack that crucial kinship and explore all it implies (Jakobson 1988, p. 436; Eco 1986b, pp. 7–13, 15–20; Sebeok 2000).

To what extent Grice’s ideas can fit into this unified inquiry is an open question (see Pietarinen 2006, p. 66). In any event, semiotic theory augments the Gricean division in two respects. It adds something “above” the Gricean division, since it regards natural meaning and nonnatural meaning as species of the genus “sign.” Second, it also adds something “below” the Gricean division, since it regards “natural meaning” as a genus with *two* sub-species, namely indices and icons. Indices are “natural” in virtue of a mind-independent link of causality, whereas icons are “natural” in virtue of a mind-independent link of similarity. Part of what I will do in this dissertation is unpack the ramifications of this finer-grained taxonomy.

Iconicity in particular remains poorly understood. In philosophy of mind and cognitive science, icons are often viewed with suspicion. It might be worth remembering, though, that even a critic like Zenon Pylyshyn was careful to

stress that “the existence of the experience of images cannot be questioned. Imagery is a pervasive form of experience and is clearly of utmost importance to humans. We cannot speak of consciousness without, at the same time, implicating the existence of images. Such experiences are not in question here” (1973, p. 2).

A colleague, Gabriel Greenberg, recently devoted his entire doctoral dissertation at Rutgers to proving that iconicity is a worthwhile topic of philosophic study, and that “the traditional, language-centric conception of semantics must be overhauled to allow for a more general semantic theory, one which countenances the wide variety of interpretive mechanisms actually at work in human communication” (2011, p. ii). I basically pick up where he left off. I nevertheless try to steer the dialectic in a slightly different direction. Greenberg (*ibid.*, p. 8) does some perfunctory name-dropping, but his arguments show little demonstrable mastery of the relevant semiotic literature. Due to my familiarity with work done outside the analytic tradition, I am far less certain that the “overhaul” he calls for will leave intact reigning assumptions about meaning and its place in the world.

The analytic tradition has, from logical positivism onward, privileged the study of “semantics” and “syntactics” over “pragmatics,” and in so doing ignored Charles Morris’ warning (in 1938) that “semiotic, in so far as it is more than these disciplines, is mainly concerned with their interrelations, and so with

the unitary character of semiosis which these disciplines individually ignore” (1971, p. 63). The foundational assumption of semiotics is that all signs involve a shared (triadic) structure which it behoves us to recognize and understand (Fisch 1983). Sebeok (1979, p. 64) called ecumenicalism the “distinctive burden” of semiotics. Elimination is the cardinal sin of such a research program. Indeed, “if semiotics is the science of signs, as the etymology of the word suggests, then *it does not exclude any sign*. If, in the variety of the systems of signs, one discovers systems that differ from others by their specific properties, one can place them in a special class without removing them from the general science of signs” (Jakobson and Pomorska 1983; quoted in Sebeok 1991a, p. 77, emphasis added). One is of course free to return to the study of language (or other codified sign system) after having adopted such a wide vantage, but one will then do so with a renewed understanding that renders less mysterious where the human mind and its products fit in the grander scheme of things. Here, my goal is to see where phenomenal consciousness fits.

Would a semiotic account of consciousness have to limit itself to observable symptoms, or could it give some insight into what is experienced from a first-person vantage? Most philosophers of mind hold that the qualitative contents of conscious episodes fall outside the ambit of testability and inter-subjective verification. Bertrand Russell, for example, held that, when different organisms react in the same way to the same inputs, “the only difference must lie in just that essence of individuality which always eludes words and baffles description,

but which, for that very reason, is irrelevant to science” ([1919] 1950, p. 61). Casting out qualities is certainly less problematic when one is asking whether the practice of physics will be affected. However, once Nagel (1974) switched to the biological sciences, this dismissal became harder to sustain.

Like Russell, Peirce was impressed by the explanatory power of scientific inquiry: “I was thoroughly grounded not only in all that was then known of physics and chemistry, but also in the way in which those who were successfully advancing knowledge proceeded. [...] I am saturated, through and through, with the spirit of the physical sciences” (Peirce 1931–58, vol. 1, para. 3). Pursuant with this naturalistic orientation *avant la lettre*, Peirce never anchored his claims on the private data of introspection. Hence, there is definitely a healthy dose of functionalist sobriety in Peirce, who insists that “[e]very form of thinking must betray itself in some form of expression or go undiscovered” (1998, p. 18). Yet, Peirce found reason to cling to the reality of qualities throughout his investigations. Owing in part to his familiarity with scholastic traditions, Peirce never viewed the world solely in terms of efficient causes. In this respect, he departed from Occam and Descartes, two villains of Peirce’s narrative who made the rejection of “formal causes” a centerpiece of their mechanistic metaphysics. Understandably, Peirce’s anachronistic commitments did not fit well with the philosophizing of his time. The flip side is that his anachronism spared his semiotic theory from viewing everything exclusively in terms of functional descriptions.

For decades, few philosophers knew what to make of Peirce's semiotic theory. As Ahti-Veikko Pietarinen writes, "Harvard University to which Peirce's literary remains were eventually deposited, had in its possession a monster easier to lock up than harness" (2006, p. 46n22). Whereas some scholars still try hard to study Peircean pragmatism without studying Peircean semiotics, I think this is an untenable approach, since "[h]is pragmatism is a theorem of his theory of signs" (Fisch 1986, p. 435). My dissertation is thus part of an ongoing re-evaluation of Peirce and his place in the canon.

As it turns out, Peirce wasn't nitpicking when he insisted that his stance differed crucially from the pragmatisms of James, Dewey, and others. As work on the Peirce manuscripts proceeds, the full extent of this difference is dawning on scholars. A lot of the received wisdom about Peirce one finds in mainstream venues like textbooks is just plain wrong. Specifically, Peirce was not a crude "verificationist." On the contrary, he endorsed a sophisticated ontology that countenanced *potential* signification. This commitment has far ranging ramifications that are only now beginning to be appreciated.

Having read the Peirce manuscripts housed at Harvard, Roman Jakobson (1979; reprinted in Jakobson 1988) told participants at the first congress of the International Association for Semiotic Studies in Milan (June 1974) that engaging with the ideas of Peirce would bear dividends. Eco, who was at that congress, took Jakobson's advice seriously. Prompted by his study of Peirce,

Eco was one of the first philosophers of signs to work into his theory the idea that some modes of signification are neither symbolic nor indexical. Moving away from a purely conventional interpretation of interpretation helped to cement Eco's (1990) growing impatience with the implausible social constructivist stances inadvertently supported by his earlier work (Eco 1976). Given Eco's prominence in the semiotic community, his change of mind on the controversial topic of images (Eco 2000) invigorated Peircean scholarship. In fact, European scholars were (and arguably remain) the go-to people for insight into this American thinker (owing to the influence of Jaakko Hintikka, Finland has a particularly vibrant community, which I will join in the coming months). By looking at the qualitative dimension of consciousness from a semiotic vantage, my dissertation continues that project of applying Peirce.

Peircean semiotics has informed cognitive science (see Steiner 2013), but some of the technical notions developed by Peirce remain poorly known in mainstream debates. For instance, “[a] third kind of signification exists which does not consist in brute denotation *or* in arbitrary convention, but which presents structure directly to the mind's eye. It is barely glimpsed in formal semantics today” (Legg 2013, p. 17). My dissertation is the first systematic attempt to apply Peirce's semiotic theories to philosophical debates about consciousness. If, as I suspect, some of the more established distinctions are insufficient, then it is predictable that conscious experience should appear puzzling. How do we explain this qualitative dimension? If it escapes functional

description, how could we ever refer to such a thing? What sort of place, if any, should we assign qualities in the world? In these pages, I test the hypothesis that adding the toolbox of Peircean philosophy of signs might help to answer some of these questions.

More is currently being written on consciousness than at any other time in history (see Katz 2013). I hope, though, that I have managed to craft something genuinely different that is well-argued and provokes thought. The results of my efforts are not perfect—I sometimes wish I had an extra decade or two to further study the matter—so what I present is a fallible inference to the best dissertation.

In September 2001, I decided to do two doctorates. In August 2007, accompanied by a heavy cardboard box, I turned in the paper copies of my semiotics dissertation at UQÀM. The next day, I created a new file on my computer desktop and named it “Second Dissertation.” A week later, I started my studies at York. The journey from there to here required a lot of honest (and enjoyable) toil. Fortunately, I have been able to share some of my results along the way. Parts of chapter one appeared in *Dialogue*, vol. 48 (2009), pp. 145–183. Parts of chapter two appeared in *Dialogue*, vol. 53 (2014), pp. 135–182. Parts of chapter three were presented at the *Second International Conference on Charles S. Peirce’s Thought and Its Applications* in Tallinn, Estonia, on April 21, 2014. Parts of chapter four appeared in *Analysis and Metaphysics*, vol. 11 (2012), pp. 65–74; and *Philosophical Psychology*, vol. 26 (2013), pp. 129–138.

Introduction

The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those two gates is to be arrested as unauthorized by reason.

Charles Sanders Peirce, "Pragmatism as the Logic of Abduction"
Lecture delivered at Harvard on May 14, 1903
(Reprinted in Peirce 1998, p. 241)

Each *quale* is in itself what it is for itself, without reference to any other. It is absurd to say that one *quale* in itself considered is like or unlike another. Nevertheless, comparing consciousness does pronounce them to be alike.

Charles Sanders Peirce, "Quale-Consciousness"
Unpublished notes, *circa* 1898
(Reprinted in Peirce 1931–58, vol. 6, para. 224)

This dissertation engages with a philosophical worry that the qualitative or "phenomenal" dimension of consciousness may not be captured by regular scientific explanation, that is, by the sort of inquiry which can be verified from a third-person vantage. There is a sense in which I agree and disagree that consciousness poses such a problem, so I draw on the semiotic ideas of Charles Sanders Peirce to articulate in what respects I think the worry ought and ought not to be taken seriously. If we can come to see how this introduction's two epigraphs are consistent, then I think we will make progress in philosophy of mind.

Philosophers like David Chalmers (1996), Ned Block (1995a), and Thomas Nagel (1974) have argued (from different angles) that even if one were to describe in a rigorous way how a creature responds to various stimuli, those functional input-output responses would still leave out “what it’s like” for the creature in question to undergo those experiences. Before one can assess this claim of incompleteness, one has to get clear on what aspect is supposedly left-out. In order to make their grievance against functionalist explanation persuasive, these philosophers have had to introduce a distinction between “phenomenality” and “accessibility” (Block 1995a). Access-consciousness is within the reach of cognitive scientific explanation, but phenomenal-conscious lies outside that reach, and can presumably be gleaned only by introspection—provided, that is, that one does not report the experience or act on its basis, otherwise that would become access-conscious.

The concept of phenomenality is meant to track how a conscious episode *feels*, whereas accessibility tracks what it *does*. It seems that, if one accepts this quality/function distinction, one needs a further step to say that an account of doing supplies one with an account of feeling. Since, at present, there is no such step, we are left with an “explanatory gap” (Levine 1983) between first-person and third-person accounts. In fact, one might argue that “the word *qualia* and its plural *qualia* were introduced into philosophy as technical terms precisely in order to capture that aspect of an experience that escapes the scrutiny of any natural science” (Hattiangadi 2005, p. 342). In this dissertation, I am more

interested in this conceptual distinction than in the arguments for dualism that usually come afterwards.

Since only access-consciousness is detectable, the presence or absence of phenomenal-consciousness should make no detectable difference. As a result, one might have expected a pragmatist to be the first to dismiss the whole issue as a non-issue. Indeed, if all one knew about the father of American Pragmatism was that he wrote this introduction's first epigraph, one would assume that Peirce was a functionalist. However, it turns out that Peirce advanced ideas in his theory of signs that vindicate the current suggestion that qualities can be divorced from all functional involvement. It is true, as Hattiangadi notes, that the idea of qualia was introduced to capture an aspect that escapes the scrutiny of science. It was introduced by Peirce (Livingston 2004, p. 6). He called them qualisigns.

“A *Qualisign* is a quality which is a sign. It cannot actually act as a sign until it is embodied; but the embodiment has nothing to do with its character as a sign” (Peirce 1998, p. 291). This entire dissertation is devoted to unpacking what that statement means.

How to approach the controversial idea of qualia is itself a controversial matter. Thomas Nagel thinks that “almost everyone in our secular culture has been browbeaten into regarding the reductive research program as sacrosanct, on the ground that anything else would not be science” (2012, p. 7). Don Ross

(2005, p. 166), for example, says that the dualist stance espoused by David Chalmers is a “heretical position.” For an issue that supposedly makes no difference, siding with the wrong camp certainly seems to irk some. The idea that commitment to science requires one to ward off “heresies” departs from the Peircean spirit I espouse (contrast my view with the comments by Short 2007, p. ix). Peirce was confident that science is the most truth-conducive method ever devised, but he never elevated that confidence above the status of a well-confirmed hypothesis:

There are real things, whose characters are entirely independent of our opinions about them; those realities affect our senses according to regular laws, and, though our sensations are as different as are our relations to the objects, yet, by taking advantage of the laws of perception, we can ascertain by reasoning how things really and truly are, and any man, if he have sufficient experience and he reason enough about it, will be led to the one true conclusion. (Peirce 1992, p. 120)

In contrast with Ross, who penned a provocative “Defence of Scientism” (Ladyman et al. 2007, pp. 1–65; John Collier abstained), Peirce stressed the need never to “block the way of inquiry” (1998, p. 48). As someone who made prescient advances in logic and mathematics that were routinely rejected by editors (see Brent 1998), Peirce was familiar with what happens when prevailing wisdom does not make allowance for the possibility that it may be mistaken.

I do not aim to present any kind of “scientific” resolution to the hard problem of consciousness in this dissertation. Signs can be studied, but I doubt they can be studied scientifically. This is because, while sign-vehicles can be seen, “signs in their constitutive being as relations are invisible to sense [...]” (Deely 2009a, p. 236). Now, William James once suggested that “the relations between things [...] are just as much matters of direct particular experience, neither more so nor less so, than the things themselves” (1977, p. 136). I follow James in accepting the reality of relations, but I think bluntly relying on observation would be a non-starter. Peirce was conversant with (and contributed to) early advances in neuroscience (see Pietarinen 2006, pp. 71–76), but he too realized that a study of signs must employ methods closer to those used in logic.

As to the important experimental research of semiotics, by means of questionnaires, tests, eye-tracking, brain-imaging and so on, all such procedures importantly add to our general understanding of how signs, meanings, and references are processed by human beings and their brains and minds, in some cases by different groups of human beings. But such results can never hope to reduce the generality of signs to any mere sum of such individual processing. (Stjernfelt 2013, p. 106)

One is of course free to dismiss or belittle all non-naturalist philosophies (e.g., Ross and Spurrett 2004). However, there is no inference from “all [t]heories of consciousness that are not based on functions and access *are not scientific*

theories” (Cohen and Dennett 2011, p. 361; emphasis added) to “all theories of consciousness not based on functions and access *are untrue*.”

Ross argues that we should not place “too much weight on intuitions and questions of conceivability” (2005, p. 167). I agree that intuitions are often unreliable trackers of truth. However, I do not think posits supported by considerations of conceivability should be dismissed. Fields like logic and mathematics draw considerable normative force from what can and cannot be conceived. Some present-day naturalists think a priori data carry no evidential weight whatsoever (see Cockram 2014). Peirce was not that kind of naturalist. He regarded semiotics as a “formal science” (Liszka 1996, pp. 1–17) governed at its core by an insight akin to the serial axiom of modal logic: if it is actual-that-P, then it is possible-that-P. Like all conditional statements, this is a one-way passage, since one cannot infer the antecedent from the consequent. As we shall see, Peirce’s semiotic categories are organized along the same modal lines (interestingly, one of the founders of modal logic, C. I. Lewis, was charged with cataloguing the Peirce papers while at Harvard).

Central to the account I develop is the idea that humans can take anything, internal or external, and focus on its qualitative character to the exclusion of all else. In keeping with the idea that a quality “cannot actually act as a sign until it is embodied; but the embodiment has nothing to do with its character as a sign” (Peirce 1998, p. 291), I will argue that while we always begin with actual states,

we can nevertheless contemplate “what” those states *subsume*. This sort of deliberate myopia, which Peirce and medieval logicians called prescissive abstraction, leaves the starting point untouched, but I believe it manages to make sense of the intuition that the relations captured by scientific descriptions do not address the qualitative content of their relata.

Many aspects of cognition are answerable to the techniques of inquiry typically brought to bear on that material world. Response times, skin moisture levels, eye movements, verbal reports, brain scans, blood flows—all can be tracked in controlled experiments that give a robust indication of what a subject thinks. It is not evident that all of this is insufficient. Hence, before one can say that functionalism fails to supply a complete account of consciousness, one has to explain what sort of residue might possibly escape functional description. In *The Conscious Mind*, David Chalmers zeroes in on a very specific dimension of conscious life:

What is central to consciousness, at least in the most interesting sense, is *experience*. [...] The subject matter is perhaps best characterized as “the subjective quality of experience.” When we perceive, think, and act, there is a whirl of causation and information processing, but this processing does not usually go on in the dark. There is also an internal aspect; there is something it feels like to be a cognitive agent. [...] To put it another way, we can say that a mental state is conscious if it has a *qualitative feel*—an associated quality of experience. [...] According to the psychological concept, it matters little whether a mental state has a conscious quality or not. What matters is the role it plays in a cognitive economy. On the

phenomenal concept, mind is characterized by the way it *feels*; on the psychological concept, mind is characterized by what it *does*. (Chalmers 1996, pp. 3–4, 11)

According to Chalmers, cognitive science has a lot to say about the psychological concept, but it has “almost nothing” to say about the phenomenal concept. Looking at the vast literature on consciousness, this is perhaps less true today. In any event, Chalmers claims that while there is “no deep philosophical mystery” about the psychological concept, the phenomenal side is, from a scientific perspective, “surprising” (1996, pp. 4–5). Like Nagel (1974, p. 449), Chalmers thinks it is presently “hard to see” what a theory of the phenomenal concept would look like (1996, p. 5).

In order to avoid begging the question, Chalmers never calls on zombies to justify the concepts teased apart in his opening chapter on “Two Concepts of Mind” (1996, pp. 3–31). Indeed, if we read Chalmers closely, we notice that he first pinpoints a very narrow sense of “experience” and *then* asks us to conceive experience-free zombies. This means that, whatever stance one takes on the traditional issue of dualism versus (materialist) monism, the distinction can be made intelligible on its own grounds. Chalmers and his commentators seem to consider the distinction between two concepts mere table setting, but I think it is where all the major action transpires. As such, I will devote myself solely to the preamble, since I think the function/quality distinction that Chalmers and others appeal to is underwritten by our generalized ability to prescind semiosis.

Cohen and Dennett (2011) have recently claimed with unmistakable boldness that consciousness cannot be separated from function. One immediate reaction upon hearing this is: *of course it can*. Naturally, a lot turns on what sort of “separation” we are talking about. An idea floating around since at least Hirst (1959) is that there may be respectable ways of granting that mind and brain are the same yet different. Unless one dismisses this suggestion altogether, one is burdened with at least explaining why philosophers constantly return (under different guises) to this “intuition of mind-brain distinctness” (Papineau 2002).

Current debates about consciousness are driven in large part by an intuition of quality-function distinctness. According to Chalmers, the “phenomenal” dimension of mind is different enough from the “psychological” dimension to merit a distinct concept. He insists that “[t]here should be no question of competition between these two notions of mind” (Chalmers 1996, p. 11). Call this *the non-overlap thesis*. He also insists that “[t]hey cover different phenomena, both of which are quite real” (Chalmers 1996, p. 11). Call this *the dual commitment thesis*. Taken together, these theses yield dualism. Chalmers and Block have advanced arguments in support of both theses. Whereas Block (1995a) is chiefly preoccupied with defending the non-overlap thesis, Chalmers (1996) is more concerned with defending the dual commitment thesis. *The semiotic account of consciousness I develop in this dissertation accepts the dual commitment thesis but rejects the non-overlap thesis.*

As I see it, quality-function distinctness is appealing because it rests on a truth which Peirce's ordinal categories make clear: *the idea of a relatum without a relation makes sense, but the idea of a relation without relata does not. This, in turn, permits an asymmetrical deletion.* In developing my semiotic account of consciousness, I will make a host of adjustments, but I will never stray from this core insight.

Zombies are often said to be “behaviourally indistinguishable” (see Tanney 2004). Such a characterization is true but incomplete since, according to the construal of phenomenality endorsed by Chalmers (1996, p. 95), zombies would be *psychologically* indistinguishable as well. It is not just that one can imagine a creature whose sensory input and behavioural output functions map onto ours despite having a different physical realization. A sufficiently sophisticated robot passing the Turing test would qualify in that regard. Rather, the claim is stronger, and pertains to the very information processing sandwiched between inputs and outputs. A genuine zombie would think just like us, only it wouldn't feel like us. This entails that “[m]y zombie twin, for instance, has his eyes water just as I do when he eats too much Wasabi. Unlike me, however, my zombie twin lacks any phenomenal consciousness. There is nothing it-is-like for him to taste Wasabi” (Majeed 2013, p. 252). This is well known. But the broad notion of function also entails that, if you silently ponder xyz before doing P, your zombie twin would, under the same circumstances, also silently ponder xyz before doing P. The only difference would be that there

is nothing “it is like” for that zombie twin to undergo this psychological episode. Given that computational prowess would be achieved in a zombie by the same algorithmic methods as us, an eternity spent on the psychoanalyst’s couch would not allow an examiner to determine whether or not a subject was a zombie (Freud would be as impotent here as Skinner).

To highlight the peculiar challenges posed by the function/quality distinction, Ray Jackendoff (1987, p. 20) calls this the “mind-mind problem.” This is more subtle and insidious than the traditional mind-body problem, because it asks: what is the relation between functional states and qualitative experiences? John Searle (1980) argued that perfect computational mimicry does not suffice to duplicate a human mind. Even if what happens on the behavioural outside matches what we do, we cannot be confident that what happens inside matches us too. Now, decades later, David Chalmers is arguing that perfect algorithmic mimicry also does not suffice to duplicate a human mind. Even if what happens on the inside matches how we think, we cannot be confident that this cognitive processing is accompanied by feelings like ours. Zombies are more than behavioural indistinguishable; they are indistinguishable *tout court*. Framed this way, the presence or absence of a qualitative dimension would, *ex hypothesi*, be unverifiable.

Now, Paul Churchland has argued that, if we want to charge a scientific account with coming up short, “then let us endeavor to find in it some real

empirical failing. Imaginary failings simply don't matter" (2005, p. 558). Although one might have expected a pragmatist to agree, Peirce actually developed a set of distinctions (inspired by Duns Scotus) that lend *some* support to current contentions about qualia. Drawing on this Peircean semiotic analysis, I think a weaker distinction can be made which lends some credence to the idea of an un-interpreted quality.

Peirce came to his conclusions, not to promote any pre-set philosophy of mind, but to evince the semiotic relations on which logical inferences depend. The main findings first reported in his "New List of Categories" (Peirce 1992, pp. 1–10), though eventually couched in a different terminology, never really changed: one can suppose a sign-vehicle without an object, or a sign-vehicle linked to an object without that link being interpreted; yet the reverse is not possible. Progressively trimming away the triadic sign's layers by means of abstract thought allows us to discern three ways sign-vehicles can exist (as qualities, occurrences, and regularities) and three ways such sign-vehicles can be related to objects (by imputation, causality, and similarity). I will go over these distinctions in detail. The important thing is that the semiotic tool of precission I will call on shows that the idea of a quality isolated from all functional involvement has *some* warrant.

While I agree that one ought to countenance phenomenal-consciousness and access-consciousness, my precissive analysis leads me to conclude that p-

consciousness is always subsumed *in* a-consciousness (see section I.VII). If phenomenal qualities are always found in the midst of functions, there is no reason why cognitive science should do things differently (although keeping dogmatism in check is always salutary). All philosophy can do is soothe the worry that the “intrinsic quality of experience” (Harman 1990) has been “left-out” (Levine 1997). Much comfort can come, I think, from demonstrating that the intuition of quality-function distinctness is not unfounded.

Peirce, a hard-nosed scientist, is often credited as a forerunner of verificationism. In keeping with his pragmatist maxim, I accept that if “the object of our conception” does not “conceivably have practical bearings” (Peirce 1992, p. 132), then we have no basis to credit our concept with having an object. However, what commentators eager to invoke verificationism often miss is that Peirce did not shave-off qualia. On the contrary, he put qualia at the core of his philosophic system. Peirce was adamant that, even when considered in total isolation, a lone quality always retains the power to generate practical effects, because any quality harbours a latent similarity-relation. As a logician disinclined to rely on introspection, Peirce sought to prove this with the rigour of a Venn diagram. I will examine Peirce’s demonstrations carefully (especially in section II.III). I will also look at historical evidence that those demonstrations effectively introduced the notion of qualia—and that subsequent philosophers misunderstood what Peirce had tried to say (going back to the source is one way to set things right).

My first chapter will look at the (perfectly sensible) idea that, in order to describe a thing, we have to describe its relations to other things. In order to avoid the charge that such a description would fail to capture qualities as they are “intrinsically” (i.e., irrespective of anything else), I will enlist the help of Peirce to vindicate the idea of a qualitative relatum not involved in any relation: “In *quale*-consciousness there is but one quality, but one element. It is entirely simple” (Peirce 1931–58, vol. 6, para. 231). Using the notion of a “prescissive” distinction that is less than real yet more than nominal, I will argue that while no quality can exist in isolation, the idea is sensible enough to prompt the phenomenal/access distinction championed by Block. At the heart of my first chapter will be a call to migrate from the incomplete type/token distinction to the complete type/token/tone distinction as first conceived by Peirce.

My second chapter will look at the only mode of reference afforded by a tone, namely iconicity. If qualia are so simple that they are prior to any relational involvement with other things, as I argue in the first chapter, how could we ever refer to them? Working from the (Russellian) assumption that knowledge comes either from description or acquaintance and the (Russellian) assumption that acquaintance is always causal in nature, philosophers like John Perry have maintained that reference to qualia would require that one use an index. While appealing to such context-dependent signs is relevant, I believe it does not get the referential relation quite right. Since similarity is not reducible to causal proximity, I will argue that a theory of reference that allows some cases to turn

on shared quality can bypass many of the implausible consequences that plague indexical accounts. My goal, in sum, will be to deploy the Peircean notion of icon so as to articulate in a more plausible manner David Papineau's suggestion that phenomenal concepts use the very quality they refer to.

My third chapter will deal with precession. If phenomenal qualia are non-relational, as I argue in the previous two chapters, then qualia are idle. Yet, as William James noted, consciousness is constantly streaming. Is there any way to stop or at least artificially pause this process? In my third chapter, I will answer yes. To motivate his claim that consciousness includes more than cognitive access, Ned Block reinterprets experiments conducted by the psychologist George Sperling. I will argue that, for the Sperling results to support the existence of phenomenal consciousness, the functional prowess that makes the experiences detectable has to be supposed absent. I will characterize this supposition of absence as meta-representation in reverse: when we think about our thinking, we are not pushed into a regress, because we can "undo" what we have done. I will argue that un-accessed experiences are gleaned by the same benign means.

My fourth and final chapter will present an ontology that fits nicely with the previous three chapters. If we take extended matter as our starting point, the qualitative dimension of consciousness has to be spooky. Panpsychists react to this by spreading consciousness everywhere, which is arguably even spookier.

Now, David Skrbina points out that “many of our greatest thinkers and philosophers have held to some version of panpsychism” (2006, p. 152). One of the luminaries listed by Skrbina is Peirce. Actually, Peirce defended the view that reality is made of triadic signs and all that such triads presuppose. I believe this “trinitarian” ontology is more promising than panpsychism. Some parts of my trinitarian worldview have been argued for by other philosophers. Don Ross, for instance, has suggested that psychological and physical patterns are both genuine parts of the world. I will help myself to his “structuralist” ontology and add to it the idea, developed in my third chapter, that pattern-discerning creatures like ourselves are capable of entertaining a relatum divorced from all relations. While this ability can lead rational animals to worry that their experiential feelings have escaped their best method, it can also comfort them with a story for why that worry is not totally unfounded.

Chapter I

Explaining the Qualitative Dimension of Consciousness: Precission Instead of Reification

It's not hard to see how philosophers have tied themselves into such knots over qualia. They started where anyone with any sense would start: with their strongest and clearest intuitions about their own minds. Those intuitions, alas, form a mutually self-supporting closed circle of doctrines, imprisoning their imaginations in the Cartesian Theater.

Daniel C. Dennett, *Consciousness Explained* (1991a, pp. 369–370)

[I]f we ask what has been the impact of semiotics upon philosophy over the course of the 20th century, to answer anything beyond “marginal” would be an exaggeration. This situation, as I read it, is about to change dramatically.

John N. Deely, “The Impact of Semiotics on Philosophy”
Paper delivered at the University of Helsinki (December 1, 2000)

I.I Chapter Introduction

Apparently, it is a little-known fact that the type/token distinction should be *threefold*; the notion left-out being the *tone*. Although one could seek to redress this omission purely in the name of exegetic fidelity, heeding C. S. Peirce's complete type/token/tone trichotomy can actually help current philosophy out of many quagmires. Specifically, the notion of tone seems tailor-made to explain the qualitative aspect of consciousness. One of the leading concerns

animating contemporary philosophy of mind is that no matter how good a scientific account is, it will leave out the feeling of “what it’s like” to be conscious. The topic has grown into an industry of industrious arguments for and against. But, if the thesis I recommend in this chapter is correct, much of this effort is misplaced.

I will argue that it is largely a want of notional distinctions which fosters the “explanatory gap” that has beset the study of consciousness since Thomas Nagel’s revival of the topic. Modifying Ned Block’s controversial claim that we should countenance a “phenomenal-consciousness” which exists in its own right, I will show that there is a way to recuperate the intuitions he appeals to without engaging in an onerous reification of the facet in question. My goal will not be to corner the reader into some “clincher” aggressively forcing her to adopt a given thesis, but rather to lay out an alternative way of “picturing” a particularly troublesome aspect of the cognitive situation. By renewing with the full type/token/tone trichotomy developed by Peirce, I think the distinctness Block (rightly) calls attention to stems, not from any separate module lurking within the mind, but rather from of our ability to *prescind* qualities from occurrences.

I will begin by recapping in generic form a common contemporary take on the mind-body problem. In an effort to recover some lost insights that might have important repercussions for that debate, I will outline the historical thrust

animating Peirce's work and present in an abstract fashion the categories which undergird his type/token/tone distinction. With this two-pronged diachronic-synchronic retrieval in place, I will stake out how precission might offer a better way to account for qualia. As a case study on the benefits of this conception, I will analyze Block's controversial ideas about "phenomenal-consciousness," and see whether they might profit from being reformulated in terms of the complete trichotomy previously canvassed. Although I intend my contribution mainly to intersect philosophy of signs and philosophy of mind, I will end by addressing some likely metaphysical concerns.

I.II What It's Like

In spite of the fact that the mind-body problem as we know it essentially begins with the reflections of Descartes, few theorists actually consider the question from such a wide historical angle. As we shall see, this lack of familiarity with the past can have unfortunate consequences. Be that as it may, most contemporary accounts of the debate over the nature of consciousness tend to adopt a more proximate starting point. So that's where I will start too.

A fitting moment in this regard (to choose but one notable landmark) is Nagel's 1974 essay "What Is It Like to Be a Bat?" As Paul Churchland writes, "Nagel's compact argument is a prominent flag around which much antireductive opinion has rallied" (1996, p. 196). Indeed, the paper deserves

mention for the manner in which it defiantly challenged the then-prevalent “wave of reductionist euphoria” (Nagel 1974, p. 435).

Nagel’s polemic was no mere curiosity, and went on to find a wider audience (and contribute to a weakening of its opponents) precisely because it gave voice to a compelling intuition most feel should be binding for explanations of consciousness generally. Nagel’s work thus heralded a resurgence of interest in the topic. Two decades later, Francisco Varela would speak of an “outburst” of research standing in sharp contrast with “all the years of silence, during which consciousness was an impolite topic even within cognitive science” (1996, p. 331). Such a return was in all likelihood inevitable, and the central merit of Nagel’s paper is that it goaded that all-too-human trait, curiosity. As Gary Gutting remarks: “Those with strong naturalist inclinations are free to give up thinking about issues that do not admit of rigorous empirical treatment. But doing so will not eliminate the body of traditionally philosophical issues that cannot be so treated, nor the general human need to engage such issues” (1998, p. 11).

Although the vocabulary itself was (and remains) rather coarse, Nagel’s original idea of an elusive “what it’s like” dimension proper to conscious life captured an important aspect that is seemingly left out by most theoretical accounts. By its very nature, the idea Nagel gestured at makes for a very slippery object of discourse. Colin McGinn, for instance, borrows the biological

perspective adopted by Nagel and turns it on its head. We shall never know what it's like to be a bat, Nagel argued, because as life forms we simply shall never be bats. McGinn basically accepts this argument, but then gives it a reflexive twist. On this view, our humanity may give us enough insight into ourselves to have an intuitive sense that there is something "it is like" for us to be the conscious beings we are; however, that same humanity prevents our inquiries from attaining a robust theoretical comprehension of this qualitative facet. As a result, McGinn suggests that just "as traditional theologians found themselves conceding cognitive closure with respect to certain of the properties of God, so we should look seriously at the idea that the mind-body problem brings us bang up against the limits of our capacity to understand the world" (1989, p. 354). If this turns out to be correct and the worries which are typically brought on by the study of consciousness are fundamentally the product of an insurmountable impediment, then it is difficult to see what theorists could do about that fact—save commit themselves to some sort of methodological embargo on all things subjective.

That would of course reprise the general leitmotif of most twentieth-century Anglo-American philosophizing about consciousness, human or otherwise. Such resignation notwithstanding, it seems right to acknowledge that, despite its relative remoteness from the standpoint of theory, each of us knows intimately what it's like to enjoy conscious experience. As Nagel points out, "in discovering sound to be, in reality, a wave phenomenon in air or other media,

we leave behind one viewpoint to take up another, and the auditory, human, or animal viewpoint that we leave behind remains unreduced” (1974, p. 445). Or, to put the same point in another way, we can say that “[t]o analyze consciousness in terms of some functional notion is either to change the subject or to define away the problem. One might as well define ‘world peace’ as ‘a ham sandwich.’ Achieving world peace becomes much easier, but it is a hollow achievement” (Chalmers 1996, p. 105).

Fully aware of how much explanation-worthy material is left behind when we refuse to tackle the issue of “what it’s like” for us to be the sorts of beings we are, Nagel’s essay made it a point to push for a more hopeful gloss of the situation, spurring the troops to action, as it were. For it could very well be that the difficulties which accompany inquiries into the “what it’s like” side of consciousness are *epistemological*. If this is so, then it seems more reasonable to hope that the difficulties can indeed be overcome—if only through an arduous re-conceptualization of our basic assumptions.

As Nagel cleverly points out, we would likely scoff at a Martian race’s contention that their (supposedly exhaustive) reductionist account of our species shows our conscious experiences to be illusory: “We know they would be wrong to draw such a skeptical conclusion because we know what it is like to be us” (1974, p. 440). Truth be told, we generally scoff at humans too when they make that remarkable claim (see Baker 1987). In any event, such a

privileged insight provides the theorist with a point of entry to exploit; thereby reviving hopes that a rigorous solution to the difficulties at hand, no matter how elusive, might be in the offing. In fact, Nagel underscored that while this qualitative aspect of our cognitive lives “includes an enormous amount of variation and complexity, and while we do not possess the vocabulary to describe it adequately, its subjective character is *highly specific*, and in some respects *describable* in terms that can be understood only by creatures like us” (1974, p. 440; emphasis added).

Nagel’s work thus left subsequent Anglo-American philosophizing in a peculiar situation. On the one hand, it contributed to a revival of interest in the question of “what it’s like” to be conscious, adding enough of a biological-*cum*-cognitive twist to the standard mind-body problem to make it palatable again. But, while Nagel refused to neatly segregate the two aspects into incommensurate domains, he underscored the epistemological difficulties that await any attempt at bridging the apparent divide, stressing that while “[p]erhaps a theoretical form can be devised for the purpose, [...] such a solution, if it exists, lies in the distant intellectual future” (Nagel 1974, p. 436). This prompts McGinn to remark that “[d]espite his reputation for pessimism over the mind-body problem, a careful reading of Nagel reveals an optimistic strain in his thought” (1989, p. 354fn9). While Nagel himself was reticent to speculate about what an adequate account of consciousness would look like,

there was indeed something prophetic in the way he chose to conclude his classic paper:

At present we are completely unequipped to think about the subjective character of experience without relying on the imagination—without taking up the point of view of the experiential subject. *This should be regarded as a challenge to form new concepts and devise a new method—an objective phenomenology not dependent on empathy or the imagination.* (Nagel 1974, p. 449; emphasis added)

Chalmers has made this a mainstream project by arguing that while “[c]urrently it may be hard to see what such a theory would be like, but without such a theory we could not be said to fully understand consciousness” (1996, p. 5). Part of what I want to do in this dissertation is show that one need not look to the “distant intellectual future” to find the “objective phenomenology” Nagel called for. Specifically, I believe the materials needed to assemble such a robust perspective already exist in semiotics.

Peirce saw clearly that “if the sign does not consist in a true relation, it is difficult or impossible to see how it can serve as the medium of *communication between* two individuals of whatever species or type” (Deely 2001a, p. 429; for more on this rejection of psychologism, see Stjernfelt 2013). Locke, who coined the word semiotics, also thought that if “men really had different ideas, I don’t see how they could converse or argue one with another” ([1690] 2007, book 2, chap. 13, para. 28). Yet, in spite of this, Locke still regarded the first-

person vantage as proper starting point. However, I agree with Deely that the moment Peirce and other semioticians began “to think that their experience of communication was real, the moment they began to think of that experience as a proper starting point of philosophy, the remaining days of classical modern thought were numbered” (2001a, p. 539).

As we shall see, not only does the semiotic tradition draw on theoretical foundations that pre-date the quagmire Descartes bequeathed philosophical modernity, I believe its quasi-logical organon is perfectly suited to answer Nagel’s central desideratum, namely to “think about the subjective character of experience [...] without taking up the point of view of the experiential subject” (1974, p. 449). Granted, one must guard against a facile nostalgia which “holds that all major problems have already been solved—or, at least, that a framework for the solution has been provided—by some great philosopher of the past” (Gutting 1998, p. 12n5). But, when the facts indeed speak to the availability of pre-existing materials, one must be careful not to turn a blind eye to such resources. Let us then go back further in time than the contemporary starting point we provisionally adopted.

I.III Recovering a Discarded Patrimony

The day a rebellious young René Descartes walked out the door of the Jesuit college of La Flèche for the last time, we all did. Given that the Frenchman’s

once-eccentric grievances with scholastic philosophy went on to shape the landscape of discursive acceptability for centuries to come, it is something of an irony that the thinker who would go on to challenge *that* orthodoxy would also turn out to be a freethinking iconoclast. Indeed, sometime in the second half of the nineteenth century, Charles Sanders Peirce, gripped by an unshakeable conviction in the powers of logic ever since he read Richard Whately's 1826 *Elements of Logic* in his youth (Fisch 1986, pp. 347–349), took it upon himself to engage in a detailed study of that discipline's underpinnings (see Brent 1998, p. 48). That lifelong project would eventually lead him to breach the methodological imperative that had basically defined the modern mindset since Descartes: “Thou shalt not learn from the Latins”—to borrow John Deely's acerbic but telling characterization in his monumental *Four Ages of Understanding* (2001a, p. 613). As Deely recounts:

From Scotus in particular, but also from Fonseca and the Conimbricenses, [Peirce] picked up the trail of the sign. He was never able to follow it as far as the text of Poinset [...]. Nonetheless, what he picked up from the later Latins was more than enough to convince him that the way of signs, however buried in the underbrush it had become since the moderns made the mistake of going the way of ideas instead, was the road to the future. (ibid.)

Just as Paul Churchland (1988, p. 43) wants his own brand of “eliminativism” to be distinguished from the more subdued “reductionism” advocated by other scientifically-minded naturalists, so it is more accurate to

say that the semiotic inquiry taken up by Peirce is not “anti-Cartesian” but rather *non*-Cartesian. Such a characterization would seem to hold not only theoretically but historically as well. Going back, we find a succinct and powerful definition of the sign in the scholastic “*Aliquid stat pro aliquo*”—literally “Something stands for something else.” This formula does not prejudge whether the relation at hand is conventional or natural. Although the neutrality implicit in this definition went on to find its most explicit expression only in the seventeenth century with John Poinsett’s *Tractatus de Signis* ([1632] 1985), the generic medieval formula dates back to Augustine, a pivotal figure whose synoptic sensitivities led “to the first construction in the history of Western thought that deserves to be called semiotic” (Todorov 1992, pp. 56–57).

It may be surprising to find Augustine credited with inaugurating a model that will in time blossom into a sophisticated theory of representation. We may recall, for example, Wittgenstein’s paragraphs at the outset of the *Philosophical Investigations* ([1953] 2001, pp. 2–3)—not exactly a work known for its historical scholarship—that depict Augustine as using names to merely “label” cognitively complete concepts. All the same, in Todorov’s estimate, Augustine “affirms more strongly than earlier writers have done that words are merely one type of sign; this affirmation, which stands out with increasing sharpness in his later writings, is the cornerstone of the semiotic perspective” (1992, p. 36; see Eco and Marmo 1989, pp. 4–5; as well as Markus 1957). It is important to keep in mind, however, that “[Augustine] introduced to the Latins and to philosophy

the sign as a theme, but he himself was never to thematize it” (Deely 2001a, p. 218). The covering model of the sign put forward in his pregnant reflections will be discussed by a long succession of thinkers, like a silent undercurrent beneath the better-known disputes of medieval philosophy. Hence, recent years have witnessed a growing “body of research on the Middle Ages from the community of semioticians whose attention to both implicit and explicit medieval semiotics now begins to amount to a subgenre of semiotic scholarship” (Evans 1987, p. 177).

Although the etymology of “semiotics” is Greek, the theoretical underpinnings of the inquiry are not. Indeed, one of the most interesting findings to have emerged from the work of Umberto Eco and his colleagues (Eco and Marmo 1989, pp. 4–5) is the discovery, surprising at first, that Greek thought had no *general* notion of “sign” as we understand it today. In ancient Greek culture, we find on one hand the “*semeion*,” which, like a symptom, expresses an association such that “If the woman has milk, then the woman has given birth.” This construal, which was part of the early development of medical science (Baer 1983; Baer 1988), also applied to subjects like meteorology, and was carefully discussed by the Stoics (see Eco 1986b, pp. 29–33, 214–215; Manetti 1993, pp. 97–110). The signification at play in the *semeion* rides on a correlation which would obtain with or without the inferential-like movement that finds in the manifest a trace of the hidden. This is the broad class of signs that natural scientists are usually interested in. The

feature which allows interpretation to go from a sign-vehicle to an object is mind-*independent*, and while we can fail in our epistemic apprehension, this explanatory mis-attribution leaves wholly intact the link that would have otherwise secured it.

On the other hand, we find in Greek thought the “*symbolon*,” whose signification is wholly conventional, like insignia or flags. Etymologically, “symbols” were linked coins or clay-plates used to publicly announce the bond of marriage and other contractual agreements (Eco 1986a, p. 153; Eco 1990, p. 9; Peirce 1998, p. 9). A correlation is involved in the *symbolon*, but there is nothing above and beyond interpretation which binds the *relata*. To be sure, Plato had famously argued in the *Cratylus* (1997, pp. 101–156) that names or “*onoma*” in fact bear a natural bond to their objects, their apparent arbitrariness supposedly being a corruption that was introduced over time. More famously still, Aristotle urged the exact opposite of this implausible philological view in *De Interpretatione*, insisting that a “*name* is a spoken sound significant by convention [...] because no name is a name naturally but only when it has become a symbol” (1984, p. 25, lines 16a19–16a28). The imputed link which allows interpretation to go from a sign-vehicle to an object is thus mind-*dependent*, such that any sign that falls in the broad category of *symbolon* can “convey the nonexistent with a facility every bit equal to its power to convey thought about what is existent” (Deely 1990, p. 17). This allows human users to exploit channels not bound by constraints for truthfulness, going against a

default biological hard-wiring in order to acquire a uniquely powerful and flexible resource (see Donald 2001). Symbols are the signs that permeate culture and hence, those are the signs which social scientists are usually interested in.

So, what we have in Greek Antiquity is a division between nature and culture, reflected in the very linguistic fabric of the communities concerned (Manetti 2010b). There are two different words for signs, not one. This begins to change when we come to Augustine. For reasons that have nothing to do with philosophy proper, Augustine nursed an aversion to the Greek language, and remained ignorant of it throughout his productive life. When, as a devout Christian trained in rhetoric, he felt the need to reflect on how it was that God could speak to us through the Scriptures—through surface marks on a codex—he did not first verify what the Greeks had thought on the matter. Proceeding from his native Latin, he instead defined the “*signum*” generically as “something which is itself sensed and which indicates to the mind something beyond the sign itself” (1975, p. 86).

Whatever its shortcomings, this definition is novel, in that it accommodates both natural *and* cultural correlations—the smoke that indicates fire *and* the white flag that stands for surrender (see Jackson 1969, pp. 48–49; Eco and Marmo 1989, p. 4). Tacitly, in the year 387, “Augustine unifies the two theories and the two classes of signs” (Manetti 2010a, p. 25). This betokens a massive

shift. Indeed, by accidentally clearing the way for this unique perspective, Augustine laid the groundwork for a genuinely semiotic inquiry (Todorov 1992, pp. 56–57; see Manetti 1993, pp. 156–168). Other divides will linger, for instance between “formal” and “instrumental” signs (see Maritain 1959, pp. 119–120; Furton 1995, pp. 96–97), but the two sorts of correlations—mind-independent and mind-dependent—will henceforth be recognized as falling under one super-ordinate class as signs *tout court*.

Augustine’s semiotic proposal, which was widely disseminated in Peter Lombard’s twelfth-century anthology of authoritative tenets, *Four Books of Sentences*, bequeathed to future generations a dilemma: is the unified kind “sign” a conflation or an insight? Views on the matter differed. After Augustine, though, it became mandatory for theorists to figure out in precise technical terms what the common denominator between all these different signs might be.

A thorough vindication of the covering model suggested by Augustine’s reflections was proposed in the seventeenth century by John Poinset (religious name “John of Saint-Thomas”), a Spanish philosopher and theologian who left behind a difficult but ground-breaking *Tractatus de Signis* ([1632] 1985). Poinset was heir to the long and intricate debate over the proper definition of signs, all of which took Augustine’s definition as their starting point. Indeed, “it is clear that both Augustine (b. 354; d. 430) and John of St. Thomas [a.k.a.

Poinsot] (b. 1589; d. 1644) were engaged in the same intellectual program and therefore belong together” (Gracia and Noone 2006, p. 1). Some parties to those debates, like Petrus Fonseca (1528–1599), denied that there is something which truly unites the different types of signs (Deely 2004, p. 107). Poinsot, by contrast, tried to vindicate the original Augustinian proposal on principled grounds, resting his case on a careful metaphysical study of the category of relation in Aristotle and Thomas Aquinas. In this way, Poinsot offers a sustained theoretical engagement with the cryptic but pregnant insight enunciated in 1507 by his predecessor Thomas de vio Cajetan that “A rose existing only in thought is not a rose, but a relation existing in thought is truly a relation” (quoted in Deely 1994a, p. 22). That is why the sign is indifferent to whether it is found in the mind or in the world: its “being consists in relating, and this does not depend on us” (Rasmussen 1994, p. 410).

Unfortunately, Poinsot’s proposal took place in one of the least-known periods in the history of Western philosophy, which consists of scholastic thought after René Descartes basically took historiography along with him. Since Poinsot’s theoretical advance went almost totally unnoticed, we have to wait several centuries for the late-medieval insights to be recovered and further articulated.

The year 1690 nevertheless stands out, for this is when John Locke first gave “semiotics” its name in the penultimate paragraph of his *Essay*. Locke,

however, did not carry out the revolutionary promise of that project, since he remained bound to the view that “the work of intentionality or aboutness is done at the level of the mental” (Ott 2008, p. 292). As Peirce writes: “The celebrated *Essay Concerning Humane Understanding* contains many passages which [...] make the first steps in profound analyses which are not further developed” (1931–58, vol. 2, para. 649). Semiotics is one of them.

Although Poincaré’s work shows that “the doctrine of signs proclaimed by Locke did not have to wait 200 years to rise in the bosom of Peirce’s complex and monumental work” (Santaella 1991, p. 155), philosophy of signs truly came of age when Peirce connected anew with the literature on the topic that was lost in the shuffle of modernity (see Beuchot and Deely 1995; Tiercelin 2006). It was a view of inquiry as a communal endeavour that “led Peirce to open the dusty folios of the medieval schoolmen” (Colapietro 1989, p. 2) in order to further his studies:

Drawing to a large extent on the same sources from which Poincaré had drawn, and being a man of scientific intelligence [...] [Peirce] quickly reached the substantially same conclusions that Poincaré had reached: that the sign consists not in a type of sensible thing but in a pure relation, irreducibly triadic, indifferent to the physical status of its objects and to the source of its immediate provenance, nature or mind. (Deely 2001a, p. 614)

A logician trained in framing things in the broadest terms possible, Peirce showed how any sign is perforce a three-place relation where something stands

for something to something—regardless of what might fill these three placeholders on a given occasion. Delete any component of a semiotic triad and representation becomes impossible. The roles themselves, moreover, can be switched around. If one were to postulate that the basic categories of all things are up, down, left and right, this would not mean that the universe is populated with scattered ups, downs, lefts, and rights. Similarly, to be Third is to play a certain logical role. The basic triad forms a processual concatenation which Peirce, following the first century Epicurean Philodemus (De Lacy 1938), dubbed “semiosis”:

It was a reading of [Philodemus’ work] *On Signs* that suggested to [Peirce] the idea of an autonomous science of signs, semiotics, as well as a name for inference specifically by signs, semiosis. This took place in 1879–80, when Peirce was supervising the doctoral thesis of his student Alan Marquand on “The Logic of the Epicureans,” including a translation of Philodemus’s treatise. (Manetti 2002, p. 282; see also Fisch 1986, p. 329; the work supervised by Peirce was subsequently published in Marquand [1883] 1983)

The Peircean tradition I align myself with considers semiosis to be a general process that extends beyond the human realm. For example, if a squid—call it squid A—sees an approaching predator and squid A secretes ink, this ink is an interpretant which can in turn act as a sign-vehicle to another squid B, whose interpretant will also be to flee. There is no limit to how much expansion this process allows: add another squid C which flees upon seeing the flight of squid B and what was an interpretant in the original triad now counts as a sign-

vehicle in the newest triad. The three categories of semiotic theory are meant to track the role-switching that permits information to be passed on in a sort of relay race (that can pause but can never stop, once and for all).

Importantly, the patterns of semiosis disappear if we refuse to ascend to the level of repeatable triadic relations. If one refuses to see that squid B flees *a predator* (and not a cloud of ink), I believe one is going to miss out on what is *really* going on. Squid B may never actually see the predator itself—that is the whole point (and evolutionary utility) of an anticipatory flight. According to the view I espouse, the familiar secretion which prompts an about face in squid B cannot by itself account for that squid's aversive response. Chemistry alone won't do; we must recognize that the ink acted as a sign.

Like rubber-bands layered atop one another until they form a ball shape, signs can be added to signs even though, at the core, the inner-most rubber band that started it all is coiled unto nothing but itself. This is what happens when an error or fiction spreads. If, for example, squid A would have secreted ink simply because of a malfunctioning organ (instead of an approaching predator), squid B would still have fled. Erroneous or not, the basic structure of meaning propagation stays the same.

Striving to further develop these radically non-Cartesian conceptions, Peirce took the Latin notion of *signum* to a new level of theoretical sophistication. In the course of his studies, Peirce came to hold in particularly high regard the

writings of John Duns Scotus (see Boler 1963; Boler 2004), a Franciscan philosopher and theologian whose nuanced doctrines merited him the moniker “the Subtle Doctor.” As he explained,

The works of Duns Scotus have strongly influenced me. If his logic and metaphysics, not slavishly worshipped, but torn away from its medievalism, be adapted to modern culture, under continual wholesome reminders of nominalistic criticisms, I am convinced that it will go far toward supplying the philosophy which is best to harmonize with physical science. (Peirce 1931–58, vol. 1, para. 6)

Central to Scotus’ position was a specific sort of separation which—as the scholastic catchphrase goes—is “more than nominal but less than real.” Peter King summarizes it as follows: “The core intuition behind Scotus’s formal distinction is, roughly, that *existential inseparability does not entail identity in definition*, backed up by the conviction that this is a fact about the way things are rather than how we conceive of them” (2003, p. 22; emphasis added).

The motivation for Scotus’ distinction was originally theological, since it formed part of a concerted argumentative defence (from early-Christian times onward) against accusations of polytheism:

How can one reconcile the doctrine of the Trinity with a belief in the unity and simplicity of God? [...] The problems posed by the Trinity supplied the impulse for the development of the distinction [...]. Of course, it was not the *only* field of application, and the formal distinction came to be invoked in solving a host of purely philosophical problems. (Jordan 1984, p. 1)

Interestingly, the expression “formal logic” may have its roots in the formal distinction (see Peirce 1931–58, vol. 2, para. 549). As R. G. Collingwood noted, “[t]he doctrine of the Trinity, taught as a revelation by early Christianity [...] becomes in Kant and his successors a demonstrable and almost alarmingly fertile logical principle” (1968, pp. 119–120). As it turns out, religious controversies gave birth to a technical tool well suited for the study of signs.

One of Peirce’s most important contributions to semiotic theory was his Scotus-inspired realization that, if one wants to rigorously and systematically unpack all that is implied by the misleadingly obvious notion of “sign,” then one must recognize that every sign manifests both an unbreakable *unity* (as a sign whose significance is transparently given “in a flash,” as it were) and a *multiplicity* (as a “step-by-step” passage from a sign-vehicle to that which it represents). Construing any of the components that go into making representation possible as things somehow capable of existing without the collaboration of the others may not obliterate them metaphysically, but it *does rob* them of the very significance that allows them to serve useful cognitive functions. Thus, if we dissect a sign any further and start reifying the various parts we have uncovered, we effectively destroy what we wanted to study in the first place, and ensure that these no longer have any representational value. *Mutatis mutandis*, construing the sign as some airtight atom which reflective thought cannot penetrate would drain all the properties that make it a sign

(acknowledging the historical origins of this insight, I will call the ontology of my fourth chapter “trinitarianism”).

Peirce first presented his crucial thesis to the *American Academy of Arts and Sciences* in 1867, in a paper titled “On a New List of Categories.” This is by no means the most mature of his papers. There is for instance a lingering commitment to “substance” that will be pruned soon thereafter. That curt text nevertheless announced to the modern world a rich but forgotten way of approaching some perennial questions of philosophy.

Exclusive attention consists in a definite conception or supposition of one part of an object, without any supposition of the other. Abstraction or precession ought to be carefully distinguished from two other modes of mental separation, which may be termed discrimination and dissociation. Discrimination has to do merely with the essences of terms, and only draws a distinction in meaning. Dissociation is that separation which, in the absence of a constant association, is permitted by the law of association of images. It is the consciousness of one thing, without the necessary simultaneous consciousness of the other. *Abstraction or precession, therefore, supposes a greater separation than discrimination, but a less separation than dissociation.* (Peirce 1992, pp. 2–3, emphasis added; see also 1931–58, vol. 1, para. 353; as well as vol. 2, para. 428; for details on the etymology and alternative spellings of the term, see Peirce 1998, p. 352)

Cary Spinks notes that “precession is a difficult concept, but it is one of the most powerful developed by Peirce and also one of the few which he keeps throughout his life work” (1991, p. 23).

At the time though, Peirce did not conceive of his endeavours as semiotic per se, instead nursing an ill-fated hope that his discoveries would be adopted by mainstream philosophy. Be that as it may, the notion of tone he would eventually develop is intricately tied to the categorial framework uncovered by precission. A good way to explain this would be to liken semiotics to geometry. While one would be hard-pressed to find in the natural world a line with no girth or a point with no extension, we nevertheless have the ability to rigorously decompose any three-dimensional space and manipulate the dimensions it subsumes. The organization in such a case is not cardinal, but *ordinal*: nothing in a singular point entails a line or a volume, but the very notion of volume logically implies the line and the point. The geometrical dimensions, we could say, do not lie next to each other, but are instead like Russian dolls nested in one another. Semiotics is articulated around a similar insight. As Peirce showed, any representation perforce involves a genuinely *triadic* relation that cannot be sundered; that is, one which cannot be reduced to the dyadic or the monadic on pain of no longer representing. In order to be meaningful, something (monadic quality) must stand for (dyadic relation) something else and be taken (triadic interpretation) as so standing. Nevertheless, we can break these three dimensions down and recognize the specific role of each in any bona fide representation.

Peirce died in 1914, his failure to secure a place within the academic establishment during his lifetime (see Brent 1998) effectively bequeathing to

future generations the laborious task of understanding his massive body of unpublished writings. Thus, outside of a handful of influential papers on pragmatism written mainly in the 1870s (which he eventually repudiated), his later thought remained largely unknown (the term “pragmatism” was introduced by William James in 1898, who cited a 1878 *Popular Science Monthly* article by Peirce as the source of the term, but oddly the word itself never shows up in that much-cited piece). Peircean scholar Joseph Ransdell recounts that,

As regards Peirce’s semiotic in particular, hardly anybody had paid any attention to it at all—it is clear from something [John] Dewey says in his correspondence with [Arthur F.] Bentley that, prior to the publication of [Charles W.] Morris’s article on the foundations of the theory of signs, not even he had previously paid any real attention to that aspect of Peirce’s thought [...]. At most, the term “semiotic” was thought of as referring to a crackpot scheme for classifying things called “signs” which nobody in philosophy had any interest in to begin with [...]. (in Deledalle 2001, p. 220; see Rochberg-Halton and McMurtrey 1983)

This unfortunate ignorance is the more lamentable for the fact that many of Peirce’s mature ideas were in principle available shortly after the First World War. His extensive correspondence with Victoria Lady Welby (Hardwick 1977; see also Peirce 1998, pp. 477–491), which dealt chiefly with semiotics, was circulated in Europe and sent to prominent intellectual figures (like Bertrand Russell). Peirce’s letters eventually reached C. K. Ogden, who had been

employed as a research assistant to Welby. Together with his co-author I. A. Richards, Ogden published excerpts of those letters in a trailblazing appendix to *The Meaning of Meaning* ([1923] 1989, pp. 279–290), a book which Charles Morris credits with identifying “the contours of a general theory of signs” (1971, p. 7). The philosopher of mathematics Frank P. Ramsey, who collaborated with Ogden in translating Wittgenstein’s *Tractatus* (Wittgenstein [1921] 2002), came to know of Peirce’s ideas through this transitive connection. By 1923, we find Ramsey arguing in a review that the Viennese thinker would have benefited greatly from a familiarity with “two words used by C. S. Peirce,” namely “type” and “token” (Ramsey 1923, p. 468). Through a precarious chain of iterated interpretations, some of Peirce’s most important semiotic notions had found their way out of the secluded Pennsylvania home whence they were spawned. More than that, they were being broadcast in a very prominent forum, by a respected (if still emerging) Cambridge scholar, during the formative years of the analytic movement, in discussing what was to become one of its most important founding texts. People took notice.

The notions of “type” and “token” surfaced with growing frequency in the philosophic literature. Yet, regrettably, what could have been an occasion to connect with non-modern conceptions simply became newfangled jargon in which to reprise some rather stale schemes. The climax of this tale is somewhat anti-climactic: by the time anybody realized that this famous notional duo was in fact supposed to be a *trio*, the error had been fully committed.

I.IV Tone-Deaf No More

The absence I want to call attention to is effectively compounded by the prominent visibility of its counterparts. For instance, we find David M. Armstrong, a well-known adherent to the materialist wing of the reductionist program in philosophy of mind (1993), framing the problem of universals in terms of the type/token distinction developed by “the great U.S. nineteenth-century philosopher, C. S. Peirce” (Armstrong 1989, p. 1). As part of his introduction, Armstrong produces a box within which one finds the word “THE” inscribed twice, and continues: “Peirce would have said that there were two tokens of the one type” (ibid., p. 2). This characterization, though not inaccurate, is incomplete. If Peirce’s name is to be invoked and his nomenclature employed, then it should be remembered that the distinction he developed is in fact *tripartite*, the neglected party being the *tone*.

While he basically misappropriates the type/token/tone distinction and describes it as pertaining to “semantics,” Armstrong correctly insists that we are dealing here with “a perfectly general distinction applicable to any subject whatever” (1989, p. 1; for more on Armstrong, Peirce, and the metaphysical biases which are smuggled in when one switches from semiotics to “semantics,” see Legg 2001). The generality of Peirce’s notions owes precisely to the fact that his project was *not* semantic, in that semiotics is an all-encompassing enterprise which has nothing to do with the “glottocentrist”

dogma that takes intentionally emitted and conventionally coded expressions to be paradigmatic exemplars of the sign (recall that, even if we adopt Morris' tripartition—and it is unclear to me why we should—then “semantics” is only a part of the disciplinary genus semiotics).

Peirce did not discover the type/token distinction in the sense in which it is currently used (e.g., Hutton 1990; Wetzel 2009). Plato did that. So the terms “type” and “token” are not fancy ways to restate the age-old distinction between universals and particulars, respectively. Given such a hasty reading, it is only normal that the tone should have fallen by the wayside. For those intimately familiar with the long-standing debate between realism and nominalism, Peirce's talk of the tone can appear as something of a conceptual anomaly, a quirk that can be all-too-easily dismissed. John Boler notes that quality is “certainly the least clear of the categories, and the one that receives the least attention” (1963, p. 123). It is the latter part of this statement which accounts for the former.

Peirce's type/token/tone trichotomy—resting as it does on a fine-grained distinction of distinctions—was ostensibly too subtle. As a result, it has basically been denatured in the last century to bring it into conformity with reigning (dualist) expectations. However, the foundations which underpin these notions are not beholden to any standard metaphysical outlook. “How far are the basic categories of Peirce's phenomenology either particulars or universals?”

In describing Firstnesses as qualities of feeling Peirce never makes their status plain in terms of this disjunction. All he requests is the disregard of the question of reality and of connections with other phenomena” (Spiegelberg 1981, pp. 35–36). Indeed, it is important to keep in mind that the complete tripartition is not arrived at by speculation over “what there is.” The distinction is through and through logical: “In Peirce’s semiotic the type/token/tone (legisign/sinsign/qualisign) trichotomy is based on the idea that a given entity, assumed to be a sign, can be regarded in respect to any or all of three types of properties it has—monadic, dyadic, triadic (i.e., one-term, two-term, three-term)—depending upon the analytical needs in some concrete semiotic inquiry” (Sebeok 1994, p. 1130).

Peirce formulated the type/token/tone distinction under a variety of nomenclatures throughout his life. Moreover, the distinction itself is imbedded in a set of three trichotomies which together produce (not by multiplication) a tenfold semiotic declension, cataloguing the modal steps by which representation passes from possibility to actuality to generality (I will scan those steps in section IV.IV). To fully understand the tone, one must apply precission twice over. Strictly speaking, then, the tone is the First element of the sign (the sign-vehicle or “representamen”) considered in its Firstness as a not-yet-occurring quality (see Peirce 1998, pp. 289–299). For the record, I find the less familiar terminology of “qualisign/sinsign/legisign” more conceptually appropriate, and recognize that the full import of Peirce’s distinctions is best

brought out when they collaborate as an interwoven whole. That said, in the interest of letting my historical-*cum*-logical restoration latch onto those terms that already enjoy wide currency, I have elected to stay with the better-known appellations. There is some exegetical justification for this choice of terminology, since as late as December 1908 Peirce wrote in a letter to Lady Welby that “For a ‘possible’ Sign I have no better designation than a *Tone*” (1998, p. 480)—although he still juggled with alternative names.

Prescission is a particularly crucial tool for semiotics, given that a sign is essentially characterized not by any specific material status but by a general relational structure.

A Sign, or Representamen, is a First which stands in such a genuine triadic relation to a Second, called its Object, as to be capable of determining a Third, called its Interpretant, to assume the same triadic relation to its Object in which it stands itself to the same Object. The triadic relation is genuine, that is, its three members are bound together by it in a way that does not consist in any complexus of dyadic relations. (Peirce 1998, pp. 272–273; see also Posner, Robering and Sebeok 1997, p. 4)

If what we have in view is the whole interaction, then we are at the level of what Peirce called Thirdness, because we are considering all three parties involved. In such a case, we have a relation between two relata grasped *as* a relation by some third thing beyond it. This is usually the level of interest, especially when one is studying some particular cultural or natural instance of sign-use. But, if our goal is a philosophical analysis of the representational

structure itself, we may want to go further. If we now suppose this relation between two relata as it would be without any further recognition of it as a relation, we are dealing with Secondness. Two and only two things are involved, so we've effectively left the realm of intelligibility and entered that of brute contiguity (see Champagne in press).

Prescinding still further, we may also want to suppose one of the relata without its entering into any relation with another. Peirce writes: “[T]he idea of a quality is the idea of a phenomenon or partial phenomenon considered as a monad, without reference to its parts or components and without reference to anything else” (1931–58, vol. 1, para. 424). If we do this, we eliminate whatever alterity allowed that relatum (the term now becomes a misnomer) to have a “contour.” Thus, when we prescind relation away so as to consider only that which is related, we may no longer think of the resultant tone as we do a token, since doing so would require us to delimit it in some fashion and ascend back to Secondness. It isn't that what we began studying suddenly vanishes from existence proper; the analysis is one in thought and leaves our initial object of study untouched. But, if we choose to prescind all the way, Firstness is as far as we can go, and we obtain a pure quality that *could* be actualized but isn't.

Peirce argued that any representation involves an irreducible combination of three parties: firstly a vehicle, secondly that for which it stands, and thirdly a

mediating term of some sort for which there is such a “standing for.” In many ways, this is a very liberal definition, as it does not prejudge what might fill its various place-holders. Still, it is a robust formula, as the three components supply individually necessary and jointly sufficient conditions for anything to represent. An immediate or “non-mediate” relation, then, would be just that: a mere relation between two things which has no representational value (although it *can* have one, if taken as such by something external to it). Far from concluding from this that only what is represented exists, Peirce (1998, pp. 179–195) insisted that the triadic character of representation compels us to countenance realities that are patently non- (or more appropriately *sub-*) representational (I will make a big deal of this in the fourth chapter, when I distinguish the ontological commitments of semiotic theory from those of idealism).

If we avoid the fallacy of elevating the sign-vehicle into a sufficient condition of representation, we see that the tone is emphatically *not* a sign. “Phonemes, for example, are not signs since they mean nothing” (Nöth 1995, p. 80). To be sure, the tone is at the heart of any and all signs, since anything triadic perforce subsumes the dyadic and monadic. But it is a contradiction to approach a quality as if it were alone in the universe yet maintain that it stands for something *else*. Although this in no way means there is only one thing in the universe, it does show that a single quality would by itself be insufficient to represent.

Although the declarative intelligibility expected of introspective reports is possible solely by recourse to triadic representation, this appeal does not preclude but in fact *presupposes* simpler dyadic and monadic ones which are patently *not* beholden to any form of mediation (see “The Triad in Psychology,” Peirce 1992, pp. 257–262). Hence, even though these more elementary relations require the addition of a third term in order to be interpreted, we can discern their ordinal priority. In order to give an overview of the sorts of distinctions afforded by prescission, let us consider a fairly straightforward example (taken from Sebeok 1994, p. 1130; adapted from Peirce 1931–58, vol. 2, para. 230):

Because of his long *fast*, he was too weak to stand *fast* or hold *fast*
or even to run *fast*.

Through the lens of prescission, the word “fast” appears three times as type, four times as token, and once as tone.

The idea of token is perhaps the easiest to compass. To be a token is to be an occurrence, something that has a discrete spatial and temporal location. In contrast, neither the type nor the tone is bound by such immanence. The tone is a quality—considered prior to its occurrence as token. If we prescind, we can isolate the qualitative feature that is common to the tokens “fast” and “fast.” To be sure, this quality—in this case a configuration of marks—is very much *there* as constitutive of each token, and there is no way for us to get to a “suchness” except through a “thisness.” But the tone itself enjoys a priority which enables

us to logically isolate it while disregarding its numerically distinct manifestations. It is, Peirce would say, a First.

The tone may be the qualitative commonality which runs beneath various tokens, but its position in the triadic order prevents it from accounting for the specific manner in which such tokens appear. This last task belongs to the type. Like the tone, the type manifests a certain transcendence—albeit in virtue of a very different rationale. To be a type is to be a generality that legislates the occurrence of tokens. One type of “fast” applies the adjective to objects that are quick in motion, whereas another type pertains to things that are firmly fixed (from a semiotic point of view, it makes no difference whether the regularity which governs the appearance of a set of tokens owes to natural laws or grammatical conventions). It is important to stress that “[a] class, of course, is neither a tone nor a type in Peirce’s sense” (Willard 1983, p. 284), but is rather a collection of tokens. The members of such a collection can of course be grouped in virtue a shared tone (see Williams 1936, p. 702). Nevertheless, the rationale in virtue of which members of a given (natural or non-natural) kind reappear is not to be explained by the shared quality of those members.

There is a whole tradition preoccupied with the following situation. A set of things—orange traffic cones, say—are arranged in a line and put before a knowing subject. The subject then notices that there is some feature in common, then proceeds to inquire into the reality of that common feature. As

part of that inquiry, a story might be told about how the orange of the traffic cones was “abstracted away” from the particulars. Whatever its merit, solubility, or outcome, this entire debate has already skipped over what interests me. Indeed, the topic I engage with in this dissertation is best brought out by inquiring into a *single* traffic cone.

Nothing prevents anyone from starting their investigation with a single item instead of a group of items. Now, looking at a lone traffic cone, the philosophical tenet that interests me is that *this one cone has a quality even if no other cones like it exist*. This means that we do not need two instances of orange to mentally separate orange from an instance. Moreover, there needn't be any law-like tendency to reproduce cones for the quality at hand to be what it is. Hence, scrutinizing a singular instance reveals that, on some level, quality is not a “kind” or “class.” As a unique, singular, unrepeated (or unrepeatable) occurrence, the traffic cone has a distinctive colour. So, the story about “abstracting away” features common to many things is inapplicable here, since we are dealing with a lone instance. As such, grasping the orangeness of a singular traffic cone involves nothing remotely “inductive” (this motivates a taxonomy of inferences: going from a plurality of tokens to unencountered tokens is induction, but going from a single token to unencountered tokens is abduction). One will risk skipping right over this crucial nuance if one begins with a collection of tokens.

The account of precission that I pursue in this dissertation can be deployed in the absence of any plurality. The key to making progress is simply to ask what can be known of a single individual (instead of assuming a collection of such individuals). So, modifying my earlier example, it may help to contemplate the following:

fast

Looking at this single token, the two semiotic theses I am concerned with are that 1) the here-and-now “thisness” of the singular occurrence can be precinded from its “suchness,” and 2) the “suchness” or tone one arrives at by precission determines what similar tokens *would* be like without indicating whether such other tokens in fact *exist*. I explore thesis 1 in this chapter (and will spend the next chapter exploring thesis 2).

The separation of “suchness” from “thisness” is, I think, what led the Persian philosopher and Aristotelian commentator Ibn Sina (known to Latin Europe as “Avicenna”) to say that “Horseness is just horseness, neither of itself one nor many, neither universal nor particular” (quoted in Boler 1963, p. 50). Indeed, “what distinguishes Avicenna’s treatment of *essence* is the way he distinguishes three ways of taking it: as existing in individual things and so determining their kind, as understood to be shared by many such things, and as it is in itself” (Gracia and Noone 2006, p. 199). Ibn Sina influenced Scotus,

Scotus influenced Peirce, Peirce influenced me, and—since I think the tenet passed on is correct—I am striving to continue that chain of influence.

A handy summary of these distinctions would be this well-known but often truncated passage from Peirce:

There will ordinarily be about twenty *the*'s on a page, and of course they count as twenty words. In another sense of the word “word,” however, there is but one word “the” in the English language; and it is impossible that this word should lie visibly on a page or be heard in any voice, for the reason that it is not a Single thing or Single event. It does not exist; it only determines things that do exist. Such a definitely significant Form, I propose to term a *Type*. A Single event which happens once and whose identity is limited to that one happening [...] such as this or that word on a single line of a single page of a single copy of a book, I will venture to call a *Token*. *An indefinite significant character such as a tone of voice can neither be called a Type nor a Token*. I propose to call such a Sign a *Tone*. (Peirce 1931–58, vol. 4, para. 537; emphasis added)

Linda Wetzel, who authored the *Stanford Encyclopedia of Philosophy*'s online entry on “Types and Tokens,” alludes to this very passage in both the entry and her book (Wetzel 2009, p. xi), yet she neglects to mention the tone in her book, and buries a brief mention somewhere in the later parts of her website entry. Given that Wetzel equates types with universals (ibid., p. xii), I fail to see why the traditional notions of “universal” and “particular” should have been clad in labels that belong to a framework foreign to that topic.

Using Peirce's less familiar terminology helps to bring out what a transition can offer. As a "legisign," a type is a "law-like" regularity used as a sign-vehicle. A type thus ranges over more than one instance. Children learning a language may be adept at inducing from use even when there is a poverty of examples, but there must a minimum two examples and a possibility of implementing a learned rule *again*. There is no such thing, for example, as a word that can be used only once. Of course, as a token, a word can (only) be used once. What makes a brute event like a noise capable of bearing symbolic meaning is that it can be re-cognized and re-employed by language-capable creatures. Such recurrence is not the whole story, since there must be a convention that connects that recurrence to an object(s) in some concerted way. Denaturing the tone by switching to something less threatening to common assumptions like, say, a "qualitative type," would imply that the tone can somehow meet this demand. It cannot. A token has a quality, but there is no reason why that quality should ever occur again. There is a tremendous difference between what *does* occur repeatedly (type) and what *could* occur repeatedly (tone). To call the latter situation a "type" is to skip right over this crucial nuance. That is why Peirce saw fit to use different names.

We can therefore return to our example and say that "fast" is there three times when we consider it as a law-like regularity, four times when we consider it as a singular occurrence, and once when we consider it as pure quality (a nominalist would claim that there are only four singular events, but this would

severely cut down the sorts of sign-vehicles; see Stjernfelt 2013). As an ordinal First, “fast” is merely a potentiality, a “something” that *could* be employed to stand for something else (but doesn’t have to be). If and when such a quality *occurs*, “fast” is a Second. To the extent that such an occurrence is not a singleton, but appears repeatedly in accordance with some sort of rationale that is not merely haphazard (e.g., a habit), “fast” is a Third. Like a Russian doll, a type presupposes tokens which presuppose a tone. Even if it makes little sense to think of “fast” as existing in only one of these respects, be it a quality that never occurs or a law that never manifests itself, precission allows us to carefully distinguish these three axes:

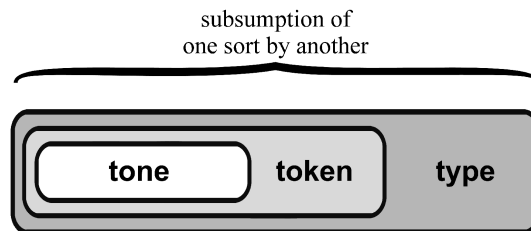


Figure 1 Trichotomy of sign-vehicles

Clearly, one is not likely going to make much of a dent on any problem regarding consciousness if one persists in obtusely equating the tone in this illustration with a sound or configuration of marks—a legitimate but by no means exhaustive case. The moral, in sum, is that one should impose no more restrictions on the tone than on the token and type—a popular pair also explained by an appeal to “words” yet routinely mobilized in non-linguistic

domains like philosophy of mind (see for example Guttenplan 1995, pp. 596–597, or more recently Jaworski 2011, p. 387). In this respect, however novel my proposal may be, it capitalizes on an already respectable move.

The main thing which concerns me here is the fact that precission can be deployed without assuming that anything it uncovers could truly stand on its own, that is, without the involvement of those other aspects deliberately disregarded. As David Savan explains,

The *occurrence* of a quality in space and time renders the quality at least in some measure a *sinsign* [i.e., token] [...]. Similarly, the *sinsign* is always, to some degree, a replica of a *legisign* [i.e., type] [...]. And a *legisign*, like a *qualisign* [i.e., tone], can not be encountered as such in experience [...]. What this means is that the empirical student of semiotics must use Peirce's trichotomy (if he uses it at all) as an analytical tool, by means of which to distinguish three different aspects of semiosis [...]. Empirically, no sign belongs exclusively to one of these classes. This is not to deny the value of the distinction, or the potential value for empirical research. It is only a caution against a threatening misunderstanding. (1987, pp. 23–24)

When we commit ourselves to carefully distinguishing what can and cannot be supposed independently of other suppositions, we engage in an exercise of epistemological hairsplitting that can go still deeper than the level of particular individuals. Just as “P” implies “possible that P” but not the other way round, the token asymmetrically implies the tone. This does not, I think, stray far from Duns Scotus' original account:

The first act of the intellect is the immediate and simple apprehension of an individual in so far as it is present and existing, and, as such, the first act of the intellect is opposed to the second or abstractive act of the intellect which reaches the object in its essence. [...] This second act of the intellect gives us knowledge of the essence of an object considered in abstraction from existence, whereas the former act gives us knowledge of an object as existent and actually present. (Almeder 1973, pp. 4–5)

To the extent we consider something (anything) absolutely *in itself* without regard to its actual occurrence, we have willingly robbed ourselves of any basis that could have allowed the situation to be more than a mere potentiality, because “existence depends on its subject having a place in the general system of the universe” (Peirce 1931–58, vol. 1, para. 424). Strictly speaking, a merely “possible that P” without any kind of actuality would be ineffable. If, as I will argue in the second chapter, there is a point beyond which linguistic symbols cease to work, then there is a point beyond which we have to stop trying to use symbols. We can still manage to “show” what we mean using indices and icons, but we have to accept that such sign convey information very differently than symbols do.

Just as the type as such cannot be encountered in experience, so the tone can only be encounter in a “degenerate” form, via a token. This means that, whenever we reveal the pure tone by prescission, we end up with a qualitative dimension so sparse that it forbids description (since this would require, at minimum, that one say something “more” than the quality itself). Clearly, the

qualia we find in Peircean philosophy of signs “are the artificial product of a highly sophisticated analysis, and not genuine existents revealed to ordinary, everyday scrutiny” (Goudge 1935, p. 536). A given quality may be used in a triadic sign, but looking solely at the quality we have no way to tell whether it serves any function. So, it becomes a fallacy of sorts to lose sight of this and construe the resultant quality as some distinct token. Since the error consists in taking a “doctored” product of our thinking to be a “discovered” fact independent of that intervention, it is apt to call it a *reification*.

The ongoing flow of conscious mental life has long been remarked for its stream-like quality, one thought always involving another one thought quite literally leading to another (James 1977, pp. 21–74). Phenomenologists have of course long recognized this (see for example Merleau-Ponty 1968, pp. 130–155). A sound philosophy of signs must recognize this too:

The abstraction from which we must begin concerns perceptual semiotic processes involving the *index* and the *symbol*, that is to say, perceptions that refer to the object as that which stimulates us, affects us, in a causal and/or contiguous relation with perception; or perceptual semiotic processes that refer to the already given habitual world on the basis of habits and conventions which now function automatically and passively. (Petrilli 2010, p. 268)

Semiotic inquiry, however, is not phenomenology, so no methodological constraint forbids us from adulterating this baseline of lived experience.

The stream of consciousness may be unified, but so long as it has parts, we can take this complexity and begin to remove some items. The first removals are more straightforward, and can in fact be regarded as “real” distinctions in Scotus’ sense. For example, “[w]hen I see the red book and hear the bird singing, there seems to be no good reason to deny that I could have a visually identical experience without hearing the bird singing, and so on” (Bayne and Chalmers 2003, p. 43). The move is fully permissible because anything complex subsumes something simpler.

We prescind the sense modalities, which usually blend. “The eye works together with the ear and with touch and taste, and so forth, in forming our perception of an object as sensible. Yet the contribution of each channel is distinct and irreducible” (Deely 2001a, p. 647). As the complexity of experience gets decomposed into simpler and simpler elements, we eventually have to move from perception to sensation. Here, only a “formal” distinction is possible. So, in order to reach a tone like, say, the smell of a burnt steak, a lot needs to be supposed absent (including our knowledge that a steak is present).

In prescinding, we attend to some elements and deliberately neglect others (see Deledalle 2000, pp. 5–6; Houser 2010, pp. 95–96; Stjernfelt 2007, pp. 246–255). It is not a matter of psychological focus, but of logical focus. In a sense, the method of prescission can be likened to the “simplification” inference

rule applied to (in our case, three-term) conjunctions in logical derivation (see Kalish et al. [1964] 1980, p. 60).

Now, suppose that, armed with this logical “focusing mechanism” (Stjernfelt 2007, p. 172), we have done quite a bit of prescriptive pruning and are left with, say, only four things (here using the term loosely). Can there still be a sign? Certainly, since one of these could conceivably stand for another to yet another (Heusden 2009, p. 118; Deacon 2008, p. 173). So we continue supposing simpler scenarios. Three items still allows for sign-action or semiosis. A major shift occurs, however, when we get down to two. All of a sudden, the situation becomes too sparse for us to assemble anything plausibly resembling a sign. We as thinkers gleaning this fact do not suddenly vanish from existence; we have been (and remain) there all along (a fact I will return to in section IV.VIII). However, in supposing increasingly simpler states of affairs, we eventually learn something informative about the constitutive conditions of semiosis. The passage from, say, 500 items to 4 can be implemented rather smoothly, and although the resulting setting becomes more and more impoverished and artificial, nothing beyond frustrated folk intuitions prevents semiosis from unfolding. When we dip below three elements, though, we hit a barrier that is very real, and which turns on impersonal considerations that are not at all the product of whim or social convention.

With less than three things there can be no sign-action, and this for principled (i.e., demonstrable) reasons. And since qualia are defined as simple qualities considered in themselves, the only way to confront them as such (besides inducing a vegetative state) is by prescissive abstraction.

Peirce recognized that the conclusions arrived at by way of prescission manifest a persuasive force very different from the sort provided by traditional argumentation (De Tienne 2000). The kinship of this Peircean appeal to the self-evident with phenomenology is now widely recognized (Dougherty 1980; Spiegelberg 1981, pp. 27–50; Stjernfelt 2007, pp. 141–159). In the same vein, the complexity premise can justly be classified as phenomenological. Yet, since quite a bit of epistemological doctoring needs to be done for that setting to yield the insights that are of interest to a study of signs, in prescinding we are performing something very different from phenomenological description (Goudge 1935, pp. 535–536), which is defined by its programmatic desire to capture human experience as it actually presents itself in first-person experience. Hence, although a scholar like Spiegelberg (1981, p. 33) is correct to draw a parallel between the semiotic tool of prescission and the Husserlian method of “eidetic variation” (see Husserl 1999, p. 70), I disagree with those (e.g., Haaparanta 1999, pp. 39–41) who think prescission can artificially tease apart and omit the bound features of experience whilst still falling under the rubric of the phenomenological.

Care must therefore be taken to disambiguate the kinship at hand. Going back to the parallel introduced earlier, if precission consists in using the simplification rule to infer “P and Q, therefore P,” then eidetic variation is akin to appealing to the commutative law to license “P and Q, therefore Q and P.”

Peirce did not address the “hard problem” of consciousness—at least not in the sense in which it is currently understood. That said, Peirce was fully aware of the problematic rifts that were starting to appear in the study of consciousness:

Matters of brain-physiology and matters of consciousness elbow one another in unsympathetic juxtaposition, in a way which can only be transitional, and is a sign for us, as well as we can look forward to conceptions not yet attained, that psychologists do not yet understand what mind is, nor what it does. I am not at all prepared to clear the matter up; but I dimly discern, I think, that the physiological view has not sufficiently affected the introspective aspect; and possibly the converse is true, also. (1931–58, vol. 2, para. 42)

I believe precission and the notion of tone he left us points the way to a more satisfactory theoretical account of “what it’s like” to enjoy conscious experience. Let us now explore that possibility.

I.V A Fork in the Road

Twentieth-century philosophy ignored not only a full third of Peirce’s trichotomy, but—perhaps more importantly—its very rationale. Nevertheless,

as a result of those semiotic notions that *did* manage to seep through (albeit in distorted form), today's philosophers of mind are unlikely to make a more onerous ontological commitment without explicitly recognizing that they are doing as much—it's rather hard, for instance, to endorse "type-type identity" without also being recognized as doing so and being given the appropriate label (e.g., Hill 1991). Crucial avenues are routinely lost, however, due to the fact that, in this climate, reification of the tone can happen without anybody even noticing the move. I submit that this is exactly what has happened in the case of phenomenal qualia.

There are many thought-experiments on the market which attempt, with various degrees of success, to prove that consciousness indeed comprises an irreducibly qualitative dimension. Although he has since sought to distance himself from the claims he once made, Frank Jackson's "knowledge argument" remains one of the more vivid examples. Jackson (1982; 1986) invites us to consider a neuroscientist who, upon being raised in a strictly black and white setting since birth, is allowed for the first time to emerge from her isolated confines and step into a fully-coloured environment. Even if she had mastered a comprehensive physical and functional account of colour prior to that virgin exposure, her new experiences would likely give her an *additional* insight into "what it's like" to actually see a colour like red. This is by no means the only way to bring out the qualitative dimension of consciousness. Kripke (1971; 1980, pp. 144–155), for instance, offers another, more technical, argument

which turns on considerations of modality. In any case, whoever acquiesces to the common distinction such arguments are intended to convey is eventually faced with the following question: What might this phenomenal experience be which seems to escape conventional explanations? Whatever the terminology, an all-important decision must therefore be made: what sort of ontological status should be ascribed to the qualitative features that are experienced in consciousness?

Given a generic commitment to phenomenal qualia, I believe the core alternative is whether one shall *reify* or *prescind*. Admittedly, even if one has no clue what the second disjunct consists in, raising the spectre of reification is enough to scare most thinkers into denying that the distinction had any basis to begin with. Of course, the idea that standard reductionist/eliminativist accounts are not exhaustive is tendentious, but if the “non-exhausted” party is dead wrong, then there is really no problem left for us to address, and our proposed reconceptualization cannot even get off the ground. I shall therefore take due note of this profound dissension and continue with the (in my assessment, correct) assumption that the perplexing realization that something is “left out” is not totally ill-founded.

Those who stand fast by their philosophical conviction that there is indeed something “more” to consciousness are faced with a fork in the road: 1) does the reality at hand warrant our engaging in some measure of “thing-making,” or

2) is the distinction—no matter how objective—nevertheless insufficient to sanction such a reification? My central contention in this first chapter is that, wittingly or not, *the pervasive type/token distinction compels one to adopt the first of these disjuncts, whereas semiotics provides one with the technical tools needed to comprehensively follow the latter path.*

At the risk of oversimplifying (I shall here focus on the most essential features of the problem), those who think mental life has a qualitative dimension usually gloss the situation in the following terms: there are *token* brain states on one side, there are *token* qualia on another side, and the task is to find something that would correlate these two seemingly disparate relata. This is what has come to be known, appropriately enough, as the “explanatory gap.” Although Farrell (1950) is credited with the first use of the expression, Levine is the more frequent reference. Interestingly, the original coining cited Nagel’s paper as an influence (see Levine 1983, p. 361n3). An earlier book (Deutsch 1959) alludes to a “mysterious leap” from the mind to neurophysiology. Sometimes, the parties in want of a union are grouped into their respective *types*. Yet, this way of viewing the situation unquestioningly treats qualities like pain and red as tokens and/or types. Given the omission I outlined earlier, the idea of tone—*construed as something irreducible to tokens or types*—simply does not come up. With no visible alternative, the accepted roster of options thus misses a potentially fruitful exit. This situation can be summarized as follows:

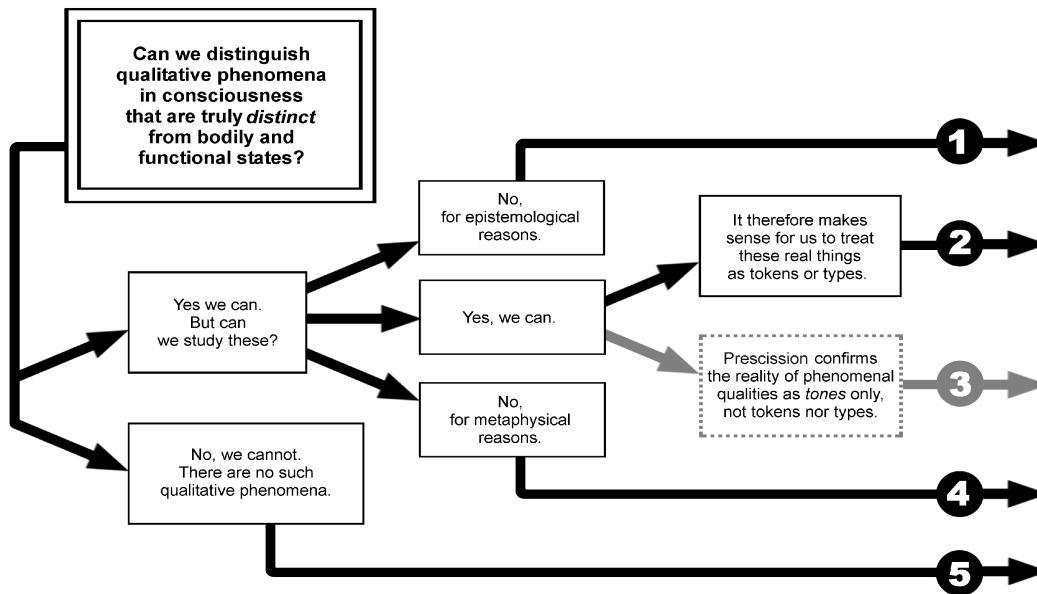


Figure 2 Explored and unexplored dialectic options

Although this diagram seeks to relate various programmatic commitments in an explicit and informative way, it is by no means intended as an exhaustive survey of all that could be said (or *not* said) on the topic of consciousness. Moreover, the diagram ends where most theoretical inquiries begin. Indeed, the five tracts that figure 2 tries to make explicit each lead to prolific research programs that rarely attend to their founding suppositions. The bulk of the literature on consciousness—including the explanatory gap—lies to the “East” of the right-hand arrowheads. Each basic combination of commitments carves out a space of intellectual possibilities within which further discussion unfolds.

In keeping with the mantra that precission is less than real and more than nominal, one could have filled the final box leading to the third tract with “Yes,

for *epistemological* reasons.” Likewise, the spirit of the second tract can be encapsulated by the answer “Yes, for *metaphysical* reasons.” This characterization is somewhat crude, but it does capture the essence of what’s at stake.

However one wants to describe the basic idea, what matters is that, given the current climate, the bifurcation which leads to either reification (path 2) or precission (path 3) goes pretty much unnoticed. As such, thinkers who acquiesce to the thesis that we can indeed hope to study qualitative phenomena typically proceed directly from this to a treatment of qualia as tokens and/or types. And of course, once this much has been granted, the problem of “relating” the disparate classes surfaces with particular inevitability.

This is where Peirce’s complete trichotomy has much to offer. The theorist working with a dichotomous palette of types and tokens is inadvertently strong-armed by her tacit commitments into the inference that if phenomenal qualities are real enough to be *discerned*, then they must exist in their own right as something genuinely *distinct*. But if we accept that precission allows us to robustly differentiate the layers subsumed in triadic relations, the fact that we can consider the tone to be logically prior to the token is taken to mean no more than that, ontology-wise. When the distinction between type- and token-physicalism was introduced in philosophy of mind, it changed the playing field by making room for a new position. By introducing the complete

type/token/tone distinction, I aim to do the same (acknowledging that a notional space was cleared does not require one to plant one's flag in that space).

In order to elaborate on this alternative way of viewing the situation, I want to examine the position defended by Ned Block. His contention that the literature on consciousness routinely conflates the “accessible” and the “phenomenal” has stimulated quite a bit of debate, be it among those who think he misconstrues the distinction or among those who think there is simply no distinction there to conflate. Not only is Block's controversial proposal interesting in its own right, it provides us with a template whence to better comprehend the manner in which “what it's like” comes to be regarded as “what there is.” As we shall see, the insight behind Block's distinction is basically right-headed, but runs into all sorts of problems because it construes qualia as tokens.

I.VI Carving Consciousness at the Joints Too Deeply

Rehearsing the widely held sentiment that the notion of consciousness is a “mongrel” which clumps together various objects that in fact are (and should be conceived as being) distinct, Block has challenged a seemingly innocuous inference he deems fundamentally mistaken. The psychological literature describes abnormal cases where, for all intents and purposes, an afflicted person is missing one or more of the aspect(s) and/or faculty(ies) we typically expect

consciousness to have (e.g., anything discussed in cognitive science that ends with “syndrome”). Faced with these puzzling cases, the stock assumption has been that this want of one or more aspect(s) and/or faculty(ies) is truly a *want* (in kind and not just degree), medical exceptions effectively confirming our starting intuitions about what constitutes a fully healthy consciousness. As an upshot, it is held that ascertaining the specifics of an abnormal dearth can better our understanding of consciousness in its normal state. This apparently benign line of thought is the “target reasoning” Block aims to undermine. A notable proponent of this view, according to Block, would be Searle (1992, pp. 107–108), who argues that if epileptics in the grip of a seizure do not display any flexibility and creativity in their behaviour, then we can conclude that flexibility and creativity are important traits of consciousness.

With its underlying inference explicitly identified, Block contends that “[a]lthough some variants of this sort of reasoning have some merit, they are often given more weight than they deserve, because of a persistent fallacy involving a conflation of two very different concepts of consciousness” (1995a, p. 228). In sum, Block believes that while certain mental faculties and thought-processes can be found wanting in afflicted patients, this does not provide a sufficient basis to infer that the *phenomenal* aspect of their conscious lives is correspondingly missing.

At the heart of this claim lies a distinction Block thinks is routinely neglected. In fact, as Block explains, “[n]early every article I read on the subject by philosophers and psychologists involves some confusion” of the difference in question (1995a, p. 236). In order to put an end to this widespread conflation (or at least make sure it does not go unrecognized), he gives this distinction a semi-technical gloss, the functional side being designated “*access-consciousness*” and the qualitative side “*phenomenal-consciousness*.” Block spends quite a bit of time trying to illustrate this proposal, and the specifics of his many inventive examples could be debated at length. But the hope seems to be that the distinction would be retroactively vindicated by a subsequent contention that the aspects distinguished are very likely *mutually-independent*, in the demanding sense of the term. Indeed, Block thinks empirical data and thought-experiments alike suggest that there can be access without phenomenon (1995a, pp. 243–245) and phenomenon without access (*ibid.*, pp. 239–243).

Let us consider the first of these situations, where agents would process information without actually enjoying any phenomenal episode. Block believes there is some empirical support for this in the case of “blindsighted” persons who cannot see things before them, yet supposedly can have reliable responses to these when pressed by an examiner to venture an answer. The oxymoron “blind + sight” was coined in 1974 by the neuroscientist Lawrence Weiskrantz and his colleagues (for an overview of what is involved, see Bornstein and Pittman 1992; Milner and Rugg 1992; as well as the more philosophical

treatment in Nelkin 1996). Referring to the information-processing model developed by Daniel Schacter (1989), Block (1995a, p. 229) suggests that the generally correct judgements (about unseen things) which these patients perform is made possible because they somehow *bypass* their “phenomenal-consciousness module” and proceed straight to the executive system whose end-product is overt behaviour (e.g., decisions, actions, and utterances).

That, as it stands, is a provocative suggestion. What Block is saying, in effect, is that qualia are real—and that we should think of them as such—even though it is possible for an agent without access to them to meet the demands of functionalism. Seeing how the case for phenomenal experience is already problematic when such subjective episodes are held to aid cognition, the urge to shave off qualia is all the more pronounced when a prominent defender of “phenomenal realism” (Block’s label in his 2002) insists that correct decision-making can obtain even when no qualitative episodes are available to a patient. Chalmers, for instance, voiced such worries:

[T]here is something very strange about the idea of an “epiphenomenal” P-consciousness module. The main motivation for epiphenomenalism is surely that experience seems superfluous to any information-processing; but Block’s idea suggests an implausible epiphenomenalism *within* the information-processing story. Indeed, if the module has no effect on other processes, then we could lesion it with no external change (same reports, even), and no empirical evidence could support the hypothesis. (1997, p. 149)

As if this wasn't inflammatory enough, Block enjoins us to fathom a "*super-blindsighted*" person who would declare that "Now I know that there is a horizontal line in my blind field even though I don't actually see it" and for whom visual information "simply pops into his thoughts in the way that solutions to problems we've been worrying about pop into our thoughts" (1995a, p. 233).

I do not want to wedge a "real" distinction between p-consciousness and a-consciousness, since I think a "formal" distinction is what is called for. This differs from Block. Indeed, "[i]t is crucial for Block's distinction to constitute a distinction of kinds that it is possible for representations to be merely accessible without at the same time being phenomenal" (Schlicht 2012, p. 313). "Blindsighted" persons are supposed to be a) able to see, in the sense of being capable of having the proper responses to visual stimuli put before them; and b) unable to see, in the sense that there is nothing "it is like" for them to perform (a). For that conjunction to obtain, one has to determine whether both conjuncts obtain. Yet, as far as I can tell, the only way (b) is ascertained is by asking the patients if they experience anything during the relevant acts, to which they answer in the negative.

For example, the patient (called G. Y.) reported that his visual experiences were "like black on black" but, despite giving this substantive description, the researchers preferred to credit this patient with a lack of phenomenal content

because “he still insists that the use of visual terms is for lack of a better alternative because in fact he does not see the stimulus” (Stoerig and Cowey 1997, pp. 554–555). Note that the illocutionary force of “he insists” is all that underwrites the claim that “*in fact* he does not see” (ibid., emphasis added). In another case, a patient (called D. B.), was asked whether a stick was horizontal or vertical. Following a forced-choice guessing paradigm, this patient was informed that he scored above chance and was asked: “Did you know how well you had done?” to which he replied “No,” “I didn’t—because I couldn’t see a darn thing” (exchange quoted in Weiskrantz 1986, p. 24). Informal conversations of this sort were deemed sufficient to establish that the subject’s experiential lights were off. One wonders to what extent the follow-up query alleviated the methodological challenge at hand: ““So you *really* did not know you were getting them right?” ‘No,’ he replied, still with something of an air of incredulity” (Weiskrantz 1986, p. 24; emphasis added).

One would have assumed that any attempt to establish the existence of a-consciousness without p-consciousness would have no recourse to introspective reports. However, as we have just seen, researchers basically rely on patients to inform them about “what is it like” to lack qualia (I surmise that, if “naturalist” philosophers of mind would look more closely into the matter, they would be perturbed to see how much weight is being put on introspective authority). It is said that “[t]he discovery of residual visual functions that were demonstrable in patients *who consistently claimed not to see the stimuli* [...] was met with a

surprise that bordered on disbelief” (Stoerig 2001, p. 88; emphasis added). This situation causes amazement only on the assumption that the first-person reports are reliable/authoritative.

Discussing the report of blindness by a patient who can nevertheless track any X shown to it, Block writes: “Temporarily taking his word for it, I am assuming that he has no P-consciousness of the X” (1995a, p. 233). It is unclear, textually at least, if and when Block ever withdraws this temporary concession. Well, if simply taking a person’s claims at face value is all there is to establishing the absence or presence of qualia, then the hard problem of consciousness has been solved. After all, I too can insist with great vigour that I experience colours (if any researcher is prepared to record my statements, we could publish those revolutionary findings). So, either blindsight is legitimate and the hard problem is not, or the hard problem is legitimate and blindsight is not.

Now, it has been suggested by Block (1995a, p. 233) and some others that “blindsight” may also occur in monkeys. Were this the case, it would nullify the above grievance since, in the case of monkeys there are no first-person reports. However, because a monkey cannot verbalize what it experiences, it is questionable whether it still makes sense to ascribe “blindsight” to an animal. A monkey cannot tell us it is blind, so how do we know it is? At first blush, the solution would seem easy: if, for example, the animal bumps into things, its

failure to perform regular motor functions in response to visual inputs can be a solid indicator of its blindness. So far, so good. The problem, though, is precisely that the monkeys in question *don't* bump into things (see Stoerig and Cowey 1997, p. 549). Indeed, “blindsighted” creatures (human or monkey) are supposed to function quite well. Therefore, to describe them as blind is a bit bizarre; it violates everything functionalism prescribes.

Surprisingly, the putative “blindness” of the monkeys is established solely in virtue of the fact that a portion of the brain is lacking (or lacking activation). In primates, stimulation of the eyes usually triggers optic nerves that then activate a portion in the back of the brain called the striate cortex. Researchers thus reason that a monkey lacking a striate cortex is a blind monkey. Again, that seems like a plausible inference. However, if a region of the brain is considered relevant to vision because its absence impairs visual function, and if its absence is subsequently shown *not* to impair visual function, what reason do we still have to consider that region relevant to vision?

In reality, total eradication of a given brain region is very difficult to achieve. “For example, there might be diffusion of light within the eye so that some of it spreads into the intact field and provides a kind of subtle cue about the presence of a visual event” (Weiskrantz 1986, p. 11). In the best known case, “[t]here was some visual cortex left, and the situations in which she [the female monkey Helen] showed unprompted visual discrimination were natural ones in which

there was no control of where the stimuli engaged her retina” (Block 1995a, p. 233). Those eager to get philosophical mileage out of such rare cases might want to gloss over the fact that “*almost* the entire visual cortex of the monkey’s brain” (Humphrey 1992, p. 88; emphasis added) was surgically removed, but the question of residual tissue matters. By analogy, we would hardly declare kidneys unnecessary solely on account that, once, a patient had *almost* all of her kidney tissue removed yet still managed to filter her blood.

Let us assume for the sake of argument that complete removal of a monkey’s striate cortex has been histologically verified and that such an operated monkey goes on to perform visual tasks quite well. The sense of amazement we would then get from such findings would stem from a contrast: we assume that the striate cortex is needed for vision, so we are understandably surprised when the input-output functions survive even when that cortex is missing. Monkey “blindsight” thus trades on sustaining the joint endorsement of two claims, namely that “Cortical activation is needed for vision” and “Cortical activation is not needed for vision.” Well, which is it? The situation is analogous to removing a cornerstone crucial to holding a building erect and then finding out that the building does not collapse. We could either say that 1) the building can mysteriously stand in spite of the cornerstone’s absence, or we could say that 2) the cornerstone was not a cornerstone after all. Clearly, option (2), which says that it was not a cornerstone after all, is the best explanation.

There may be other reasons for being interested in a given region of the brain (like iconic imprinting, which I will discuss in section III.III). But, if a brain region R is considered necessary for the performance of a function F, and F is shown to occur even in the absence of R, then R can no longer be considered necessary for the performance of F.

Weiskrantz (1986, p. v) remarks that his oxymoronic name “blind-sight” quickly “caught on.” In philosophy, the wave of enthusiasm for these cases has been fueled in large part by their resemblance to “zombies,” those hypothetical creatures that perform all humans can without enjoying any of the qualitative experiences (see Kirk 1974; Kirk 2005; Chalmers 1996, pp. 94–105). To his credit, Block (1995a, p. 233) prudently states that he “doesn’t know whether there are any actual cases of A-consciousness without P-consciousness.” Owen Flanagan, however, believes that “the case of blindsight shows its actuality” (1992, p. 149). That is hyperbole.

A mutual-independence of access and phenomenon would entail another sort of zombie, who would have the phenomena without having access to them—as in the case of a busy person who “hears” but does not “notice” the loud drilling noise that has been present near her during an engaging conversation (Block 1995a, p. 234). In terms of Schacter’s model, this would mean an activation of the phenomenal module that has no repercussion upon anything beyond itself, be it access-consciousness (of the sort that would prompt the

more overt realization that “Wow, that noise is really loud and/or bothersome”) or the executive system which could trigger reactionary behavioural outputs (say, covering one’s ears or moving the conversation to another location).

Staying true to his distinction, Block argues that no matter how inaccessible they may be from the standpoint of information-processing, qualia could in fact be present in such a zombie’s phenomenal-consciousness module (for an early statement of the mutual independence of function and qualia, see Block and Fodor 1972; as well the criticisms by Shoemaker 1975). Schlicht notes that, “if Block is right, then there is not only a large part of our mental life that is inaccessible to us, namely the unconscious part; in addition, even a large part of our *conscious* mental life will then be inaccessible to us, since he argues that there are phenomenal yet inaccessible experiences” (2012, p. 310).

Block (2007) stresses the need to search for such a phenomenal module without expecting the episodes enjoyed by a subject to be in any wise reportable. He argues that if we make reportability a non-negotiable desideratum of our explanation, we will see no need to investigate the qualitative experiences themselves. However, “access” in Block’s sense is thinner than a verbal report: “Reportability is a legacy of behaviorism that is less interesting than it has seemed. The more interesting issue in the vicinity is not the relation between the phenomenal and the reportable, but rather the relation between the phenomenal and the cognitively accessible” (2007, p. 484).

So presumably, one could have access and still not be able to express this in any overt act of communication.

It is usually sound methodology to think that, if a posited object does not manifest itself in any overt way, the object in question does not in fact exist. Indeed, it seems reasonable to say that a rare beast cannot be so rare that no one ever witnesses it; and that one must first establish the actual reality of a species before labelling it endangered and adopting legislative measures. This, however, is the (purportedly hasty) reasoning Block seeks to assail. Although one typically determines the absence of an aspect and/or faculty of consciousness by way of a contrast with its manifest presence in healthy persons, Block claims that the evidence adduced to sanction such a move is inconclusive, as it does not fully exclude the possibility that the aspect and/or faculty in question might still lurk in an afflicted patient's mind.

To be sure, Block recognizes that his distinction makes for some very strange and onerous consequences, notably the two zombies just sketched. But before we raise the razor of parsimony, he asks us to consider whether the view of consciousness we adopt takes due consideration of experiments that supposedly show patients reliably executing various cognitive tasks without recourse to the sort of phenomenal resources healthy persons would typically marshal. As Levine rightfully says: “[T]o the extent that there is an element in our concept of qualitative character that is not captured by features of its causal

role, to that extent it will escape the explanatory net of a physicalistic reduction” (1997, p. 553). The question of course is whether this is actually the case—that is, if and to what extent qualia indeed merit explanatory attention in their own right. Although assorted empirical findings are often quoted in support of various positions, the debate largely hinges on which party should assume the burden of (dis)proof. Block (1992) has explicitly accused theorists of begging the question against phenomenal-consciousness, and has recently reiterated this claim in greater detail (in his 2007; for a further discussion of Block’s stance and the inference he deems inconclusive, see Tye 1996, pp. 291–295).

Convinced by the sorts of arguments presented by Block, Nagel, Jackson, and others, some (most notably Chalmers 2010) have proceeded to develop positive theories that try to account for this elusive feature of mind. Others, unimpressed by Block’s distinction or uncomfortable with the thorny methodological issues that are raised when one countenances a (potentially inaccessible) phenomenal-consciousness “module,” have simply followed through with the reductionist program, unabated. Still others have tried to make sense of the fairly strong intuitions Block appeals to by recasting them in a more reductionist-friendly mould. In the final tally, although Block has not garnered many outspoken adherents, his proposed distinction has come to be seen as “very useful,” and most theorists would likely agree with Chalmers that, at the very least, “[t]here is clearly a *conceptual* distinction here” (1997, p. 148;

emphasis in original; see also Chalmers 1996, p. 22; as well as Bayne and Chalmers 2003, p. 28).

The question, then, is how best to handle a “conceptual” distinction which does not seem to latch onto things that are real in the demanding sense, but which is nevertheless convincing enough to sustain a fairly stable set of descriptions. Barring an outright denial, we can recognize that something tangible is animating those who think the qualitative dimension of consciousness is distinct enough to escape standard accounts.

Some philosophers have suggested, however, that there might be nothing more to it all than this sociological convergence. As one of the most vocal (and eclectic) opponents of qualia, Daniel Dennett (1988; 1991a) maintains that human consciousness is best understood as a cultural construct of sorts; inasmuch as one would never claim to possess consciousness unless one did not acquire the very concept from one’s societal surroundings. Objecting to this view, Block states: “Now I hope it is obvious that P-consciousness is not a cultural construction. Remember, we are talking about P-consciousness itself, not the concept of P-consciousness” (1995a, p. 238). There are many ways to read this statement. For one thing, it could be argued that Block does not fully appreciate the substantial point Dennett is trying to make when he asserts that the *ontology* of consciousness is essentially cultural (to affirm that we have cultural constructs for those things we talk about is a truism, and would make

Dennett's thesis a mere platitude). Indeed, Block (1999) thinks the construal of qualia as social constructs is "ridiculous." For my purposes, I should like to draw attention to the specious character of Block's laconic reply. What it amounts to, in effect, is the declaration that a certain thing (in this case phenomenal-consciousness) has a full-fledged existence apart from discourse, since we can talk of "the-thing" itself in abstraction from "discourse-on-the-thing." In my view, this sort of reasoning betokens a reification—one which runs counter to the Scotist insight that we can accurately identify (and intelligibly discuss) a feature without that feature thereby becoming a supplementary "thing" existing in its own right.

Sensing the tensions at hand, Güzeldere makes an insightful remark that encapsulates the predicament I diagnosed earlier (in figure 2):

[C]ould it be that the particular way Block's distinction carves out phenomenal consciousness, separating it *completely* from its causal and functional aspects in accord with the "segregationist intuition," renders its investigation by means of scientific methods theoretically impossible? Put differently, could we be painting ourselves into a corner by a conceptual commitment to Block's distinction such that we end up with a number of straightforward problems about A-consciousness and a conjured-up "hard problem" of P-consciousness that in principle admits no solution? (1997, p. 29; emphasis added)

Given that considerable difficulties confront Block's "phenomenal realist" position (and Dennett's instrumentalist position; see Dahlbom 1993), I think it

might be worthwhile for current philosophy to explore an unheeded tract which explicitly centres on a separation that is less than real yet more than nominal. Such a framework would have the potential of doing justice to Block's intuitive appeals whilst resisting an all-out "segregation" of the mind's qualitative dimension. Let us then return to the fork in the road identified earlier and venture down a new path.

I.VII What It Could Be Like

As we saw earlier, one of the central tenets of Peircean semiotics is that the very idea of representation, carefully unpacked, presupposes a three-place relation that cannot be sundered; that is, one which cannot be reduced to the dyadic or the monadic on pain of no longer representing (see Peirce 1998, pp. 272–273, 411). This does not, however, mean that qualia are representational. Semiotics does not say that a quale represents, but rather that representation perforce involves a quale—there is no reciprocity (i.e., no monad is a triad). This is the crucial feature that is so difficult to make sense of when one follows the path of reification, as witnessed by Block's suggestion that access-consciousness is what allows phenomenal-consciousness to be "poised" for use (1995a, pp. 231, 245n7). Addressing this problematic idea, Denise Gamble writes: "An ontology of representations is a powerful tool for explaining some types of content. But not every internal stimulation or activation in mentality

need be a representation. Is there no other conceptual framework for understanding phenomenology?” (1997, p. 150). There is indeed.

Although Peirce draws on a distinct phenomenology (Spiegelberg 1981, pp. 27–50), the notion of the “phenomenal” suggests a “phenomenalism” which he as a scientific realist found repugnant (see Ransdell 1978). Some semioticians (e.g., Colapietro 1989, p. 18) think the term “representation” has suffered so much harm at the hands of sceptical philosophers that we should opt for “mediation” instead. I am not prepared to give it up. “Representations,” from a semiotic point of view, are not a special class of objects such that certain (typically *mental*) things inherently *have to* represent while others can never do so. Much the opposite: the tone emphatically does not have to be the ground upon which interpretation pole-vaults to an object. If and when it is, then of course it has; and there is no question here of denying that all-important service (known as “*renvoi*” in French, *pace* Jakobson 1988, p. 452). But, the whole point of *prescission* is that we can recognize quality as an ordinal First in such a relation, thereby incorporating into our theoretical picture the idea that a tone *can* stand for something else *but need not do so*. Thus, despite the unbreakable (triadic) bond which characterizes any representation, whatever is burdened with the logical duty of standing for something else—no matter what it may consist in—can be *prescinded* in such a way as to disregard its employment in that capacity.

This means that, *pace* Block (1995b, pp. 33–34), orgasms don't have to be “about” anything. But it also means that if one is led to infer from this “that something very pleasing is happening down *there*” (Tye 1995, p. 269), then, to that extent, the orgasm is acting as a sign (in this case, an index). From a semiotic standpoint, however, there is nothing about bodily feelings or sensations that make them more apt to serve as bearers of meaning, nor is there anything that bars a particular class from doing so. Block's talk of “mental paint” (1995b, pp. 27–29), though couched in a mentalistic idiom, at times comes very close to the notion of tone. Block does not think that representational properties are intrinsic, so can view his mental paint as tone. Even so, Block's proposal is less desirable because it implies (by its very name) that the issue of whether something is or is not a vehicle of representation—of whether it stands for something else to something—can somehow be answered by studying the nature of the candidate in question. According to the view I recommend, that is a misguided endeavour:

[T]he *being* of the sign is the triadic relation itself, not the elements related or structured according to their respective roles [...]. The representative element within this triadic structure, which we loosely call a “sign,” “in itself” is *not a sign at all*, but one of the three elements *necessary to the being of a sign*, one of the three legs on which the sign walks in working its way through the world, and, indeed, the “foremost” leg, insofar as it is the leg which takes the direct representative step in carrying a semiosis. (Deely 2005, pp. 176, 178)

Block states that he does “not want to claim that there are non-representational phenomenal features of every experience or that when there are, these non-representational features form support [for] the representational features in the manner of a ‘base’” (1995b, p. 28; see also Seager 1999, p. 4). That is exactly what semiotics claims, the tone being the ultimate ground one can reach. Having said this, one must keep in mind that “[w]hat is sign-vehicle one time can be significate [i.e., object] another time; and what is interpretant one time can be sign-vehicle the next time; and so on, in an unending spiral of (as Peirce liked to say) abductions, deductions, and retroductions through which symbols grow” (Deely 2005, p. 178).

Although, as we shall see in the fourth chapter, the cardinal layers at the heart of Peircean semiotics can provide us with a coherent metaphysical outlook, the human ability to prescind certain features need not entail any corresponding ontological profligacy. The *Dictionnaire de la langue philosophique* cites the definition of “la précision” given by J. B. Bossuet as “*l’action que fait notre esprit en séparant par la pensée des choses en effet inséparables*”—“the act which our mind does when it separates by means of thought things that are in point of fact inseparable” (*Logique*, I, xxii; quoted in Foulquié and Saint-Jean 1962, p. 562; my translation). It is fully consistent, therefore, for one to acquiesce to the above distinctions while steadfastly denying that there are 8 *fast*’s in our earlier example (obtained from adding 3 types + 4 tokens + 1 tone).

Block, in contrast, suggests that the fact that we can conceive of a quality not accessed in any overt state of consciousness is evidence that a distinct phenomenal-consciousness module might truly exist. Let's go back to an example mentioned earlier and see how he describes the qualia involved (I will quote from the anthologized version, which is more carefully worded):

[W]e have P-conscious states when we see, hear, smell, taste, and have pains [...]. Here is another reason to believe in P-consciousness without A-consciousness: Suppose that you are engaged in intense conversation when suddenly at noon you realize that right outside your window, there is—and has been for some time—a pneumatic drill digging up the street. You were aware of the noise all along, one might say, but only at noon are you *consciously aware* of it. That is, you were P-conscious of the noise all along, but at noon you are both P-conscious *and* A-conscious of it [...]. Only at noon is the content of your representation of the drill *poised* for use in rational control of action and speech [...]. The example shows the conceptual distinctness of P-consciousness from A-consciousness and it also puts the burden of proof on anyone who would argue that as a matter of empirical fact they come to the same thing. (1997, pp. 380, 386–387; in the original article, Block speaks of a “deafening” drill)

Stripped to its essentials, Block's argument can be summarized as follows: 1) Phenomenal-consciousness is conceivable without access-consciousness (i.e., the passage above). 2) Access-consciousness is conceivable without phenomenal-consciousness (i.e., the projected case of “super-blindsight”). *Ergo*: 3) We are entitled to distinguish phenomenal-consciousness from access-consciousness. If we heed the insight that triadic relations can be decomposed

without their involving a multiplicity of distinct objects, we can proceed straight to the conclusion after the first premise. By contrast, the theorist working with the incomplete type/token distinction needs both premises to proceed to the conclusion—which is then glossed as proof that qualia exist as tokens. Indeed, Block has made his ontological commitments in this regard crystal clear: “Whether we use ‘consciousness’ or ‘phenomenal consciousness,’ ‘awareness’ or ‘access-consciousness,’ the point is that there are two different concepts of the phenomenon or phenomena of interest. We have to acknowledge the possibility in principle that *these two concepts pick out different phenomena. Two vs. one: that is not a verbal issue*” (2000, p. 133; emphasis added).

Since the mutual-independence upheld by Block is logically posterior to the distinction on which it is deployed, one can buy into the distinction without endorsing the onerous relational thesis which would have them be mutually independent. The debt to Duns Scotus is apparent: existential inseparability indeed does not entail identity in definition. Of course, Scotus was not the only philosopher to have grasped this crucial fact. As Joseph Levine writes in discussing the problematic entanglements that accompany arguments for the full reality of qualia in consciousness: “One cannot infer from a variety of modes of access to a variety of facts being accessed” (1997, p. 546). I believe semiotic theory helps to theoretically articulate this. The fact that we can

rigorously prescind a tone from a token is not a sufficient reason to think that it exists in its own right, apart from its functional role(s).

In short, just as Ramsey suggested that Wittgenstein would have profited from distinguishing between the type and the token, so I hold that carefully heeding the token/tone distinction can lend support to Block's insightful but embattled propositions. Consider for instance the following passage by Peirce:

Among phanerons [Peirce's name for phenomena] there are certain qualities of feeling, such as the color of magenta, the odor of attar, the sound of a railway whistle, the taste of quinine [...] I do not mean the sense of actually experiencing these feelings, whether primarily or in any memory or imagination. That is something that involves these qualities as an element of it. But I mean the qualities themselves which, in themselves, are mere may-bes, not necessarily realized [...]. *A quality of feeling can be imagined to be without any occurrence, as it seems to me. Its mere may-being gets along without any realization at all.* [...] I suppose you will tell me that no such thing could be alone in the universe [...]. But I point out to you that these things are only known to us by extraneous experience; *none of them are either seen in the color, heard in the sound, or felt in the visceral sensation. Consequently, there can be no logical difficulty in supposing them to be absent,* and for my part, I encounter not the slightest psychological difficulty in doing so, either. (1931–58, vol. 1, para. 304–305; emphasis added. See also Peirce 1998, p. 150)

Precission teaches us that underneath all the hubbub of thought, discourse, and that general “action of signs” which Peirce called semiosis, there is the tone: a monadic dimension that has the *power* to be the qualitative vehicle of

representation but which in virtue of its ordinal primacy remains serenely ignorant of whether it is *actually* employed in so raucous an activity (see Peirce 1931–58, vol. 1, para. 422–426).

The kinship between Block’s intuitive illustrations and Peirce’s analysis is striking. Yet, with these two interpretations now in plain sight, would it not be preferable to keep intact their common contention that a legitimate distinction is at play—all while recognizing that it owes to our ability to “peel off” occurrences and glance in an abstract fashion at the qualities they presuppose? By refusing to reify the features it prescind, such a semiotic approach would allow us to respect the distinct character of phenomenal experience without turning it into a chimera. Going back to the Russian doll metaphor, precission shows us that the distinctness of qualia does not put them *besides* mental states, but *in* them. On this view, *it is not that access-consciousness and phenomenal-consciousness are tokens of different types; rather, the latter is the tone of the former’s tokens.*

This explains why “A-consciousness and P-consciousness are almost always present or absent together” (Block 1995a, p. 242), and supports Chalmers’ surmise that “the co-occurrence of phenomenal and psychological properties reflects something deep about our phenomenal concepts” (1996, p. 22). But, given that tones are not themselves occurrences, this steadfast accompaniment in no way means that the qualities at hand somehow

“supervene” on the corresponding tokens (Chalmers 1996, pp. 32–89; Kim 1990). Although I am reluctant to adopt a facile “-ism” for fear that the crucial semiotic interrelation I have striven to explicate might be forgotten, it could be said that the situation involves a species of *subsumption*.

Some remarks on subsumption have recently been provided by Tim Bayne (2010, pp. 20–21). Bayne agrees with me that “[t]he paradigm case of subsumption is the relation between a complex phenomenal state and a simpler state that is intuitively one of its ‘component’” (Bayne and Chalmers 2003, p. 40). However, whereas Bayne and Chalmers describe subsumption as “a relation among token phenomenal states” (2003, p. 40), my account takes the subsumption to extend farther, since it regards any token state as subsuming a tone. The unified stream of consciousness (which is mine as a subject) can be cut into signs, which can in turn be cut into three parts. Despite Bayne’s endorsement of a mereological model (2010, pp. 20–46), it never occurs to him to also sunder tokens.

Try as one might, I believe it is impossible to reproduce or mimic the relation provided by tract 3 in my earlier diagram with the more onerous resources of tract 2. To the extent I am right, then incorporating the full trichotomy creates a shift in the topography of the debate—a change which might spell promise for an inquiry that, by its own admission, has been deadlocked before a seemingly unbridgeable chasm. Attentively considering the

advantages and disadvantages that come with Block's influential distinction, Chalmers summarizes the current situation in three points: "(1) one can imagine access without experience and vice versa; (2) access can be observed straightforwardly, whereas experience cannot; and, most important, (3) access consciousness seems clearly amenable to cognitive explanation, whereas phenomenal consciousness is quite perplexing in this regard" (1997, p. 148). To layer a summary of my own, the outlook I advocate gives good grounds to be wary of the symmetrical "vice versa" of (1), agrees with the gist of (2), and marshals tools which—when properly understood—allow (3) to appear less foreign from the standpoint of explicit understanding.

Block compares the contribution of phenomena in conscious functions to that of water in a hydraulic machine (1995a, p. 229). This is a fair analogy, especially since any token perforce implies a tone. However, precission reminds us that water without hydraulic machinery would be just a puddle. Since such a lack of access would entail a tone without any token, talk of "qualia" in the plural would be inaccurate: such a mind would be an unbounded expanse filled with a unique "what it's like" that would literally be "I know not what." We already have a name for such a "zombie": we call it a vegetable (see Brandt 2007, pp. 61–62; Farrell 1955, p. 500).

Precission is a form of explanation which we can in turn explain—an unmysterious technical method we can share amongst ourselves and apply with

constancy. Alluding to this mode of distinction, Peirce wrote: “It may be noticed that, throughout this process, *introspection* is not resorted to. Nothing is assumed respecting the subjective elements of consciousness which cannot be securely inferred from the objective elements” (1992, pp. 3–4; compare this with Heil 1988). Indeed, it should be emphasized that my discussion of the qualitative dimension of consciousness relegated the (inescapable) frame of reference of lived experience to the background and at no point appealed to the idiosyncratic history of the reader in order to make its technical proposal intelligible and/or persuasive. This dissertation proposes something different from phenomenology.

The semiotic account of phenomenal qualia I have tendered would thus seem to meet the desideratum laid down by Dennett, who encouragingly stressed that “[t]he third-person approach is not antithetical to, or eager to ignore, the subjective nuances of experience; it simply insists on anchoring those subjective nuances to *something*—anything, really—that can be detected and confirmed in replicable experiments” (2001, p. 231). Semiotic inquiry can satisfy this because, as we have seen, it is patently *non-Cartesian* from the start. As Thomas Short explains: “[S]ince the human mind, according to Peirce, is constituted by semeiotic processes of a special type, it should be possible to use the concept of semeiosis to analyze consciousness, and that precludes using the concept of consciousness to analyze semeiosis” (1986, p. 105).

I.VIII Tentative Excursus in Ontology

Tracts 2 and 3 in my earlier diagram (figure 2) both agree that qualia are amenable to some sort of description and/or analysis. In light of this shared commitment, what sort of methodological rigour can one expect? Although his ontological allegiances leave no room for ambiguity, Block's own answer on this front is a qualified optimism. While he thinks there is no reason to be embarrassed by the fact that no non-circular definition of phenomenal-consciousness can be formulated (Block 1995a, p. 230), he has acknowledged that a realistic stance vis-à-vis this slippery aspect of consciousness and an endorsement of scientific naturalism do not fit comfortably together (see his 2002). That appraisal seems right. However, the semiotic framework I have offered as a substitute allows one to account for the fact that we can discern qualia-without making promises it cannot keep. Precission suffices to establish that a tone is not a token. On this "quasi-logical" reading, one is not led to onerously postulate a separate "module," the actual presence of which researchers would subsequently have to empirically vindicate (the researcher who seeks to confirm that $1 + 1 = 2$ by adding drops of water basically invites the objection that two drops joined yield but one; but staying grounded in the theoretical idiom suited to that truth obviates such criticisms).

The Scotist gloss on precission as a distinction "less than real yet more than nominal" will not be very helpful, however, if it is taken to entail some

mid-way “subsistence” or other disingenuous “quasi-reality.” That’s why Peirce, in spite of his admiration, emphasized that for Duns Scotus’ logic to fruitfully contribute to a scientific worldview, it would have to be “torn away from its medievalism” and kept under guard by “continual wholesome reminders of nominalistic criticisms” (1931–58, vol. 1, para. 6). Duns Scotus, as we saw, defended the ideas of Ibn Sina, who had argued that, though the human intellect groups concrete instances into various natural kinds, the “essence” which makes each individual item what it is must in some sense be *prior* to its “existence” (see Noone 2003, pp. 104–105; Jordan 1984, pp. 143–147). In a way, this resembles Peirce’s contention that there is “no logical difficulty” in “supposing” a quality or suchness that “is not in itself an occurrence” (1931–58, vol. 1, para. 304–305). An informative parallel can thus be drawn between the type/token/tone distinction and the medieval tripartition of natures as *post rem*, *in rebus*, and *ante rem* (see Gracia and Noone 2006, p. 199; Goudge 1935, p. 538; Almeder 1973, p. 5).

As interesting as such a gloss is, however, it presents severe limitations one would do well to keep in mind. In a full-blown reification that makes Block’s activated-but-inaccessible module pale by comparison, the idea of the *ante rem* was usually taken as what the Divine Mind would be (was?) contemplating prior to the mysterious “contraction” of inchoate commonality into individualities (Stjernfelt 2007, p. 35); whereas from a (more humble) semiotic standpoint, the apprehension of the tone’s priority comes simply by way of a

cognitive operation directed at a specific subclass of things (“signs”) which allow for such splitting to begin with. According to Peirce’s categorial architecture, representation entails relation and relation entails quality. But in establishing this, we always work our way down from a stock of representations, and thus never really encounter a quality that isn’t actualized. This lack of actuality is not a fault. Writing about the qualities at the heart of semiosis, Goudge remarks that:

Although they are abstractions in the sense that they never exist in isolation in any experience or state of consciousness, we have no right to condemn them on that account. To do so would be to condemn thought itself [...]. Hence the mere fact that “qualities of feeling” can not be sharply articulated by means of introspective examination, provides absolutely no ground for denying their logical priority in knowledge. (1935, p. 537)

In his well-documented study of Peirce’s intellectual relation to Scotus, Boler (1963, p. 102) suggests that Peirce objected to the notion of a dispositional “substantial form”—perhaps the closest scholastic analogue to his qualitative “may-being”—on account of its failure to elucidate the monadic structure (or lack thereof) involved. In this sense, the framework I have urged, though largely continuous with a scholastic past, supplies a tangible advance. Centuries of semiotic reflection have produced some hard-earned results which we can now distil to a handful of secure tenets (a store of achievements nicely summarized in the otherwise eclectic Nöth 1995, pp. 79–80). Using the evocative terminology employed by Armstrong (1989), we know that

representations necessarily have to be “layer-cakes” (and cannot be unitary “blobs”) on pain of no longer representing, and that this irreducible complexity in turn allows us to prescind—i.e., distinguish without extinguishing—the constituents that make up a whole greater than its parts. Moreover (and this is of special importance to the “extended mind” conception in cognitive science; compare Clark and Chalmers 1998 with Skagestad 1999), the previous holds true regardless of whether the triadic representation that pole-vaults on a qualitative vehicle to reach its object does so on the basis of a correlation that is subjective or objective, conventionally recognized or truly bound to its object.

This construal of representation as a triadic relation of “standing for” (“*stare pro*”) manages to show that there is a “glut”—to borrow a particularly apt term from multi-valued logic—between the extremes exemplified by Block’s realism and Dennett’s instrumentalism. Minimally, we have to be able to wedge some sort of distinction in a sign to even realize that it isn’t its object—that the word “dog” doesn’t bite or that the smoke-from-the-fire is also just plain smoke. Still, the partitioning of a sign’s three components is not the product of fiat, in spite of the fact that no quality is by itself significant and that the meaning we ascribe a vehicle can be wholly conventional (although it need not be). However one wants to describe all of this, Peirce was probably on the right track when he characterized semiotics as “the quasi-necessary, or formal, doctrine of signs” (1931–58, vol. 2, para. 227).

As was seen in the previous sections, Peirce's semiotic conception can help elucidate the intuitive appeal of many thought-experiments that are pro-qualia. The proponent of phenomenal-consciousness may thus be inclined to think that precission affords her a means of further articulating her thesis that consciousness includes an irreducible qualitative dimension. As Frank Jackson insists, "Physicalism is not the noncontroversial thesis that the actual world is largely physical, but the challenging thesis that it is entirely physical" (1986, p. 291). Accordingly, if it can be shown that the tone simply cannot be reduced to the token or the type, then this should lend appreciable support to the (for some, recondite) contention that there is "more" to consciousness than purely physical occurrences. Despite having reprimanded the reification that made this qualitative dimension some separate "thing" existing in its own right, it seems correct to say that I have vindicated Block to a certain extent by showing that, this important flaw aside, he had a point after all.

I will explore metaphysical questions more fully in the fourth chapter. For now, it suffices to note that precission can gel with parsimonious ontological outlooks. In surveying various positions on the subject, Paul Churchland points out for example that "[t]he identity theorist can admit a duality, or even a plurality, of different *types of knowledge* without thereby committing himself to a duality of *types of things known*" (1988, p. 34; see also his 1992, pp. 67–76). This idea, which I will explore more fully in the next chapter, clearly harks back to the Scotist insight I have reiterated throughout this paper. But,

according to this interpretation, it should silence—not embolden—the phenomenal realist. All I have done is tell a convincing story about how we discern features, but since these are in fact bound together, my account gives us no grounds to think qualia in the typical sense exist in their own right. So it seems I have criticized Block; and indeed I have.

Unless one is prepared to hold the line that qualia are something *entirely* distinct or the (equally improbable) view that there is absolutely *no* way to even *notionally* seize upon the qualitative dimension subsumed in a given representation, then I think the semiotic account can be used pretty much to everyone’s benefit. The categorial interrelations I outlined clearly allow those who initially countenanced qualia to continue doing so—albeit in a modified, less provocative, way. On this reading, the type/token/tone trichotomy exonerates their chief contention. *Mutatis mutandis*, theorists who didn’t countenance qualia can cite precission to plausibly explain why the topic of qualia has captured with a remarkable consensus the inter-subjective attention of theorists. They can, that is, emphasize my critique of Block and read the glass so that it becomes half empty.

Granted, my declared goal was to tug at the *realist* side of this dialectic so as to prevent the grasp of a qualitative dimension from turning on the hardboiled existence of some “thing” capable of being wholly independent. In keeping with this critique, I have tried to show how precission rescues sundry

intuitions about conscious life from castigation without appealing to any kind of reification. Nevertheless, a welcomed by-product of this amendment is that it makes the tone more palatable to theorists who reject the ontologies often promulgated alongside phenomenal qualia. Taken together, these changes have the power to dislodge a long-standing clog in the flow of inquiry.

I.IX Chapter Conclusion

The notion of tone must recover its rightful place alongside the type and the token if contemporary thought is to consummate its aspiration of escaping the centripetal pull of Cartesian dualism. Although I can at best *invite* a concerted rectification of this neglect in this dissertation, I hope this first chapter has shown that resisting facile interpretations is not only sound from the standpoint of exegetic fidelity, it offers substantial philosophic benefits. For want of historical sensitivity, however, philosophy butchered an important distinction which involved a rationale completely foreign to the canons of post-Latin discourse. Indeed, the vocabulary of the parties to the present controversy over qualia and Peirce's triadic vocabulary do not easily match up. A crucial question for the former debate is: should we quantify over qualia? Block (and Nagel) think that we should, Dennett (and others) that we should not. That discussion becomes totally warped when it is considered from the framework (in the Carnapian sense) of Peircean semiotics. And of course, that's not a failing—it's the whole point.

Pursuant with this aim (and figure 2), I have not proposed a solution to a problem as it stands. I have instead proposed a set of tools that allow us to rethink certain fundamental assumptions so that that problem does not surface as it does in the first place. Admittedly, the means elected to achieve this are in many ways deceptively humble. But, like bending a tree in its infancy, it should not require much if the positioning is right. After looking at what has been historically and what should be logically, I have previewed what could be; forecasting in a programmatic way the fruitful impact prescission can have on at least one aspect of the mind-body problem. If most of our theories have until now been unable to adequately fathom the phenomenal dimension proper to conscious life without running into all sorts of implausible consequences, perhaps this is because those theories have been trying to capture that object of study with dichotomies fundamentally ill-suited to the task. So at any rate I argue.

This still leaves much work to be done. Given my concern with elucidating the problematic status of “phenomenal-consciousness,” I have confined myself mainly to Firstness, and have disregarded—as one can in prescission—the more developed categorial grades in contradistinction with which that qualitative dimension finds its meaning. As Peirce wrote: “Experience is the course of life. The world is that which experience inculcates. Quality is the monadic element of the world [...]. But in saying this, we are straying from the domain of the monad into that of the dyad” (1931–58, vol. 1, para. 426). Indeed, we prescind

from the fabric of representation elementary vehicles we do not (and would not want to) encounter in isolation. The tone may be a good fit for p-consciousness, but it is by no means an explanatory panacea for consciousness altogether. Accordingly, it is legitimate to try and elaborate a semiotic account of consciousness far less static than the one I have presented. This will be my goal in the next chapters. Nonetheless, it would be a mistake to conceive such an approach as rival and not complementary—a warning-post wisely planted by Umberto Eco: “[T]he sign is the origin of the semiotic processes, and there is no opposition between the ‘nomadism’ of semiosis (and of interpretive activity) and the alleged stiffness and immobility of the sign” (1986b, p. 1; see also Lidov 1999, p. 104).

Just as nothing prevents us from folding our representational apparatus onto itself so as to inspect its incipient substructure, so can we scrutinize from the vantage point of the present the historical developments that have led us to where we are. The remaining chapters will explore the landscape of possibilities which ensues when one decides to backtrack and incorporate the less heavy-handed method of precission. Should the gist of my suspicions vis-à-vis the deep insufficiency of the type/token distinction prove correct, then adopting the complete trichotomy might go a long way towards remedying some of the more stubborn problems that have beset contemporary inquiries into consciousness. I now want to see if Peircean semiotics can help us understand how we refer to qualia.

Chapter II

Referring to the Qualitative Dimension of Consciousness: Iconicity Instead of Indexicality

In reference to its object, this footprint is a perfect icon, although reversed like the image of a person looking at himself in a mirror. But it is *at the same time* the index of a presence on the island, and not just any presence [...]. The sign in itself has its own existence, an existence of a non-sign, one might say, just as an ambassador, although representing his country, is what he is in reference to himself [...].

Gérard Deledalle

Charles S. Peirce's Philosophy of Signs (2000, p. 105)

Peirce himself, like Leibniz, gave to the world only fragments of his system, with the result that he has been very thoroughly misunderstood, not least by those who professed to be his admirers. I am—I confess to my shame—an illustration of the undue neglect from which Peirce has suffered in Europe.

Bertrand Russell, foreword to James Feibleman's

Introduction to Peirce's Philosophy Interpreted as a System (1946, p. XV)

II.I Chapter Introduction

You and your friend are sitting in a coffee shop when all of a sudden a stranger walks in. “Oh my,” your friend whispers, “that man looks just like my father.” Your friend's father, whom you never met, died years ago in a fiery blaze that destroyed all photos of him. Given this lack of causal exposure, it would seem you can never know what your friend has in mind when she thinks of her father.

Yet, thanks to this look-alike, you now have a sense of what her mental state is like. The two of you have managed this by means of an *icon*.

Given the privacy that allegedly separates conscious minds, such a promising sign-exchange is certainly worth investigating (perhaps the icon cannot bear the weight of scepticism, but that is something to be argued for, not taken for granted). Unfortunately, glancing at the topics covered by recent books on consciousness, one rarely finds the term “Icon.” The term “Index,” by contrast, abounds. That is strange, considering that both notions originated in Peirce’s symbol/index/icon tripartition.

Although iconicity remains poorly understood, indexicality is arguably “one of the best known features of Peirce’s theory of signs” (Atkin 2005, p. 161), and so is now a staple of mainstream philosophical discourse (see for example Perry 1997). In fact, indexicality has recently been invoked by philosophers of mind to account for how one refers to qualitative experiences. The neuroscientist Mary in Frank Jackson’s (1982; 1986) knowledge argument enjoys an experiential exposure that enriches her mastery of a fabric of symbols (throughout this chapter, I shall assume prior familiarity with Jackson’s argument). Using a terminology introduced by Bertrand Russell (1910–11), we can say that Mary in the cave can muster “descriptions,” but will lack a more intimate “acquaintance” until and unless she undergoes those experiences forbidden to her (Bigelow and Pargetter 2004). By directing one’s attention at a

specific time and place, an index can broker acquaintance. The recent suggestion is that, when Mary exits her confines, she will refer to her new experience as “this” feeling (Perry 2001, pp. 97, 146).

I agree that “[s]ome kinds of knowledge require distinctive forms of engagement between the knower and the known” (Bigelow and Pargetter 2004, p. 194). Judged by that standard, indices indeed bring us closer to their referents than symbols do. However, I think the standard roster of options is too coarse, since according to the sign theory developed by Peirce, there are *three* ways one can refer to objects: by description, acquaintance, and *shared quality*. I will argue that knower and known are at their closest when they share a common quality, and that this is what would have to be involved in successful reference to phenomenality.

Indeed, this chapter aims to show that reference to phenomenal qualities is best understood as involving iconicity, that is, a passage from sign-vehicle to object that exploits a similarity between the two. This contrasts with a version of the “phenomenal concept strategy” that takes indexicality to be central. However, since it is doubtful that phenomenal qualities are capable of causally interacting with anything, indexical reference seems inappropriate. While a theorist like David Papineau is independently coming to something akin to iconicity, I think some of the awkwardness that plagues his account would be remedied by transitioning to a more inclusive philosophy of signs.

My argumentative journey will start on familiar soil, methodically venture into semiotic terrain, and then return to the point of departure to see how the new ideas can shed light on recalcitrant issues. I will begin by looking at the phenomenal concept strategy, specifically those versions that appeal to indexicality in order to account for reference to qualia. I will then look at how philosophy of signs in the Peircean tradition countenances a neglected mode of reference which, unlike the actual exposure required by indexicality, turns on a shared quality. In order to show that there is a need for this notion, I will discuss the work of David Papineau, whose recent views gravitate towards something close to the icon. Finally, using the ideas laid down in the earlier sections, I will try to reformulate in a more explicit way Papineau's claim that, in order to refer to phenomenal qualities, those very qualities would have to be "included in" the concept employed.

II.II The Indexical Phenomenal Concept Strategy

The "phenomenal concept strategy" (the expression comes from Stoljar 2005) is an attempt to preserve physicalist commitments while accounting for why there appears to be a "gap" when it comes to explaining the qualitative dimension of consciousness (Levine 1983). The general idea is that, since we have special concepts to pick out conscious states, whatever difficulties we have fitting consciousness into a naturalist picture may owe to the peculiar nature of those concepts. The strategy thus caters to what Chalmers (1996, pp.

165–168) calls “type-B” materialists, that is, those who accept that there is an epistemic gap between the physical and the phenomenal but who deny an ontological gap (I will say more about Chalmers’ letter-based classification in section IV.V). Although there are several variants of the phenomenal concept strategy currently vying for adoption (see Balog 2009), this chapter will focus on stances that call upon the notion of an index.

Indexicality is usually taken to be the direct mode of reference whereby language comes into contact with whatever it denotes. Before it got enlisted in debates about consciousness, indexicality was introduced to a wide audience by John Perry, whose original intent was to challenge the view that propositions “have a truth-value in an absolute sense, as opposed to merely being true for a person or at a time” (1979, p. 6; see also his 1977). Perry looked to indexicality as a means of pinning propositional attitudes down to the world, thereby permitting a better treatment of some difficult cases. The idea of indexing meanings to contextual circumstances is less controversial than the idea of indexing truth-values (compare Blome-Tillmann 2008 with MacFarlane 2014). In philosophy of language though, Perry’s proposal has become a common place. We use some words like “this” in specific contexts, and these contexts fix what (in the world) those words point to (Kim 2010).

Given Perry’s preoccupation, indices came to be seen as linguistic devices “about where one is, when it is, and who one is” (Perry 1979, p. 5). According

to John O’Dea, this explains the intuitive force of thought-experiments like the inverted spectrum (Shoemaker 1982). O’Dea argues, for instance, that a disagreement between an Earthling and a Martian about what each would mean by “I am in pain” would be “tantamount to a disagreement over whether Earth is *here* or Mars is *here*” (2002, p. 180). O’Dea surmises that “[t]he irreducibility of sensory terms [...] may be nothing more than a straightforward consequence of their indexicality” (2002, p. 175). Context-specificity is thus invoked to explain (away?) talk of conscious states. “If this is right, then we may not have a straightforward physical explanation of consciousness, but we have the next best thing: a physical explanation of why we find an explanatory gap” (Chalmers 2007, p. 167).

This indexical account thus strikes a bargain with scepticism: one can successfully refer to, say, the fact that one is now enjoying an experience of green, but the sign one uses to achieve this act of public reference cannot reach all the way to the qualitative feel of the experience. O’Dea illustrates this as follows:

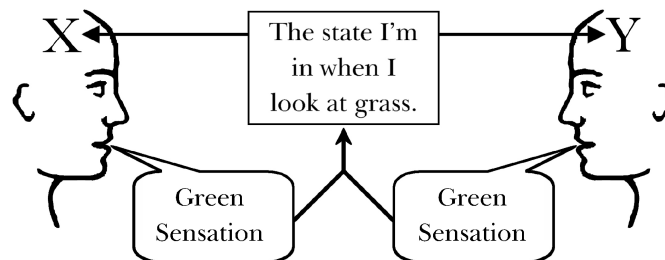


Figure 3 The alleged incommunicability of qualitative experience
(Taken from O’Dea 2002, p. 177)

This depiction seems to recapitulate, rather than solve, the “hard” problem of consciousness (Chalmers 1996, p. 205). Since qualia are not captured by causality and since indexicality works precisely by exploiting causality, qualia are not captured by indexicality. This means that the qualitative dimension of consciousness cannot truly affect or be affected by discourse. On the further assumption—mistaken, as I hope to show—that indexicality is our ultimate means of reference, the privacy of qualia follows.

Tenets in the philosophy of language thereby constrain what can be hoped for in epistemology: if meaning is always anchored to an utterer, then one can at best “believe”—not “know”—the claims others make about what it’s like to undergo a given conscious experience. Therefore, when prompted to convey how something feels, the convergence of two persons’ verbal reports and/or behavioural responses remains inconclusive. People of course remain free to discuss how they feel, but they cannot *really* discuss how they feel. My goal in this chapter is to find a principled way to eradicate this second clause—to genuinely capture the experiential feel of “X” or “Y” in O’Dea’s illustration (I insist on “principled” so as to exclude dismissals that dodge or miss the issue, like Baars 1997).

Some (e.g., Daddesio 1995, p. 111) have taken gestures like pointing to be different from an index because, unlike a windmill moved by wind, a finger does not necessarily have to touch what it refers to. This is not a helpful

distinction. To use an index, one has to place the sign-vehicle in the *vicinity* of the relevant object. Such vicinity, however, should not be construed too literally. One can point to Alpha Centauri in the night sky; but one has to *aim* at a specific location if one wants to aid/elicit a specific interpretation. The fact that spatial coordinates matter in fixing the reference shows that, even if distance is not an issue, causal considerations are essential to explaining why/how anything could be non-arbitrarily “sensitive” to a context (for an advanced discussion of these issues, see West 2012).

While appealing to indexicality is not irrelevant, it does not seem to get the reference in question quite right, at least when it comes to qualities. Upon emerging, Mary will surely want to convey the qualitative character she has just discovered. When Mary points to, say, a red rose and proclaims that “So *this* is what was meant by red,” she cannot mean that particular flower, then and there. Were this what she meant, one could destroy the colour red once and for all simply by burning the flower. Hence, seeing how “indexicality is now pretty much a given in mainstream analytic philosophy, formal semantics has accreted some epicycles” (Legg 2008, p. 210). In an attempt to surmount the insufficiency of indices when it comes to consciousness, some have grafted the (much used but incomplete) type/token distinction onto indexicality to yield what Brian Loar (1997, p. 597) calls a “type-demonstrative,” that is, a context-specific gesture and/or utterance by which a subject somehow manages to refer to “*That type* of sensation” (see also Levin 2007, pp. 88–89). Alas, I do not

think this finessing succeeds. It makes perfect sense that one should be able to point to tokens, since these supply the presence needed for indices to do their referential business. But types? If “type-demonstratives” were truly possible, one could literally *see* generality. Surely, one can see *instances* of a law, kind, or habit—but not the law, kind, or habit itself.

This ability to “see” types is supposedly achieved by “thick” perception (Masrour 2011). Of course, once an agent realizes that what she perceived was a token of a type, she can become convinced that she somehow “saw” the type. That, however, would be an embellishment of hindsight. Given that the stream of consciousness flows in a linear fashion, one way to test claims about so-called “thickness” would be to require a subject to ascertain—before any other tokens are experienced—whether there are in fact such other tokens. Clearly, a subject looking at a painting cannot tell, just by looking, whether it has ever been copied or mass produced. Rather than arguing that kind properties are only sometimes represented in experience, it seems more judicious to say that, when perceiving a single token, the most a subject is perceptually (and intellectually) entitled to answer is that a) it exists and b) another token like it *could* exist. Talk of “recognitional *dispositions*” (Siegel 2011, p. 100) captures this, but conflating the modal strength of (b) with the actuality of (a) would constitute a reification. Loar asserts that “type-demonstratives” are “recognitional concepts” which, despite their recognitional status, “need involve no reference to a past instance,” such that “[y]ou can forget particular instances and still judge

‘another one of those’” (1997, p. 601). If one can do without past instances, what is the relatum in the judgement “another one of those”? That is a bit like saying that a sibling has no sibling(s).

The standard analysis (from Aristotle to Kant to Frege) breaks “This gerbil” down into three components, insofar as a particular gets identified as a member or instance of a kind or universal by an act of judgement (see Peirce 1931–58, vol. 1, para. 485). It was a tangible advance of twentieth-century philosophy of language (Kaplan 1989; Perry 1979) to stress that, irrespective of how one glosses the ontological status of universals or the epistemological workings of judgement, context of use would have to be involved in securing reference to a particular. Capitalizing on the well-deserved reputation of that account, “type-demonstratives” (and “thick perceptions”) simply repeat this story to explain reference to (or perception of) universality. This implausibly outstretches the resources of indexicality.

If one wants to refer to “Gerbilhood” by means of a situated sign-vehicle like “This,” then, given the generality of the intended target, there should be no reason to prefer one particular gerbil over another. Yet, since in the end not all gerbils will be pointed to, it may rightfully be asked: why *this one*? The only sensible answer seems to be because it is in the vicinity of the utterer (needless to say, uttering “This” with no gerbils present would not accomplish much).

The claim that demonstratives pick out tokens is therefore less contentious than the claim that demonstratives can somehow pick out types.

Note that “inscrutability” with regards to pinpointing exact referents does not alter the fact that indexicality works by and on tokens, not types. It may not be obvious what to look for upon hearing “Look there!,” but it is obvious that to find out one has to scan the nearby environment for a particular object or event and that any universal that might be intended by the demonstrative would be gleaned only *via* that particular object or event. If, say, your friend points to a stranger who just walked in a crowded coffee shop, you might conceivably have some difficulty pinpointing who your friend intends; but that does not license you to roam the whole city looking for the person she meant.

There is plenty of room in my account for fallibility in interpretation (Eco 1988). However, semiotic theory does not support the skeptical leap from fallibility to impotence. Whatever correctives constrain interpretations in the long run (if, that is, dialogue and inquiry unfold) are discrete and immanent—which is just to say that grasping laws, kinds, or habits requires observation and experience (even though exposure to the world is by no means the end of the story).

In one of his more cavalier moments, Russell held that “It is obvious... that we are acquainted with such universals as white, red, black, sweet, sour, loud, hard, etc., i.e., with qualities which are exemplified in sense-data” ([1912]

1997, p. 101). Taking Russell at his word, if one is in contact with an “exemplification,” is it not a slide to construe this as contact with a universal? Russell added: “When we see a white patch, we are acquainted, in the first instance, with the particular patch; but by seeing many white patches, we easily learn to abstract the whiteness which they all have in common, and in learning to do this we are learning to be acquainted with whiteness” ([1912] 1997, p. 101). Again, if learning and rational intervention is needed to get at the targeted quality, how can this still count as acquaintance, which is defined as a “direct” mode of knowledge (Russell 1910–11, p. 108)? If one were truly capable of being acquainted with universals, these should simply present themselves to one, with no intervening particular(s). Needless to say, a subject-to-type access differs greatly from a (more plausible) subject-to-token-to-type access. Russell promises us the former but delivers only the latter. Chalmers (2003, p. 233) expresses similar worries about Russell’s stance. Perry (2001, pp. 97, 140) is a proponent of the indexical phenomenal concept strategy who recognizes that knowledge of a type must pass via knowledge of its tokens (although he does not say much about how that passage happens).

Mary may not be entitled to point to a particular rose and say that “This” is what red is, but she can certainly use the same index to sustain the claim that “This” is what red is *like*. Hence, picking out particular instances is by no means a negligible service, since it is part of what has to happen if one is to grasp a likeness. Yet, if on full consideration we must acknowledge that

thought, comparison, and other deliberate intellectual interventions are needed, then these interventions need to figure in the official account. Merely pointing does not suffice.

One might reply that it is a matter of coming across the “right” exemplar. After all, if—in keeping with Peirce’s account of abduction (Houser 2005)—the initial stage of establishing a sign-vehicle’s referent is (and cannot help but be) a surmise, then there is no reason why that surmise could not benefit from beginner’s luck. If so, then the burden would be on the advocate of referential serendipity to explain why, in the vast majority of cases, we do not grasp types via a single token. In any event, confirmation that one indeed guessed a type right from the get-go can be revealed only by further action/experience, so one cannot “forget particular instances and still judge ‘another one of those’” (Loar 1997, p. 601).

Ideally, a story of how one refers to the qualitative dimension of consciousness should be such that whatever post-emergence Mary does or uses to refer to her novel colour experience(s) is not something she could have done or used in her pre-emergence condition, otherwise Mary would not need to emerge. Symbols clearly do not live up to this demand, since prior to seeing red Mary can competently employ the word “red” found in her textbooks (the adjective “competently” is warranted because Mary can draw more red-based inferences than most lay persons). Therefore, with a twofold menu of symbols

and indices, all hope must be placed on the latter option. Interestingly, the indices favoured by many phenomenal concept strategists do not fare any better than symbols. Indeed, if one were to ask pre-emergence Mary what she means by the word “red,” she could very well point to a diagram of the appropriate wavelength and answer “This one now.”

Of course, we as outsiders are privy to the fact that Mary has brought the context-sensitive sign-vehicles “this” and “now” in the vicinity of an object ill-suited to truly convey what red “is like.” But—and this is crucial—nothing in the indexical account permits us to regard her gesture as a blunder. This shows that another mode of reference is needed. I thus agree that “in order to be successful, the Phenomenal Concept Strategy needs [...] to explain how these concepts afford us a rich and substantial grasp of their referents” (Schroer 2010, pp. 509–510).

In contrast with indices, icons work only if (and only because) the qualities match. What matters in iconicity is not that the sign-vehicle is *near* its object but rather that the sign-vehicle is *like* its object. Hence, if nothing in Mary’s room is coloured, nothing in that room can be used to refer to colours. To be sure, the confines of pre-emergence Mary are filled with other icons. One pencil, for example, might resemble another pencil, and could thus be used to iconically refer to the other (and vice versa). Alas, familiarity with office supplies is not what is at stake, so emergence from the cave is needed for the

relevant colour icons to become possible. Mary's eventual exit is therefore doubly enriching: not only does she get to experience something new, she also gains access to the various sign-vehicles capable of conveying the quality at hand. As we shall see, this is because in iconicity sign-vehicle and object are one and the same.

We saw in the first chapter that the type/token distinction was originally meant to be threefold and include the neglected notion of tone (Lachs and Talisse 2008, p. 777). As a first approximation, the referential relation I will champion could be characterized as a “tone-demonstrative”: a sign-vehicle that refers to an object by sharing a common quality with that object. Of course, the very fact that a similarity is apprehended attests to the presence of two (or more) tokens brought together by an interpretation. Hence, whenever an icon actualizes its power to resemble something, it automatically becomes an index. In this sense, whatever qualitative unity there is can be evinced only by precission. Still, as I hope to show, such an analysis suffices to establish that only icons could refer to qualia.

In order to preview how these ideas can contribute to current debates, let us look briefly at the argument which led Frank Jackson ([1998] 2004; 2004) to abandon the conclusions he once drew from his famous thought-experiment. Robinson (2008, p. 224) renders Jackson's rationale as follows:

1. Reference to any x involves causal influence from x to the referential act.
2. If x is epiphenomenal then it has no causal influence on anything, so *a fortiori*, not on any referential act.

Therefore,

3. If x is epiphenomenal then it is something to which we cannot refer.

Therefore,

4. If qualia are epiphenomenal then they cannot be objects of reference.
5. Qualia (if they exist) are what we refer to by using our phenomenal concepts.

Therefore,

6. If qualia exist and are epiphenomenal then they can and cannot be objects of reference.

Therefore,

7. Epiphenomenalism about qualia is incoherent.

The claim that “Reference to any x involves causal influence from x to the referential act” obviously does not apply to symbolic description. However, Jackson insists (with Russell) that true descriptions must be reducible to acquaintances. As Jackson puts it, “[o]ur knowledge of the sensory side of psychology has a causal source,” such that when making claims all “our entitlement comes back to causal impacts of the right kinds” ([1998] 2004, p. 418).

Robinson believes the above argument is sound. I disagree; it is valid but unsound. Indeed, I contend that premise (1) is false, since there exists a mode of reference which, though not mind-dependent like symbols, does not rest on causality.

Premise (1) is pivotal to what has been called the “meaning objection” (Robinson 2012). Gilberto Gomes gave a canonical formulation of what is at stake: “But how can we refer to [our experience of red] if, by assumption, it cannot have any causal effect on our thought?” (2005, p. 78). In this chapter, I will answer: by means of an icon. Once we incorporate iconic reference in our overall picture, the terms of the debate shift: working out the logic, (3) and (4) become false, so (6) and (7) no longer follow.

II.III Removing Relations

In a survey of debates about consciousness, Paul Livingston identifies Charles Sanders Peirce as the earliest English-speaking philosopher to have used the term qualia. Livingston remarks that, “[f]or Peirce, qualia (often used as cognate to ‘qualities’) were already the most basic constituents of the totality of sensory experience, the ground of what he called Firstness or immediacy” (2004, p. 6). Peirce was primarily interested in studying how signs work (Savan 1987) and all that this action of signs presupposes (Deely 1990), and his analyses shed direct light on the topic of phenomenal qualities. The foundational insight of Peirce’s inquiry (rooted in medieval sign theory; see Beuchot and Deely 1995) is that if any sign is truly to act as a sign, it must be a triadic compound of sign-vehicle, object, and interpretation (Fisch 1983). Qualia, as escapees of functionalist reduction, are held to be nonrelational. This

might seem like it poses a problem. However, there is one sort of sign—the icon—that does not depend on causal interaction or inference.

Some think that “[i]f qualia represent then it is plausible that they represent non-conceptually. That is, they do not have language-like structure but rather are akin to pictures [...]” (Balog 2009, p. 296). The semiotic class of icon includes images and much else besides. A perfume, for example, is an icon, even though in resembling the smell of, say, lavender, it is in no way pictorial. Still, for better or for worse, the image has become a paradigmatic exemplar of iconicity that continues to inform much theorizing. Jesse Prinz (2002, pp. 25–32), for example, speaks of “imagism” in the cognitive sciences. The virtue of focusing on the technical notion of icon is that it compels us to bear in mind that these signs are defined in virtue of the sort of referential relation they sustain: to bear an iconic relation is to guide interpretation by exploiting a qualitative bond that would exist regardless of whether another (similar) object or interpretation was present. To give two succinct illustrations, a cough that would sound like the word “Attack!” would still resemble that command, and a morphological “homoplasy” between species lacking a common ancestry (Kleisner and Stella 2009) could dupe a predator into attacking the wrong prey. In both cases, even in the absence of intention and causality, interpretation—which in semiotics is not the sole preserve of humans (Sebeok 2003)—could very much capitalize on the shared quality to take one thing to stand for something else.

It is imperative to the evolutionary success of camouflage that the likeness of, say, an insect with a leaf, truly be a mind-independent likeness and not merely a wilful association (Maran 2003; Sebeok 1976, pp. 1440–1441; Sonesson 2010, pp. 50–53). Despite helping herself to the term “icon” and purporting to develop “A General Theory of Signs,” Ruth Millikan (1984, pp. 83–158) does everything she can to avoid countenancing such real similarities. Despite his laudable inquiry into the varieties of reference, Gareth Evans is also hesitant to acknowledge the existence of mind-independent similarities, and accepts that one thing could resemble another only “if it strikes people as like that other thing” ([1982] 2002, p. 292). Analyses of similarity “anchored in the reactions they occasion in people” (Evans [1982] 2002, p. 294) have been amply explored—even by semioticians like Charles Morris (1971), Millikan’s teacher. However, such behavioural approaches leave unanswered (or rather unasked) why these reactions occur in the first place. Resemblance is mind-dependent in the sense that there must be an organism with an appropriate sensory system to deem one experience to be similar to another experience. The Peircean account I promote has plenty of room for the effects which icons can have on such organisms. Still, it regards those interpretants as *effects*, not causes, of underlying similarities.

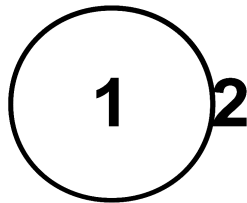
In a rare pedagogic moment, Peirce (1998, pp. 170–171, 425–427) likened the relation involved in the action of signs to “giving,” insofar as the very idea commits one to countenancing not only 1) that which is given, but also 2) that

to which it is given and 3) that which gives. This example was later made popular by Russell ([1918] 1985, p. 59), who picked it up from Josiah Royce—that friend and intellectual student of Peirce (see Fisch 1986, p. 326; Brent 1998, p. 329) who, “[f]or some reason” that Russell could not discern, “always liked triadic relations” (Russell [1918] 1985, p. 68). As we will see, it is unclear whether Russell really understood the Peircean emphasis on triadicity. In any event, like “giving,” the passage at play in a sign cannot be reduced to pairs, so the point is that nothing below three places will do.

Keeping speculation to a minimum, we can thus conclude this much: a universe containing only one or two things could contain neither signs nor gifts. William Seager notes that “[o]ne of the core intuitions about intrinsic properties is that they are the properties that things have ‘in themselves,’ the properties that something would retain even if it was the only thing in the universe” (2006, p. 141). This concurs with the semiotic account I am advocating in stressing the logical separability of any relatum from a relation. That said, Seager diverges from my account in assuming that this is somehow unique or limited to phenomenal consciousness. Although I focus on consciousness, the prescissive move can be performed on *anything*, which is why labeling its results “panpsychist” would only be half true (I will develop this more fully in the fourth chapter).

Although semiotic inquiry has something informative to say about mental life, its observations about quality do not call or depend on introspection (Delaney 1979). Peirce explained the 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 [...]” (quoted in Colapietro 1989, p. 44). The basic categories used in a semiotic analysis of consciousness can be demonstrated by almost geometric means (Deledalle 2000, p. 15):

There are three categories, no less and no more. Let us suppose that the world is a unique sheet of assertion [a technical expression borrowed from Peirce’s graphical logic; see Shin 2002]. Let us call it “1.” What can we say of “1”? Nothing—and, of course, as it is “unique,” nobody is there to say anything. So to speak, “1” is not even there. It is not “something,” and it is not “nothing,” unless as *non-being*, in the Aristotelian sense of sheer “possibility.” To conceive of “1,” “1” has to have a limit and consequently we cannot have “1” without a “2” which delimits “1” on the sheet of assertion:



“1” can only *exist* in a pair. But, as Peirce [1992, p. 251] points out, “it is impossible to form a genuine three by any modification of the pair, without introducing something of a different nature from the unit and the pair.”

In other words, to have a pair (1, 2) one needs a “3” which mediates between “1” and “2”:

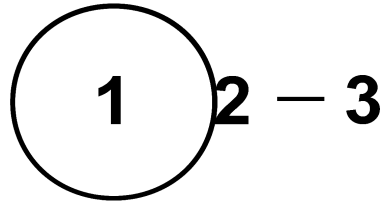


Figure 4 Depiction of the three semiotic categories
(Taken from Deledalle 2000, p. 15)

To make the most of the above diagram, a couple of notational reflexes need to be avoided. First, the fact that “2” is in the middle does not mean that it “mediates” between “1” and “3.” Rather, the idea is to place “2” right at the very border delineating “1” so as to mark the delineation as such (irrespective of whether it is interpreted). Likewise, the line before “3” is not to be taken as a “minus” sign. Rather, the idea is to set “3” apart from “1” and “2” in order to emphasize that “3” is whatever would recognize the alterity or contrast for what it is.

Like Euler and Venn, Peirce explored the potential of images in rendering proofs more parsimonious and perspicacious (see Shin 2002). As a logician trying out different graphical calculi, Peirce made meticulous observations of what happens when minds use such signs to reason (see the extended quote in Stjernfelt 2007, pp. 93–94). What, Peirce asked, remains of a diagrammed circle once its boundary is removed? In other words, what happens when we let

a qualitative content spread out without obstruction? In a philosophically radical move, Peirce insisted that, whatever the proof, diagrammatic reasoning must start by countenancing a blank sheet. This is Firstness: an expanse that awaits further specification.

Peirce did this in logic, but his commitment to the blank sheet is so basic that it applies also to philosophy of mind. As James notes, when considering a white paper without any contrasts, there is “no ‘pointing,’ but rather an all-round embracing of the paper by the thought” ([1906] 1975, p. 31; reprinted in James 1977, p. 156). Such possibility is the canvas of all eventual sign-action. Peirce held that, however bizarre, we have no basis for denying this modal precondition: “That which underlies a phenomenon and determines it, thereby is, itself, in a measure, a phenomenon” (1998, p. 2). Everything that *is* asserted *can* be asserted; everything that *is* thought *can* be thought. This is the common ground which arguing parties must accept if their disagreement is ever to be resolved (see Peirce 1931–58, vol. 4, para. 431; as well as Pietarinen 2006, p. 60).

Of course, every sheet of paper I have ever encountered has a rim. This applies to all experience; factually, we do not encounter a quality isolated from all others. In keeping with the pragmatist account of inquiry, we always begin mid-way. So, judged by induction alone, what Peirce says about Firstness is false. Yet, if one goes in the opposite direction, by deduction, the claim that

such facts can be decomposed in the abstract seems to me undeniable. Take a string of qualitative experience, grant that those qualities come to us conjoined, then apply the simplification inference rule, which licenses one to consider any single conjunct on its own. That, in essence, is *prescission*. It shows that, if an articulate musical symphony is possible, then so must an “eternally sounding and unvarying railway whistle” (Peirce 1931–58, vol. 1, para. 305). One cannot, however, infer a complex symphony from a simple sound. “*Prescission* is not a reciprocal process” (Peirce 1992, p. 3).

When we use the three categories—which Peirce called *Firstness*, *Secondness*, and *Thirdness*—to analyse *semiosis*, we gather that an object referred to occupies the role of “2,” since it must be something which the sign-vehicle (“1”) is not (actually, at this level of analysis, the labels are interchangeable, insofar as symmetrical difference is really what matters). Interpretation is what links the two. What this “3” consists in is left unspecified. This third element, which Peirce called the “*interpretant*,” can of course be glossed as some mental act which apprehends the brute relation between “1” and “2.” The categories themselves are noncommittal. Yet, since “3” is not nothing, an *interpretant* has the potential to figure as a vehicle in a further sign, so the whole machinery can be applied over and over.

The term “*interpretant*” is not a fuzzy lay term, but a rigorously defined term-of-art of semiotic theory. An *interpretant* is not an interpreter. Even so, as

shown by the common etymology, the notion of an interpretant is not completely alien from that of an interpreter.

Now, the conception that Peirce takes to be the ordinary, unreflected idea of sign and sign-process is that the activity of signs [...] involves an utterer and an interpreter. Such a view may seem to be almost opposite to Peirce's generalized conceptions of sign and semiosis. But, in fact, Peirce considers this crude idea to contain the seed of truth. (Bergman 2003, p. 11)

As a logician, Peirce looked at everyday interpreters and was able to discern a very specific relation: "Such a mediating representation may be termed an *interpretant*, because it fulfils the office of an interpreter, *who says that a foreigner says the same thing which he himself says*" (Peirce 1992, p. 5; final emphasis added).

Consider a United Nations interpreter. Unless that function is replaced by a software, we are clearly dealing with a regular person, liver and all. However, the *role* that this person plays is not visible in the same sense as the person is. Imagine that the bilingual U.N. interpreter is paid to mediate between French and English diplomats. The French diplomat speaks in French, then the interpreter (having listened) speaks in English. The constraints governing the utterances of the bilingual interpreter are very different from those governing the French diplomat, who is pretty much free to say whatever she deems appropriate. The bilingual interpreter does not have that leeway. Of course, that paid worker could temporarily suspend her vocation and say whatever she

wants to her English interlocutor. Were she to do this, though, she would no longer be linking her signs to the French utterances in a way that would entitle the former to count as interpretations of the latter. The U.N. worker is a sign-like conveyor of information only if, among the many (Chomsky would say infinite) things she could say, she says a specific subset that reflects the French diplomat's own choices. In this way, "differences that make a difference" (in Gregory Bateson's sense) are passed on.

The business of a philosopher of signs is to track the role-switching in the above story. Semiosis is a chain where "the last terms in the series represent the first by the mediation of the middle terms" (Deely 1990, p. 87). Semiotics can track subpersonal processes because it construes semiosis as an impersonal process. We see, then, how the notion of interpretant used in Peircean semiotics differs from the common or lay notion of interpreter. It "is why Peirce can without circularity define thinking, and hence mind, in terms of semeiosis, or sign-action," since "a potential interpretive activity is presupposed by the concept of signhood, but the subject of that activity is left undefined, *except* in so far as it is precisely the subject of an interpretive activity" (Skagestad 2004, p. 245). Although the role of interpretant is similar to that of the interpreter who acts as a "middle-man" between two parties (Savan 1987, pp. 43–48), it is being in the *middle* that counts, not being a *man*.

Peirce stressed that actual reference arises only when things are involved in triadic relations, so icons and indices always need to be *interpreted*. Yet, he also stressed that because any relation is complex (having more than one relata), there ought to be no principled impediment to conceiving whatever simplicity a triad subsumes. Sign-vehicles do not always signify in virtue of their *hic et nunc* existence as tokens. When a sign-vehicle reaches its object in virtue of a shared quality, it is that quality (and nothing else) that is acting as a sign. Looking at the image above (figure 4), iconicity exploits the quality of “1” and indexicality exploits the contact in “2.”

So, one must always make sure to ask: *in what respect* is something being used as a sign? It is not as if the question can be answered once and for all. For instance, if a lime is used to signify a golf ball, then what matters is the shared spherical character. If the same lime is used to signify a blade of grass, then what matters is the shared green colour. Figuring out what is the pivot of sign-action is a task that must be done afresh with every case. A lime is a complex and multifaceted thing, so if that fruit is employed in semiosis, it has the potential to be used in a myriad of ways. It would therefore be a mistake to try and count all the ways in which a neatly-circumscribed thing in the world can act as a sign. A far better approach is to wait for the sign-action to occur and then ask what channel it employed. After all, a lime can also partake in symbolic semiosis, and thus be assigned a meaning which it in no way possesses naturally. That green fruit (understood as a type) can be taken to

stand for justice, for example. The metallic limes on police badges in such a community of concerted symbol users would act as icons of real limes, which in turn would act as symbols of justice. Mind-independent relations can therefore pass the interpretive baton to mind-dependent relations and vice versa.

Signs can act in extremely complicated ways, so the aim of a well-conducted semiotic inquiry is to give a perspicacious (non-reductive) description of what happens, tracking what is doing what and how. The roles that can be played in the triadic sign relation are sign-vehicle, object, and interpretant. A sign-vehicle can support a link to an object in virtue of that vehicle's quality, actual occurrence in space and time, or regular recurrence. Considered as tone, a sign-vehicle can only signify by sharing that quality with its object. Considered as token, a sign-vehicle can causally interact with its object. Considered as type, a sign-vehicle can support conventional or arbitrary associations.

A quality, on Peirce's ordinal analysis, does not presuppose anything besides itself. So, while it is useful to remind ourselves of just how complicated things get in the real world, the only tones which interest me are those that figure as icons, whatever those are. If what is of interest in a lime is the fact that it is green, then the fact that it is spherical must, along with the identification of the lime as that sort of fruit, be dropped.

“Prescission” is the technical name given to this operation of attending to some elements and deliberately neglecting others (see Deledalle 2000, pp. 5–6, 156–157; Houser 2010, pp. 95–96; Stjernfelt 2007, pp. 246–255). Unlike the invitation to conceive of “zombies,” prescission does not subtract qualia from a person, but rather a person (and everything else) from a quale. The Peircean account does not seem to belong to any of the five argumentative routes favoured by Chalmers (1996, pp. 94–106) to motivate the project of non-reductive explanation.

Appeals to conceivability have come under attack (Yablo 1993), especially in philosophy of mind (e.g., Hill and McLaughlin 1999; Sommers 2002). Some may thus be uncomfortable with the idea of countenancing something that is not (and could never be) encountered were it not for abstract reasoning. Minimally, any consistent philosophy of signs must acknowledge the reality of relations (Bains 2006), since it studies something defined by its ability to relate things. The question, then, is whether there is any way to both admit the idea of a relation and deny the idea of a relatum. Peirce did not think this conjunction is coherent, and neither do I, even if the quality that results can seem strange. As Peirce put it: “Logic teaches us to expect some residue of dreaminess in the world [...]” (1931–58, vol. 4, para. 79).

Since anytime one encounters a sign one perforce encounters a full relational triad, the isolation of a quality only makes sense if it involves a

distinction that is “more than nominal but less than real” (to use the medieval saying). For example, every triangle is trilateral, but while neither sides nor angles can be present without each other, we do distinguish them (and not arbitrarily so). Likewise, an object and an interpretant are always present alongside any sign-vehicle. I thus accept that consciousness cannot be factually separated from functional involvement (Cohen and Dennett 2011; Churchland 2011). Nevertheless, I believe there are weaker grades of separation one can make. To be sure, this exposes one to the threat of reification. Still, there is no way to understand how iconicity works without employing prescission.

In a prominent collection of essays on consciousness, James H. Fetzer claims that “systems are conscious when they have the ability to use signs of specific kinds and not incapacitated from the exercise of that ability” (2003, p. 303). The definition of sign Fetzer uses—which he attributes to Peirce—is “something that stands for something (else) in some respect or other for somebody” (Fetzer 2003, p. 303; see also his 1988). This view ensures that anything less than a three-term relation cannot be regarded as telling us anything useful about consciousness. Fetzer’s proposal is telling, because it is the opposite of what I am trying to accomplish. There is no denying that conceiving minds as things for which things can stand for other things is a good way to approach the “easy” (or, more appropriately, “easier”) problems of consciousness; like the ability to discriminate, categorize, react to environmental stimuli, and so on (Chalmers 1995, p. 200). However, the “hard

problem” stems from the fact that such a theory of sapience or thinking would not amount to a theory of sentience or feeling. By dipping below the level that makes cognitive processing possible, my goal is to show how this demand for a theory of sentience can fit into—or, more precisely, be subsumed in—an enriched account of sapience. Fetzer, by contrast, situates consciousness only at a certain level of complexity (for similar views, see Rosenthal 2010; Carruthers 2000, pp. 237–238; and Deacon 2011, pp. 530–531). The edifice being erected has no qualitative ingredient in it, but once we reach an upper floor, qualities suddenly appear. I agree with Chalmers (1996, p. 30) that this does not address the challenge posed by conscious experience (I will explore the metaphysical ramifications of this in the fourth chapter).

These considerations about relations and their removal bear directly on current discussions of consciousness. Josh Weisberg has recently distinguished between a “moderate” and “zealous” reading of phenomenal consciousness. Those epithets are of course biased, so we might recast the distinction as “complex” and “simple” readings, respectively. On the complex reading, “‘phenomenal consciousness’ just means ‘experience.’ Many people have embraced this sense of the term and use it to roughly pick out conscious experience involving sensory quality” (Weisberg 2011, p. 438). We can call this a complex reading because something besides the quality itself is allowed to enter into the notion. By contrast, on the simple reading, the very presence of something besides the quality itself disqualifies the candidate from belonging to

phenomenal consciousness. Accordingly, “any explanation of phenomenal consciousness in exclusively cognitive, intentional or functional terms will fail to capture, without remainder, what is really distinctive about phenomenal consciousness” (Weisberg 2011, p. 438). Weisberg notes that the simple reading is what Ned Block (1995a) has in mind when he talks of “p-consciousness.”

We can now see that the simple reading is what precission uncovers, insofar as it reveals “what-it’s-like” to be “a monadic property of conscious states. It is something that a state has or lacks independently of its relations to other mental states” (Weisberg 2011, p. 439). Indeed, compare this definition with that given by Peirce:

By a feeling, I mean an instance of that kind of consciousness which involves no analysis, comparison or any process whatsoever, nor consists in whole or in part of any act by which one stretch of consciousness is distinguished from another, which has its own positive quality which consists in nothing else, and which is of itself all that it is, however it may have been brought about [...]. (1931–58, vol. 1, para. 306)

Weisberg is in some sense correct to maintain that “what it is to be in a conscious state is to be aware of oneself as being in that state” (2011, p. 439). Yet, anyone committed to two layers of thinking is *eo ipso* committed to there being one such layer. The point a theorist like Block (1995a) is trying to make—and which I believe Peircean semiotics succeeds in making—is that the

commitment to something simpler (i.e., the first layer) is inescapable, since one can always suppose that second layer absent by prescinding (I will devote the entire third chapter to explaining this supposition of absence). True, “[i]t is the intentional content of the HO [or higher-order] representation that matters for consciousness, not the presence of the target first-order state the HO representation is normally about” (Weisberg 2011, p. 439). Yet, to the extent this is so, the higher-order theorist is bound to countenance a first-order quality stripped of all relational involvement.

As a logician, Peirce was cautious never to make this last claim any stronger than it needs to be. Hence, he never claimed that, as a matter of empirical fact, we encounter non-relational qualities. Since what we cognize is mediated by signs and since such mediation implies relations, Peirce acknowledged that when we look inside what we see is not “phenomenality” *per se* but “psychology” in the functionalist sense (Chalmers 1996, pp. 3–31). Even so, since the stream of experience (whence we glean all that we know) is complex, the commitment to subsumed simplicity seems logically inescapable. Hence, the (Jamesian) observation that “[o]ur phenomenology has a rich and specific structure” that is “unified, bounded, and differentiated into many different aspects but with an underlying homogeneity to many of the aspects, and it appears to have a single subject of experience” (Chalmers 2010, p. 136) does not pose a problem for a semiotic account, so long as we retain the ability to prescind.

Once we grasp all this, important consequences ensue. Loar asserts that “[p]henomenal qualities vary in generality: I can note that a state of mine has what all smells share, or that it is the smell of new mown grass” (1990, p. 81). This glosses over several important distinctions. To say that a given quality is shared by other experiences is already to enter into some sort of comparison, and thus to take one quality as the (in this case, iconic) sign of another (or others). So when Prinz (2007, pp. 188–189) speaks of “iconic memory,” he is using the adjective loosely. To say that the phenomenal quality in question is the smell of something besides that smell (like new mown grass) is to confess that the quality has already entered into semiosis (Peirce 1998, p. 320). Likewise, the moment a subject notes that a given state has what all such states share, the recognition of similitude falls within the ambit of functionalism.

Now, there is nothing wrong or inherently problematic in noting a similitude between qualities, nor is there anything wrong or inherently problematic in the idea of taking a quality as the quality “of” a certain thing. What *is* wrong and problematic is the assumption that one can do all this whilst handling the simple quality *itself*, irrespective of its functional role or involvement in relations. Interestingly, Daniel Dennett issued a similar warning: “[W]hen philosophers claim that zombies are conceivable, they invariably underestimate the task of conception (or imagination), and end up imagining something that violates their own definition” (1995, p. 322).

I am discussing phenomenal concepts. In the general literature on concepts, it is common to ask whether concepts are structured or unstructured (Margolis and Laurence 1999, pp. 4–5). Whether or not it is appropriate to call it a concept (see Prinz 2007), the simple quality reached by prescissive abstraction is clearly unstructured. If this is so, then there is not much one can say about a quale. In fact, this indeterminacy of qualitative experience can be seen as a strength, not a liability, of an epistemological account, because it motivates the need for epistemology to begin with. Peirce is well known for showing “How to Make Our Ideas Clear” (1992, pp. 124–141). One could say that, by removing relations, philosophy of signs shows “Why our ideas need to be made clear.”

Pereboom (2011) has recently explored what he calls the “qualitative inaccuracy hypothesis,” according to which one might represent qualitative natures that the objects of those representations do not in fact have. Looking at a quality, there is no way to tell. Epistemologically, the most a tone can yield is a hypothesis (which is why, for Peirce, Firstness is the site of abductive inferences). This muddles the distinction between veridical and illusory experience, such that “the sorting out of which-is-which is a problem rather than a given” (Deely 2003a, p. 188; for a similar view, see Dewey [1929] 1958, pp. 20–21). One can doubt that a hypothesis is true, but one cannot doubt that a hypothesis is a hypothesis. Inquiry, then, becomes an expression of the fact that “[w]e have only the experimental or hypothetical application of the principle of reason to the fact that we live in a puzzling world” (Bradley 2012, p. 162).

If, as inquiry unfolds, it turns out that things were not as they initially seemed, that judgement will still have to relate an object to a sign-vehicle that, by itself, retains its qualitative character—otherwise there would be no mismatch. As Stroud-Drinkwater puts it: “If I drink too much wine and ‘see’ a pink elephant, where is that pink patch? [...] Although the word ‘see’ deserves quotation marks, the thing ‘seen,’ viz., the pink elephantine patch, does not. Qualitatively, as a quale in itself, it may be indistinguishable from that which would be seen if the pink elephant were real” (1994, p. 353fn20). This means that “the givenness of the qualitatively phenomenal does not guarantee the accuracy of any of my judgments about it” (Adams 2013, p. 730). Minds, on this view, are not just accidentally fallible, but constitutively so.

Thomas Sebeok (1986, pp. 77–78) described the mission of semiotics as mediating between illusion and reality. As a site of vagueness and ineffability, experiential qualities have a crucial role to play in that fallibilist story. Looking at the tone, this raises an interesting question:

[W]hy should such a sign without reference be a sign at all? Husserl and the phenomenological semioticians would consider it as a nonsemiotic phenomenon, but to Peirce, it is nevertheless semiotic, since even if a sign refers only to itself it has the potential of producing an effect in a process of semiosis. (Nöth 2003, p. 14; see Petrilli 2010)

As we shall now see, this “potential to refer” is the pivot of iconic reference.

II.IV Referring to Something by “Being Like” that Thing

Iconicity has, until recently, had a bad reputation. I am not persuaded by most critiques of similarity-based meaning (for the standard roster of grievances, see Prinz 2002, p. 30). One stock complaint is that pictures are misleading. “Of course, pictures may be misleading. But, so may sentences” (Moktefi and Shin 2013, p. v). So, this grievance is either unjustified or applicable across the board. Another frequent complaint is that everything is, in some way, similar to everything else. This, on the face of it, is plainly untrue: clearly, I am more like you than I am like a cloud of helium. Of course, one could perhaps add a host of stipulations and narratives to play up the similarities and narrow the difference(s), but by then the stipulations and narratives would account for the (stretched) sense of sameness. In any event, even if it could be shown that similarity relations are, by degrees, ubiquitous, that would still be insufficient to discard similarities from the semiotic repertoire. After all, every material thing is (by transitivity) currently in some sort of causal interaction with everything else in the cosmos, yet that does not prevent humans and other animals from using closed causal channels to convey information from one distinct point to another.

Frederik Stjernfelt contends that similarity is not a defining feature of iconicity, since “[s]imilarity is generally symmetrical: if *a* is similar to *b*, then *b* is also similar to *a*; while sign-relations are generally asymmetrical: if *a*

signifies *b*, it does not follow that *b* signifies *a*” (2007, p. 49). It is true that similarity is symmetrical. It is also true that, in any triadic sign, interpretation will impose an asymmetrical sense of direction going from sign-vehicle to object. However, it is important to stress that this asymmetry is beholden to *interpretation*, not to the sign-vehicle or object. Since the overlaying of a means-end order on qualities that are otherwise identical can just as easily be turned the other way around, every object iconically referred to by a sign-vehicle is at the same time a potential sign-vehicle in the opposite direction. This is obscured by the twin facts that there is no reason to “prefer” one quality over the other, yet an interpretant will always privilege one sense of direction in a given instance. To the extent the sign-relation truly latched on to a real similarity between *a* and *b*, nothing in principle would have barred the reverse from happening, letting *b* do the “standing for.”

Concretely, this means that, if the stranger in the coffee shop truly looks like your friend’s father, then it is as legitimate to find that your friend’s father looks like the stranger in the coffee shop (for each seesaw on this biconditional, a new interpretant is spawned).

The world is inter-crossed by similar qualities, and this adds to causation as a possible channel for the conveyance of meaning (for a discussion of iconicity in natural languages, see Landsberg 1980). Yet, with a few exceptions, this idea of reference by shared quality is absent in mainstream philosophical debates.

Some of this neglect is an accident of history, but some of it is concerted. Looking back, it is distressing to see how early iconicity got discarded, and how thin the grounds of that dismissal really were. Nelson Goodman's (1976) contribution to this state of affairs cannot be overstated (for a stepwise rebuttal of Goodman's case, see Stjernfelt 1999; modified version in Stjernfelt 2007, pp. 49–88). Nearest to our topic, one of the biggest blunders occurred when Arthur Burks—despite editing Peirce's *Collected Papers*—reassured the philosophical public that the full type/token/tone distinction was articulated by Peirce “in a way which is too bound up with his system of categories to be of use outside his philosophy, and without adding anything novel to his original trichotomy” of symbol/index/icon (Burks 1949, p. 673). Given what systematicity means, it is hard to see how being “*too* bound up with a system” could be seen as a reproach. Let us therefore rectify this neglect and explain how the type/token/tone distinction constrains the symbol/index/icon distinction.

Peirce always felt that advances in semiotic, like those in logic, require tentative exploration (Colapietro 2010, p. 16). As such, he essayed several divisions (of unequal merit) during his lifetime (for a dense but accurate comparative analysis of Peirce's various taxonomies, see Jappy 1985). Portions of the Peircean account of sign-action have nevertheless proven consistent and garnered a consensus.

Although three parts are needed for the sign to do its referential business, those parts hang together in a specific ordinal arrangement, and the question of whether each part is essential or accidental to a given reference is what motivates the symbol/index/icon distinction. For the symbol, if one deletes the interpretation, then the sign-vehicle can no longer signify, since interpretation is all that binds together the sign-vehicle and the object (the “deletion” here is simply the prescissive supposition of one thing without another that we discussed earlier). For the index, if one deletes the interpretation, the sign-vehicle and the object will remain factually connected, so one needs to delete the object as well in order to extinguish the sign-vehicle’s power to signify it. For the icon, the interpretation and the object can both be deleted and still the sign-vehicle retains its power to signify.

Peirce drew on the views of Duns Scotus in crafting this account (Boler 1963). For Scotus, “this white thing can exist without similarity. If another white thing comes into being, then similarity begins to exist in this white thing. Hence, the foundation of the relation can exist without the relation” (Weinberg 1965, p. 101). This may be what Loar was trying to express with the claim that “[y]ou can forget particular instances and still judge ‘another one of those’” (1997, p. 601). However, one must not gloss over the fact that, when a similar token has not entered the picture, the similarity of the lone tone is merely *potential* (and so cannot allow judgements like “another one of those”).

Putting one of the chapter epigraphs to use, if a footprint leads interpretation to a foot in virtue of its similarity with that foot, then it is the outline (of either the foot or the imprint) that matters. What permits iconicity in this case is the quality of the sign-vehicle “1,” not the object “2” nor the interpretation “3.” If, however, a footprint leads interpretation to a foot in virtue of the causal contact it had with that foot, then it is the actual foot that matters. Here, what permits indexicality is the pair “1, 2”—not “3.” As for the word or symbol “footprint,” nothing but interpretation (“3”) holds its reference together. Peirce rightly insisted that these referential relations “are all indispensable in all reasoning” (1931–58, vol. 1, para. 369; see his 1998, p. 10).

Symbol/index/icon mark out three different ways sign-vehicles can be linked to their objects. We may distinguish those links by a systematic analysis of which parts of the sign depend on which. In the same way, the nature of the sign-vehicle will affect what sort of relation it can have with its referent. If one is going to assemble a sign, there are essentially three resources one can use: “What / happens / again.” Obviously, an ontology which, for one reason or another, rejects any of these aspects will have less to work with. Still, a Peircean semiotician accepts three supports for meaning. These different supports constrain what sort of referential relation a sign-vehicle can have:

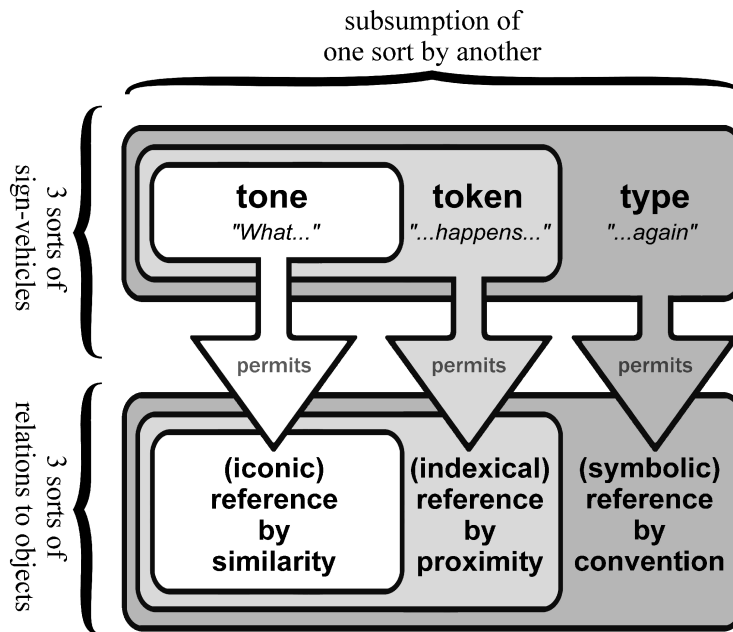


Figure 5 Three sign-vehicles constraining three relations to objects

Conventional imputations must be re-applicable, so only as a type can a sign-vehicle have a symbolic bond to its object. Causation requires particulars, so only as a token can a sign-vehicle have an indexical bond to its object. Similarity requires a shared quality, so only as a tone can a sign-vehicle enjoy an iconic bond to the quality referred to.

Symbols arguably presuppose a whole linguistic community. The icon does not presuppose anything besides itself. Indeed, the referential power of an icon “is not necessarily dependent upon its ever actually determining an Interpretant, nor even upon its actually having an Object” (Peirce 1998, p. 273). Consequently, the only way to eliminate the semiotic potential of a given tone

is to eliminate that tone itself. Short of doing so, the ability to be linked to similar things always lies in wait, in germinal form, simply because any quality would resemble whatever would be like it.

Of course, the mere talk of “another” tone would entail that we are no longer dealing with tones but with tokens, since juxtaposition or comparison presupposes numerical plurality. Still, when two tokens are related in virtue of their shared quality, it is the underlying tone they share that matters, not those particular tokens. Therefore, in order to truly understand iconicity as a mode of reference, one has to prescind. Doing so reveals the icon to be an idle sign, something that “can only be a fragment of a completer sign” (Peirce 1998, p. 306).

Whether this idleness means that icons are epiphenomenal is a vexed question. Peirce wrote: “[I]t must not be inferred that I regard consciousness as a mere ‘epiphenomenon;’ though I heartily grant that the hypothesis that it is so has done good service to science” (1998, p. 418). It is worth pointing out that, in terms of the argument laid out at the close of section II.II, if premise (1) is indeed false, then the conclusion (7) about epiphenomenalism’s supposed incoherence no longer follows (from that argument at least).

When Russell wrote in *The Philosophy of Logical Atomism* that “[t]he simplest imaginable facts are those which consist in the possession of a quality by some particular thing. Such facts, say, as ‘This is white’” ([1918] 1985, p.

59), he was already several storeys of complexity above the simple “1” in the earlier diagram (section II.III). Peirce and Russell were both pioneers in the early florescence of symbolic logic: Peirce reviewed Russell’s *Principles of Mathematics* in 1903. Nubiola (1996) reports that “[o]ne of [Victoria] Lady Welby’s aspirations was to bring about a meeting between Peirce and Russell, and in fact she acted as an intermediary between them, though to no avail.”

Both philosophers heeded the Leibnizian insight that whatever is complex is composed of simples (Blamauer 2011). Yet, the method of prescissive abstraction employed by Peirce pushes farther the decomposition into simplicity. It goes beneath “This is white” to reach “white.” The sign-vehicle “This” is not white; in fact, here it is black (and, if spoken, it has no colour at all). Hence, in order to successfully use “This” as a sign of white things, one has to bring a token of “This” near a token white thing so that interpretation can relate the two. Such indexicality is indeed more primitive than description (which in the case of colours seems quite impotent). A white thing, however, can lead interpretation to another white thing. Here it is similarity—not proximity—that underwrites the interpretive passage from one token to another. Therefore, the actual tokens are not what is essential.

Russell is sometimes credited with espousing a form of “neutral monism” (Chalmers 2010, pp. 133–137). However, one should keep in mind that, as an early advocate of what contemporary philosophers of science call “structural

realism,” Russell had an uneasy attitude towards anything that is not involved in relations. Hawthorne (2002, pp. 39–46) wrestles with this idea that the intrinsic suchness or “quiddity” of things is not captured by their functional role (he even mentions Scotus). Peirce’s work shows no such unease.

As David Pears explains, Russell thought that “when we find that we cannot push the analysis of words any further, we can plant a flag recording the discovery of genuine logical atoms” (in Russell [1918] 1985, p. 5). However, if one is engaged in the analysis of signs (not just words), one can plant a flag still further. By analogy with the scale-relativity of the natural sciences, we could say that philosophy of language is akin to chemistry, whereas philosophy of signs is akin to fundamental physics. One can study the conditions for the possibility of natural language(s). But, as Sandra Rosenthal writes, “the epistemic import of such a logic of language lies in the fact that it incorporates the dynamics of lived experience at its most rudimentary level, a dynamic that [...] grounds itself in those most rudimentary semiotic structures by which man experiences a world of appearing objects” (1979, p. 285). Indeed, semiotics splits triadic relations and thereby reveals the tone, which does not actually refer to anything, since there is nothing there for it to refer to. Still, even when considered in such abstract isolation, a qualitative sign-vehicle retains the *power* to refer. Simply put, “1” could only refer to (or be referred to by) “1.” However, for such a sign-vehicle to *act*, it must come into contact with something besides itself. The moment a quality does this, it is no longer an icon

but an index (that subsumes an icon) since the object *with which* it is similar must be in the picture.

II.V Searching for the Icon

Peirce saw semiotics as a foundational account of logic, and logic as a normative attempt to say, in a principled manner, when we reason properly and when we do not. Icons are used to assist reason, because their qualitative character means that not everything is up for conventionalist grabs. The self-same consistency is crucial to this view. Subjects make correct reports only when they make correct observations of whatever iconic surrogate they have stored. Yet, since the very qualitative constitution (common to both the sign-vehicle and the object) constrains what interpretations can and cannot rightly be made, not all interpretations will work as effectively. After all, you cannot mark an “x” outside a Venn diagram and claim that it is also inside. The sign-vehicle repels that interpretant.

Philosophers like Legg (2008; 2013), Pietarinen (2006; 2012), Stjernfelt (2007), and myself (Champagne forthcoming) are currently working to promote apply, and expand the Peircean account of iconicity. Yet, even before such an alternative is given any detail, it begins with a dialectic disadvantage, since the current received view seems to be that talk of images is misguided. Consider Papineau, who notes that “[a] first thought might be that perceptual concepts

refer in virtue of the fact that exercises of them *resemble* their referents,” and then immediately adds “I assume that this suggestion does not need to be taken seriously” (2002, p. 111). This is because Papineau, like Russell, thinks all knowledge of the world derives from two (and only two) channels, namely acquaintance and description. This is different from the Peircean view, which adds shared quality to the mix.

Ironically, no one working from Russellian assumptions has come closer to independently reconstructing an account of iconicity than Papineau. Block, as we saw, tersely dismisses resemblance-based accounts, but Papineau develops views that are very close to the Peircean stance I am advocating. According to Papineau, when a subject undergoes novel experiences, her “brain is lastingly altered in certain ways” (2003, p. 359). The alteration consists in the acquisition of a “stored sensory template.” He uses this to explain what happens to Mary in the knowledge argument. Until she enjoys the actual experience of red, Mary has not stored the relevant stand-in, but experiencing red outside the cave allows her to henceforth “imaginatively to recreate and introspectively to reidentify an experience she could previously think about only in a third-person way” (Papineau 2003, p. 359). If Papineau is right that “the introspective identification of some experience requires that it is compared with some model or template stored in the brain,” then “it would scarcely be surprising that we should need an original version of the experience in order to form the template for such comparisons” (2003, pp. 358–359).

Papineau's project can be seen as an instance of the phenomenal concept strategy, insofar as he hopes to capture an "intuition of mind-brain distinctness" (Papineau 2002, pp. 161–174). As we saw, the phenomenal concept strategist holds that the apparent distinctness of qualia is an artifact of the special concepts we deploy to refer to such experiential episodes. Hence, "[l]ike many physicalists, Papineau diagnoses the apparent threats to physicalism posed by the phenomena of consciousness by locating the source of anti-physicalist intuitions in features of our thinking rather than in non-physical features of reality" (Crane 2005, p. 155). Papineau (2002, p. 96) champions precission when he insists that one should be a conceptual dualist but an ontological monist. I obviously sympathize with the aspiration of making such a stance tenable.

Papineau (2002, pp. 116–121) originally developed what he called the "quotational-indexical" account of phenomenal concepts. However, he eventually came to think that indexicality imposes too strong a constraint on when and where phenomenal concepts can be exercised. Papineau's defection is reminiscent of Jackson's, as both were led to ponder the troublesome intersection of demonstrative reference and epiphenomenalism. Indices turn on physical presence: one has to be near something in order to refer to it by ostention. Likewise, something quoted must be present in order for the mentioning device to do its work. "Linguistic quotation marks, after all, are a species of demonstrative construction: a use of quotation marks will refer to

that word, whatever it is, that happens to be made salient by being placed within the quotation marks” (Papineau 2007a, p. 121). That will do in most circumstances. Yet, since qualia are not physically present in any straightforward manner, the analogy with quotation seems to bring little aid. Led by these considerations, Papineau has rebuilt his account so that nothing turns on the actual presence of what is referred to. His recent work still retains the core idea that *phenomenal concepts involve the very quality referred to*. This is the basic thesis I am defending in this chapter. However, I believe the standard menu of options—specifically the type/token and description/acquaintance bipartitions—doom Papineau’s efforts to failure.

Consider first the type/token bipartition. Papineau asks: “Can phenomenal concepts pick out experiential particulars as well as types?” (2007a, p. 123). Clearly, any concept wedded solely to a particular token is bound to be severely limited in its use, so Papineau rightly concludes that such an *hic et nunc* concept (if it could indeed be so called) would not allow for crucial “reencounters,” as he puts it. After all, the taste of the ice cream one ate on the occasion of one’s seventh birthday—if treated as a token—is a taste found in no other ice cream. The Peircean semiotician will of course notice that what is relevant in discussing the taste of ice cream is a tone; but a theorist unable to call on this crucial notion will recoil to her only remaining option when rejecting tokens as inappropriate. Predictably, then, Papineau concludes that what is involved must be “encounters with a type” (ibid.). This response brings

us back to the unsatisfactory starting point: how does one encounter a type? Types cannot impact one's sensory organs, tokens of types do; so any theory which hopes to account for phenomenal consciousness by invoking experiential encounters with types is surely ill-fated.

To be sure, we do say, as Peirce [1931–58, vol. 4, para. 537] pointed out, that there is but one word “the” in the English language. But this is no more to be taken *au pied de la lettre* than is the statement that there is only one poisonous lizard in the continental United States [...]. There is not one *lizard* which is the “type-lizard,” and many other lizards which are the token lizards. Likewise, there is not one *word* which is the type, and many other words which are the tokens. (Willard 1983, p. 287)

Investigations into consciousness have progressed on a lot of fronts in the last two decades. Yet if, by analogy, philosophers of mind have recently been led by their discussions of phenomenal concepts to conclude that one can somehow “see” the type-lizard, then something has gone wrong along the way (using the full resources of the type/token/tone tripartition, one should say that one does not “reencounter” a type; rather, a type is what permits one to encounter tokens of the same tone).

To further illustrate how a limited menu of options strong-arms Papineau into adopting unsatisfactory conclusions, consider next the acquaintance/description bipartition. Knowledge by description can be detached from its worldly site of origin and communicated second-hand. Descriptions can therefore work just fine even though the object described is absent.

Knowledge by acquaintance, by contrast, requires the actual presence of its object. In order to count as knowledge, (symbolic) reference *in absentia* must, in some way, answer to (indexical) reference *in praesentia*. Indeed, the whole point of the knowledge argument is to show that mere description is insufficient; at least when it comes to conveying the content of experiential feels. Papineau accepts this, since by his lights “[i]t seems clear that the preemergence Mary does lack some concepts of color experiences” (2007a, p. 111). Thought-experiments notwithstanding, this contribution of lived experience explains why “[o]ne cannot give an informative answer about seeing orange to the congenitally blind” (Pitt 2004, p. 31).

The phenomenal concept strategist is thus in a bind. Either she maintains that qualia can be referred to by description—which is what the knowledge argument denies; or she maintains that qualia can be referred to causally—which is difficult to make sense of in the case of qualia. Like Papineau, discussants who rely on Russellian notions bounce between these two options to no avail. I submit that, to dismount this seesaw, one needs the concept of iconic reference.

The employment of one yellow object to signify another yellow object by means of their yellowness (and not, say, their proximity to one another) does not permit one to dissociate questions pertaining to “the medium and the message” (to echo McLuhan), since these admit of a univocal answer, to wit,

“yellow.” As William Seager writes: “What can be called ‘immediate consciousness’ just has the peculiar reflexive property of allowing an appreciation of both the information being conveyed and the mode of conveyance” (1999, p. 93). Given this overlap, the very quality which acts as a sign-vehicle cannot be omitted—on pain of omitting the passage that makes that quality play a semiotic role in the first place. This explains why “[m]any phenomenal kinds can be referred to only through the content shared by experiences of the kind at issue” (Nida-Rümelin 2008, p. 310).

In a statement echoing Peirce’s remark that the icon has the ability of “bringing its interpreter face to face with the very character signified” (Peirce 1998, p. 307), Papineau writes that “phenomenal concepts are too close to their referents for it to seem possible that those same concepts could refer to something else,” since “the referent seems to be part of the concept itself” (2007a, p. 132). Of course, given that an icon refers to a quality by being that very quality, this suggestion that the referent is “part of” the concept is not at all fanciful. Nonetheless, since Papineau lacks the notional resources needed to properly express this idea, he sometimes frames his conclusions in terms that hinder their reception. Tim Crane, for instance, writes that:

[I]t seems to me entirely incredible that when one thinks about, say, pain, one must, as a necessary part of that very act of thinking, have an experience which *in any way* resembles pain. When the narrator of E. M. Forster’s *Where Angels Fear to Tread* says that ‘physical pain is almost too

terrible to bear,' he is clearly intending to talk about pain in the phenomenal sense, pain as a feeling, an event in the stream of consciousness. In any normal sense of 'phenomenal,' then—any sense that relates it to its etymology and its traditional philosophical meaning—he is employing the phenomenal concept of pain. But in order to understand this remark, and therefore grasp the concepts which it expresses, I do not think I need to undergo, as a part of that very understanding, an experience which is in any sense painful. Yet this is what Papineau seems to be saying. (2005, p. 156)

Armed with the full symbol/index/icon taxonomy, I want to come to Papineau's defence. All parties agree that describing something exclusively by symbols is a non-starter. Russell would be the first to agree. After all, "Russell was as aware as anyone else that not everything can be thought of by description, on pain of the whole system of identification failing to be tied down to a unique set of objects [...]" (Evans [1982] 2002, p. 45). The knowledge argument brings this out in a particularly memorable way. While sequestered in her cave from birth, Mary could have been taught by unscrupulous experimenters to take *Dungeons and Dragons* seriously and thereby make coherent functional responses about "ghouls" and "trolls." Hence, given that on one level "pain" is a symbol like any other, there is surely something right in Crane's claim that this lexical concept does not have to be painful. Yet, if one is to truly comprehend what that word refers to, then, in some respect, one must have experienced pain, and whatever quality one will have retained from such token episodes will itself be related to pain states by

being able to indexically spot a similar state if and when it presents itself and have an iconic sense of “what” those states “are like.”

The second conjunct here is crucial, since it distinguishes the fine-grained appreciation of qualities that iconicity (via precission) permits. The concept of pain can indexically refer to past experience(s), but at some point that concept will have to share the experiential quality itself, on pain of having no real clue what that feeling is like. In other words, if one asks the narrator of Forster’s book “What is pain?,” that narrator is free to answer “What I experienced last Friday;” and when asked what was experienced last Friday, he can in turn answer “What I experienced the Monday before”—and so on. The semiotician has no quarrel with any of this. Yet, if the person really possesses the relevant phenomenal concept, it cannot be anaphora all the way.

Signs are not memes (Kilpinen 2008). So, if a novel would be written by a congenitally blind autistic literary savant who has no sense of fine grained emotion concepts, Peircean semiotic theory predicts that, to the extent it would be considered a good novel by readers, this text generator would have relied on informant(s) who enjoyed the relevant experiences (those informants would then be the analogues of programmers who feed instructions and symbols in a Turing machine).

As shown in the earlier grid (figure 5), semiotics arranges icons, indices, and symbols in an ordinal fashion, such that the more developed grades of

reference subsume the lesser ones but not vice versa (Peirce 1998, p. 9). Interestingly, this triadic pecking order is confirmed by empirical data. Consider for example the icon “IIIII” and the symbol “6,” which have a common referent but relate to it in different ways, the former non-conventionally, the latter conventionally. If symbolic reference could depart *completely* from iconicity, as Crane’s criticism suggests, then one would expect the interpretation of Arabic numerals like “6” to be untainted by whatever cognitive and mnemonic limits plague its iconic counterpart “IIIII.” However, studies have shown that subjects asked to pick the largest among pairs of symbols like “4 versus 9” demonstrate a lag in their response times akin to figuring out “IIII versus IIIIIII.” “These results strongly suggest that the process used in judgements of differences in magnitude between numerals is the same as, or analogous to, the process involved in judgements of inequality for physical continua” (Moyer and Landauer 1967, p. 1520; for more recent studies, see Carey 2009, pp. 117–156). Now, if there is evidence that a symbol such as “6”—a quantitative concept not exactly known for its poetic connotations—is in some way IIIII-like, why should it be absurd to agree with Papineau that “[e]ven if imaginings of pains don’t really hurt, they can share some of the phenomenal unpleasantness of real pains” (2002, p. 174)?

One could also look to scientific and phenomenological studies which suggest that mere contemplation of a word or phrase primes the body for a host of motor and affective responses, such that reading “pain” is in some sense

experiencing a trace of the relevant feeling. I will not pursue that line of inquiry here, but some points of entry would be Shapiro (2011, pp. 70–113), Thompson (2007), and Gallagher (2006).

The interesting question is not whether concepts need to *always* resemble the things they refer to; there is a clear sense in which they do not (to that extent, Crane’s criticism of Papineau is trivially right). The interesting question is whether mastery of symbols and indices alone could ever suffice to secure reference to the “feel” of experiences. After all, from a developmental perspective, iconic competence is often (and perhaps always) the gateway to symbolic competence. It is doubtful anyone ever mastered “6” without first mastering “IIIIII” (Resnik 1982, p. 98). Some biologists (e.g., Kull 2009; Deacon 1997) believe that this holds on the evolutionary ladder as well. Holistically drawing inferences on an empty symbol-to-symbol axis certainly remains possible (especially by machines that have never known otherwise). It is also possible for one not to feel a hint of pain when one reads or writes the word “pain.” But, if one *never* does—anywhere, anytime, under any circumstance—one can hardly lay claim to what the word *means*. Smithies (2011, pp. 22–25) argues that, unless a subject is phenomenally conscious of the object(s) of her demonstratives, she cannot rationally defend her claims when challenged. It may be okay for Mary to refer to whatever her textbooks told her; just as it is okay to answer the question “What is pain?” with “What I experienced last Friday.” But it is *not* okay for the authors of those textbooks to

have never enjoyed the relevant icon(s). I thus agree with Peirce that “[t]he only way of directly communicating an idea is by means of an icon; and every indirect method of communicating an idea must depend for its establishment upon the use of an icon” (1931–58, vol. 2, para. 278).

The point can be put another way. Suppose that a subject were to possess a given colour concept solely in virtue of having been told about its relations to darker and lighter colours in the vicinity. Being told, say, that amethyst is midway between purple and pink could conceivably be informative to someone who has experienced purple and pink. If so, then that person’s concept of amethyst would amount to a rule (involving several relata), and the unfamiliar quality sandwiched between purple and pink would become akin to a conclusion that can be inferred once one knows the relevant premises. Since the rule applies to a spectrum that is ordered, there is a temptation to dismiss the need to experience the midway quality itself (e.g., Churchland 1992, pp. 102–110). Yet, that spectrum actually vindicates qualia. The colours sandwiching an unfamiliar shade remain unproblematic only provided that one does not slide the very sandwiching relation to either side. Without an iconic access to qualia though, one *has* to (constantly) make that slide. Therefore, the premises adduced to secure a supposed inference of the quality turn out to be insecure conclusions of their own, leading to a regress or circle.

David Rosenthal believes that “[w]e cannot acquiesce in the unhelpful thought that we all know the qualitative state when we see it” (2005, p. 196). Why not? Rosenthal reasons, quite rightly, that if experiential familiarity with a quality is needed, then “[t]hat would amount to picking the phenomenon in purely ostensive terms, which leaves too much open for us to tell whether we can explain the phenomenon in a way that makes it intelligible” (ibid.). I differ from Rosenthal in being open to the possibility that, when we move past the range of symbolic description, we move past the range of intelligibility. Language is like a tour guide who can show you around the sites of Prague. It is a good guide, but you still need to tour Prague.

Compared with words, indices and icons are certainly mute. Of course, one will run into problems if one demands an articulate account of the inarticulate. Livingston is correct that “consistent maintenance of the position that the contents of consciousness are literally unspeakable threatens to require the theorist to deny the intelligibility of much of our ordinary language of self-description and explanation” (2004, p. 240n27). Nonetheless, I believe “[t]he ineffable is not something mystical or mysterious; it is merely that which evades description. It evades description, but it pervades experience” (Short 2006, p. 171).

Iconic reference thus augments the important “semantic” axis brought out by John Searle’s (1980) “Chinese room” thought-experiment (Harnad 2002).

Indeed, it should be noted that the distinction between semantics (vehicle-to-object), syntactics (vehicle-to-vehicle), and pragmatics (vehicle-to-interpreter) was introduced by Charles Morris in his influential 1938 *International Encyclopedia of Unified Science* paper on “Foundations of the Theory of Signs” (reprinted in Morris 1971, pp. 13–71) to draw a methodological (not ontological) division of labour between those studying semiosis (i.e., the full triad of vehicle-to-object-to-interpreter). The division was known to medieval logicians (see Peirce 1998, p. 327). One can *prescind* the various axes discussed by Morris, but one can never isolate them *in fact*.

On a common sense level, most of us grasp that when a dictionary defines a colour by citing other colours, its accomplishment is partial. The Jacksonian insight—present in Russell and developed by recent phenomenal concept strategists—is that symbols without indices are empty. In keeping with the subsumption illustrated earlier, Peircean semiotics takes this insight further by holding that indices without icons are empty.

Papineau heeds the moral regarding the insufficiency of descriptions, adds to it a novel recognition of acquaintance’s insufficiency with respect to qualities, and then tries to construct a model that could remedy this. The success of his positive suggestions is partial, but I think his desiderata are on target. In a coloured world, iconicity trumps indexicality as a more plausible way to explain reference to phenomenal experience(s).

II.VI “Being Like” a Quality by “Being” that Quality

I have been contrasting two modes of reference. An index “is a sign which would, at once, lose the character which makes it a sign if its object were removed;” whereas an icon “is a sign which would possess the character which renders it significant, even though its object had no existence” (Peirce 1931–58, vol. 2, para. 304; see Copley 2010, pp. 242–243). Now, a sign-vehicle can serve as both an index and an icon. Chalmers is therefore correct to describe Mary as able “to think demonstrative–qualitative thoughts in which both a demonstrative and a qualitative concept are deployed” (2004, p. 186). Thankfully, precursive analysis does not force us to take this double-duty at face value.

Suppose Mary utters “This is what red looks like.” This involves both indexical and iconic reference. The indexical component captured by “this” is an effective way to track the things in the world that prompt the qualitative experiences one wants to elicit (Chemero 2006, p. 64). Papineau (2002, pp. 66–67) expresses doubts about the ability of an indexical construction like “This feeling” to select a quality in the manifold stream of consciousness with enough specificity. A lot is going on, so communicators will presumably have to work to pinpoint what they mean. However, once Mary exits her black and white confines, the world provides her both with qualitative experiences and the iconic means needed to convey those experiences. Using symbols (i.e., language) and indices, Mary can invite her interlocutor(s) to precursively focus

on the tone of the tokens she points to. This is where iconicity does its work. If all goes well, iconicity allows one to glimpse “what” Mary has in mind when she says “My experience is like that.” A stubborn interlocutor can at any point spoil the sign-exchange. Still, thanks to iconic reference, one can in principle convey what a phenomenal quality is like.

Mary could not use her exhaustive neurophysiological premises to make an inference about the qualitative feel of the colour red, in advance of any face-to-face experience (for a kindred view, see Robinson 2004). Still, even supposing Mary could do this (Dennett 1991a, pp. 399–401), then in order to prove her accomplishment to her peers, she would have to engage in some overt act of communication. The ensuing question is whether the red things she points to can be linked to her experience in a way contentful enough to counter fears that she might be persuading her peers even though “all is dark inside” (Chalmers 1996, p. 96).

As we saw when we looked at the blind trust placed on introspective reports of “blindsight,” the claim that the mind is qualitatively vacant is not worthy of much argument these days. In any event, current debates take it that, “[w]hen you know all of science but don’t know what it is like to see red, then you can name the relevant property and perhaps interact it [*sic*] from the outside, but you lack the mode of presentation that *reveals* what the quiddity of the property is” (Hawthorne 2002, p. 44). Usually, it is assumed that only introspection can

secure confidence that the experiential lights are indeed on. Such a “viewpoint-relative” (Kirk 2005, pp. 61–63) confirmation that one is conscious obviously falls short of third-person verifiability. Some (e.g., Cohen and Dennett 2011) make a big deal of this; while others (e.g., Nagel 1986) think it is simply a fact we have to live with. Talk of irreconcilable perspectives is arguably less offensive to the contemporary palate than talk of irreconcilable substances. Yet, given that humans have to use signs in the world in order to communicate their mental states, what results from either stance is very much sceptical business as usual. Chalmers encapsulates this when he writes that “My qualitative concept ‘*R*’ plays little direct role in communicative practices. In that way, it resembles Wittgenstein’s ‘beetle in a box’” (1996, p. 206; see Wittgenstein [1953] 2001, p. 85; and also Kirk 1994, pp. 46–47).

Papineau, despite being aware that “Mary’s concept [of colour] looks like a paradigm of the kind of thing Wittgenstein’s private language argument is designed to discredit” (2002, p. 128), philosophizes from the assumption that communication of phenomenal qualities is possible (*ibid.*, p. 130). Truth be told, so do most of us, most of the time. Is there any way to vindicate this commonsensical point of departure—to make it our philosophical point of arrival too? Let us assume for the sake of argument that the signs emitted by people are available to you, but that their minds are hidden. A person may tell you, for instance, when and where she feels green, perhaps locating the objects

and events that prompt her experience. On those terms, what sort of reference would be most apt to licence your confidence about *their* consciousness?

As Edmond Wright (2008) points out, mutual trust can quickly seal the divide between numerically-distinct experiences. From a practical standpoint, that is certainly true; after all, symbolic reference employs that very channel. Seen in this light, indexicality is a way to fine-tune the coupling of two people's behaviours, thereby ensuring that your inference by analogy about another mind involves as little risk as possible. Yet, no matter how adept, those antics will not amount to a conveyance of what green feels like. This is because, even if a perfect covariation were to hold between what happens "on the outside" and what happens "on the inside," one cannot use whatever happens on one side to figure out what happens on the other, any more than one can use smoke to ascertain what fire looks like. Indexicality tracks only the covariations, not *what* covaries. This is certainly more to go on than a stipulated agreement between symbol-users. Nonetheless, since the reach of indexical reference stops where your partner's skin begins, conversational goodwill—even when reduced to a minimum by a judicious use of indices—pole-vaults from one mind to another by a leap of faith. This yields the isolated conversationalists pictured earlier. All told, most philosophers would prefer a story less dependent on voluntarism, if such a story can be had.

Prescissive abstraction is not mechanical, so one cannot eradicate voluntarism altogether. Still, I believe inference to the best explanation licenses a migration to a semiotic account, since its analysis of resemblance appeals to considerations more impersonal than outright introspection. Papineau (2002, p. 171) quotes approvingly Thomas Nagel's observation that "To imagine something sympathetically, we put ourselves in a conscious state *resembling* the thing itself" (Nagel 1974, p. 446; emphasis added). Given that "[i]cons are so completely substituted for their objects as hardly to be distinguished from them" (Peirce 1992, p. 226), if the box that holds the beetle is made into an exact likeness of the beetle, one can gaze at the beetle itself.

Granted, that's not exactly a naturalist answer, but then again these aren't exactly naturalist questions. Only sapient creatures wonder how (and worry if) they refer to their own sentience (Deely 2002).

II.VII Transparency and Opacity

Is it grandiose to suggest that icons can allow one to gaze at the beetle itself? To test this claim on a less controversial case, consider "IIIIII" (on this page) as an icon of IIIIII (on this page). Besides the fact that distinct tokens are present, one would be hard-pressed to say that there is any difference between the sign-vehicle and its object. Now, anyone who has ever had their attention redirected by an index finger or sudden scream accepts such mundane events as proof that

indices are semiotically efficacious. The index cannot bear the full weight of scepticism, but this hardly stops most philosophers from thinking that we are better off with indexicality in the mix. By parity, the manifest similarity between “IIIII” and IIIII should suffice to show that icons can work.

Note that the pronounced similarity of the icon holds irrespective of whether one chooses to use or “mention” a sign-vehicle. This is brought out by the much-discussed transparency argument (with roots in Harman 1990, but usually attributed to Tye 2000, pp. 45–68; see also Tye 2002). Imagine that you are placed before a blue wall so large that it engulfs your entire visual field. The surface of the wall is uniform in hue and smooth in texture, nothing else enters the picture, and your subjective vantage is not allowed to shift. Often, one is told to pick a thing in one’s surroundings and to “concentrate as hard as you can, *not* on the colours of the *objects*, but on the quality of your *experience* of those colours” (Carruthers 2000, p. 123; emphasis in original). Yet, if one truly follows those instructions and “concentrates” on a colour, one can no longer contrast that quality with whatever other colour(s) delimit(s) it. Precissive abstraction must always work with a stream of lived experience that is complex (Kelley 1984), so unless one wishes to explicitly defend gestaltist commitments, the usual set-up is worded somewhat carelessly.

I agree with Peirce that “precission, if accurately analyzed, will be found not to be an affair of attention” (1931–58, vol. 2, para. 428). Since it is not a

matter of psychology, “it is conceivable, or supposable, that the quality of blue should usurp the whole mind [...]” (Peirce 1992, p. 290; see also his 1998, p. 4). The task is to note what can and cannot be gleaned from an examination of such a lone quality. Speaking strictly as a logician, Peirce wrote: “To suppose, for example, that there is a flow of time, or any degree of vividness, be it high or low, seems to me quite as uncalled for as to suppose that there is freedom of the press or a magnetic field” (1931–58, vol. 1, para. 305).

Peirce took this to vindicate qualia. Strangely, the conclusion nowadays drawn from the transparency argument is that qualia cannot exist. “Since the main reason for believing in nonrepresentational phenomenal character, or qualia, is our alleged direct awareness of it in experience, if there is no such direct awareness, as transparency suggests, then there is little reason to posit qualia” (O’Dea 2008, p. 300). Apparently, considerations like these helped tip the scale of Frank Jackson’s deliberation away from dualism (Bigelow and Pargetter 2006, pp. 353–354). Despite changes in terminology, the terms of the debate are essentially those captured in Searle (1983, p. 59): either a vehicle intervenes, in which case it blocks access to the object; or access to the object is achieved, in which case no vehicle intervened (Kind 2010). In my view, what the transparency argument establishes is that one would be impotent to tell whether the qualitative experience one undergoes is “internal” or “external” to one. Indeed, under the stringent exclusionary conditions just outlined, it would be just as reasonable to interpret a blue expanse as an opaque screen as it is to

interpret it as some physical object transparently present before one (Ransdell 1979). What deserves endorsement, then, is not one of these two glosses, but an agnostic mid-way, since both options are equally viable (until and unless further experience is allowed to enter the picture).

In his *Tractatus de Signis*, John Poinset explicitly addressed the tension implied by iconicity:

[T]he more a representation is one with the thing represented, the better and more efficacious is the representation. Yet no matter how perfect, a concept in us does not attain to identity with the represented, because it never attains to this, that it represents itself, but [always rather] another than itself, because it always functions as something vicarious in respect of an object; it always retains a distinction, therefore, between the thing signified and itself signifying. ([1632] 1985, p. 228)

Poinset concluded that iconic likeness can never be complete. What motivated Poinset to endorse this minimal difference is something along the lines of Aquinas' thesis that "[a]lthough it is necessary for the truth of cognition that the cognition answer to the thing known, still it is not necessary that the mode of the thing known be the same as the mode of its cognition" (*Summa Contra Gentiles*, translated by Rasmussen 1994, p. 417). A default recommendation to tease these two elements apart can certainly benefit philosophic inquiry in most instances. The problem, however, is that in iconicity *what* we know is precisely *how* we came to know it (for a fuller discussion of Poinset's views on iconicity, see Champagne forthcoming).

Peirce, who had a command of medieval semiotics (Beuchot and Deely 1995), agrees with Poincaré that “one and the same thing never represents itself; for this identity cancels the rationale of a sign” (Poincaré [1632] 1985, p. 234; see Furton 1995, p. 126). But, as a logician, Peirce (1998, pp. 186–194) bites the bullet, as it were, and accepts that the triadic relations involved in semiosis must subsume simpler (dyadic and monadic) ones—even if that means that, below a certain point, there cannot properly be a sign (Santaella 2003, pp. 49–50). This may be what James had in mind when he noted that, approached from a certain perspective, “the sensation as ‘sign’ and the sensation as ‘object’ coalesce into one, and there is no contrast between them” ([1890] 2007b, p. 243). If an ontology is incapable or unwilling to countenance such an iconic contact, then “any project of explanation that applies to consciousness the empirical methodology of the experimental sciences risks falsifying or omitting entirely the interpretive kind of access that we have to our own consciousness, a kind of access that is unique and practically definitive of the special problems of explaining it” (Livingston 2004, p. 229).

Now, a standard approach to truth sees it as consisting of truth-bearers on one side, truth-makers on the other side, and a truth-relation between the two. This essentially reprises the triadic model of the sign. Whatever “truth” we get in iconic reference, though, reminds us not to take this model for granted, since in our most proximate experiential dealings with objects, truth-bearer and truth-maker are one (Bradley 2012, pp. 157–158). This means that one should not

worry about (much less accuse theorists of) conflating physical presence and cognitive presence (Levine 2007, p. 163) since, at the proper level of analysis, there is simply nothing to “conflate.” I believe this is what John McDowell means when he says that “there is no ontological gap between the sort of thing one can mean, or generally the sort of thing one can think, and the sort of thing that can be the case. When one thinks truly, what one thinks *is* what is the case” (1996, p. 27; see Dodd 1995).

Like Peirce, James invites us to consider a white sheet of paper, and to note that “[t]he thought-stuff and the thing-stuff are here indistinguishably the same in nature [...] and there is no context of intermediaries or associates to stand between and separate the thought and thing” ([1906] 1975, p. 31; also found in James 1977, p. 156). Matjaž Potrč defends something analogous when he argues that conscious experience presupposes an “original intertwinedness” of subject and object (2008, pp. 110–111). His proposal is reminiscent of Maurice Merleau-Ponty’s reflections on the “chiasm” of experience, according to which “he who sees cannot possess the visible unless he is possessed by it, unless he *is of it*” (1968, pp. 134–135).

Whereas iconicity engulfs the very quality it refers to, acquaintance always keeps its object at bay. Russell reworked the original notion with the express intent of preserving such a split: “Now I wish to preserve the dualism of subject and object in my terminology, because this dualism seems to me a fundamental

fact concerning cognition” (1910–11, p. 109). Indeed, it should be remembered that indexicals, which Peirce originated (see Atkin 2005; Sebeok 1990, p. 21), were later changed by Russell to the (now unpopular) name “egocentric particulars” ([1940] 1997, pp. 108–115). The possibility of developing an account of iconicity has been hindered by the assumption that such demonstratives are “the mother and father of all information-based thoughts” (Evans [1982] 2002, p. 145). A symptomatic statement can help to appreciate the scope of the missed opportunities. Chalmers matches my negative claim that what is involved in phenomenal knowledge is not an index. He writes: “Mary’s thought involves attributing a certain substantive qualitative nature to an object that is identified demonstratively. The concept *R*—her qualitative concept of the sort of experience in question—is not a demonstrative concept at all [...]” (Chalmers 2004, p. 185).

However, Chalmers does not match my positive claim that what is involved is an icon. The closest he comes to reference by shared quality is when he invents a “direct phenomenal concept” (Chalmers 2010, p. 267). Pausing to take stock of what he has gleaned from his dialectic, Chalmers writes: “All this is to say that there is something intrinsically epistemic about experience. To have an experience is automatically to stand in some sort of intimate epistemic relation to the experience [...]” (1996, pp. 196–197). Chalmers is saying that to undergo an experience is *eo ipso* to know “what it is like” to have that experience (I would rephrase this by saying that whenever there is a token,

there is a tone). Yet, Chalmers immediately adds: “[...]—a relation that we might call ‘acquaintance’” (1996, p. 197). If it is true that “[s]ome kinds of knowledge require distinctive forms of engagement between the knower and the known” (Bigelow and Pargetter 2004, p. 194), and if knowledge of qualia requires just such a distinctive form of engagement, then by using the Russellian label “acquaintance” and speaking of a “relation,” Chalmers (2010, pp. 283–291) inadvertently takes on a host of philosophical assumptions which introduce a gap or hiatus between knower and known.

Chalmers is simply working out a consequence of this “dualism of subject and object” (Russell 1910–11, p. 109) when he asserts that “experiences are not red in the same sense in which apples are red. Phenomenal redness (a property of experiences or of subjects of experience) is a different property from external redness (a property of external objects)” (Chalmers 2010, p. 254). Although Chalmers immediately adds that “both are respectable properties in their own right” (*ibid.*), his basic assumptions nevertheless leave him with two tokens to juxtapose: one “in here,” the other “out there.” Presumably, one comes to know a token “out there” by means of a token “in here.” Yet, no matter how alike those tokens are, the thin space of numerical distinctness between them is enough to cast doubt that one truly has referred to the quality in question. Chalmers is therefore right that a predicament like absent or inverted qualia “is occasionally found distasteful, but it is a natural consequence of the indexicality

of the concept” employed to express phenomenal qualities (Chalmers 1996, p. 205).

The trichotomy of symbol/index/icon is distinguished from all this by making room for a mode of reference that fuses sign-vehicle and object. Because it is merely potentially similar to something like it, “[a] pure icon can convey no positive or factual information; for it affords no assurance that there is any such thing in nature” (Peirce (1931–58, vol. 4, para. 447; for a similar view, see Crane 2009). Although indexicality has its place, Peircean semiotics countenances an ideal case where what is signifying and what is signified are one and the same. In short, careful study of the conditions for the possibility of sign-action reveals a ground level where similarity becomes so pronounced that “[i]t is an affair of suchness only” (Peirce 1998, p. 163). When prescind all the way to uncorrupted iconicity (without numerically-distinct tokens), we therefore place ourselves at a level incapable of supporting the distinction between veridicality and illusion, given that “[o]n a perceptual level you cannot predicate anything of a Likeness other than the recognition that it is that Likeness” (Eco 2000, p. 347). This means that, contrary to the view expressed by Chalmers, if one looks solely at a quality, experiences *are* red in the same sense in which apples are red.

Papineau comes to the same conclusion: “What it’s like to focus phenomenally on your visual experience of the bird is no different from what

it's like to see the bird" (Papineau 2007a, p. 124). Using symbols, one person can invite another person to use icons and engage in such "focus." Such prescissive disregard of everything except a given quality can be done in a way that lets the two persons achieve the same result. But, in order to verify the convergence on a shared quality, those persons necessarily have to start talking and gesturing again. We will never rid ourselves of the fact that communication requires us to show *and* tell. Yet, to the extent the transparency argument holds, then by joint attention subjects can genuinely come to know what it's like for each other to enjoy a given phenomenal experience.

All the distinctions in the earlier diagram (figure 4) and grid (figure 5) are prescissive, so I have no wish to deny that, "[w]hen Mary says, 'So *this* is what it is like!', what she refers to will almost certainly be a physical property of a physical event" (Bigelow and Pargetter 2006, p. 377). Such physical presence would suddenly matter if, say, Mary were to use a red rose to indicate to her colleagues that she passed by the laboratory while they were gone. Indices, however, do not exhaust the referential repertoire, so I argue that the red rose can fulfil other roles that turn on its quality. Deliberate focus on a quality does not erase the fact that a token is needed to see a tone—the referential resources of philosophy of signs may be richer, but particulars are always needed to impinge upon our senses, just like any sign must have some concrete material support. But if, as I have argued, similarity does not depend on proximity, then

it is misleading to claim in an unqualified way that “Reference to any x involves causal influence from x to the referential act” (Robinson 2008, p. 224).

It is important to keep in mind that similarity can be (and probably always is) a matter of degree (Nöth 1995, p. 124). Although I am dealing with similarity in its most extreme theoretical case (as a pure qualitative identity uncorrupted by numerical distinctness), it nevertheless remains that, in everyday sign-use, one handles imperfect similarities. Interpretation must ultimately answer to mind-independent constraints (Eco 1990), but it has plenty of wiggle room. For example, the fact that a letter is missing will surely not halt one from taking “Raise your f_st” to mean “Raise your fist.” Therefore, a philosophical preoccupation with ideal similarity should not be confused for a practical account of similarity-based semiosis.

Papineau acknowledges that “in phenomenal thought the conscious referent seems to be present in the thinking itself, without any veil between subject and object” (2006, pp. 104–105). Papineau has a mixed attitude towards this result. He writes that “[p]henomenal thoughts do not have any magical property to reach out and grasp their objects transparently” (2006, p. 105). This conveys an unmistakable incredulity. For my part, I do not detect anything magical here. Of course, if icons enjoy a bond to their object(s) near or far, this does look like action at a distance, which can in turn seem magical. However, this sense of magic arises only on the assumption that “[p]henomenal thoughts, just like any

other intentional states, gain their referential powers from causal and historical relations” (Papineau 2006, p. 105). I follow most semioticians in recognizing that not all reference conforms to that indexical model.

Trying to force every encounter with reality into an indexical encounter means that whatever fails to meet this expectation is discarded as somehow unreal (see Cockram 2014). A lot of things fall into place once we realize this. Indeed,

We may understand Quine’s criterion of ontological commitment in Peircean semiotic terms as an attempt to place the full burden of representing reality onto *indexical signs*. This leads philosophers with realist sympathies to feel they need to ask a raft of questions of the form: “Does term X [e.g. ethical or aesthetic predicates, number-terms...] denote a real object?” If we recall that indexical signs pick out sign-independent particulars, it often seems hard to answer “yes” to this question for key terms in manifestly important human discourses [...]. (Legg 2013, p. 16; for a kindred complaint, see Horwich 2010)

Qualia are a casualty of this assumption. Widening the array of referential options, so as to include iconicity, is thus one way to avoid dismissing immediate conscious awareness solely on account of its linguistically inarticulate character.

To be sure, the pure icon must remain a theoretical ideal—the logical asymptote of a likeness bereft of any alterity (qualitative and numerical). To the extent one reaches this limit, one does so only by means of reason. I thus own

up to the fact that, ultimately, “[s]emiosis explains itself by itself” (Eco 1976, p. 71). There is nothing spooky about this sort of circularity. In discussing philosophical explanations of natural science which rely on the very results of natural science, Quine famously wrote that “scruples against circularity have little point” (1969, p. 76). Nowadays, most have accepted that we do our best with the means we have at our disposal. All the semiotician does is enlarge that circle to encompass signs, which we can never stop using. The methodological difference is that, unlike using symbols to talk about symbols—which is what linguists do when they employ a meta-language—using symbols to talk about icons requires semioticians to subtract, not add, a layer a discourse. Neither strategy is impossible to implement. In either case, one must disregard one’s intervention; otherwise no progress can be made.

II.VIII Chapter Conclusion

The moment an organism acts on the basis of a feeling, this generates a worry that we are studying that feeling’s discernible effects, not the quality of the feeling itself. Properly understood, phenomenal states or qualia are not supposed to enter into any kind of relation with the world or other mental states, otherwise they could in principle be detected (either through their causal efficacy or participation in inferences). Hence, “[o]n the phenomenal concept, mind is characterized by the way it *feels*; on the psychological concept, mind is characterized by what it *does*” (Chalmers 1996, p. 11). Yet, since “doing”

automatically changes the topic away from phenomenality, how could one possibly refer to such qualities? Some (e.g., Levine 2001) have taken this to mean that humans have an inherent shortcoming when it comes to understanding consciousness. The phenomenal concept strategist maintains that, on the contrary, our epistemic powers are almost too strong for their own good. We employ a special class of concepts when discussing conscious states, and a better understanding of those concepts will show that “the disturbing effect of the explanatory gap arises from an illusion [...]” (Loar 1999, p. 103).

There is a sense in which I too have endeavoured to disentangle certain intuitions that generate puzzlement about consciousness. Chalmers remarks that “[t]he clearest cases of direct phenomenal concepts arise when a subject attends to the quality of an experience and forms a concept wholly based on the attention to the quality” (2010, p. 267). Once we enlist the resources of philosophy of signs to articulate this idea of a concept *wholly* based on attention to a quality, we gather that only icons could be up to the task of referring to qualia. One can prescind a simple quality amidst any segment of semiosis, but one has to make sure that whatever one reports about those impoverished scenarios does not help itself to the very resources supposed absent. Hence, qualia “are the artificial product of a highly sophisticated analysis, and not genuine existents revealed to ordinary, everyday scrutiny” (Goudge 1935, p. 536). Unfortunately, mainstream debates took on selected Peircean ideas without grasping their full semiotic motivation. Present-day advocates of the

phenomenal concept strategy represent the culmination of the (mistaken) assumption that indexicals are the simplest form of reference one can muster. By dipping below the level of triadic relations, I have tried to approach phenomenal consciousness from a different—and more promising—angle.

How does the world “convey” information to our minds? The overlooked possibility I have been exploring is: by doing no conveying to begin with. Icons are ideal transducers because they involve no transduction; “[a]nd this means that philosophers do not have the task of explaining how we get *from* our experience *to* its external object” (Hookway 2007, p. 68). If we come to the situation armed with the possibility of such “split-free” iconic reference, it is no longer mandatory to countenance the disconnect illustrated in figure 3. William Seager writes that “[t]he privacy of your qualia does not at all imply that others can’t know what experiences you are having or what they are like. But of course they cannot know this by literally sharing your experiences” (1999, p. 92). At the risk of sounding provocative, this chapter has suggested that they can.

Since icons can reach their shared qualities only once we suppose all interpretations and objects absent, I want to spend the next chapter studying this prescissive supposition of absence.

Chapter III

Does the Mind Have an “Undo Button”?

Prescission Demystified

What, [Dennett] asks, was the taste of beer the first time you tasted it, before you learned to like it? He seems to think that it had no specific taste, no *qualia*. Dennett’s understanding seems to be that what we mistook for taste was really a frustrated urge to spit the stuff out. Such a disposition may well have been part of the experience, but I also remember a taste.

David Lidov, *Elements of Semiotics* (1999, p. 117)

Supposing [...] that a certain representation, A, passes from some state unaccompanied by the *I Think* to a state in which the *I Think* does accompany it, will there follow a modification of the structure of A, or will the representation remain basically unchanged?

Jean-Paul Sartre, *The Transcendence of the Ego: An Existentialist Theory of Consciousness* ([1936–37] 1991, p. 34)

III.I Chapter Introduction

If one thinks about one’s thinking, can one undo what one has done—or is one forever burdened with the added complexity one has generated? In *The Conscious Mind*, David Chalmers inserts a memorable cartoon of a character, Zippy the Pinhead, spawning a long (and seemingly open-ended) series of higher-order thoughts:



Figure 6 Zippy the metareflective Pinhead
(Taken from Chalmers 1996, p. 230)

I take it that this is comical because, for the most part, such a predicament does not hinder our daily affairs. Sartre is right: if an extra “I think” were to accompany every experience, “this superfluous *I* would be a hindrance” ([1936–37] 1991, p. 34), because it would engender a regress. One might conclude from this that “the transparency of the phenomenal is biologically and philosophically necessary to avoid the sensory overload and the regress implied in sensing the sensors *ad infinitum*” (Musacchio 2005, p. 405). However, we can and do reflect in many cases. So, the question is: when animals capable of reflection extricate themselves from the mental meta-edifices they erect, must they wait for the extra layers at hand to “die out” from fatigue and inattention—or can they do so right away, by deliberately *supposing* those layers absent?

Answering this question is important, because I have argued in the previous chapters that tones and icons can be entertained only if their relations with

other things or states are supposed absent. Because every tone is embodied in a token and every iconic bond is embedded in an indexical bond, it is only by dipping below the level of actuality that the qualitative dimension of consciousness makes sense. So, a lot hinges on our ability to suppose that we are not thinking what we already do, in point of fact, think. Dennett (1991a, p. 389) may believe that humans mistakenly confabulate the presence of experiential qualities sandwiched between their behavioural dispositions, but I think we can prescind qualities from the various reactions they engender. In this chapter, I want to demystify the workings of such prescindive abstraction.

Some philosophers of mind, like David Rosenthal, have argued that “a state’s being conscious consists in one’s being in some kind of higher-order mental state that represents that state” (2005, p. 4). In a way, this demand makes perfect sense. Imagine, for instance, a Beefeater—those British palace guards with the big furry helmets—paid to stay immobile and who, sometime during his shift, becomes bored. Surely, if that Beefeater does not represent to himself this experience of boredom, it seems more parsimonious to say that he performs his duty in a blanked out, quasi-vegetative state. A given conscious state must rise to a minimal level of complexity if it is to be embroiled in functions that can in principle be studied. Otherwise, if a subject in no way issues actions or decisions that attest to her enjoying a conscious experience, shaving off that alleged experience seems the naturalist thing to do. A metarepresentational theorist like Rosenthal is thus correct to hold that, at

minimum, the Beefeater must be a bit like Zippy the hyper-reflective pinhead, otherwise that does not leave us much to go on.

Ned Block, however, disagrees. He argues that shaving off phenomenal experiences that do not manifest themselves would be hasty. Intuitively, the issue comes down to this. Block (1995a, p. 234) argues that when one hears a nearby drilling noise but notices it only moments later, one was conscious of the noise all along. Rosenthal, by contrast, thinks an experience becomes conscious only when one notices it. Since I find each of these views compelling, I want to develop an account that can plausibly house them both.

The claim that one was phenomenally conscious of a drilling noise before noticing it is plausible—it certainly would not violate the laws of physics in any obvious way. Still, for a standpoint that requires the ascription of mental states to be backed by *some* kind of verification, Block’s suggestion is problematic. Block believes that results achieved by the psychologist George Sperling (1960) vindicate his views on phenomenal-consciousness. I thus want to revisit Sperling’s experiment so that, later, I can give it a new twist.

III.II Ned Block and the Sperling Results

Metarepresentational accounts of consciousness typically fall into two basic families. On the one hand, we find theories that center on “higher-order thoughts” or “HOTs,” while others employ the notion of “higher-order

perceptions” or “HOPs.” Despite their differences, both HOTs and HOPs mobilize a common idea: conscious states involve a folding of the mind onto itself, as it were. This can be glossed as a substantive claim about the nature of consciousness: where there is no higher-order folding, there is no consciousness. Rosenthal, for example, holds that “if one isn’t in any way aware of an experience, there simply isn’t anything it’s like for one to have it” (2005, p. 191).

I have a lot of sympathy for higher-order theories of consciousness (I have tried to contribute to their development in Champagne 2009b). Using Block’s distinction, it does seem right to say that, for a higher-order representation to represent a first-order state, that high-order representation must “access” the first-order state. Since Block holds that phenomenal-consciousness can exist even in the absence of such access, one way of glossing the disagreement is to say that Rosenthal wants to dismiss Block’s “phenomenal-consciousness” as ontologically onerous and scientifically uncalled-for. Block, however, thinks his distinction is not only conceptually sound, but that it actually enjoys empirical support. He uses experiments conducted by George Sperling to show this. Sperling presented subjects with very brief visual displays of letters lasting 50 milliseconds then asked them whether they saw the whole display and how many letters they could identify. The stimulus used by Sperling looked like this:

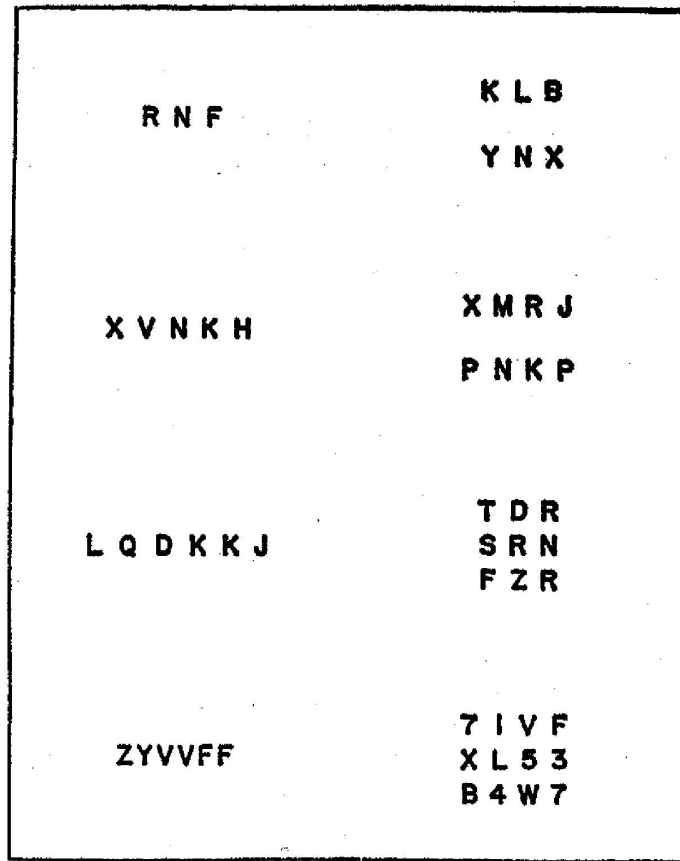


Figure 7 Example of actual stimulus materials used by Sperling
(Taken from Sperling 1960, p. 3)

The experiments conducted with these cues are interesting because results showed a pronounced mismatch or discrepancy between what the subjects *said* they saw and what the subjects could *prove* they saw. While subjects reported that they had seen the whole display of letters, they could only recall a limited subset (usually a third or less) of these. Even so, in all cases, subjects insisted on having been conscious, however briefly, of the whole visual display. This suggests that experience floods the mind with more information than it can use at any given time.

The results obtained by Sperling have been widely duplicated and are not under dispute. The contentious issue pertains to what those results tell us about the mind. Clearly, “[i]t is difficult to know exactly what is going on in the phenomenology of the subject who is undergoing the Sperling experiment, before being asked about the contents of a row” (Bayne and Chalmers 2003, p. 36). In spite of this methodological challenge, Block believes the explanation which “makes the most sense of the data [...] is that *although one can distinctly see all or almost all of the 9–12 objects in an array*, the processes that allow one to conceptualize and identify the specific shapes are limited by the capacity of ‘working memory,’ allowing reports of only about 4 of them” (2007, p. 487; emphasis added). Block’s interpretation is controversial, because it states that subjects saw “all or almost all” the items shown, and moreover saw them “distinctly.”

Commenting on Block’s interpretation, David Papineau (2007b, p. 521) thinks it is more parsimonious to see Sperling’s results as motivating a distinction between an indistinct “scene” phenomenology and a more distinct “item” phenomenology. Presumably, only some items in an experienced scene receive cognitive attention. Indeed,

Consciousness is the subject of many metaphors, and one of the most hardy perennials compares consciousness to a spotlight, illuminating certain mental goings-on, while leaving others to do their work in the dark. One way of elaborating the spotlight metaphor is this: mental events are loaded

on to one end of a conveyer belt by the senses, and move with the belt—perhaps changing as they go—towards a fixed circle of light, which does not completely cover the width of the belt. Some mental goings-on fail to pass through the illumination, in which case they never become conscious. But others are illuminated, and thereby enter one’s consciousness. Beyond the spotlight, at the other end of the conveyer belt, lies the filing cabinet of memory, into which some of the more garish or lurid of the belt’s contents fall. (Byrne 1997, p. 103; for a similar metaphor, see Crick 1993, p. 62)

Proceeding from this picture of the mind, one might ask: what is the point of (or warrant for) countenancing unlit portions? Jesse Prinz, for example, recently developed a view where “items to which we have not allocated any attention are not available. Thus, there is no worry that this account will include too much” (2012, p. 105). However, in terms of the conveyor belt metaphor, what Block is saying is that the surplus portions that do not receive the spotlight of attention are nevertheless, in their own way, distinctly present to consciousness.

I think Block’s critics are in many ways right to charge him with promoting a bloated ontology. Indeed, in keeping with Peirce’s pragmatist maxim (1992, p. 132), I accept that, if “the object of our conception” does not “conceivably have practical bearings,” then we have no basis to credit our concept with having an object. Or, to put that maxim in terms that speak directly to the concerns of philosophy of mind: “Every form of thinking must betray itself in some form of expression or go undiscovered” (Peirce 1998, p. 18). The simple or “zealous”

(Weisberg 2011) construal of phenomenal-consciousness espoused by Block seems to violate this maxim, since it could never be detected. After all, on the terms Block has set, the moment experimental evidence supports the existence of phenomenal-consciousness, one switches the topic to access-consciousness. Strictly speaking then, only a-consciousness enjoys experimental support.

Yet, having said this, I do not think Block's view necessarily fails to meet the demand for tangible effects. If we read the Peircean maxim carefully, it requires only that an object "conceivably" have practical bearings. So, unlike Prinz, who holds that "[a]vailability is not mere disposition" (2012, p. 105), I am willing to admit un-accessed contents, provided they support a *power* to be acted upon. Unnoticed drilling noises are admissible because, eventually, they *are* noticed.

Ernest Sosa claims that having an experience need not involve any explicit awareness that one is having the experience in question. As he writes: "One's consciousness contains experiences that go unnoticed; unnoticed altogether, or at least unnoticed as experiences with an intrinsic, experiential character that they nevertheless do have" (Sosa 2003, p. 276). I do not want to go *that* far. As I see it, any given state in a person's private mental life must eventually leave some observable trace if we are ever to infer its presence. One should not recoil so far away from behaviourism that one relinquishes this perfectly sensible requirement.

Interestingly, Sperling managed to meet that demand by changing his initial experimental design:

Sperling's clever idea was to test whether people really did see all or almost all of the characters and whether the phenomenology persists after the stimulus was turned off by playing a tone soon after the array was replaced by a blank. Subjects were to report the top row if the tone was high, the bottom row if the tone was low, and the middle row in case of an intermediate tone. The result was that subjects could report all or almost all the characters in any given row. (Block 2007, p. 487)

Compared with blind trust in first-person reports, that is a huge improvement. Philosophically, though, it still leaves us with a tension: we want to study consciousness, not the effects of consciousness.

As we have seen in the previous chapters, one of the leading concerns animating current philosophy of mind is that no matter how good a scientific account is, it will leave out "what it's like" to be conscious (Nagel 1974). Indeed, the "hard problem" of consciousness (Chalmers 1996) stems from the fact that a full story of what one "does" does not amount to a story of how such doing "feels." As such, the challenge in recent years has been to develop a way to rigorously study that experiential dimension. Introspection is one obvious method, but most would agree that, all other things being equal, it would be preferable to have something less reliant on private insight. Block (2007, p. 487) says that "phenomenal-consciousness overflows accessibility," which is just a high-flown way of saying that "more is seen than can be remembered" (Sperling

1960, p. 1). That can seem like a trivial idea, but the requirements of scientific verification actually make it difficult to prove.

Recently, in an effort to sidestep some of the challenges posed by his accessibility/phenomenality distinction, Block seems to have weakened his stance. Instead of saying, as he once did (Block 2007, p. 487), that phenomenal consciousness overflows *accessibility*, he now prefers to say that phenomenal consciousness overflows *access*. Looking at the Sperling experiments, his revised view “does not claim that any of the items in the array are cognitively inaccessible, but rather that necessarily most are unaccessed” (Block 2011, p. 567).

While a strategic shift from the “inaccessible” to the “unaccessed” blunts the force of many critics (like Cohen and Dennett 2011) who “think that a vote for overflow is a vote for inaccessible consciousness” (Block 2011, p. 574), I am unsure whether a weakening of access succeeds in sidestepping the methodological challenges posed by Block’s distinction. Block motivates his new stance with an analogy: while only one lottery ticket wins, “this does not show that for any particular contestant the lottery is unwinnable” (Block 2011, p. 567). This point is well taken; an “unwon” ticket is not an “unwinnable” ticket. In fact, as long as a ticket *could* have won, the view espoused by Block gels with the Peircean modal realism I want to defend. There is, however, an important disanalogy. In terms of the example given by Block, scientific

observations can only work with (and establish the existence of) winning tickets. Whereas failure to win does not make a lottery ticket nonexistent, failure to be manifested in access certainly makes an experiential ascription ontologically suspect.

According to Block's official definition, "a representation is access-conscious if it is made available to cognitive processing" (2011, p. 567). Whether it is computational or connectionist, cognitive science is in the business of studying just such processing. If we deprive an experience of access, what are we left with? Many would say: nothing. Strictly speaking, the correct answer should be: nothing cognitive science can study. This qualified consequence is still problematic. It is of course sensible to hold that what *is* experienced *could* be experienced, but challenges remain when it comes to articulating this.

While Block uses the term "overflow" to describe the relation between phenomenal-consciousness and access-consciousness, I think the troublesome relation in question is best understood as one of subsumption. If you have ever handled a hard-boiled egg, you can have a sense of what sort of relation I mean—and what sort of methodological challenges such a relation poses. For a first approximation, then, consider the following analogy. A boiled egg is white on the outside, yet it contains a yellow yolk on the inside (see figure 1 in section I.IV). Without an x-ray machine, we cannot see the yolk through the opaque

egg-white, so we have to break away that layer. Once we do this, we can readily confirm that there is a yolk. Clearly, talk of an egg yolk now involves less epistemic risk. Yet, since we have destroyed the egg, we have tampered with the initial situation a way that makes us ill-placed to make any claim about the inner portion of the egg as it stood prior to any intervention. As egg researchers, we have to suppose that we *did not do* what we in point of fact *did* to obtain this result.

I submit that one must make such a methodological supposition of absence in order to fully understand phenomenal consciousness. Block is right: there are more than winning tickets, and unwon lottery tickets are not thereby unwinnable. But, given that scientists can only handle winning tickets, the only way to theorize about unwon tickets is to suppose that the winning tickets one has access to did not in point of fact win.

Precission is what happens when, going against the facts, we suppose that some portion of a thing is absent (when in fact that portion is very much there). Because precissive abstraction does not pretend to actually separate anything, it is, in many ways, a modest move. Still, if we cannot permit the insertion of such a formal distinction, then the very ingenuity that allows a cognitive scientist to study consciousness will always invite the retort that the scientist has not “really” studied the quality of consciousness as it is intrinsically, irrespective of

its functional role. That is an abstract and speculative request, and I think it can be catered to only by abstract and speculative means.

III.III Experiencing Icons

Impingement on sense organs is an indexical encounter that conveys an icon that persists once the exposure proper has ended. It is a fortuitous boon of the chemistry and physics of vision that it allows information to be available for longer than the strict emission of photons off a screen. Subjects in Sperling's experiment were presented with a blank screen immediately afterwards. Block (2007, p. 487) quotes William James' *Principles of Psychology* on this lag time: "If we open our eyes instantaneously upon a scene, and then shroud them in complete darkness, it will be as if we saw the scene in ghostly light through [sic] the dark screen" ([1890] 2007a, p. 645). Admittedly, 50 milliseconds is not a long time. Still, an afterimage, to the extent it indeed qualifies as an image, would manifest enough determinacy to permit interpretations.

Interestingly, Sperling readily granted the presence of phenomenological afterimages. In his view, "[t]he question is not *whether* the observer continues to see the stimulus after the illumination is turned off, but for *how long* he continues to see the stimulus" (1960, p. 20). For my purposes, this question of duration, while certainly relevant, is less interesting than the qualitative content of what is contemplated.

Subjects in the Sperling test were basically interpreting icons. A request to name what letter one saw is a request to generate an interpretant. In the event of ignorance, subjects were asked to guess what they saw, so they always provided complete answers. As fleeting as an afterimage is, “[w]e can read off details in it which were unnoticed whilst the eyes were open” (James [1890] 2007a, p. 645). Provided images after the fact manifest some sort of diagrammatic organization (into rows, etc.), these signs contain all that subsequent inferences might need (see Hoffmann 2011). A neuroscientific account that does not incorporate this idea that the visual prompt was stored as an icon risks rendering the subjects’ correct answers a mystery.

The expression “iconic memory” was introduced in the mainstream literature by Ulric Neisser (1967, p. 20) in the same book that coined the expression “cognitive psychology.” Neisser, however, did not explore all that is implied by this idea of storing and accessing a past experience by using an image-like quality. Philosophy of signs recognizes icons as shared qualities that *can* be interpreted *but do not have to be* interpreted. This seems to be exactly what Block needs, since it can allow one to say that mental representations were available in the first round of experiments, even though subjects in that first round did not muster interpretants to prove their experience. Indeed, “Sperling’s study firmly establishes that unreported letters *could* have been reported” (Prinz 2012, p. 103). I thus believe Block deprives himself of powerful resources when (following Coltheart 1980) he rejects the idea that “a

‘visual icon’ persists after the stimulus is turned off” and deems that “the term *icon* is especially unfortunate” (Block 2007, p. 487).

Some philosophers may have developed a bias against resemblance, but it is not as if icons enjoy no neuroscientific support. By staining monkey brains with traceable chemicals, researchers have been able to show the presence of map-like formations in areas of the brain (see Tootell et al. 1982). A grid pattern was shown to the monkeys and the same grid was found imprinted on the relevant region of their brain, almost as if the visual stimulus got tattooed on the cortex. “Like pictures, adjacent neural populations in these areas corresponds to adjacent boundaries or surface points in the objects they represent” (Prinz 2002, p. 31). Appropriately, a visual comparison conveys the similarity at hand better than verbal descriptions ever could:

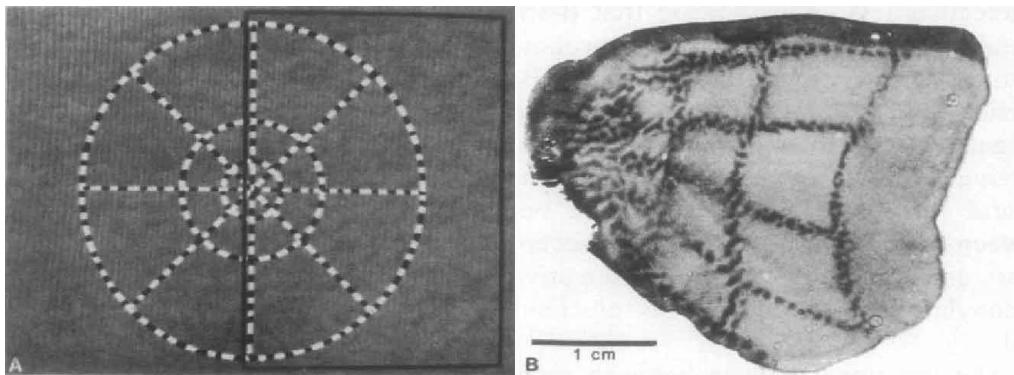


Figure 8 Imprinting of a map-like shape on a macaque brain
(Taken from Tootell et al. 1982, p. 902)

The image on the left (A) shows one of the visual stimuli used, while the image on the right (B) shows the pattern of brain activation in a flat-mounted tissue section of a macaque striate cortex. Considered as an index, it matters in the paired images above that there is cause and effect sequence allowing a transduction of the pattern in A to the pattern in B. However, considered as an icon, the assignment of the roles of sign-vehicle and object to A and B is interchangeable, depending on which interpretant is generated.

In cognition, an organism (fallibly) infers, by the production of a further sign, that what holds for the configuration of B will hold for A. Hence, a further event in the brain, call it event C, will relate to the worldly object A via the mediation of B, and so on, in an open-ended series of concatenating triads. Importantly, the production of C is not needed for B to resemble A. It does so, even when no further thought represents it as doing so.

According to the account of iconic experience I have just sketched, “[e]ven before having a fully functional semiotic consciousness, our body is not mere pre-semiotic matter, but a highly complex semiotic system, endowed with [...] the capacity to make subtle distinctions and respond in competent and meaningful ways to salient environmental stimuli” (Violi 2007, p. 84). The growth of signs which ensues does not have to remain bound by a shared quality, and can (and likely will) switch to discrete symbolic encoding (Pylyshyn 1973). The claim of Peircean semiotics, though, is that the chain of

signs does not begin that way. Thomas Sebeok and Marcel Danesi (2000, p. 11) call this the *dimensionality principle*: iconicity precedes indexicality, and indexicality precedes symbolicity. Organisms tied to their environment by shared qualities do not face any problem grounding their symbols (Harnad 2002).

I believe the iconic semiosis shown above substantiates David Papineau's claim that "the introspective identification of some experience requires that it is compared with some model or template stored in the brain," so that we "need an original version of the experience in order to form the template for such comparisons" (2003, pp. 358–359). This is Papineau's way of saying that Mary must exit the cave.

Coltheart (1980, p. 184) has recommended that we distinguish between "neural," "phenomenological," and "informational" persistence. An account of what happens when we are exposed to the world can certainly be given greater detail (e.g., Burge 2010). However, as a philosopher of signs, I am mainly interested in the idea that, in some cases of objective cognition, what skewers all such levels is a shared quality. As Clark and Chalmers (1998, p. 8) point out, in playing the video game Tetris, one can either rotate a mental tile or an on-screen tile. Sam Coleman (2011, p. 102) recently objected that this clashes with normal intuitions about the boundary of consciousness. Such intuitions are the sediment of philosophical arguments fought long ago (Champagne

2008–09). From the standpoint proper to a study of signs, though, the opposition of mental versus worldly Tetris tiles is nugatory. Peirce noted that, in an iconic sign like a diagram, “similarity concerns the relations of parts, and is represented through analogous relations” (Petrilli 2010, p. 264). Looking at the results shown above, researchers wrote that “[o]ne of the most striking aspects of the [Deoxyglucose] maps is the unexpected sharpness of the borders between visually stimulated and nonstimulated regions” (Tootell et al. 1982, p. 903). The motivated interpretations that such iconic mappings permit explains why turning a Tetris tile a quarter turn to the right in the mind yields the same result (and so is a fit surrogate for) a quarter turn to the right in the world. As Sperling put it: “It is as logical or illogical to compute the information contained in a visual image [...] as it is to compute the information in a visual stimulus” (1960, p. 21).

It is no accident that Sperling organized his visual cues into rows. Placing items in such a hierarchy allows for informational compression, which in turn allows one to circumvent well known cognitive limitations (Miller 1956). It is a bit like working with an abacus: once ten balls have been pushed to the side, attention can be allocated solely to the next bar. Treating multiple items as compound figures is sometimes called “chunking,” the classic example being “CIAFBIIRS,” which Americans can chunk as their familiar governmental agencies CIA / FBI / IRS, thereby going from 9 items to 3. Making allowances for the fact that, linguistically, the letters shown by Sperling were random

gibberish, the configuration or spatial arrangement of the items into rows nevertheless aided cognition to surmounting the narrow scope of conscious awareness, since one can revisit the configuration or spatial arrangement in order to make further observations.

Icons provide an ideal way to understand what the Sperling subjects experienced prior to verbalizing what they saw. Of course, the chemical stains used to highlight the stimulated portions of the brain make that method inapplicable to the Sperling paradigm, since the monkeys whose brains were stained were presented with their visual display for 25 to 30 minutes whereas human subjects in the Sperling test were allowed only a 50 msec glance at the letters. Yet, as Sperling points out, the situation raises “considerations about available information [that] are quite similar, whether the information is available for an hour (as it is in a book that is borrowed for an hour), or whether the information is available for only a fraction of a second” (1960, p. 1). Sperling also noted, quite appropriately, that “[p]artial reporting of available information is, of course, just what is required by ordinary schoolroom examinations and by other methods of sampling available information” (ibid.). So, there might be pedagogical applications in the offing if we investigate the hypothesis that long-term mental representations are also stored as icons (and not in the discrete symbolic idiom favoured by classic computationalism).

The suggestion that information can be stored, accessed, and diagrammatically manipulated in virtue of its qualitative character is ostensibly foreign to the modern mindset. Peirce, however, is noted for his unusual historical breadth, specifically for his familiarity with (and fondness for) pre-Modern traditions (Deely 2001a). Interestingly, as part of his courses on logic, the sixteenth-century Italian polymath Giordano Bruno used to teach a technique called “mnemonology,” which consisted in dividing information into hierarchical structures. His instructional manual, *The Great Key*, has been lost, but his work *On the Shadow of Ideas* survives. In it, subjects are instructed to mentally visualize genus and species relations as statues in rooms. “Like files, these statue collections or architectures of the imagination were designed to store thoughts in a way that made them easily accessible, easy to recall” (Rowland 2008, p. 123). The “scene” and “item” distinction proposed by Papineau (2007b) thus seems to allow for subsumption: an item in a scene can be unpacked into another scene with yet more items. So, when Sperling aided his test subjects to recollect seen items by using high and low pitched musical notes to pick out rows, he was exploiting semiotic abilities that can, it seems, be trained and enhanced.

III.IV The Fidelity of First-Person Reports

Block (1995a, p. 234), as we saw, thinks that if you hear a nearby drilling noise and only later come to notice it, there is still a sense in which you were aware of

the noise all along. On this view, your phenomenal consciousness of the noise does not begin with your noticing it. It would, of course, be difficult to tell how long the noise went on in your head without being noticed since, prior to becoming access-conscious, that experience was a mere quality not involved in any detectable function. Were you to insist after the fact that you had heard it all along, your insistence would come too late. The contentious philosophic issue concerns what, if anything, your mental life was like *prior* to any explicit grasp.

The experiments conducted by Sperling were more concerned with elucidating memory than with vindicating a philosophical view of consciousness, so if we want to follow Block's reasoning, we need to focus on the essentials. Sperling conducted a variety of different tests, but only two are invoked by Block to serve a philosophical purpose. In the first round, subjects had a bunch of letters flashed before them but performed poorly when asked to identify the items they glimpsed. They had to give a letter even if they were unsure, but the accuracy of what they named was low. However, in a second round of testing, subjects were shown the same number of letters but were given an auditory "retro-cue" that directed their mental focus to a given row. This allowed them to perform better at identifying the items of whatever row was cued. In both the first and second round of testing, however, Sperling's subjects reported seeing the whole visual display.

Subjects were asked how much of the whole display they saw but, despite including some instructions (Sperling 1960, p. 11), the methodology assumed that subjects were competent to answer such queries in a reliable manner. This reprises a common idea (going back to at least Descartes) that introspective reports are by their nature authoritative and infallible. Yet, some (e.g., Gallagher and Zahavi 2008) have recently warned that first-person reports are often tainted by assumptions that lived experience does not corroborate. For instance, careful phenomenological description will reveal that, even when engaged in ordinary perception, the area that appears in focus in our visual field is not nearly as wide as folk theory presumes. As befits a fuzzy outline, we can debate where that area of focus ends, but the clarity certainly does not reach a neat frame, like a television set. Rather, it ends in a blur. Even so, the “television set” view remains the default way of understanding the visual field used in everyday folk psychology. Sampling movies and video games in popular culture, we find that, despite the prized emphasis on realism, the first-person vantage is almost never depicted with a blurred boundary. When it comes to peripheral vision, it appears we are massively gripped by a mistaken account (trained phenomenologists would likely want tease more perspicacious descriptions out of the report of “black on black” vision we encountered in section I.VI).

Without psychologizing the psychology, it does seem to offend an ingrained sense of self-worth to admit that our awareness of surroundings is not nearly as

crisp as we think it is. It is one of the few generalizations of phenomenology that what is most familiar to us is often what is most difficult to notice (Dreyfus and Wrathall 2009, p. 460n3). As a consequence, I surmise that most lay people, test subjects or not, would always report seeing *everything* shown to them. If it is true that people tend to credit themselves with overblown powers of discrimination, then it is predictable that subjects in the Sperling tests reported enjoying a phenomenal-consciousness that “overflowed” their provable access.

Rocco Gennaro, a prominent higher-order theorist, has recently criticized Block’s interpretation of the Sperling results. Gennaro cites experiments by De Gardelle and his colleagues (2009) which showed that “participants persisted in the belief that only letters were present when pseudo-letters were also included in the array” (Gennaro 2012, p. 167). This justifies worries about the reliability of first-person reports. In fact, the participants’ belief in the presence of letters “persisted even when participants were made aware that they might be misled” (ibid.). So, when subjects report seeing all the letters, they might simply be confabulating.

Now, it is clearly less risky to believe what subjects report experiencing once those subjects make good on their claims in a tangible way. Can the subjects prove that they saw the whole scene? In the first version of the Sperling test, they were unable to do so. However, once cues were added to the experimental design, subjects in the second version were able to draw on the

previously unused portions of their visual experiences. The verbal reports and actions still come too late—they have to, given the brief duration of the visual flash. Still, the accuracy of those reports and actions lends credence to their claim that the *whole* scene was experienced. “If an experience is reported, or accessed in some weaker sense, then we can explain it by reference to how the brain thinks about itself. But if an experience happens without being accessible, then it becomes a phantom” (McDermott 2007, p. 518). The Sperling results make it no longer onerous to ascribe to subjects a possession of the relevant information, because now they access it. Block thus reasons that Sperling managed to experimentally prove what the story about a drilling noise can only intuitively adumbrate.

Combining the introspective reports of subjects with their identification tasks, we thus have the following clusters of data before us. In the first round of tests without cues, we have introspective reports of seeing the whole scene and no behavioural corroboration of those reports. In the second round of tests with auditory cues, we again have introspective reports of seeing the whole scene, but this time we have strong behavioural corroboration of what subjects reported. Although reporting counts as a form of accessing in Block’s sense, subjects were ostensibly making claims pertaining to their phenomenal-consciousness when giving reports. When subjects were making outputs in response to controlled inputs, tests were capturing their access-consciousness.

Block wants to argue that the good performances at identification tasks corroborate what was claimed in the introspective reports, namely that the whole scene was seen. Is Block licensed to say this? I think he is, but only if he has recourse to precission. Of course, now that success at third-person tasks corroborates the first-person reports, it is easy to turn around and make pronouncements regarding what was subjects were phenomenally conscious of. Yet, presumably, even if Sperling had not devised ingenious ways to verify what subjects saw, it would have been true that subjects experienced the whole scene. In order to show why a supposition of absence is needed—and to illustrate how such precissive abstraction works—I want to give a new twist to the Sperling test.

III.V A Slow-Motion Sperling Test

My modified version has three steps. The first step consists in looking at the letters of the stimulus depicted earlier, in figure 7. In contrast with a 50 msec flash, my “slow-motion” version allows a subject to take ample time to view the display. So look and take your time. The only directive you must abide by is to not act on what you experience. You are instructed to stay still, like a Beefeater on duty.

I take it that, already, the brain of any subject following these instructions will have changed as a result of the causal exposure to the image. It may be

possible not to act, but it is hard and perhaps impossible not to react. For an eliminative materialist, once one has fully described this encounter between the subject's human physiology and the page, there is nothing more to say. However, the philosophic controversy I am concerned with surrounds "what it is like" for one to undergo this event. Is there even such a qualitative dimension? Perhaps we can track a subject's involuntary eye movements (if any) to find out, but it would take an abductive leap to let those minute indices speak to the experience of a qualitative state, and it is unclear whether such a leap could ever be done without begging the question. Some further test thus seems in order.

Step two of my slow-motion experiment thus requires a subject to perform an identification task. Please look at figure 7 name the letters you see. Alas, the moment the subject breaks her silence and immobility to act on what she experiences, she makes herself capturable by functional description. We are now recording linguistic outputs, not the intrinsic character of a mental state. In other words, step two can only detect access-consciousness. So, on the terms Block has set, the choice seems to be this: silently enjoy phenomenal-consciousness—or switch to access-consciousness. This means Block cannot infer that correct identification tasks speak to what is or was experienced.

Block obviously intends his inference to go through, since he thinks Sperling managed to vindicate reports of phenomenal-consciousness. Strictly

speaking, though, Sperling did no such thing. The introspective reports of his subjects have no more or less value or reliability because those subjects were later able to perform better at certain tasks. All that such performances can establish pertains to access-consciousness. This may seem like an unpalatable consequence, but it follows from Block's phenomenality/accessibility distinction. I take that, from a dialectic standpoint, Block is not prepared to jettison the distinction he has spent a whole career finessing. Hence, I argue that unless we can retroactively "delete" or prescind access, it is self-defeating for Block to adduce prowess at accessibility in order to substantiate the existence of a phenomenal-consciousness divorced from all access.

One surprising conclusion of the foregoing is that the very performances which made the Sperling results interesting have to be supposed *absent* if they are to speak in an informative manner about what subjects experienced *before* they engaged in overt identifications. In other words, if one wants to follow Block and get philosophical mileage out of the Sperling results, one must employ prescindion.

My slow-motion version of the Sperling test is tailored to address concerns about consciousness, not memory. I take it that, without any time constraints, normal adult subjects will report that they see whole scene. I also take it that, if asked to identify the items in that scene, they will do so without fail. It is clear, though, that if we now want their splendid functional performance to say

something about their experience *apart from functional involvement*, we have to suppose that their experience would have been the same had we not asked them to identify the items. In other words, we have to suppose that the qualitative experience of a subject remains the same without or without all the additional interpretive brouhaha.

Block tacitly relies on this hypothetical deletion when he claims that the strong behavioural performance of subjects with cues corroborates the reports those subjects made without cues. My stance differs from Block in two respects. First, it makes this an *explicit* move. Second, it stresses that the move is perfectly *legitimate*.

Why should one accept the legitimacy of prescinding function? This is where the third step of my slow-motion experiment comes in. Step one required subjects to look at the display of letters, silently, without acting on their experience. Step two required subjects to say what they had seen, and to tangibly make good on that experiential claim by identifying the various items. I assume that, under my slow-motion conditions, normal adult subjects will have no trouble naming all the letters. Gennaro, as we saw, calls on the possibility of confabulation to support his view that “not all twelve letters were conceptualized or experienced initially” (2012, p. 166). This objection is unlikely to apply here, since the extended duration of the slow-motion version shrinks the possibility of (honest) confabulation. Subjects having looked at the

letters carefully, step three now asks them to say *in what order* they named these items.

Let us assume that, like most readers of English, subjects started from the upper left corner, even though they were not narrating what they were doing at the time. Now, however, they are asked to represent how they represented the items. Until we come to this third step, we have no evidence that subjects metarepresented their activity in step two, thinking to themselves “I am now naming letters from the upper-left corner outward.” Step three of my modified Sperling experiment thus stands in the same relationship to step two that step two stood to step one. Indeed, the word order has the same status that the unexpressed quality had: it was something that *could* have been verbalized but was not.

Let us grant that the verbalization of an experience transforms that experience into an access-conscious experience. My *reductio* argument is that, if we are going to say that the visual experiences of subjects who saw the whole scene needed the overt identifications of step two to be confirmed, then we also have to say that the sequential identification of items at step two needed the overt identification of step three.

Rosenthal holds that “[w]hat a qualitative state is like for one is a matter of [...] how one represents that state to oneself” (2005, p. 193). Do we really want to say that, until and unless subjects represented to themselves what they were

doing, there was nothing “it was like” for them to start at the upper-left corner? That can’t be right. Whereas Rosenthal writes that “a state’s being conscious consists in one’s being in some kind of higher-order mental state that represents that state” (2005, p. 4), I find it more plausible to say that every qualitative experience has the power to be interpreted, and every interpretation has the power to generate further interpretations, but since we are not Zippy the Pinhead, we do not have to do so, and if we do, we can always suppose all the interpretations absent. I submit that we come to the idea of qualia by the same benign means.

Whether or not I subsequently take stock of what it feels like, there is clearly something “it is like” for me to read in the direction I do. This qualitative character becomes apparent when I pit it to its opposite and try to read in the reverse direction, from right to left. The same could be said of walking forward versus walking backward. We are, for the better part of our lives, unreflective creatures. Those raw feels may become easier to scientifically track once subjects represent them to themselves, but I think it is a mistake to make such access our starting point.

The attempt to confirm the presence of p-consciousness without triggering a-consciousness is a variation on what is sometimes called “the refrigerator light problem”: to check whether the light in a refrigerator is on, we have to open the door—and thereby turn on the light. On those terms, tampering with the data

seems inevitable. “Since any report relies on cognitive access, it cannot inform us about the presence of an inaccessible conscious representation” (Schlicht 2012, p. 319fn7). If this is so, then any inquiry into consciousness that manages to render that object of study tractable by some sort of articulate description risks being charged with avoiding the qualitative dimension of conscious experience.

The formal distinction between “doing” and “feeling,” if reified and glossed as a “real” distinction, can spur hope that experimental investigations could one day isolate a quale. Indeed, at present, many feel “there is a pressing need for a methodological approach that is capable of separating P[henomenal-consciousness] from A[ccess-consciousness] empirically” (Shea 2012, p. 308). While I do not share the incredulity of so-called “mysterians” like Colin McGinn (1989) and Joseph Levine (2001), I think waiting for a scientific isolation of phenomenal consciousness is a forlorn hope. After all, “[t]here is a simple and fundamental reason why all attempts to get at the ‘raw data’ of experience fail: introspective evidence always arrives already interpreted” (Jack and Shallice 2001, p. 177). This accords with the semiotic claim that all cognition, being intelligible, is cloaked in a layer of Thirdness.

Rosenthal argues that “[c]onscious states are those we are actually conscious of, not just potentially conscious of” (2000, p. 207). It is hard to fault this sober view. Yet, on my reading, Block is trying to call attention to the fact if

one *does* hear a drilling noise, one *can* hear that noise. I agree because, more generally, *we can suppose actuality absent*.

“A thought about a thought” is, I assume, something more complex than just “a thought.” I assume, moreover, that one can infer “a thought” from “a thought about a thought,” but that one cannot infer “a thought about a thought” from “a thought.” Now, what Rosenthal (2005) calls the “transitivity principle” is basically an acknowledgement that a sign-vehicle, to the extent it merits our calling it by that name, always produces one or more interpretant(s). As a semiotician, I am hardly in a position to oppose this. For example, when advertisers boast on their ads that “You’ve just proven signs work,” they are tapping into a basic feature of semiosis that governs mental activity as well. The demand that every relation between sign-vehicle and object be interpreted is a promising way to tackle the easy problems of consciousness. In fact, were it not for controversies regarding qualia, I think a Peircean philosopher of signs should defend such an account without reserve. I agree with Fetzer that “the theory of minds as *sign-using (or ‘semiotic’) systems* [...] appears to fulfil the desideratum advanced by Jerry Fodor—namely, that a cognitive theory aims at connecting the *intensional properties* of mental states with their *causal properties vis-à-vis* behaviour [...]” (2003, p. 295). Every sign (say, a colour) is an interpreted sign (say, a thought about a colour), and every interpretation (the thought about the colour) leaves itself open to being interpreted in turn (say, a clinical observation that a subject has a thought about a colour). There is plenty

of detectability to go around. Yet, in this dissertation, I argue that, properly understood, the very triadic model which compels one to recognize the need for (and growth of) interpretants should also compel one to accept the possibility of conceiving states simpler than three-term relations.

Epicurus argued that, “when we exist, death is not yet present, and when death is present, then we do not exist” (1994, p. 29). In a way, what Epicurus said about death is applicable to sleep. Even though watching someone else sleep is not experiencing sleeping, hardly anyone doubts that there exist states below waking states. To that extent, everyone is prepared to admit that the mind contains portions which, properly speaking, they never have (and never will) confirm directly. The question is how low one is prepared to go. Rosenthal is uncomfortable with the idea that first-order experiences have a quality. Block, by contrast, is open to the possibility that phenomenal experiences that are not the target of higher-order representations will nonetheless have a feel. I think Block’s stance is not as onerous as his critics sometimes make it out to be.

John Locke held that it is not “any more necessary for the soul always to think, than for the body always to move” ([1690] 1978, book 2, chap. 1, para. 12, p. 48). In the same vein, William James wrote:

Like a bird’s life, [the stream of our consciousness] seems to be made of an alternation of flights and perchings. The rhythm of language expresses this, where every thought is expressed in a sentence, and every sentence closed by a period. The resting-places are usually occupied by sensorial imaginations

of some sort, whose peculiarity is that they can be held before the mind for an indefinite time, and contemplated without changing; the places of flight are filled with thoughts of relations, static or dynamic, that for the most part obtain between the matters contemplated in the periods of comparative rest. *Let us call the resting-places the 'substantive parts,' and the places of flight the 'transitive parts,' of the stream of thought.* It then appears that the main end of our thinking is at all times the attainment of some other substantive part than the one from which we have just been dislodged. And we may say that the main use of the transitive parts is to lead us from one substantive conclusion to another. ([1890] 2007a, p. 243; emphasis in original)

Peirce (1931–58, vol. 8, para. 89) considered this “one of the finest, if not the finest, passage” in James’ *Principles*. Using the same terminology (but not crediting James), Rosenthal claims that “transitive consciousness can occur without intransitive state consciousness” (1997, p. 737). This is true if it is analogous to the claim that one can drive on the freeway without stopping. However, it is false if it is taken to mean the one can drive without retaining the ability to stop.

Indeed, I think it is informative to note that while computers that self-monitor routinely “crash,” we do not. The cartoon of Zippy the Pinhead does not send its readers into a head-spin. This is because we can access a phenomenal quality, then access that access, but we can also move in the reverse direction. We did just that when we read the items sequentially, then represented to ourselves the direction of the sequence, then acknowledged that the sequence was there all along, prior to that verbalized identification. The

semiosis made two-steps forward, then one step back. I suggest that *prescission is meta-representation in reverse*. Hence, what is involved in prescissive abstraction is the same disregard that spares one from being forever stuck with a higher-order thought. That is what I meant when I said (at the close of section II.VII) that, unlike linguists who use symbols to talk about symbols, semioticians who want to study icons must subtract, not add, a layer a discourse.

None of this manages to show that qualia exist apart from their involvement in interpretive activity. Yet, as factually inseparable as qualities and their functional roles are, I do not see what can stop rational animals from inserting a formal distinction between the two, nor do I see why such a power should be taken to threaten empirical science.

To be sure, prescission is an artificial move that leaves everything as is, so it can bring only philosophical solace. While I would not go as far as to label the predicament an antinomy (Levine 2001, p. 175), I do have a story to tell for why rational animals are puzzled when they contemplate the idea of a qualitative feeling isolated from all functional involvement. It is because of our unique ability to prescissively contemplate uninterpreted relations and unrelated qualities that we humans “can form the idea of phenomena that we do not know how to detect” (Nagel 1986, p. 24).

III.VI Chapter Conclusion

Because the moment a subject acts or responds to phenomenal-consciousness she switches to access-consciousness, the demand for an example of qualitative Firstness untainted by the access of Thirdness is tantamount to “asking a flashlight in a dark room to search around for something that does not have any light shining upon it” (Jaynes [1976] 2000, p. 23). One might generalize this as follows: Everything that presents itself in the stream of experience will be couched in triadic signs, so the ubiquity of interpretation demands our theoretical and ontological recognition.

Given that raw feels almost always prompt a host of responses and further experiences, should we, as Rosenthal suggests, consider the representation of such experiences to oneself as the key to understanding consciousness? I do not think so. Unless experiential qualities are somehow there from the get-go, adding layers of self-awareness will not solve the problem. The qualitative character of experience is simple, but the actual world presents itself in everyday life and scientific inquiry as complex. So, if we want to make sense of qualia, what matters is not the addition of further complexity, but the subtraction of complexity.

A conscious mind is coupled to an environment. Not only that, it drags behind it a trail of past thoughts. As such, a conscious mind is constantly jostled by causation and inference. Still, the human mind is so constituted that it can

pinpoint a given qualitative state and trim away everything besides that quality. Of course, if one contemplates an experiential quality in such pure isolation whilst forgetting all that needed to be forgotten in order to yield such a state, one can end up populating one's ontology with chimeras. Therefore, we should insist that conscious states rise to a level of complexity sufficient to bubble to the observable surface; otherwise, we can end up ascribing all sorts of superfluous experiences to any Beefeater who stands on guard. Yet, if I am right that precission employs the same "undo button" which makes metarepresentation a manageable endowment, then forays into what subjects experienced before they functionally acted on those experiences can be done responsibly, and the idea of enjoying an un-accessed experience does not have to be spooky.

That has been my more modest goal in this chapter. The next step will be to show that qualities—and the triadic relations they enter into—are genuine features of reality. It is to that task that I now turn.

Chapter IV

Locating the Qualitative Dimension of Consciousness: Trinitarianism Instead of Panpsychism

Chalmers, through his use of the information concept beyond functionalism and computationalism, allows for a kind of panpsychism [...]. [H]e needs to add Peirce's semiotic philosophy to his theory in order to do that.

Søren Brier, *Cybersemiotics: Why Information is not Enough* (2008, p. 38)

I would say, actually it is fine to derive one's metaphysics from one's semantics—just please, please get a less simplistic semantics!

Catherine Legg, "What is a Logical Diagram?" (2013, p. 16)

IV.I Chapter Introduction

I am aware that many do not consider a position in philosophy of mind complete until it has proclaimed how many basic "stuffs" it is committed to. I am also aware that any number greater than one is usually viewed with suspicion. Catering to those who seek an exact number (but not those who seek a low number), this final chapter will explore the idea that reality is comprised of *three* stuffs: lone quality, causal impacts between two things, and triadic relations (that have the power to beget more of themselves). If, as Legg (2013,

p. 16) suggests, it is acceptable to derive a metaphysical outlook from a theory of meaning, then the Peircean account of meaning as a triadic relation would seem to entail a triadic ontology. Following James Bradley (2009), I will call this ontology *trinitarianism* (my use of the word denotes only a commitment to three stuffs, not any religious doctrine, as in Polkinghorne 2003). On a trinitarian view, consciousness, like everything else, is made of one or more of the sign's parts.

I approach the topic of ontological commitment with some hesitancy, because I do not know how disagreements in that area are to be resolved (nor do I think anyone else really knows). Parsimony is a nice criterion, but then how exactly does one determine what counts as more parsimonious? Chalmers writes, for example, that “[a]ccording to Russellian monism, all conscious experience is grounded in structure plus quiddities, but not in structure alone” (2013, p. 18; see Holman 2008). I happen to agree with that claim, and will spend the whole chapter defending it. Yet, if there is a commitment to something “plus” something else, how is this still monism? I suppose I could say that there is only one thing in the world, semiosis, and that it has three “properties”: Firstness, Secondness, and Thirdness. However, there may be genuine ontological commitments involved, and I have no wish to dodge these.

Consider, for example, the subsumption which makes the inference from “a thought about a thought” to “a thought” a one-way street. This asymmetry is

not binding in virtue of a mere convention. Hence, what if we were to follow Peirce and consider the quasi-logical principles that govern semiosis “not merely as regulatively valid, but as truths of being” (1931–58, vol. 1, para. 487)? I will look at what happens when the three categories are made into a *bona fide* ontology. I will suggest, in effect, that semiotics makes a great metaphysics.

Those who think the preceding chapters do not need to be augmented with such a metaphysical story can, I think, skip this final chapter without much loss. I propose trinitarianism only as a back-scratcher for those who feel that itch. I certainly do. My aim, in essence, is to paint *a comprehensive picture of the world as composed of relations and relata*. I think countenancing qualities gives us a way “to account for conditions of signification that are not themselves semiotic” (Kruse 1990, p. 212).

I do not have a finished account, so everything I am going to say in this chapter will be tentative and programmatic (I do not want to genuflect at every claim, so please bear that qualification in mind throughout). Still, whatever the shortcomings, I regard trinitarianism as an outlook which “[i]n its schematic, pre-Socratic way [...] attempts to recognize the mental as a physically irreducible part of reality while still clinging to the basic form of understanding that has proved so successful in physical theory” (Nagel 2012, p. 62).

I will begin by describing the central motivation for trinitarianism. Like the panpsychist, the trinitarian countenances qualities at the most fundamental level so as to avoid making those qualities “emerge” at higher levels of biological and cognitive complexity. Since this clashes with the standard assumption that qualia have only a “subjective” existence, I will revisit the Lockean division between “primary” and “secondary” qualities in order to show that this division does not have to be taken as mandatory. I will briefly compare/contrast the Peircean categories with Karl Popper’s three “worlds” account. I will then look at how Peirce partitions the steps involved in semiosis. My take-away message will be that much of Peirce’s theory is devoted to cataloguing potential (or “proto”) signs. I then will try to situate this fundamental semiotic account among contemporary views on consciousness. Finally, I will try to combine positions germane to a trinitarian outlook: some ideas of logical atomism will supply me with relata, and some ideas of information theory will supply me with relations.

I believe that, once we factor in the idea that pattern-grasping animals like ourselves are sophisticated enough to suppose their sophistication absent, we can see where qualia fit in the world. I cannot paint a full picture. Still, my hope is that those who think panpsychism is “not worth investing in” (Goff 2009, p. 289) will give my version of trinitarianism a fairer hearing.

IV.II Qualities as Primitive Instead of Emergent

John Locke invented the word *semiotics* ([1690] 2007, book 4, chap. 21, para. 4; see Deely 2003b), he invented the inverted spectrum (*ibid.*, book 2, chap. 32, para. 15), and, according to some (e.g., Balibar 2013), he invented consciousness too. As a founder of empiricism, Locke agrees with the knowledge argument that experiential exposure to things is needed in a way that no amount of theoretical learning can supersede. He writes that if, like Mary the neuroscientist, “a child were kept in a place where he never saw any other but black and white till he were a man, he would have no more ideas of scarlet or green, than he that from his childhood never tasted an oyster or a pine-apple has of those particular relishes” (Locke [1690] 1978, book 2, chap. 1, para. 6, p. 46).

As healthy adults, we are unlike Locke’s secluded child (or Jackson’s neuroscientist) in that we have been flooded with many different (and many similar) experiential qualities. Indeed, it is too late to put ourselves in a state of qualitative deprivation; were we to succeed in doctoring the right kind of isolation, the sudden drop or lack would be noticed—which is precisely what Locke’s child and Jackson’s scientist are not supposed to notice. As philosophers though, it seems we can disown all that the world has taught us and call into question the very existence of our conscious experience(s). The phenomenal character of consciousness thus poses a “hard problem” (Chalmers

1995) because it fails to fit in a worldview that has decided to exclude such qualities.

That worldview owes much to Locke. Locke claimed that solidity, extension, figure, motion, rest, and number “really exist in the [physical] bodies themselves;” but he held that feelings like sweet, blue, and warm “have no resemblance of them at all” ([1690] 1978, book 2, chap. 8, para. 15, p. 69; see Jacovides 1999). This division follows from the view that anything real must, at bottom, be composed of “atomicules [that] all alike act mechanically upon one another according to one fixed law of force” (Peirce 1998, p. 186). Causal events produced by such micro-bangings are held to have a basis in fact, “[b]ut as for Qualities, they are supposed to be in consciousness merely, with nothing in the real thing to correspond to them [...]” (Peirce 1998, p. 187).

If one is gripped by this vision of the world, then the question of “how it is that anything so remarkable as a state of consciousness comes about” will be “as unaccountable as the appearance of the Djinn when Aladdin rubbed his lamp in the story [...]” (Huxley 1866, p. 193). Advances in cognitive science will only exacerbate the puzzlement, because “matter, *incogitative* matter and motion, whatever changes it might produce of figure and bulk, could never produce thought” (Locke [1690] 1978, book 4, chap. 10, para. 10, p. 315).

Even though many of the assumptions that Locke relied on have now withered away, his vision of “a world made out of ultimate little things and

collisions amongst them” (Ladyman et al. 2007, p. 23) continues to figure prominently in the attempt to give a purely neuroscientific account of consciousness. As we saw in the second chapter, Frank Jackson claims that all our knowledge of the mind “comes back to causal impacts of the right kinds” ([1998] 2004, p. 418). However, I think such causal chains are interesting only insofar as they transmit information. That seems to involve more than mere causation. Bernard Baars writes that “[i]f we could zoom in on one individual neuron [...] we would see the nerve cell *communicating* frantically to its neighbors about one thousand times per second [...]” (1997, p. 18; emphasis added). Why is the term “communicating” being used here? Stjernfelt remarks that, “[i]f you take an ordinary textbook, and pick some arbitrary page, you’ll find semiotic terminology” (in Emmeche et al. 2008, p. 7). Stjernfelt also remarks that, promissory notes aside, such terms are never actually reduced or eliminated (ibid.). A trinitarian would argue that such reductions or eliminations are never done because, fundamentally, they cannot be done. They cannot be done because the triadic action of signs is a genuine part of reality.

If, say, neuron A impinges directly on neuron B, and neuron B impinges directly on neuron C, then no matter how we unpack the impingement, we cannot credit these two dyadic events with a “transfer” of information unless neuron C is affected in a way that makes it relate to neuron A through the intermediary of neuron B. In this sense, we have action at a distance. Hoffmeyer (2008, p. 64) has therefore suggested that all events which have this

triadic structure involve “semiotic causality.” This, as we saw with the squids fleeing ink (in section I.III), is what Peirce meant by semiosis, namely “an action, or influence, which is, or involves, a cooperation of *three* subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs” (1998, p. 411).

Peirce, in what has been called his most “scholastic” passage (Deely 2009a, p. 268), wrote that “[t]hat which is communicated from Object through the Sign to the Interpretant is a Form” (Peirce 1998, p. 544n22). Locke knew of this scholastic account, but he dismissed it (see Jacovides 1999, p. 463). If everything the mind knows comes by way of collisions between two things, then it follows as a matter of course that triadic relations (involving Thirdness) and intrinsic qualities considered apart from all other things (involving only Firstness) will appear suspect. Thus, Locke is only being consistent with what his chosen ontology allows him.

By countenancing only efficient causation, the ontology favoured by Locke resembles a restaurant or night club admitting only couples. An institution with such an admittance policy will not know what to do with single persons. However, it is not as if, simply in virtue of excluding them, single persons suddenly cease to exist. Couples are, after all, nothing more than conjunctions of (otherwise single) persons, so I would argue that commitment to paired items entails commitment to singular items. Likewise, beginning at Secondness does

not make Firstness vanish. One may elect to ban qualia from a given discipline, but that does not metaphysically eradicate the qualitative dimension itself. I thus propose that, metaphysically, we countenance semiotic triads *and all the simpler (non-triadic) states such triads subsume*. Such an ontology makes room for the causal events favoured by Locke—but it also includes triadic relations and simple qualitative states.

Formal causality, which is arguably what is involved in iconic reference, is absent from accounts of perception that countenance only efficient causation. Locke, for instance, asks “How do bodies produce ideas in us?” and answers “Obviously they do it by impact” ([1690] 2007, book 2, chap. 8, para. 11). Whereas I stressed the centrality of iconic semiosis in uniting physical presence and cognitive presence, Locke dismissed (in a single paragraph) the entire stance of my second chapter:

To reveal the nature of our ideas better, and to talk about them intelligibly, it will be convenient to distinguish them as they are ideas or perceptions in our minds, and as they are states of matter in the bodies that cause such perceptions in us. That may save us from the belief (which is perhaps the common opinion) that the ideas are exactly the images and resemblances of something inherent in the object. That belief is quite wrong. Most ideas of sensation are (in the mind) no more *like* a thing existing outside us than the names that stand for them are *like* the ideas themselves. ([1690] 2007, book 2, chap. 8, para. 7)

Locke does not tell us why we need to be “saved” from the supposedly “quite wrong” belief in mind-world likeness. Focusing on what little argument we find in this passage, one cannot infer from the premise that “most” ideas do not resemble external things to a conclusion that *none* resemble them.

Ostensibly, there were other disputes in the background. There seemed to be a fear that, if one accepts iconicity, one also accepts innate ideas. It is not entirely clear, to me at least, what the link between the two notions is supposed to be. I am tempted to agree with Peirce that “Locke failed to see that learning something from experience, and having been fully aware of it since birth, did not exhaust all possibilities” (1931–58, vol. 4, para. 92).

Ransdell (2003, pp. 229–231) speculates that modernist “iconophobia” may have been driven by religious controversies. Perhaps Locke’s palpable impatience with the authorities of the schools and the Church led him to bundle many of their theses. The reception of earlier versions of the *Essay* had warned Locke that many of his readers believed that, “if innate ideas were not supposed, there would be little left either of the notion or proof of spirits” ([1690] 1978, “Epistle to the Reader,” p. 7). For his part, Locke believed that “the great ends of morality and religion are well enough secured, without philosophical proofs of the soul’s immateriality [...]” ([1690] 1978, book 4, chap. 3, para. 6, p. 271).

Are there any religious implications in the notion of iconicity? Well, Galen Strawson (2006, pp. 250–255) agrees with me that experience can allow for a bond where the gap between knower and known disappears. He calls it “revelation,” a term used by Mark Johnston (1992) to describe how one could be acquainted with colours in the Russellian framework. That choice of word certainly courts non-secular readings.

I acknowledge that, when dyadic and triadic relations are prescinded, causation and language are rendered inoperable. In section II.III, I looked at how Peirce, in what is perhaps the most radical move of his diagrammatic logic, removed the rim of a Euler circle. Because the unbounded expanse thus obtained is a ground that merely *awaits* sign-action, it cannot be communicated. Now, Wittgenstein ([1921] 2002, section 6.45, p. 187) suggested that some of our most problematic intuitions—and deepest mystical sentiments—stem from our ability to conceive of a bounded whole. Interestingly, Keltner and Haidt (2003, pp. 303–304) have identified the two main traits of religious awe as vastness and the need to mentally accommodate that vastness. If we are dealing with a quality deprived of all relational contrasts, we get vastness, but the need for accommodation cannot be met. This ineffability can cause alarm, especially if it is taken as a license to indulge in all sorts of irrational whims. Strictly speaking though, none of those fears follow. I may not be able to put into words the taste of pickled relish, but I do have to produce a token spoonful of the

condiment in order to iconically convey the tone I mean. Those wishing to convey their religious awe are not exempt from this requirement.

Seeing how an outright denial of qualitative experience is hard to sustain—Locke certainly never tried an eliminativist gambit—granting such qualities “partial” reality seems the next best option. However, endorsing a distinction between “primary” and “secondary” qualities burdens one with explaining why/how the secondary qualities emerge from (or are epiphenomenally attached to) the primary ones. Locke suggests that, ultimately, how ideas are produced by non-idea-like things may be a mystery known only to God; conscious awareness might accompany material events “merely by the good pleasure and bounty of the Creator” (Locke [1690] 1978, book 4, chap. 3, para. 6, p. 270). Bypassing the implausibility of emergence is one of the main motivations for panpsychism. It is what leads Galen Strawson (2006) to reason that, if we want to explain qualitative dimension of consciousness in a non-miraculous way, we must weave experiential properties into the fabric of reality.

I will differentiate Peircean trinitarianism from the sort of panpsychism currently defended by Strawson. For now, I endorse the following statement, which I find applicable to trinitarianism:

Panpsychism rests upon a fairly strong version of the principle of sufficient reason, which it applies across the board, metaphysically as well as epistemologically. Unlike emergentism, panpsychism doesn't tolerate metaphysical discontinuities—it insists that high-level entities issue from bottom-level entities. Unlike physicalism, panpsychism doesn't tolerate epistemological discontinuities—it insists that high-level entities issue *intelligibly* from bottom-level entities. (Lewtas 2013, p. 40)

Interestingly, if one looks at the original source, the famous quote by T. H. Huxley actually says that consciousness is “just as unaccountable as the appearance of the Djin when Aladdin rubbed his lamp in the story, *or as any other ultimate fact of nature*” (1866, p. 193; emphasis added; curiously, the final portion is dropped by Bayne 2004, p. 361). This hints at two responses: magical emergence—or simply countenancing consciousness alongside the other primitive facts of nature.

On my view, the list of “primary” qualities is much longer than what Locke thought, since it includes all the items he would have relegated to “secondary” qualities. I consider qualitative Firstness to be a ubiquitous part of reality, because anything, whatever it is, can be considered “without reference to any other” (Peirce 1931–58, vol. 6, para. 224). However, to count as conscious, something must do more than simply have a quality. This is worth stressing, because debates about p-consciousness might occlude the importance of a-consciousness in contributing to a complete account. That is why I openly characterize my ontology as comprised of *three* stuffs.

I do not think we can assemble human psychology with anything less. Give me only Firstness, and all I can produce is a vegetable, an inarticulate quality unresponsive to anything. Give me only Thirdness, and all I can assemble is a zombie. Give me Firstness and Thirdness but not Secondness, and I can assemble a thinking and feeling creature that cannot act in the world (I will not discuss Secondness in this chapter, but a fuller treatment can be found in Champagne in press). To develop a plausible account of consciousness, I think all three semiotic categories are needed. The culprit, then, is not experiential qualities, but rather an impoverished worldview that makes them seem out of place. Freeing oneself of the worldview recommended by Locke should therefore go a long way towards reinstating phenomenal consciousness as a *bona fide* constituent of the world.

If qualities are countenanced at the most fundamental metaphysical level, then it is less puzzling that we encounter them in our ordinary psychological lives. Countenancing qualities as a primitive stuff will have different drawbacks and advantages depending on how the quality at hand is construed. A “pan-experientialist,” for example, contends that reality contains something experiential in nature. However, because “self-styled ‘pan-experientialists but not panpsychists’ often find themselves doing the same thing,” (Holman 2008, p. 58), I am going to overlook these domestic divides. Philosophically, what unites panpsychist views is an agreement that nothing comes from nothing and a shared sense that functional description leaves out something akin to qualia.

There may be other challenges (like the so-called “composition problem;” which I discuss in section IV.VIII), but panpsychists usually regard those as “less daunting than articulating a comprehensible theory of radical emergence of mind from utterly mindless matter” (Skrbina 2006, p. 156). The argument, in effect, is this:

1. It is undeniable that we experience qualities.

2. Qualities do not figure in a materialist ontology.

Therefore,

3. Either a materialist ontology is mistaken, or a materialist ontology must give an account of how our experience of qualities emerges from matter.

4. Nothing comes from nothing.

Therefore (in light of all of the above claims),

5. It is impossible to give an account of how our experience of qualities emerges from matter.

Therefore (in light of premises 3 and 5),

6. A materialist ontology is mistaken.

Therefore,

7. Qualities need to figure in an ontology.

This is my formulation, but the line of reasoning it captures is not new; it was stated, for example, by Nagel (1979, p. 181). Despite being compact, I endorse this entire argument, which I consider sound. Importantly though, I differ from Strawson in that I do not think accepting the final conclusion (7) also entails accepting panpsychism (which could be grafted as a supplementary claim 8). In this chapter, I am trying to build an alternative metaphysical view for those who

find the argument above persuasive yet who recoil from the prospect of scattering mind everywhere.

Someone who wanted to reject the argument could do a couple of things with it. One could, for example, reject the starting claim that we experience qualities. After all, if we do not even experience qualities, then the fact that qualities do not figure in a materialist ontology (premise 2) does not pose much of a problem. However, I accept premise (1), because I agree with Galen Strawson that a “[f]ull recognition of the reality of experience [...] is the obligatory starting point for any remotely realistic (indeed any non-self-defeating) theory of what there is” (2006, p. 4). I suppose premise (5) might also be weakened to something like “No account of the emergence of qualia from matter has thus far been successful.” Instead of betting that science will (one day) vindicate eliminativism (Churchland 1981), one could bet that science will (one day) vindicate emergentism (Park 2013 does just that). This would conceivably leave room for optimism, thereby blocking the deductive inference to claim (6). However, I accept premise (5) in an undiluted form, because I think the burden is on whoever holds it to be false to show that it is not true.

Panpsychist views have been around for a long time (for a survey, see Skrbina 2005), but they are currently making a comeback in philosophy of mind (Chalmers 2013; Seager 1995; Seager 2006; Strawson 2006). Yet, for the

use of the prefix “pan” to become plausible, the term “psyche” has to be understood in a more impersonal way than usual—more impersonal, at any rate, than how it is used in fields like psychology. In recent debates, the focus has been on the qualitative or phenomenal aspect of consciousness. However, I want to reiterate that signs are more than just qualities. Only one sort of sign-vehicle, the tone, is a quality, so trinitarianism is committed to much more than just qualities. Granting reality to all that goes into triadic signs is, I submit, a more plausible option.

I am suggesting that, in a certain way, qualities exist “out there.” Now, one of the main reasons for assuming that qualia are merely “subjective” comes from observing everyday differences in how people describe their experience of things. Two people, for example, might eat the same food yet describe the taste that they experience in different ways. This leads philosophers like Locke to reason that while experiential qualities “seem” to be located in the world, really they are not; or so the common argument goes (Locke was not the first philosopher to argue this, but for many his distinction did seal the matter).

This line of reasoning requires, at minimum, two human subjects and one thing, say, a sprig of cilantro, being accessed by a sense modality, say, taste. Were there only one person, the worries just described would probably never arise. After all, if I am alone, then I have no real cause to doubt that it is the sprig itself that tastes like cilantro. This reflects much ordinary linguistic

practice. Indeed, “[a]sk a child where the green of the lawn is and he will point out *the lawn*. [...] Anyway, normally the *finger* will point to the object, not to the eye or head of the viewer” (Stroud-Drinkwater 1994, p. 347). Doubts about the location and ontological standing of “secondary” qualities like tastes and colours thus come into view only when someone else refers to the same thing but recounts their own experience in a different way. Assuming a principle of charity that aims to maximize the ascription of true beliefs, these kinds of situations understandably generate puzzlement. If a reliable person experiences the world in a way so different from me, aren’t I rationally entitled to resolve the aporia by relegating the troublesome qualities to a purely subjective realm? This is a common response, but I believe it is hasty.

Subjects who disagree on what cilantro tastes like are engaged in an act of interpretation. Unless one lets scepticism wipe the slate of shared beliefs clean, such disagreement is by no means a case of “radical” interpretation. Still, a lot of what Donald Davidson has written is applicable here, specifically his remarks about “triangulation” (2001, pp. 212–220). The three tips of the triangle are the two persons and one object/event under discussion (in this case, a sprig of cilantro). Using symbols (i.e., language), interlocutors are trying to agree about what they intend. Philosophy of signs and philosophy of language are natural allies here, but the latter study has limitations which the former does not, since speaker and hearer will eventually resort to non-linguistic semiotic means. Indeed, based on what I have said in the second chapter, an exercise in

triangulation will never fully succeed in capturing qualia unless the passage from conventional signs (symbols) to causal signs (indices) also terminates with a passage to qualitative signs (icons). We whittle discourse down to a point, then let experience do the rest. However, in order to reach this point, a lot of contextual pointing and charitable chatting may have to occur. One might even have to import samples from another source in order to reason by analogy. I am thus sensitive to the complexity of such situated exercises of interpretation. In fact, I think the standard reasoning that leads to the supposed subjectivity of “secondary” qualities pays insufficient attention to just how complex such situations really are.

When you and I disagree about the taste of cilantro, we are not making claims about cilantro *per se*, but rather about cilantro-insofar-as-it-interacts-with-my-sense-organs-now. The taste reported is therefore, implicitly, a report about the functioning of one’s sense organs. As such, a full description of what I am claiming when I say that “This cilantro sprig is bitter” would have to include facts about the temperature of my mouth, allergies I may have, my blood sugar levels, the number and distribution of receptor cells on my tongue, psychological priming effects I may be biased by (e.g., being told right before “Wait until you taste how bitter this is...”), or whatever else might affect how I experience things. Since we have not controlled for all these variables, I find it hasty to conclude that, because there can be disagreements or divergences between persons, tastes are subjective. Every instance where we might be

tempted to attribute P and not-P to a common thing can, I think, be explained as a divergence in the circumstances of the experiencing agents.

Consider the fact that a small child cannot lift me but a strong adult can. Clearly, it would be erroneous to drop the relations involved and hold that I somehow have two clashing predicates, “liftable” and “unliftable,” and that since I cannot be the site of both, debates about my liftability are bound to remain a matter of subjective preference. Likewise, a sprig of cilantro might taste very differently to two people, but that is no reason to squeeze two mutually-exclusive qualities into one poor herb so as to infer from the incompatibility that qualities like taste cannot possibly belong “out there.”

If one puts a high premium on inter-subjective agreement, one could start refining triangulation using experimental methods. One could, for instance, try to control the variables listed above. I do not doubt that, pursued with enough care, the attempt to make the observational conditions of two people match could succeed. This is, after all, the way we deal with difficult “primary” Lockean qualities. When an engineer tries to communicate a very complex shape to another person, she does not hesitate to draw on sophisticated geometric formulas to convey what she has in mind. The natural scientific tradition, which so impressed Locke, has not treated the communication of “secondary” qualities with as much rigour. Indeed, “[c]urrent perceptual science, even when it deals with qualitative aspects of experience, almost

exclusively explains them in terms of the stimulus *quantitatively* understood as a collection of objective measurements” (Albertazzi 2012, p. 9). This, understandably, generates the worry that we have left something out. In any event, the inference from difficulty to impossibility that relegates qualitative experiences to a merely “subjective” ontological status clashes with many normal practices and assumptions:

We do not universally agree in our judgments about what is red or salty. But when there is disagreement, we do not blithely continue to maintain our own views without hesitation. The fact that others report seeing red where you saw green, or tasting saltiness where you tasted none, makes you less confident in your own color or flavor judgments. It makes you suspect that the lighting is funny, or that you are ill or under the influence of a drug, or that your perceptual equipment is defective (as it is in color-blind people). To insist without further investigation that your own judgment is right, and that the other’s is wrong, would be rash and unwarranted. (MacFarlane 2014, p. 5)

Observation grounds empirical claims, so it is normal that scientific practitioners seeking a consensus would limit themselves to observations which they can talk about with robust inter-subjective agreement. But, that disciplinary predilection does not mean that the other qualities we experience merit ontological demotion. In my account, agents can eventually agree because they can employ symbols, indices, and icons; the unique semiotic service rendered by each sort of sign cannot be replaced. Some objects may be

communicable by iconic means alone, but that does not make those objects any less real.

Locke cordoned off experiential qualities because, no matter how intimately obvious they seem, they are not mentioned by physicists. Like W. V. O. Quine (1966, p. 151), who proclaimed that “philosophy of science is philosophy enough,” Locke held that “it is ambition enough to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way to knowledge” ([1690] 1978, “Epistle to the Reader,” p. 7). Yet, a careful reading of Locke’s *Essay* reveals that he never actually argued for this deferral. That the scientific theories of his time were thriving was presumably enough to motivate Locke’s meta-philosophical stance. Surely, if one is going to assign philosophy a subordinate role, the demotion requires justification.

Like Locke, Peirce admired the natural sciences. Peirce was aware that many follow Locke in taking physics as their metaphysics: “[Henri] Poincaré would have us write down the equations of hydrodynamics and stop there” (Peirce 1998, p. 187). Unlike Locke though, Peirce believed that science needs an ontology that includes qualities alongside efficient causes. The semiotic repertoire has to be varied because the world we experience exhibits that variety. I now want to look at this Peircean ontology.

IV.III Peirce's Three Categories versus Popper's Three Worlds

Maybe I lack erudition, but I know of only one major contemporary philosopher besides Peirce who countenances three stuffs, and that is Karl Popper. Unlike Sebeok (1979, pp. 204–205), I will not draw on the metaphysics of Popper's three "worlds." However, from an expository standpoint, what Popper had to say can serve as a convenient foil to gradually introduce the distinctive commitments of trinitarianism.

Popper held Peirce to be "one of the greatest philosophers of all time" (1979, p. 212) and praised him for being one of the first post-Newtonian philosophers to espouse indeterminism in physics (Popper 1979, pp. 213, 296; Popper and Eccles 1981, pp. 22–23). Although Popper did not read Peirce prior to 1966 (Chauviré 2005, p. 209), the subsequent effects of his reading quickly became noticeable. Popper (1955) nevertheless wanted to contribute to the traditional mind-body problem. Given that "we find in Peirce no traditional philosophical arrangement that creates a mind-body problem" (Pietarinen 2006, p. 76), the Popperian worlds can be seen as a bastardized version of the Peircean ontology that caters to mainstream concerns. Hence, in comparing the metaphysics of Peirce and Popper, the shared endorsement of three levels is important, but so are the differences.

Popper is known mainly for the view that knowledge proceeds by conjectures and refutations ([1963] 2002). Having explained this epistemology

in some detail, Popper eventually felt it necessary to clarify the ontology that makes such cut-and-parry binding and predictive. As a philosopher of science, Popper had no wish to deny the mind-independent existence of matter. He did, however, think that an exclusively material world would be insufficient to house two important sets of facts which deserve acknowledgement, namely consciousness and knowledge. In short, Popper wanted to put scientists in his scientific worldview.

Popper thus strove to account for what he called “knowledge in the objective sense, which consists of the logical content of our theories conjectures, and guesses” (1979, p. 73). Examples of such knowledge would be “theories published in journals and books and stored in libraries” (ibid). Note that the “objective” items here are not paper sheets, but the abstract theories that reside in (and, when interpreted, are transmitted by) such token sign-vehicles. This suggests that a commitment to physics needs to be augmented with something that can track the flow of information. In keeping with this, Popper locates physical facts in what he calls “world 1.” Popper describes “world 2” as “the world of our conscious experiences” (1979, p. 74). The theories and ideas transmitted by symbols belong to “world 3.”

When Popper promoted his world 3, he was pitting himself against the arid materialist ontologies of logical positivism. Logical positivists appealed to so-called “protocol sentences” as a way of “*directly* reporting the ultimate

justificatory basis in first-person experience of the (objective and third-person) empirical claims of science” (Livingston 2013, p. 80). The truths expressed by science therefore stand or fall depending on whether or not we can bring a sign-vehicle like an utterance in relation with an object. There may be misunderstandings about what others mean, but triangulating a correct referent is a worthwhile pursuit only on the assumption that what others do can convey/carry some kind of meaning beyond mere sounds and gestures. Popper held, rightly I think, that the intentionality at work in such protocol sentences must be presupposed in any attempt to deny intentionality. In essence, Popper agreed with Lynne Rudder Baker’s (1987, pp. 134–148) formidable objection to eliminativism: one must defend, not just an ontology, but whatever a defence of that ontology presupposes. Putting the brain, the mind, and the mind’s ideas into separate “worlds” was Popper’s way of saying that one cannot “naturalize” meaning and intentionality.

Although it is tempting to see world 2 as bridging worlds 1 and 3—those numbers certainly invite such a reading—that temptation must be resisted. To see world 3 as an outgrowth of conscious experience would be to consider rational entailments as rooted in psychology. Like Peirce, Popper rejects psychologism, and thus makes it clear that “there is a sense in which world 3 is *autonomous*: in this world we can make theoretical discoveries in a similar way to that in which we can make geographical discoveries in world 1” (Popper 1979, p. 74). World 3 is closer to Plato’s realm of Forms: “We can discover

new problems in world 3 which were there before they were discovered and before they ever became conscious; that is, before anything corresponding to them appeared in world 2” (ibid.). If one wants to learn something about world 3, one should not study the physical brain (which is in world 1) or the mind (which makes up world 2). Rather, one has to engage with the abstract items that populate world 3. Hence, “it is impossible to interpret either the third world as a mere expression of the second, or the second as the mere reflection of the third” (Popper 1979, p. 149). The point of Popper’s numeral labels, then, is not to indicate an ordinal arrangement, but to underscore the cardinal distinctness of the three worlds. This is very different from Peirce’s ordinal categories, where what is “First” really does come first.

In the Popperian ontology, the ideal entities located in world 3 are not allowed to migrate to world 1, just like the material things of world 1 cannot leap into the unextended domain of world 3. None of this holds in semiotic trinitarianism. In contrast with Popper’s three worlds, Peirce’s three categories are not static, but are rather shifting constantly. An interpretant, despite being a Third, is whatever it is, and so also counts as a First. In this way, triadic relations beget more of themselves, and while “[t]he process as a whole is unlimited,” the same cannot be said of the finite “stages and steps in the process” (Deely 1994a, p. 31).

Popper took it for granted that “[c]onsciousness, and every kind of awareness, *relates* certain of its constituents to earlier constituents” (Popper and Eccles 1981, p. 70; emphasis in original). We also find this idea in Peirce, who held that the realization “that thought cannot happen in an instant, but requires a time, is but another way of saying that every thought must be interpreted in another, or that all thought is in signs” (1992, p. 24). Yet, despite being an expert in signs that relate things, Peirce differed from Popper in that he did not think that *all* awareness relates certain of its constituents to earlier constituents. When prescissively considered in their Firstness, the intransitive “perchings” alluded to by James ([1890] 2007a, p. 243) are simply what they are, aside from whatever functional role(s) they play in cognition. Let us see what a process philosophy looks like when it countenances those immobile states.

IV.IV A Less Simplistic Semantics

“Semantics,” the hobbyhorse of many, is sometimes defined (when it is defined at all) as the study of meaning apart from use (see Palmer 1997, pp. 1–8). This project is, I think, untenable. There is no meaning apart from use—or, more precisely, apart from the generation of Thirds in an open-ended process of semiosis. No one can police the use of labels, but I would argue that it is inconsistent to self-identify as a pragmatist while trying to do “semantics.” My section title is thus ironic, since “[t]he term [semantics] is not one found

anywhere in Peirce; for pragmatism, the field it is supposed to demarcate, simply *does not* and *cannot* exist” (Tejera 1991, p. 151).

The behaviorist Charles Morris (1971) was responsible for promoting semantics. Morris claimed to be continuing the work of Peirce. He was not. John Dewey, who studied under Peirce at Johns Hopkins, had a far clearer grasp of what the founder of pragmatism meant by meaning, and the passages where he sought to instruct Morris on the topic are succinct and on target:

Peirce uniformly holds (1) that there is no such thing as a sign in isolation, every sign being a constituent of a sequential set of signs, so that apart from membership in this set, a thing has no meaning—or is *not* a sign; and (2) that in the sequential movement of signs thus ordered, the meaning of the earlier ones in the series is provided by or constituted by the later ones as their interpretants, until a conclusion (*logical* as a matter of course) is reached. Indeed, Peirce adheres so consistently to this view that he says, more than once, that signs, *as such*, form an infinite series, so that no conclusion of reasoning is forever final, being inherently open to having its meaning modified by further signs. (Dewey 1946, p. 88; for the argumentative development of this view, see Peirce 1992, pp. 11–27)

All students of semiotics should commit this passage to memory. It is, unmistakably, the statement of a *process* philosophy (Peirce recognized an affinity between his views and those of Hegel; for a comparative study of Hegelian and Peircean categories, see Stern 2011, pp. 269–326).

The meaning of any given sign is given in another, more developed, sign (Peirce 1931–58, vol. 2, para. 228). Biologists have increasingly been drawn to this account of meaning as growth (see Favareau et al. 2012). However, I think that, if we want to understand the steps in the process, logic provides a better key. C. I. Lewis, one of the first twentieth-century philosophers on record to have discussed qualia (Livingston 2004, pp. 6–8), studied the Peirce manuscripts while at Harvard (see Pietarinen 2006, p. 53). Lewis stated that his ideas about the *Mind and the World Order* grew out of “investigations which began in the field of exact logic and its application to mathematics” ([1929] 1956, p. vii). Lewis was the co-founder of modal logic (see Lewis and Langford [1932] 1959). Following this lead, I propose that we look at trinitarianism as an ontology governed by a modal axiom: necessity entails actuality entails possibility.

The idea of necessity, so prized by rationalists (like Descartes), might clash with Peirce’s pervasive fallibilism. If so, then perhaps necessity should be demoted to generality, so as to make room for exceptions (in logic, such a demotion might require some changes, since it would no longer licence the deduction of P from generally-that-P). Such a modification would not change the fact that deduction affords the highest grade of practical (though not infallible) certainty. As we are about to see, once we systematically apply the modal axiom to the triadic model of the sign, we obtain a whole range of

distinctions that are far from simplistic. In keeping with this basic insight, we can say that signs which *are* interpreted *could* be interpreted.

Peirce saw himself as “an Aristotelian of the scholastic wing, approaching Scotism, but going much further in the direction of scholastic realism” (1998, p. 180; for an account of Peirce’s progression towards “modal realism,” see Fisch 1986, pp. 184–200; as well as Almeder 1973, pp. 7–13). In plainer terms, he believed potentials were real. Of course, by the time a quale is detected, it is too late: it has already had an effect on something beyond itself, and in so doing has been propelled from Firstness to Thirdness. Hence, on my account, we can only arrive at qualia after the fact, by *prescission*. Still, a theory can assign a placeholder for this eventual interpretation. In semiotic theory, such a possible interpretant is called a “rheme” (for the etymology, see Peirce 1998, p. 285). The *Routledge Companion to Semiotics* defines a rheme as “representing a qualitative possibility of some sort rather than a fact of the matter or a reason” (Cobley 2010, p. 307).

We can thus complete our earlier grid (figure 5) by adding a third and final taxonomy that tracks whether or not a referential relation *could*, *is*, or *tends to be* interpreted:

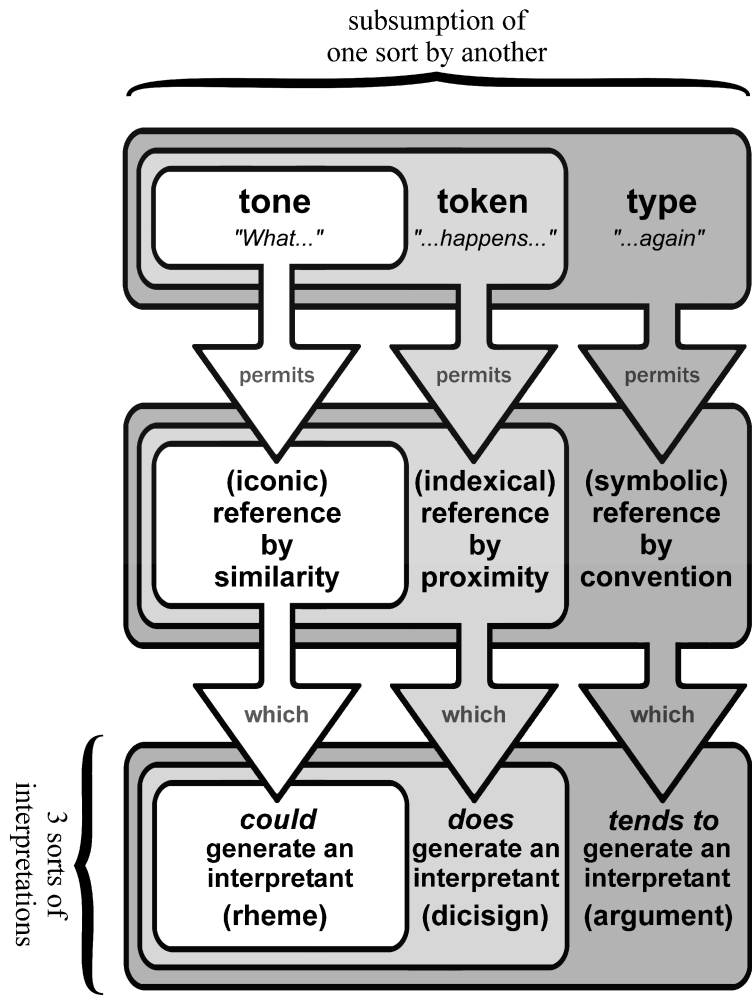


Figure 9 The three Peircean trichotomies

As we saw in section IV.II, countenancing uninterpreted qualities spares one from having to miraculously introduce those qualities once they are interpreted. When discussing the Sperling experiments in the third chapter, I argued that a feeling of reading is present before one takes self-conscious stock of it. Now, for the same reasons, I am suggesting that whatever contents were on the Sperling cue cards (colours and all) were present before any mind took

stock of them. Just as we can suppose our verbalizations absent in a way that lets our experiences have a quality apart from those interpretants, so too can we suppose that, even though no one is looking at figure 7 right now, there are qualities on that unseen page. This is granting the reality of Firstness.

The rheme is like a chemical valence that permits the sign-vehicle to eventually bond with something other than itself. In chemistry, our account of a given atom includes what it *could* connect with, without thereby stating that the atom *does* (or ever will) have that connection (for more on chemistry and semiotics, see Tursman 1989, p. 453; also, Chris Campbell, of University College London's Department of Science and Technology Studies, is conducting doctoral research on the parallels between Mendeleev and Peirce).

In addition to being a chemist, Peirce was also a logician, so he sometimes described the rhematic interpretant as “[t]hat which remains of a Proposition after removal of its Subject” (Peirce 1931–58, vol. 2, para. 95). Since this has become the received gloss among Peirce scholars, textbooks generally divide interpretants into terms (which assert nothing), propositions (which do), and arguments. Peirce clearly had this well-known division in mind. However, I do not find the logical characterization helpful, because it proceeds from a terminology that hides just how general the semiotic notion of rheme is supposed to be. In principle, the notion of interpretant should fit a tick capable of detecting the smell of butyric acid released by the skin glands of a

mammalian host (Uexküll [1934] 2010, pp. 44–52). A waiting tick that has this disposition can be credited with a rhematic interpretant, but it can hardly be credited with grasping a proposition minus a subject. I thus think a better way to appreciate the rheme is to think of it as the only sort of interpretant a tone could possibly generate. The following passage by Peirce is therefore more instructive:

Since a quality is whatever it is positively in itself, a quality can only denote an Object by virtue of some common ingredient or similarity; so that a Qualisign [or Tone] is necessarily an Icon. Further, since a quality is a mere logical possibility it can only be interpreted as a sign of essence, that is, as a Rheme. (1998, p. 294)

There are bound to be disagreements about how to render the trichotomy of interpretants. Because I am not overly preoccupied with getting Peirce right (and not at all preoccupied with matters of theology), I depart from the major studies of Peircean trinitarianism (like Robinson 2010). In this section, I merely want to showcase how, like the construction of the periodical table of elements, Peircean semiotics tries to rank signs from simple to complex using the triadic model and the principled criteria of the categories. So long as all the nitpicking occurs in semiotics, not semantics, I will be happy.

The aim of a semiotic classification, which medieval logicians called “speculative grammar,” is “to ascertain what must be true of signs in order for them to embody meaning” (Liszka 1996, p. 10). Peirce was familiar with the

treatment of the three modalities in medieval logic (Knuuttila 1993). By orthogonally combining the basic modal asymmetry described in figure 9, we can break semiosis into ten distinct steps (see Peirce 1998, pp. 294–296):

1. Tone / icon / rheme
2. Token / icon / rheme
3. Token / index / rheme
4. Token / index / dicisign
5. Type / icon / rheme
6. Type / index / rheme
7. Type / index / dicisign
8. Type / symbol / rheme
9. Type / symbol / dicisign
10. Type / symbol / argument

Applying a simple modal principle, we obtain something far from simple. Indeed, Peirce may have articulated “what has probably become the broadest conception of logic that has ever been written” (Pietarinen 2006, p. 19). It is so broad that it becomes an account of meaning and being at the same time. This is, I think, the sort of sophisticated semantics Legg (2013, p. 16) called for.

The semiotic classification does not enshrine word-to-thing relations as the key to assessing ontological commitment(s). On a trinitarian ontology, the extended “matter” of physical scientists is not the truth-making bedrock of all claims, but rather a fallible sign open to further interpretation. At the close of his study of Peircean metaphysics, Boler writes that “my major complaint

against his categories is that I find in them no place for *things*” (1963, p. 162). I think this is a strength, not a weakness. The action of signs is a process, an incessant stream that waxes and wanes between varying degrees of complexity and simplicity. The most complex bookend of semiosis is the argument, a recognizable type that has been assigned a conventional meaning which, once understood, compels the production of a further symbol. This is where logic, the study of proper reasoning, begins. Everything prior to this is meant to give a foundational account of where such inferences fit in the world.

The ten-fold classification of signs begins with the tone and ends with the argument. In an elegant loop, only agents capable of grasping arguments can strip away relations and prescissively glean tones. Monist accounts like materialism have been accused of “leaving out” qualia (Levine 1997), but my claim in this chapter is that *everything that exists can be captured in the taxonomy above*. Whereas some philosophies of language hold that “*The limits of my language mean the limits of my world*” (Wittgenstein ([1921] 2002, section 5.6, p. 149; emphasis in original), my account extends the range and holds that the limits of my signs mean the limits of my world. Qualia are ineffable, but they are real. It is hard to see how the boundaries of metaphysics could be pushed any farther.

Let us walk slowly through three examples to see how signs develop into increasingly complex forms. In the simplest case imaginable, we can, using

precission, consider a quality, say the colour yellow, all on its own. Such a quality is never encountered in actual experience, so it is, as Peirce (1998, p. 294) says, “a mere logical possibility.” As I explained in the second chapter, a qualitative sign-vehicle can only signify that same quality; it is too simple and impoverished to accomplish anything *else*. Indeed, “the proper Interpretant of an Icon cannot represent it to be an Index, the Index being essentially more complicated than the Icon” (Peirce 1998, p. 277). For the same reason, the only interpretant such a quality could produce would be, also, yellow. Thus, in the first of the ten signs, the qualities at hand cannot yet be differentiated. Still, like a city planner drawing lines in the ground before buildings are erected, Peircean philosophy of signs is prepared to draw what could be called a “pre-division”:

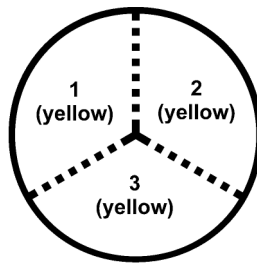


Figure 10 The tone / icon / rheme

Now, recall the formal definition of the sign (section I.IV):

A Sign, or Representamen, is a First which stands in such a genuine triadic relation to a Second, called its Object, as to be capable of determining a Third, called its Interpretant, to assume the same triadic relation to its Object in which it stands itself to the same Object. (Peirce 1998, pp. 272–273)

Looking at figure 10, we see that if a yellow interpretant (noted as “3” in that figure) *were* produced, this Third yellow would stand in the same relation to the Second yellow that the First yellow stood. Qualia are credited with being proto-signs because, minimally, “anything is fit to be a *substitute* for anything that it is like” (Peirce 1998, p. 273). The bond in this case would be underwritten by a quality that really is shared. Even though the tone is a tranquil expanse not yet disturbed by the ripples of semiosis, this iconic potential sows the seed of all subsequent semiosis. The self-same quality of this primordial sign is what renders all inference possible:

Any object, *A*, cannot be blue and not blue at once. It can be blue and hard, because blueness and hardness are not thought of as joined in *quale*-consciousness, one appealing to one experiment and the other to another. But *A* cannot be blue and yellow, because these would blend and so the color would cease to be blue or yellow either. Thus, the positive truth in the principle of contradiction is that *quale*-consciousness has but one element. (Peirce 1931–58, vol. 6, para. 231)

Compare the first sign with the actuality of the fourth sign:

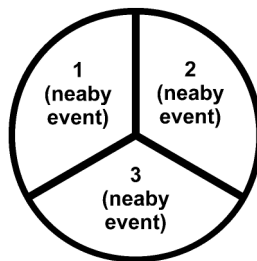


Figure 11 The token / index / dicisign

This is the kind of sign that mechanists and behaviourists favour, because all its parts are observable. In figure 11, I insert the term “nearby,” because “[p]erception signs are [...] always spatially bound, and, since they take place in a certain sequence, they are also temporally bound” (Uexküll [1934] 2010, p. 54). If you suddenly clap your hands and this creates sound waves that affect my ear drum and cause me to leap in surprise, the event has generated an actual interpretant. The dividing lines are no longer dotted because, even though “[t]alking about the relationship between discrete causal facts implies that one abstracts from a continuous process of causation” (Hulswit 2001, p. 342), the parts of the sign could in principle be separated using a real distinction. Apart from my sense of shock, there is no reason why airwaves would have to “stand for” anything. It is the triadic relation that makes the three events significant. A dicisign (from the Latin “*dicibile*”) is an interpretant that actually “says” or “asserts” something (for a whole book devoted to the dicisign, see Stjernfelt 2014). Now, compare sign four with the most sophisticated sign:

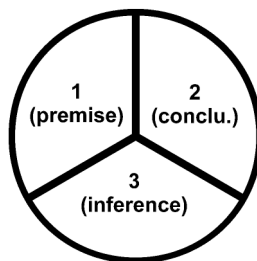


Figure 12 The type / symbol / argument

Peircean philosophy of signs describes the argument as “a sign whose Interpretant represents its Object as being an ulterior sign through a law, namely, the law that the passage from all such premises to such a conclusion tend to the truth” (1998, p. 296). Consider a familiar argument like the *modus ponens*. The sign-vehicle used in this argument has to be general enough not to be bound to any particular token instance, that type will have to be linked to its object(s) by some (constant) convention, and the symbolic notation will be such that, in its own way, it will be compelling. If all this is in place, an interpretant should ensue (teachers of logic usually feel gratified when they witness such semiotic growth).

The first sign does not imply the fourth sign, and the fourth sign does not imply the tenth sign. However, in the reverse direction, this independence does not hold. If, for example, one cannot bring the two premises of a *modus ponens* in indexical proximity with each other, then there is no hope of eventually drawing an inference, let alone a correct one.

My presentation of three particularly straightforward signs has skipped over the intermediary signs that lie between them. However, it is important to stress that, ontologically, those missing steps cannot be skipped (for an exposition of the left-overs, consult Atkin 2008; Farias and Queiroz 2006, pp. 287–289; Liszka 1996, pp. 43–52; Peirce 1998, pp. 294–296; Savan 1987, pp. 1–14). Even though one might press all sorts of worries about the account I have

gestured at here, I will be satisfied if I succeeded in showing that Peirce's theory of signs "does not establish a mere dichotomy between semiosis and nonsemiosis, but distinguishes many transitions between genuine and degenerate or quasi-semiosis" (Nöth 2001, p. 15). That is all I have set out to accomplish in this section.

The panpsychist says that reality is, in some way, composed of mind. Suppose one agrees with this panpsychist claim; then what? What sort of explanatory work can such an account do? Here, I have outlined a competitor ontology that allows us to track ascending and descending levels of complexity. Once we have a theoretical command of the conceptual machinery describing semiosis, we see that Peirce's flirtation with panpsychism was *not* "in striking contrast to Peirce's more famous work in logic" (Skrbina 2005, p. 155).

According to the metaphysical story given by the trinitarian, a lot of things have to fall into place before semiosis can reach a level that can support language. While it may, at first, seem onerous to countenance a sign-vehicle not accompanied by any object(s) or interpretant(s), Peirce believed such a commitment to be mandatory because, in virtue of modal logic, actual semiosis must subsume possible semiosis. Nöth once proposed the term "protosemiosis" to capture "a process that barely fulfils the minimum requirements of semiosis and is hence just above the semiotic threshold between the semiotic and the nonsemiotic world, if such a threshold exists at all" (2001, p. 13).

Countenancing the rheme is a particularly radical move, because it means that qualities, events, and regularities that are not actually interpreted nevertheless count, in their own way, as signs. The world, being intelligible, starts to look like a giant jigsaw puzzle where interpreters supply the final pieces to pre-existing outlines that fit: “It seems a strange thing, when one comes to ponder over it, that a sign should leave its interpreter to supply a part of its meaning; but the explanation of the phenomenon lies in the fact that the entire universe [...] is perfused with signs, if it is not composed exclusively of signs” (Peirce 1998, p. 394).

This view, now referred to as “pansemiotism” (for an early use of the term, see Nöth 1995, p. 81), is arguably one of Peirce’s most challenging ideas. It is, as John Deely (1994b) puts it, a “grand” vision. Historically, the sign-based metaphysics intimated by Peirce is not unprecedented. Pansemiotist worldviews were found, for example, during the Renaissance (Westerhoff 2001). When Galileo said that the book of nature is written in the language of mathematics, he was, implicitly, making the world into a landscape of signs to be interpreted. The major difference with the Galilean view is that, on a Peircean semiotic account, nature is a picture-book that also includes qualities alongside mathematical patterns (Resnik 1982).

Admittedly, “[t]he idea that semiosis should be possible in the inorganic world is a contradiction in terms to all those who postulate that human

intentionality or at least life is the essential semiotic threshold” (Nöth 2001, pp. 15–16). As far as Deely is concerned, the controversy surrounding pansemiotism is misplaced, and “[t]he only question outstanding is in what exactly does this perfusion [of signs] consist?” (2009b, p. 184). Now, there may be good objections to this idea but, at present, one finds mostly bad objections in the literature.

The worst reason for rejecting an ontology of signs is to provide no reason at all. Guido Ipsen is unfortunately correct when he reports that “[p]ansemiotism has [...] almost become an accusation close to an insult” (2008, p. 21). The biologist Marcello Barbieri, for example, routinely makes a caricature of the pansemiotist worldview. In Champagne (2009a), I took Barbieri to task for simply deriding the suggestion (made by Taborsky 1999, p. 601) that the specific relation we find in a function like “ $f(x)=y$ ” might make it a semiotic triad. Barbieri, despite being aware of my criticism (see his 2009), continues to repeat the same undefended dismissal, almost word for word. He thinks that, if we endorse a Peircean worldview, “it’s interpretation all the way down” (Barbieri 2013, p. 283; see the discussion in Deely 2010, pp. 40–41). I am not sure what that even means. At any rate, the fact that two thirds of the Peircean categories are devoted to *uninterpreted* phenomena should suffice to establish that interpretation does not go “all the way down.” Semiotics is not hermeneutics.

I take trinitarianism to be a commitment to the reality of the three semiotic categories, and pansemiotism to be a commitment to the reality *and ubiquity* of those three categories. Pansemiotism thus represents a stronger commitment than trinitarianism. I think Firstness is ubiquitous, and perhaps Secondness too. However, because I do not think I can defend or prove the ubiquity of Thirdness, I endorse only trinitarianism.

My presentation of Peirce's ten-fold classification does not exhaust all that could be said on the subject; it leaves room for disagreements about this or that particular way of rendering things. However, I will be satisfied if those disagreements take place on a semiotic terrain open to the idea of countenancing three stuffs.

IV.V Classifying the Classification

Trinitarianism is an unfamiliar word because countenancing three stuffs is an unfamiliar move. Even so, it might improve our understanding if we tried to situate trinitarianism in the popular classification devised by Chalmers (2010, pp. 111–137). Chalmers divides views into six types. The first trio of views (A to C) shares a commitment to materialism, albeit with varying degrees of strength: “A type-A materialist denies the existence of the relevant sort of epistemic gap. A type-B materialist accepts the existence of an unclosable epistemic gap but denies that there is an ontological gap. A type-C materialist

accepts the existence of a deep epistemic gap but holds that it will eventually be closed” (2010, pp. 110–111). Daniel Dennett (1991a) would be an advocate of type-A, Brian Loar (1997) of type-B, and Paul Churchland (1981) of type-C.

The stances of the second trio (D to F) are, by contrast, prepared to augment the materialist ontology as it is standardly understood. Type-D dualism holds that consciousness not only exists but is causally efficacious as well. The historical exemplar of this view would be the interactionist substance dualism of Descartes, but there have been more recent variants (e.g., Popper and Eccles 1981). Type-E dualism grants the separate existence of consciousness but denies its causal efficacy, thus resulting in some form of epiphenomenalism. Although Chalmers does not mention Leibniz, pre-established harmony would make Leibniz a good historical flag-bearer of this view. The early Frank Jackson (1982) also defended a type-E stance. Finally, a type-F theorist admits that consciousness has to be countenanced as a fundamental ingredient different from anything discussed by physics, but she locates phenomenal properties at such a basic level that anything which exists can be said to have some sort of phenomenality (or “protophenomenality”). Chalmers credits Russell (1927) with introducing this view. Although I will look at Russell’s arguments (in section IV.VI), Galen Strawson (2006) is perhaps the most widely read present-day advocate of a type-F view.

Despite the fact that one can arrange the six views on a spectrum such that type-F views stand diametrically opposed to the conservative materialism of type-A views, there is a sense in which type-F is not as overtly dualist as type-D and type-E:

In its protophenomenal form, the view can be seen as a sort of neutral monism [...]. In its phenomenal form, the view can be seen as a sort of idealism [...]. One could also characterize this form of the view as a sort of panpsychism, with phenomenal properties ubiquitous at the fundamental level. One could give the view in its most general form the name *panprotopsychism*, with either protophenomenal or phenomenal properties underlying all of physical reality. (Chalmers 2010, p. 134)

As the subtitle to his book *The Conscious Mind* attests, Chalmers is in search of a “fundamental” theory of consciousness, where fundamental features are those that “cannot be explained in terms of more basic features” (1996, p. 126). In his sequel, *The Character of Consciousness*, Chalmers becomes even more convinced that consciousness must be a fundamental ingredient of reality: “I think that in some ways the type-F view is the most appealing, but this sense is largely grounded in aesthetic considerations whose force is unclear” (2010, p. 138). This fourth chapter seeks to corroborate Chalmers’ aesthetic intuitions with a more developed (and, I would argue, more tenable) account.

A position falls under the “panpsychist” genus when it attempts to side-step the problem of emergence by making consciousness or mind a basic metaphysical ingredient. Peirce once wrote that “[t]he one intelligible theory of

the universe is that of objective idealism, that matter is effete mind, inveterate habits becoming laws” (1992, p. 293). Peirce was certainly not the first (or the last) to entertain that idea since, “[f]rom Leibniz and Spinoza to Berkeley and Schopenhauer, the history of philosophical approaches to mind included numerous (although perhaps unpopular) panpsychist approaches” (Beever and Cisney 2013, p. 353).

To the extent that trinitarianism makes quality a basic ingredient, it counts as a type-F view. Since there is nothing in the notion of tone that specifies whether it is mental, it would be more appropriate to call the commitment to Firstness “panqualityism” (Chalmers 2013, pp. 27–31). However, I want to forgo that label, because panqualityism would constitute only one third of a trinitarian universe. I countenance qualitative Firstness and a great deal besides. Given that a trinitarian ontology includes events and qualities that are untouched by any mind, we may conclude that, “[h]owever tempted Peirce may have been by a panpsychist approach to semiotic, [...] such a position is rendered impossible by his own principles of semiosis” (Kruse 1990, p. 222).

Despite the recent focus on qualia in the philosophical literature, consciousness is more than just p-consciousness, so I think we need three ingredients to construct a plausible account of the mind. This ensures that we never lose sight of the fact that the stream of consciousness is an incessant process of interpretant-generation spurred by (and responsive to) causal forces.

Because trinitarianism also countenances Secondness and Thirdness, it does not fit well in Chalmers' classification. In philosophy of mind textbooks, we find the terms "monism" and "dualism," but rarely is any attention given to views that countenance three stuffs. The term "pluralism" is sometimes mentioned, but that is not what I am after. Some have suggested that Peirce resorted to "panpsychism as a ploy for introducing thirdness into the realm of inorganic matter" (Deely 2009a, p. 123fn23). It might therefore be more fruitful to use a classification devised by Peirce with the express intent of situating his metaphysical view among others.

Peirce (1998, pp. 179–195) divides positions depending on which of his three categories they are ontologically committed to. Exhausting the combinations, we are left with seven options. The -isms below are those which, in Peirce's estimate, best exemplify a given ontology (I will not evaluate whether the labels have been properly attributed, since this would take me too far afield):

- Nihilism or Idealistic Sensualism
(which grants the reality of Firstness only)
- Strict individualism (which grants the reality of Secondness only)
- Hegelianism (which grants the reality of Thirdness only)
- Cartesianism (which grants the reality of Secondness and Thirdness)
- Berkeleyanism (which grants the reality of Firstness and Thirdness)
- Ordinary Nominalism
(which grants the reality of Firstness and Secondness)

And, finally,

- “The metaphysics that recognizes all the categories” (Peirce 1998, p. 180)

I have chosen the word “trinitarianism” for this final view. One might also call it “*semiotic* trinitarianism,” to distinguish it from religious trinitarianism. As I stated at the start of the chapter, my use of the word denotes only a commitment to three stuffs, not any theological doctrine. If a better label were to come along, I would adopt it. I must say, though, that I like how the word connotes the Christian doctrine of the Trinity (with an upper-case “T”), since that serves to remind us that, like the three divine Persons, the three parts of the sign can never really be pried apart.

A semiotic trinitarian believes that everything that the universe has to offer can be captured somewhere in figure 9. Peirce did not always have this layered metaphysical outlook at his disposal. His intellectual journey began with the realization that “[w]e have no power of thinking without signs” (Peirce 1992, p. 30). This can have idealistic implications, but according to Peirce:

Nothing can be more completely false than that we can experience only our own ideas. That is indeed without exaggeration the very epitome of all falsity. Our knowledge of things in themselves is entirely relative, it is true; but all experience and all knowledge is knowledge of that which is, independently of being represented. (Peirce 1931–58, vol. 6, para. 95)

Of course, heartfelt professions of realism are not by themselves sufficient to show why/how realism holds. So, in order to accommodate the apparently self-defeating notion of “that which is, independently of being represented,” Peirce

struggled to elaborate a general taxonomy of consciousness (Houser 1983) that could acknowledge both the reality of our interpretations *and* of a world that exists apart from those interpretations. It is an open question whether he succeeded. A lot depends, I suppose, on which version we choose to consider as his “mature” theory. Such exegetic matters aside, I think the triadic model allows us to grant the reality of Firstness and Secondness, assigning them a proper place inside Thirdness (Peirce 1998, pp. 179–195).

I have insisted throughout this dissertation that, since experience is shot through with interpretations, we glean Firstness and Secondness only by using precission. However, calling into question the soundness of Peircean trinitarianism, James Johnston (2012, p. 18) recently expressed doubts that a reality accessed through Thirdness would be truly real. In the same vein, Petre Petrov (2013) has argued that, if mind-independent facts did exist, our knowledge of them would immediately turn them into human constructs. Excluding human interpretation from the natural order is questionable (see Markoš 2002). At any rate, I think that, if one truly understands what it means to be a “Third,” then this worry that semiotics will support anti-realist views should not arise. After all, how can one believe in the existence of the number 3 yet doubt the existence of the number 2 or 1? On pain of contradiction, commitment to 3 seems to imply commitment to 2 and 1.

We should nevertheless heed “one of idealism’s most basic cautions: if one is to insist that there is existence outside of knowledge, then one should have the intellectual rigour of not attributing intelligibility to that existence, for this is, after all, what ‘outside of knowledge’ implies” (Petrov 2013, p. 413). That is why I have consistently stressed the inarticulate character of Firstness and Secondness. Qualities are real but ineffable. If we want to be consistent in our removal of all relations, we have no choice but to concede that describing Firstness is, by definition, an impossible task:

Stop to think of it, and it has flown! What the world was to Adam on the day he opened his eyes to it, before he had drawn any distinctions, or had become conscious of his own existence,—that is first, present, immediate, fresh, new, initiative, original, spontaneous, free, vivid, conscious, and evanescent. Only, remember that every description of it must be false to it. (Peirce 1992, p. 248)

If symbolic descriptions could allow us to bypass direct experience, life on earth would be very different. As things stand, anyone wishing to appreciate a given quality must, like Mary the neuroscientist, set their books aside. Phenomenology is not optional. “The verbal argument is at most only stage setting; the heart of the drama is the invocation of experience and, indeed, the attempt to register accurately the felt force of relevant experience” (Colapietro 2010, p. 11). Semiotic theory complements phenomenology by giving a technical breakdown of the full spectrum of possible experiences, from inchoate qualities to systems of notations regimented with military precision.

Accordingly, I have been using signs of the lower-right corner of figure 9 to call attention to the upper-left corner. The rest I cannot do.

When it comes time for Chalmers to produce a positive account in *The Conscious Mind*, he turns to information theory for inspiration. In a chapter titled “Consciousness and Information: Some Speculation” (1996, pp. 276–310), Chalmers assembles “a skeleton around which a theory might be built” (ibid., p. 277). In the remaining sections, I want to add flesh to those bones. I will defend two fairly straightforward claims: a) the world is made of complex patterns and b) such complexity must subsume simplicity. I will use insights from information theory to articulate (a) and insights from the early analytic tradition to articulate (b). I believe that, if we restate the conjunction of complexity and simplicity in the vocabulary of semiotics, we can locate the qualitative dimension of consciousness without accepting panpsychism.

IV.VI A World of Complex Patterns

The trinitarian view I endorse is not reductionist. Reductionism claims that facts about psychology can be reduced to facts about physics, which alone are “real.” Don Ross (2000) has argued, however, that such reduction would not be feasible, because physicists and psychologists are essentially doing the same thing—abstracting patterns—while directing their attention to different sets of regularities. Ross uses the philosophy of Daniel Dennett to articulate this.

In a remarkable paper titled “Real Patterns,” Dennett (1991b) used the Game of Life setting to illustrate how predictions employing the intentional stance are grounded in facts. The Game of Life is not a “game” at all, but rather a self-organizing system invented in the 1960s by the mathematician John Conway (for the cybernetic origins of this game design, see Poundstone 1985, p. 24). It consists of a primitive set of axioms or “rules” successively deployed on a two-dimensional grid of cells. This in turn gives rise to more or less cohesive patterns which we can categorize with some regularity. As Dennett emphasizes, these morphological types command some measure of predictive power. If one has ascended to a level of description sufficiently abstract for a pattern to be salient, then one can tell, for instance, that a “glider” is about to fall prey to an incoming “eater”:

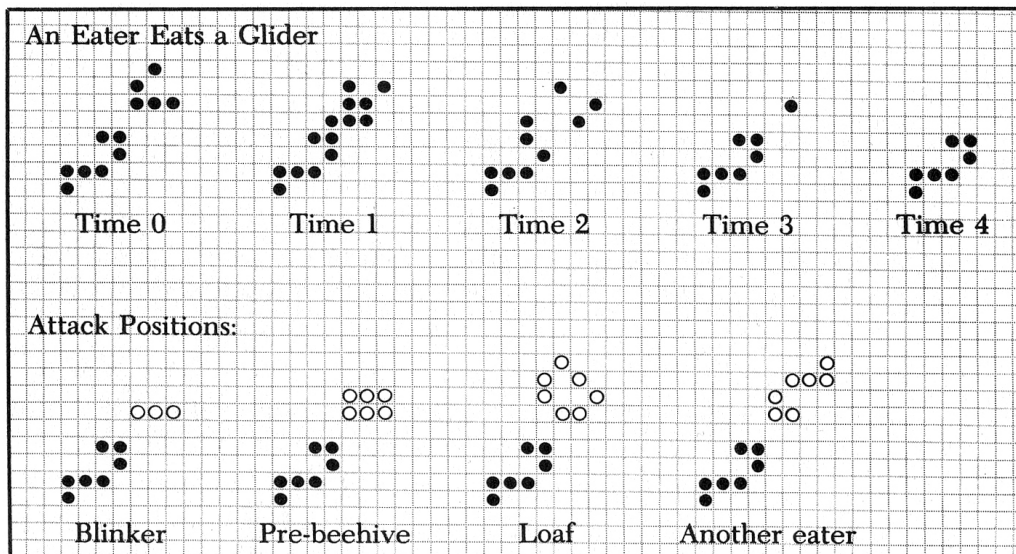


Figure 13 Real patterns in the Game of Life
 (Taken from Poundstone 1985, p. 40; reprinted in Dennett 1991b, p. 40)

Looking at the Game of Life depicted in figure 13, we can make the following observations:

- It is complex.
- There is no such thing as a neighbourless cell pixel.

Now, consider what happens when we add the following philosophical claim:

- Complexity subsumes simplicity.

I hold these three claims to be true. Yet, if one does not have recourse to precission, their conjunction can create a tension because, in principle, the first and third claim allow for the supposition of a neighbourless cell pixel—even though the second claim states that, factually, there is no such thing. Unlike Ross, I do not think the world should be understood *only* as a network of relations. Still, I think that the patterns discussed by Ross account for a lot of what happens in the universe. Let me therefore examine the idea that the world is made up of relations.

Despite its patterned complexity, the world of the Game of Life “derives, ultimately, from simple arithmetic: count the neighbors” (Poundstone 1985, p. 32). In the grid, any given cell will have eight neighbouring cells. Depending on how many of those neighbouring cells are “on” or “off,” the cell at the center will be either on or off. If, for example, there are exactly two neighbours that are on, the center cell will maintain its status (as either on or off) in the next generation or time-slice (ibid., p. 26). Other rules apply to other states. The

Game of Life thus illustrates how “[s]imple rules can have complex consequences” (Poundstone 1985, p. 31).

Are those complex consequences “reducible” to the handful of basic principles that spawn them? According to Ross (2000, p. 161), a pattern may be considered real when it meets the following conditions:

- (i) it is projectable under at least one physically possible perspective
- and
- (ii) it encodes information about at least one structure of events or entities *S* where that encoding is more efficient, in information-theoretic terms, than the bit-map encoding of *S*, and where for at least one of the physically possible perspectives under which the pattern is projectable, there exists an aspect of *S* that cannot be tracked unless the encoding is recovered from the perspective in question.

Some of the real patterns gleaned by a generalized intentional stance might reproduce themselves in a tenacious manner that is “autopoietic” (if they meet the three criteria described in Thompson 2007, pp. 101–103). A semiotician like Brier (2008) appeals heavily to such autopoiesis, but I do not want to make my conception so demanding that it excludes fuzzy patterns that rapidly degrade. I am setting the bar much lower. Even so, compared to a materialism that admits only “ultimate little things and collisions amongst them” (Ladyman et al. 2007, p. 23), making patterns a genuine part of reality is a huge step.

Looking at the behaviour of humans, Dennett argued that ascribing motives and beliefs is an objective strategy, in that we can robustly gauge whether it renders its predictive service. As he put it: “The decision to adopt the intentional stance is free, but the facts about the success or failure of the stance, were one to adopt it, are perfectly objective” (Dennett 1987, p. 24). Metaphysically, one implication of this is that the world must be the kind of place that makes the claims of psychology and physics true or false. Predicting the behaviour of a stone is easier than predicting the behaviour of a toddler, but Ross argues that the epistemology is the same: in either case, we endeavour to uncover patterns. Ross therefore proposes that “the utility of the intentional stance is a special case of the utility of scale-relative perspectives in general in science, and expresses a fact about the way in which reality is organized” (Ladyman et al. 2007, p. 199).

A shift clearly occurs when one changes perspective. There is, on the one hand, a base level where all one countenances are the cell pixels themselves, considered as immanent particulars. Since there is a one-to-one correspondence between a viewer’s representations and the discrete cells that are either on or off, the information-theoretic depiction is appropriately called a “bit-map” (literally, a “map of binary digits”). This robustly charts an area with a degree of accuracy proportionate to the number of divided squares. Given an exhaustive statement of the initial conditions of the game—that is, of the (finite) rules and starting positions of the (finite) pieces on the grid—one could

in principle deduce (in Laplace-like fashion) the various positions these will occupy on the board as the discrete volleys of moves or “ticks” are repeatedly implemented. The inferential process underwriting such a systematic forecast would be completely monotonic or truth-preserving: working with a bit-map is informationally onerous, but assuming that the governing laws do not change midway, it yields a predictive output that is as secure as its input.

The inferential dynamic at work is radically different, however, when one adopts the intentional stance. Indeed, if one ascends to a higher level where creature-like actors can be discerned on the playing field, one does so at the price of turning to an inductive rationale of a far less mechanical character. Dennett is forthright about the fact that a concession along these lines needs to be made in order to have access to intentional explanation. Whereas an exhaustive account of the pixels’ dispersion on the grid is a robust affair, moving away from a bit-map and limning “abstracta” (Dennett 1991b, p. 28) like “eaters” involves a generalization from particulars which effectively soils the truth-preservation with informational noise. This allows one to draw predictions only “sketchily and riskily” (Dennett 1991b, p. 40). A considerable boon of yielding to such induction, however, is that it provides one with assorted heuristics that are unavailable when one countenances only the pixels themselves.

To bring out the difference, we might imagine having to “text” another person’s demeanour and location at a given instant with a mobile phone. If one were to take the bit-map route and catalogue the position and velocity of all the person’s constituent particles, this would make for a lengthy message (and run a costly bill). In information-theoretic parlance, the message would have greater “entropy.” But, if one were to type something along the lines of “So and so is sitting in such and such a room doing this or that,” one would thereby spare oneself a lot of bits (not to mention a lot of money). The configuration of all the relevant neurons in a given brain state need not be exhaustively recounted to get a sense of what the subject is thinking/feeling. Neuroscientific explanation is not impotent, but it takes a long detour.

In principle, the informational compressibility involved in the intentional stance—no matter how cognitively cost-effective—should be insufficient to sway a materialist into countenancing things (like “eaters” or “angry people”) whose ontology is, at root, “more” than merely material. An eliminative materialist might try to enumerate the individual pixels of the Game of Life which a third party espousing the intentional stance has the liberty to coalesce and taxonomize. True, “posing fanciful interpretations” (Dennett 1991b, p. 41) spares one the tedious task of having to describe the domain in question one atomic unit at a time, but a materialist might reply that a token-only approach is the surest way to ensure that one’s theoretical account hugs the metaphysical makeup of the world as closely as possible. The strict one-to-one ratio between

explanans and explanandum involved in a bit-map account is impractical. But, this reproach—and the intentional realism concomitantly offered as a remedy—have traction only if one makes cognitive economy a desideratum capable of overruling the commitment to materialism. What sets eliminative materialism apart from the intentional stance is that it does not give any weight to such considerations.

Informational compression is asymmetrical in that it can result in a loss of data (especially if the domain represented is disorderly). Going back to the example just used, from an exhaustive account of another person's material makeup and spatial location, one can infer "who" and "where" (colloquially) they are; but from simply being told that "So and so is sitting in such and such a room doing this or that," one cannot determine the person's exact spatial coordinates. That is the price to pay for engaging in intentional ascription: we save time precisely because we cut corners. The downside is that there is just no way to unpack all the observational consequences of a given intentional statement, so in this respect the idiom will always fall short of a "complete" scientific account. Such explanatory completeness is what a materialist like Churchland (1988) is after.

Now, *if* the materialist ontology holds water, *then* the eliminativist grievance just canvassed is cogent. It is not at all obvious, however, that the antecedent of this conditional deserves to be affirmed. Ross and his colleagues

(Ladyman et al. 2007, pp. 20–21) argue that the “microbangings” we discussed earlier (in section IV.II) belong to antiquated conceptions of matter and causation. Since I agree, I now want to argue with Ross (2000) that the informational compression alluded to by Dennett is something *no* science can do without, such that a thoroughgoing bit-map account is nothing but a chimera of armchair reflection—a relic of early-Modern metaphysics that should be discarded.

While most materialists in philosophy see themselves (like Locke) as “defending the hegemony of modern matter against the mysteries of mental substance and of mind/matter interaction,” the fact is “physics has shown this conception of matter to be wrong in almost every respect” (Crane and Mellor 1990, p. 186). However, one does not need a full command of the latest discoveries in physics to realize that most of the promissory notes issued by philosophers have not been fulfilled. The sort of reduction advocated by Oppenheim and Putnam (1958), for example, can be deemed untenable “because over more than forty years since its publication, the specific extrapolations offered by its authors seem to have been, without exception, mistaken” (Ross 2005, p. 168).

The ultimate aim of scientific enquiry is admittedly to arrive at general laws. There are good reasons, however, to think that even this prized achievement is beholden to the pattern discernment previously canvassed. To

take an untendentious example from astronomy, we do not exhaustively chart the path and constitution of celestial bodies, pile up the ensuing records in some museum vault, and call that knowledge. Rather, “[t]he positions of the planets in the solar system over some interval constitute a compressible data set, because Newton’s laws [...] supply the necessary algorithm to achieve the compression” (Davies 1990, p. 63). To be sure, there has to be a sufficiently high degree of worldly regularity for this feat of massive informational compression to be feasible. Yet, the nomological end-product is so crisp precisely because it leaves out many concrete details and is hedged with *ceteris paribus* qualifications (Cartwright 1983). A thoroughgoing ban on noise would therefore halt scientific activity altogether, neurological or otherwise.

Once we grant that bit-map explanations are impossible even for basic material objects, we are in a position to ask: what makes the layperson’s observation that the sun regularly traces an arc across the sky less legitimate than the scientific observation that, when seen from afar, the earth regularly traces an ellipse around the sun? Natural science having amply proven its worth, the time has come to return the pendulum to a less adversarial resting place and accept that it is no concession whatsoever to geocentrism to acknowledge that the sun *does* set in the West daily. Clearly, to hold that predictions mobilized on the basis of either theory enjoy a privileged status is to express a lingering dogma since, despite their different perspectives, each abstracts out a real pattern. As far as contingent explanations go, the antics of

one's conspecifics are no different. Nevertheless, there is an ingrained philosophical bias against accepting this:

It may strike you as odd that, whereas instrumentalists hold that belief/desire psychology works so well that we can't do anything without it, eliminativists hold that it works so badly ("stagnant science" and all that) that we can't do anything with it. [...] In fact—and here's the point I want to stress just now—what largely motivates Anti-Realism is something deeper than the empirical speculation that belief/desire explanations won't pan out as science; it's the sense that there is something intrinsically wrong with the intentional. (Fodor 1990, p. 11)

With this prejudice removed, explanations of psychological facts are no longer suspect (Floridi 2008, pp. 248–249). Their only difference lies in the varying degrees of informational compression.

If no science, physical or otherwise, can desist from the demand to abstract, there would no longer seem to be anything "optional" about the adoption of a perspective: to miss a pattern that is potentially visible from an intentional vantage is surely to miss relations that truly exist in the world. Even so, we should retain Dennett's general contention that "adopting a stance" toward the world is essential. This is because pattern discernment—which can be understood as privileging one proper subset among a myriad of others—necessitates that an observer bring her aims, queries, and practical interests to bear on the cognitive transaction. Building on an example from Henry James, we can say that making out a complex figure in a Persian carpet is a joint effort,

the subject selecting one shape among others, the object ensuring that that selection is not confabulated, such that “any act of interpretation is a dialectic between [...] initiative on the part of the interpreter and contextual pressure” (Eco 1990, p. 21).

If, out of some overdone fear of relativism, we hastily cast aside the participatory component at work in this interplay—which enters most prominently as the surmise that renders further inference possible, literally determining what to look for (Peschard 2010)—we run the risk of lapsing into a naive epistemological account that lacks the resources needed to ascertain what constitutes an appropriate degree of informational compression in a given instance. Indeed, it is worth stressing that we witness the denizens of the Game of Life very much “from within” that game, so any player that “develops an interest in conserving its own structure” (Brier 2008, p. 259) will have a tangible stake in the outcomes of the intentional forecasts marshaled in this aptly-named setting (Champagne 2011).

Like Chalmers, I too am drawn to the “strangely beautiful conception” of the world “as pure informational flux, [...] a world of primitive differences, and of causal and dynamic relations among those differences” (1996, p. 303). Fred Dretske (1981) has done a great job showing how information theory can be used to craft a persuasive account of the mind. I think semiotics can contribute by construing the flow of information as a relay race where A stands for B to C

(although, in icons, A stands for A to A, as we saw in figure 10). Unfortunately, Dretske (1995) also thinks we should try to “naturalize” the mind in a way that makes the idea of qualitative experience dubious (see Bailey 2005). I do not see why this incredulity should follow. On the contrary, the argument I am making is that, if patterns are real and if complexity subsumes simplicity, then real patterns subsume real qualities.

IV.VII Complexity Subsumes Simplicity

In the second chapter, I looked at how Peirce and Russell both apply the Leibnizian thesis that whatever is complex is composed of simples (Blamauer 2011). This thesis is so plausible that even an eliminativist like Paul Churchland must grant it:

[T]he bulk of one’s sensational life is characterized, not by simplicity, but by an extraordinary and ever-changing *complexity*. Listening to a conversation, looking around a flower garden, tasting a braised-lamb stew, smelling the aromas in a wood-working shop—our sensations in such cases display intricacies that are amazing. And not always obvious. A young child may not appreciate that the distinctive taste of her first ice-cream cone *resolves* itself into sensations of sweetness, creaminess, and strawberry. And it may take her awhile to learn that such decompositions are both common and useful to keep track of. For the complexities we encounter are indeed composed, quite often, of simpler elements or constituting dimensions. In time, we do learn many of those simpler dimensions. A dinner-table conversation contains my brother’s unique voice as an identifiable element; the complex flower-garden displays the striking

orange of a typical poppy blossom; the lamb stew displays the distinctive taste of thyme, sprinkled into the mix at the outset; and the smell of yellow cedar stands out from the other smells in the wood shop, at least to a seasoned carpenter. Each of these particular qualitative features of one's inner phenomenological life is certainly a *simpler* dimension of a more complex whole. (Churchland 2011, pp. 32–33)

If we begin (as I believe we must) with a premise of complexity and grant (as I believe we should) that anything involved in complex relations can be precisely decomposed, then we are led to conclude that, in principle, such decomposition would have to bottom out at simple qualities. This is so regardless of whether the complex strand we prescind is construed as external or internal to the mind. As long as that object of study demonstrates relational complexity, a thoroughgoing analysis will arrive at Firstness. Hence, “[q]ualitative characters that are at least *apparent* simples are thus utterly inevitable on *both* approaches to understanding the mind, dualist and materialist” (Churchland 2011, pp. 33–34). Churchland thinks he can avoid the “gathering consensus that the qualitative dimension of our conscious experience is something that the physical sciences [...] will never explain” (2011, p. 17) by merely annexing the adjective “*apparent* simples,” but I think the inference at hand is more formidable.

Infering qualia from relational complexity certainly has major backers. Russell, Schlick, Carnap, and (the early) Wittgenstein all agreed with Peirce that, when analysis digs low enough, it eventually reaches a simple quality.

There were, of course, important differences in how each dealt with the qualitative simplicity thus obtained. Russell did not seem troubled by the prospect of a primitive that “eludes words and baffles description” since, “for that very reason,” such a state “is irrelevant to science” (Russell [1919] 1950, p. 61). Schlick held that “the inexpressible greenness of green” (1979, p. 322) would have to be included in a full account because, “if we are to have a science of some domain of reality instead of a mere hypothetical-deductive system, then our symbols must stand for real content” and not “mere structure” (ibid., p. 331). Carnap ([1928] 2003, pp. 235–237) tried to achieve this result by making “foundedness” a primitive. Carnap acknowledged that we begin with lived experience (“*Erlebnis*”), but (quoting Poincaré approvingly) he held that “only the relations between the sensations have an objective value” ([1928] 2003, p. 30). To track things, Carnap allowed for the use of “indicator signs” (“*Kennzeichnungen*”), but the question of “what” qualitative contents ground a symbolic system did not concern him. Consistent with this idea that we cannot convey intrinsic qualities in any articulate way, Wittgenstein ([1921] 2002, section 7, p. 189) urged us all to shut up when we get to that point. In so doing, he allied himself with “numerous arguments for humility about the intrinsic nature of our world” (Majeed 2013, p. 259)—although, by intimating iconicity, “the early Wittgenstein saw further than many of his contemporaries here, drawing his famous distinction between what can be ‘said’ and what can only be ‘shown’” (Legg 2008, p. 214).

Thus, with varying degrees of success and confidence, the founders of the early analytic tradition engaged with the same issues that captivated Peirce's semiotic investigations (for a more detailed survey, see Livingston 2004). It is bizarre, then, to see Churchland dismissing arguments that decompose complex relations as "lack[ing] integrity even by the standards of purely analytic philosophy" (2011 p. 18). Churchland may not be happy with the way debates are going, but the exegetical accuracy of his dismissal is questionable. In fact, Bertrand Russell—who surely counts as an analytic philosopher—devoted an entire book to showing that matter, not consciousness, is what we ought to eliminate.

In *The Analysis of Matter* ([1927] 1954), Russell argued that ordinary things (like tables and frogs) should be thought of as networks of relations. On this view, everything is a pattern like those found in the Game of Life (figure 13). Since bigger things (e.g., frogs) are made up of smaller things (e.g., cells), we can infer that more complex patterns are composed of simpler patterns. Yet, in contrast with Ross, who thinks that "reality is composed of real patterns *all the way down*" (Ross 2000, p. 160; emphasis in original), Russell held that when we take a pattern and decompose it into ever simpler states, "[o]bviously there must be a limit to this process, or else all the things in the world will merely be each other's washing" ([1927] 1954, p. 325; see the discussion in Holman 2008, p. 55). I side with Russell on this issue.

I follow Peirce in holding that Firstness is as low as one can go. Firstness is not mind, but it is not matter either (scale is irrelevant here, because the absence of comparisons prevents one from assessing size). It is simply a quality, robbed of any relation(s) with anything else. This suggests a “neutral” stuff. That neutrality may seem contentious, but I think it can be verified using any nearby quality, like the colour of a blank sheet of white paper (see section II.III). As Levine notes, when studying the intrinsic character of one of the many qualities that make up consciousness, “[w]ho can tell whether its ultimate ontological status is material or immaterial merely by means of having it?” (2001, p. 128). So, whereas Ross and his structuralist colleagues (Ladyman et al. 2007, pp. 39–40) liken qualia to “ectoplasm” (for another mention of that unfortunate word, Majeed 2013, pp. 254–255), I do not think the idea of a purely qualitative dimension is beyond the pale.

Russell may have been blind to the possibility of using qualities for semiotic purposes (as I discussed in chapter two), but there is a lot in Russell that can be used to assemble a plausible trinitarian metaphysics. Russell argued that physics is impotent to capture qualities (Holman 2008, pp. 50–51) because that science deals only with networks of relations. In order to show this, Russell implicitly relied on an uncontroversial premise which, following Stathis Psillos (2009, p. 126), we may call the “Helmholtz-Weyl” principle. It states that “we are justified, when different perceptions offer themselves to us, to infer that the underlying real conditions are different” (quoted by Weyl 1963, p. 26). This

principle grafts itself nicely onto well-known Russellian tenets. As we saw (in section II.IV), Russell ([1918] 1998, p. 59) thought that observational episodes conveyed by nondescript demonstratives like “This is white” supply us with “knowledge by acquaintance.” Although we can wave our index fingers around and attempt to ostensibly convey what is happening when we enjoy such first-person episodes, these empirical points of contact, Russell held, are by their nature private and ineffable.

Since Russell did not have any icons in his semiotic repertoire, this limitation of indices does not bode well for objective third-person knowledge. Not to worry, one does not have to wait long to depart from this, since “[t]he next simplest [facts] would be those in which you have a relation between two facts, such as: ‘This is to the left of that’” ([1918] 1998, p. 59). The moment we bring two or more relata into relation, we leave the domain of intrinsic qualities and effectively enter that of intelligibility (and, by extension, science).

This is where the aforementioned move from different perceptions to different causes does its work. On this view, a three-part sequence like lemon/apple/lemon will bear the same relational configuration as a three-part sequence avocado/banana/avocado—even if one person tastes avocado flavours where another tastes lemon. “Two relations P , Q are said to be ‘similar’ if there is a one-one relation between the terms of their fields, which is such that, whenever two terms have the relation P , their correlates have the relation Q ,

and vice versa” (Russell [1927] 1954, p. 249). In the previous example, avocado-tastes mapped onto lemon-tastes, and apple-tastes onto banana-tastes. Likewise, “[a] book spelt phonetically is similar to the sounds produced when it is read aloud” (Russell [1927] 1954, p. 249), since the structure binding the printed characters can be monotonically correlated with the structure binding the spoken sounds (ibid., p. 400). Hence, so long as variations in experience attest to variations in whatever is impinging on the sense organs, the “Helmholtz-Weyl” principle licenses the inference of a common *structure*. “In this mathematical view, structure is a domain of similarity and difference, which, like color for the blind, has no substance of its own” (Lidov 1999, p. 128).

Paul Livingston has argued, quite persuasively I find, that the early analytic tradition struggled with some of the same themes and issues that now grip current philosophy of consciousness. The leader of the Vienna Circle, Moritz Schlick, was particularly influenced by Russell’s analysis of matter:

In 1932, Moritz Schlick delivered three lectures under the collective title “Form and Content: An Introduction to Philosophical Thinking” [reprinted in Schlick 1979, pp. 285–369]. In the lectures, he sought to describe the condition for any possibility of communicating thought linguistically. Such communication, he held, always amounts to the communication of *structure*. In each case, however, in order for *understanding* actually to occur, it would be necessary for the “structure” or “form” of linguistic signs to be “filled in” with “content” drawn from individual experience [Schlick

1979, p. 296]. With respect to verification, Schlick held that it is the possibility of such direct “filling in” that allows empirical propositions *ultimately* to be justified by experience. In actually verifying an empirical proposition, Schlick thought, we must in each case perform a subjective act of “comparing” the proposition to reality by “filling in” the content of the proposition from experience itself. This claim about verification led him to propose his theory of “affirmations” or *Konstatierungen* as lying ultimately at the epistemic basis of empirical knowledge. (Livingston 2013, pp. 81–82)

Science gets its empirical credentials from suitably structured observations. If Schlick is right, then the project of obtaining an explanation of consciousness in terms of physics (or any other science) is problematic, since our conscious awareness is primordial.

As the British astronomer Sir Arthur Eddington noted, the knowledge we have of a particle comes from, “like everything else in physics, a schedule of pointer readings [on instrument dials]. The schedule is, we agree, attached to some unknown background” (quoted in Strawson 2006, p. 10). This pattern of pointer readings permits, as the name attests, an *indexical* tracking of whatever causally interacts with a given instrument. This can in turn give a robust structural account of how that object behaves. However, what the object *is* remains unaddressed. Since indexical relations give no insight into the relatum they track, the structures of natural scientific explanation seem hollow.

This structuralism has become prominent in philosophy of science because it is believed that focusing solely on what a thing “does” and staying mum on

what it “is” allows us to find theoretical continuities that have survived paradigm shifts (see Worrall 1989). In philosophy of mind, structuralist ontologies seem to limit one to functionalist explanations. Some semioticians, like Bains (2006), are currently trying to build ontologies using only relations that are “in between” their relata, but I think we should take advantage of the fact that the Peircean account also countenances qualitative relata themselves. This, to my mind, is one of the many advantages semioticians have gained by migrating from a Saussurean to a Peircean framework. Indeed, if we look at history as a laboratory where ideas get tested, it is instructive to note that French structuralism, which followed Saussure ([1916] 2011) in countenancing only relations (see Holdcroft 1991, pp. 88–106, 119–130), eventually collapsed under the weight of its own contradictions (Dosse 1997b).

According to Chalmers (2013, p. 18), the Russellian world “consists in quiddities connected by laws of nature,” and “these quiddities along with structure ground all conscious experience.” I am unsure Russell would have put things so confidently, since he seems to incline more toward agnosticism than realism when discussing qualities. Russell conceded that the qualitative contents which hang together in a given structure fall outside the ambit of testability and inter-subjective verification, such that “the only difference must lie in just that essence of individuality which always eludes words and baffles description, but which, for that very reason, is irrelevant to science” (Russell [1919] 1950, p. 61). Qualities may be irrelevant to physics, but they seem

crucial to a full account of consciousness—or anything else that is not solely relational. I thus take it as a desideratum that a theory should leave us able to distinguish lemon/apple/lemon from avocado/banana/avocado.

For Galen Strawson (2006), the limitation of science to structural elucidation is decisive. Recall Eddington's observation that scientific instruments track what a thing does but they give no positive characterization of "what" a thing "is" apart from those behaviours and dispositions. Whether we are dealing with an animal or a rock, we use what a thing "does" to anticipate what it will do next. However, the recent philosophical preoccupation with intrinsic qualities, which can be seen as a struggle to (re)discover Peircean Firstness, stems from the realization that, even when dealing with inanimate matter, a functional description does not give the whole story.

Seager, for instance, asks us to "consider the proposition that individual electrons generate a gravitational field. It is obviously true that the kind of behaviour which large objects engage in gives us evidence for attributing a gravitational field to them. But the question is does having a gravitational field entail producing such overt effects. Clearly, it does not" (2012, p. 25). Block makes a similar point. As he explains, particles are individuated in physics by "having certain lawlike relations to certain other physical properties (Block 1978, p. 302). However, it turns out that the functional relations which allow us to pick out "dual" particles like protons and anti-protons are identical.

Physicists nevertheless distinguish between the two kinds of particles because, when combined, they annihilate each other. Even though “physics characterizes its basic entities only *extrinsically*, in terms of their relations to other entities” (Chalmers 2010, p. 27), the suggestion here is that, unless we grant that particles possess intrinsic natures, we have no reason to think that what we call protons are not in fact anti-protons and vice versa (Block 1978, p. 302).

If all of this is right, then how should we understand the intrinsic qualities of things apart from the sundry structural relations they entertain? For Eddington, the answer rests on an inference to the best explanation. Manifestly, our conscious experiences let us appreciate what qualities are, and since we seem to have no other way to apprehend the intrinsic character of a thing, “it seems rather silly to prefer to attach [a schedule of pointer readings] to something of a so-called ‘concrete’ nature inconsistent with thought, and then to wonder where the thought comes from” (quoted in Strawson 2006, p. 10). This is not far from Schlick, who said that we must fill-in structure with qualia. True, if we consider a quality in a way that abstracts away all relations, we are left with something that “eludes words and baffles description, but which, for that very reason, is irrelevant to science” (Russell [1919] 1950, p. 61). It takes an additional assumption of scientism, however, to infer metaphysical inexistence from scientific irrelevance. Strawson does not make that assumption, so he thinks our experience of qualitative contents gives us good grounds to endorse panpsychism.

In contrast with Strawson, I do not think the qualities we obtain when we prescind relations can support the label “psyche” or any of its cognates. The shared assumption of the analytic tradition has been (and continues to be) that “whatever does not belong to the structure [...] is, in the final analysis, subjective” (Carnap [1928] 2003, p. 29). That is the Lockean view I am trying hard to subvert. Like Peirce, I believe that if we arrive at a quality by stripping away relations (e.g., patterns, structures, etc.), then we are no longer entitled to confidently locate that quality in the “subjective” mind. If, when prescinding, one consistently abides by the terms one has set, there should be no way to tell.

I agree, though, that we should countenance qualities as primitives (see section IV.II). I want the individual cells in the Game of Life to have qualities. This strikes me as more sensible than compounding pattern upon pattern in the hope that qualitative experience will eventually emerge. “In Peirce’s semiotics, everything in nature is a potential sign. [...] The implication of this is that qualia, and ‘the inner life’ are potentially there from the beginning. [...] The point is that organisms and their nervous systems do not create mind and qualia” (Brier 2008, p. 99; see also Parker 1994).

The panpsychist proposals of Eddington and Strawson exploit the fact that “physical theory does not tell us what the intrinsic properties are in virtue of which physical objects and their causal or dispositional or functional properties have the causal powers they do. It thus allows that among such intrinsic

properties could be phenomenal properties” (Holman 2008, p. 53). I agree with some of this. Eddington is right that we can have direct appreciation of the qualities related by “schedules” of indices. However, I see no reason to assume that this somehow involves introspection. Why is it that every time we label a quality “phenomenal,” we have to yank it out of the external world and toss it into a skull? As I argued in the second chapter, the transparency of iconic experience blurs this inner/outer distinction. Since direct realism (e.g., Kelley 1988) remains a genuine possibility, there is no obvious philosophical blunder in reporting that “*The beer is bitter.*”

The trinitarian view I am developing thus tells a very different story about where the qualitative dimension is located. I believe a trinitarian ontology inspired by Peirce, coupled with a recognition that we alone have the prescissive powers required to draw up a table like figure 9 and conceive of a neighbourless cell pixel, supplies an account well-suited for those (like Psillos 2009) suspicious of the claim that there exists something non-structural. True, we will never be able to give a scientific description of the basic qualities that fall under Firstness. However, that is not because qualia are mysterious ectoplasm, but simply because, in the Game of Life, “[n]othing can happen in a cellular array with just one state for cells” (Poundstone 1985, p. 195) or just one cell not bound by any neighbours (*pace* figure 4).

Some complex patterns are themselves pattern-grasping. When these pattern-grasping patterns are human creatures, what “emerges” is not a qualitative dimension that other things lack, but a unique power to prescind the individual cell pixels that comprise patterns. Hence, despite the fundamentality of Firstness, trinitarianism still sees us as the rarest creatures, albeit not for the usual reasons.

IV.VIII Trinitarianism Does Not Face a Combination Problem

I want to close this chapter with a relevant selling-point for trinitarianism. In the current literature, it is generally assumed that panpsychism faces what is known as the “combination problem” (expressed by Seager 1995; but with roots in James [1890] 2007a, pp. 158–162). The worry is that, having put experiential properties in the world, we now have to explain how and why the conscious mind is unified. That is, we have to somehow “combine” the basic mind-stuff countenanced by panpsychism in a way that yields a phenomenologically plausible self. Recent proposals on how to solve this “problem” (e.g., Coleman 2012; Cunningham 2013; Seager 2010) have gotten really bizarre. Fortunately, I want to argue that my account does not need these solutions, because trinitarianism does not face a combination problem to begin with.

Galen Strawson suggests that “there are many short-lived and successive selves (if there are selves at all), in the case of ordinary individual human

beings” (1999, p. 100). If he is right, then, as a panpsychist, he may face many small combination problems. I would have thought that the goal of a successful “combination” would be to reach something truly unified (Champagne 2013a). Luckily, I do not have much to do to re-assemble myself. I have described trinitarianism as a commitment to the reality, not just of p-consciousness, but to the triadic action of signs. Indeed, I have been insisting throughout this dissertation that we never actually split the stream of semiosis into parts. Rather, we prescind. This requires us, at each step, to keep in mind that the signs we analyze are in fact *bound*. I can thus capitalize on my repeated warnings against reification.

As an adult who has learned much about the world, I know that I am not the hub of all semioses. In philosophical parlance, this makes me a realist. However, my rejection of solipsism does nothing to alter my status as *this* particular node in the vast network of signs. I am, for better or for worse, condemned to my own vantage (see Thompson 2007, pp. 81–87). Now, semiotics can certainly tell a story about how humans construct their self-concept and personal identity (for a promising outline, see Colapietro 1989). But, whatever shape that story takes, it will have to countenance more than disparate qualities. I think that, if we properly and consistently apply prescission, we are not burdened with combining qualities into something that looks psychologically plausible, because plausible human experience—the sort

I am intimately familiar with and ardently care to enrich and extend—has been there all along.

Panpsychism faces a combination problem because, as a monist view, it must assume that filling-in the cell pixels of the Game of Life (figure 13) with colours, tastes, and other qualities flattens all patterns out of existence. The whole advantage of trinitarianism's triple commitment is that one gets these fundamental qualities, their impacts with each other, and the plethora of more or less cohesive patterns that result from the commotion.

IV.IX Chapter Conclusion

I have argued throughout this dissertation that precission allows us to consider any quality “in its own suchness, while we disregard the connections” to other qualities (Peirce 1931–58, vol. 1, para. 424). Are the qualities thus obtained real? That depends on how we define “real.” Usually, something is considered real when it is mind-independent. As a result, it can be problematic to conjoin the reality of Firstness with the acknowledgement that precission needs minds to do it. Since “it is natural to seek a general understanding of reality, including ourselves, which does not depend on the fact that we *are* ourselves” (Nagel 1986, p. 25), the very fact that humans alone can count three ingredients can be taken as evidence that there are *not* three ingredients.

We may not live in a world that permits us to encounter a quality in total isolation, but we do live in a world that permits us to consider what cannot factually obtain—and that power, I argue, needs to be accounted for in a metaphysics. It would of course simplify matters if the interpretation of signs could really *be* (i.e., not just be supposed) absent. I think, though, that we have much to gain from getting used to the nuance.

An ontology devoid of qualities “implies that our perceptual experience is incurably infected with illusion” (Shoemaker 1994, p. 296). Churchland (1996, p. 207) thinks instruction in natural science can cure one of this illusion. If one truly understands physics, he says, one will see that a quality like heat is actually motion. Alas, my feeling of heat persists—despite the science courses I have taken. It is not that I fail to understand what naturalists aspire to; it is just that what they aspire to is flatly contradicted by everything I experience. Like Peirce, I believe that “the scientific spirit requires a man to be at all times ready to dump his whole cart-load of beliefs, the moment experience is against them” (1931–58, vol. 1, para. 55). I have thus tried to tell a metaphysical story that does not require me to turn a blind eye on my most proximate certainties.

The most direct objections to panpsychism are the “no sign” objection and the “not mental” objection. The “no sign” objection says that “there is no evidence whatsoever of a nonphysical dimension to the elemental units of nature;” whereas the “not mental” objection says that, “if there was some

feature of these units we chose to label as ‘mental,’ what possible ground could one provide to justify this label” (Seager 1995, p. 282). I take it that patterns are all around us, so there are plenty of signs. As for the “not mental” objection, I accept its criticism, which is why I have argued for trinitarianism *instead of* panpsychism.

Conclusion

The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those two gates is to be arrested as unauthorized by reason.

Charles Sanders Peirce, "Pragmatism as the Logic of Abduction"
Lecture delivered at Harvard on May 14, 1903
(Reprinted in Peirce 1998, p. 241)

Each *quale* is in itself what it is for itself, without reference to any other. It is absurd to say that one *quale* in itself considered is like or unlike another. Nevertheless, comparing consciousness does pronounce them to be alike.

Charles Sanders Peirce, "Quale-Consciousness"
Unpublished notes, *circa* 1898
(Reprinted in Peirce 1931–58, vol. 6, para. 224)

I began with two epigraphs from Peirce, reprised above, and stated that, if we could see how those quotes are consistent, progress in philosophy of mind would have been made. Ideally, we should leave a dissertation a bit smarter and better informed than we were when we came in. So, now that we have a better understanding of semiotic theory, let us see if the two claims interlock.

The first quote is, in essence, a slogan for a strong functionalist program. It demands that every explanation start with an input that enters "at the gate of perception" and end with an output that exists "at the gate of purposive action" (Peirce 1998, p. 241). The goal of cognitive science is to construct plausible

theories of what happens in between. Yet, no matter what those theories look like, they seem destined to *relate* states. This involvement of relations in scientific theories would be benign, were it not for the fact that a prevalent construal glosses consciousness as having a non-relational element to it. Raw feels are supposed to have an intrinsic quality, irrespective of what objects or behaviours they are associated with. This construal is expressed by the second epigraph, which says that each basic qualitative state or quale “is in itself what it is for itself, without reference to any other” (Peirce 1931–58, vol. 6, para. 224). A tension thus ensues: The functional program calls for an explanation of psychological facts in terms of relations, but at least one dimension of our psychological lives seems to involve simple experiential qualities conceived apart from any relation(s). Hence, if one accepts both of my opening quotes, one will run into trouble.

David Chalmers speaks of “the double life of mental terms” (1996, p. 16) and emphasizes that while “[o]ur everyday concept of pain presumably combines the two [concepts of phenomenal pain and psychological pain] in some subtle weighed combination, [...] for philosophical discussion things are clearer if we keep them separate” (ibid., p. 17). What might this “keeping separate” mean? Clearly, it is not a matter of physically isolating one from the other, like severing the corpus callosum. Is it then just mere word-play? On a superficial level, “feeling” and “doing” are certainly different words. However, the suggestion by Chalmers is that those words also “cover different

phenomena, both of which are quite real” (ibid., p. 11). Since we are dealing with something more substantive than a plurality of words (Block 2000, p. 133) yet less palpable than a physical separation, I have argued that we are confronted with what Scotus called a “formal distinction.”

A “formal distinction” lies between a “distinction of reason” and a “real distinction.” A distinction of reason “is completely dependent upon the mind” (Jordan 1984, p. 44), whereas “things are really distinct if they are separable, that is, if they can exist one without the other” (ibid., p. 45). Peirce used this distinction of distinctions to tease apart the ordinal steps involved in the action of signs, and I think we can do the same to profitably disambiguate important puzzles about phenomenal consciousness.

Shoemaker provides a nice illustration: “If I perceive French tricolor, I perceive a rectangle made of three horizontal stripes, of red, white, and blue. This involves experiences of those individual stripes. There seems a good sense in which I could have had the experience I had of any of those stripes without having the experiences of the others” (2003, p. 65). Using scissors, we can tamper with the flag and make all the colours except one absent. That would be a real distinction in Scotus’ sense. But, when we leave our experience of the tricolour intact and suppose those present stripes absent, we make a formal distinction. As Peirce explains, “pre-scission is always accomplished by imagining ourselves in situations in which certain elements of fact cannot be

ascertained” (1931–58, vol. 2, para. 428). So, when precissively considering only the white stripe of the French tricolour, there is no telling which flag it is part of.

If we want to separate qualities from the functional responses they elicit, a real distinction is not opened to us. Although the world does not permit us to encounter a quality in total isolation, precission does permit us to consider what cannot obtain factually. Acknowledging this requires us to conjoin two seemingly contradictory theses: 1) precission is something we (humans) do, and 2) it is not up to us (humans) what results when precission is properly carried out. Since the first thesis speaks to mind-dependence while the second thesis speaks to mind-independence, their conjunction can seem unstable.

One response is to see fascination with qualia as an understandable but misguided by-product of our conceptual faculties. This is the view adopted by David Papineau. As we saw in the second chapter, Papineau grasps that the “characteristic feature [of phenomenal thoughts] is that the conscious *referent* itself is involved in the *vehicle* of thought. [...] [P]henomenal thoughts use the very states that they mention” (2006, p. 104). For Papineau, the chief virtue of grasping this qualitative participation is that it allows the philosopher to see how “this use-mention feature carries much potential for confusion” (Papineau 2006, p. 104). Thus, in Papineau’s hands, the icon becomes a way to explain away our tendency to consider qualia real.

Yet, when Papineau uncovers this peculiar form of reference, he presumably takes stock of a mind-independent fact. It is not up to the thinking subject how icons work. Hence, it is questionable whether semiotic notions like iconicity can be used to explain “away” qualia. I believe that, at minimum, philosophy of signs does justice to a fundamental truth: *the idea of a relatum without a relation makes sense, but the idea of a relation without relata does not*. So long as humans are capable of realizing this—and of performing the precursive deletion which this asymmetry permits—the worries that generate the “hard” problem of consciousness will persist. Joseph Levine mentions how Locke thought that even if “simple ideas go with their respective corpuscular configurations because God chose to so attach them [...] imagination will pry them apart” (Levine 1983, p. 359). If one drops the allusion to God, this begins to look like my account: We can pry apart features that are always found bound together. I therefore think that philosophers who believe in qualia are not discussing a groundless posit.

Dennett (1991a) believes our idea of qualia is nothing more than a “meme” that went viral after Descartes. Of course, some memes are more useful than others. So, for a time, Dennett (1987) sought to recuperate the instrumentalist benefits of discourse about “minded” creatures. However, given that the simple construal of phenomenality championed by Chalmers and Block could never lead to increased predictive success of another creature’s behaviour (Ross 2005), Dennett (2006) became a vocal opponent of qualia. If, like Dennett, one

expects “use” to meet Darwinian standards of increased procreation rates, then folding semiosis onto itself so as to inspect its substructure may well be a useless ability. I do not want to go on record as saying this, because I suspect that the same abilities which generate the hard problem of consciousness also allow for diagrammatic reasoning, which is surely a useful tool (my post-doctoral research will be devoted to exploring that hunch). In any event, since only sapient creatures notice their sentience, the main boon of prescissive abstraction may be that it satisfies a sense of curiosity and wonder. The three Peircean taxonomies (shown in figure 9) certainly do not have any obvious technological applications. I am thus comfortable with the idea that my account of consciousness “leaves everything as it is” (Wittgenstein [1953] 2001, p. 42).

Although the action of signs is always triadic, humans can conceive—and so request an account of—the intrinsic, non-relational, nature of any thing, because we are the sorts of beings for whom that idea makes sense. It makes sense because complexity implies simplicity. Thus, triadic signs subsumes brute collisions and simple qualities that are not articulate (and cannot be articulated) linguistically. However, given that qualitative simplicity does not entail complexity (or any kind of relation), this asymmetry can act like fishhook, letting us reach ineffable Firstness but preventing us going back to Thirdness, where cognition, discourse, and science are possible. If this dissertation has succeeded in showing how/why philosophical reflection on consciousness can sometimes get caught by that hook, then I count that as progress.

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