Mats Bergman

Fields of Signification

Explorations in Charles S. Peirce's Theory of Signs

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Fields of Signification explores the philosophical underpinnings of C. S. Peirce's theory of signs, advancing the thesis that his conception of sign and sign action is intrinsically *communicative*. By paying close attention to certain developmental strands in Peirce's philosophy, the author shows how Peirce's mature sign-theoretical outlook avoids succumbing to semiotic hermeticism, thereby establishing the viability of the Peircean stance for contemporary thought.

The book begins with an examination of sign-theoretical inquiry, and investigates how Peirce's social conception of science affects the study of signs. Special attention is paid to the connection between Peirce's *semeiotic* and his theory of categories. Through a detailed examination of the central semiotic concepts, the book shows that these can be understood as abstractions from ordinary communicative practices. Within this framework, the author discusses a number of key issues pertaining to representation, mediation, and perception. The book concludes with an explication of the dynamics of sign action, focusing on the relationship between interpretation and meaning, and on the roles of experience and dialogical indeterminacy in the Peircean approach.

This book will appeal to anyone interested in Peirce's philosophy, the theoretical foundations of semiotics, and philosophical questions related to meaning, interpretation, and communication.

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Contents

Note on Abbreviations

Throughout this study, standard editions of Peirce's writings will be referenced according to the following scheme.

CP v.p refers to *The Collected Papers of Charles Sanders Peirce*; *v* indicates volume number, *p* paragraph number.

EP v:p refers to *The Essential Peirce: Selected Philosophical Writings*; *v* indicates volume number, *p* page number.

HP v:p refers to *Historical Perspectives on Peirce's Logic of Science: A History of Science*; *v* indicates volume number, *p* page number.

MS m:p refers to an original manuscript; *m* indicates manuscript number according to Prof Richard S. Robin's (1967) annotated catalogue, *p* page number. An "L" before the manuscript number indicates a letter. An "s" after the manuscript number indicates a supplementary manuscript filmed after the publication of Robin's catalogue. A "$_{v}$" after the page number indicates a variant page, or a page that is separate from the first run of pages in the microfilm edition of the manuscripts. A "$_{d}$" after the page number indicates that Peirce has probably discarded the passage in question. A "$_{b}$" after the page number indicates that it has been obtained by the author by counting the pages of the microfilmed manuscript from the beginning.

N v:p refers to *Charles S. Peirce: Contributions to the Nation*; *v* indicates volume number, *p* page number.

NEM v:p refers to *The New Elements of Mathematics*; *v* indicates volume number, *p* page number.

PPM p refers to *Pragmatism as a Principle and Method of Right Thinking: The 1903 Harvard Lectures on Pragmatism*; *p* indicates page number.

SS p refers to *Semiotic and Significs: The Correspondence between Charles S. Peirce and Victoria Lady Welby*; *p* indicates page number.

W v:p refers to *Writings of Charles S. Peirce: A Chronological Edition*; *v* indicates volume number, *p* page number.

If known, the year of writing is placed in brackets. In many cases, the dating is tentative; a question mark after the date indicates that the year given is very uncertain. In a few instances, the designation "late" (in brackets) is used to indicate that it is highly probable that the text in question stems from the last fifteen years of Peirce's career. The dates are mainly based on Robin's catalogue, or else on the most recent estimate available. Thus, in references to MS 318 (*Pragmatism*, 1907; partly published in EP 2 and CP 5), I use the date affirmed by the Peirce Edition Project rather than the one given in the *Collected Papers*. In references to certain important undated documents, I employ dates given in the secondary literature. For instance, the dating of MS 693 (*Reason's Conscience: A Practical Treatise on the Theory of Discovery, Wherein Logic Is Conceived as Semeiotic*, 1904) is based on the year given by Prof. Carolyn Eisele in HP 2.

In the case of the *Carnegie Application* of 1902 (MS L75), I use Prof. Joseph Ransdell's reconstructed version, available on line at http://members.door.net/arisbe/menu/library/bycsp/L75/L75.htm. In references to this document, a draft version is indicated by a small letter after the manuscript number; thus, *MS L75c:60* refers to page 60 of draft C of the application. If no draft is indicated, the reference is to the final version.

In references to Peirce's Logic Notebook (MS 339), I use Prof. Don D. Roberts's page numbers, which have been added to the microfilm version of the manuscript.

1 Introduction

In 1907, after nearly 50 years of philosophical labours, Charles Sanders Peirce characterised himself as "a pioneer, or rather a backwoodsman, in the work of clearing and opening up […] *semiotic*, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis" (EP 2:413 [1907]; cf. MS 800:3_d). Coming from the father of pragmatism and the general theory of signs, it was a comparatively modest self-assessment. Yet, Peirce's evaluation was both accurate and prophetic. During his lifetime, Peirce's forays into the esoteric world of semeiotic[1] were almost completely ignored; he was a persistent but lonely explorer. Today, Peirce may not exactly be a household name, but he is increasingly recognised as a pivotal figure in the history of modern philosophy and semiotics, and is often hailed as the greatest American thinker of all time.

Yet, in spite of considerable advances in Peirce studies, the student of his writings is still not in a position to build on a solid ground provided by a generally accepted interpretation of his sign-theoretical outlook. The infamous disorder of his intellectual remains and the sheer magnitude of his production provide partial explanations for this situation; the reconstruction of Peirce's theory of signs is undeniably a daunting task. Furthermore, given that Peirce was a pathfinder in the "science of signs", it should come as no surprise that a substantial portion of his work is more like a tentative hypothesis than a final statement.[2] Much depends on what texts are taken to constitute the nucleus of the reconstruction; even the most minute and textually faithful reading of Peirce will inevitably involve many interpretative choices.

In this study, I will investigate certain central strands of Peirce's theory of signs. These examinations grow out of a key hypothesis, namely, that his conception of sign and sign action is intrinsically *communicative*; or, to be somewhat more precise, that his often obscure and abstract reflections on signs and sign action can bene-

ficially be approached from the point of view of communicative relations. This is a difficult claim to prove, especially since it will at first blush appear to be entirely misguided. Anyone familiar with Peirce's semeiotic will know that it is not construed as a philosophy of human interaction but rather as an anti-psychologistic and general theory of signs of all kinds. I do not dispute this. Instead, I intend to show that there is a pertinent sense in which Peirce's basic sign-theoretical concepts can be said to be abstractions from ordinary communicative practices (cf. Colapietro, 1995, p. 25); or, at least, that there are valid reasons to hold that Peirce did conceive of his project in such a manner in some of his later writings. This communicative point of view has been noted, but not studied at length before.[3]

In addition to the main hypothesis, there is another major thread running through this study, namely, the examination of the scope of semeiotic; or, to put the matter differently, the question of whether Peirce's sign-theoretical outlook constitutes a kind of extreme semiotic idealism, the upshot of which is the proposition that "whatever there is depends for its existence upon cognition" (Savan, 1983, p. 1).[4] I will show that Peirce subscribes to such a position – or a similar one – in his early writings, but that this radical stance is tempered by the acknowledgement of certain limits to semiosis in his mature philosophy and eventually abandoned. However, I shall not pursue the issue of realism versus idealism in Peirce's philosophy in this study. My aims are more modest, as I will argue that the later Peirce recognises the need for some extra-semiotic factors as prerequisites of higher-order semiotic operations (such as cognition), without thereby committing himself to a naïve variant of realism. To avoid confusions, it may be appropriate to specify the target of my criticism as "semiotic hermeticism", that is, the position that "describes sign-systems as self-defining, self-interpreting, self-enclosing, and self-denoting" (Short, 1994b, p. 231). A more Peircean variant of this point of view affirms the omnipresence of the sign relation in all phenomena, and denies that there can be any kind of experience that is not by nature semiotic (see Ransdell, 1976, p. 98).

Although this study is primarily scholarly, it is quite naturally fuelled by a conviction that the Peircean approach contains valuable insights, of relevance for contemporary philosophy and possibly for other areas of inquiry as well. These gems are not always easy to spot; clearly, one of the main tasks of any study of Peirce's philosophy is to provide a plausible and well-founded interpretation of his thought. This is certainly a difficult and laborious undertaking; the sheer volume of Peirce's philosophical output can be intimidating, and his penchant for terminological experiments and idiosyncratic conceptual classifications rarely makes things easier. Bertrand Russell (in Feibleman, 1946) likens Peirce to "a volcano spouting vast amounts of rock, of which some, on examination, turn out to be nuggets of pure gold" (p. xvi). Peirce's writings are notoriously fragmentary, and in many cases, so are his ideas. As Josiah Royce and Fergus Kernan (1916) note, too "often the reader meets with a thought of surpassing brilliancy and follows it eagerly, only to have it disappear like a cuttlefish in an inky blackness of its own secretion" (p. 707). In my experience, working with Peirce's philosophy is comparable to trying to put together a huge jigsaw puzzle without a picture serving as a model; connections are found, patterns begin to emerge, but there is always a nagging fear that some of the pieces do not fit or may be missing.

Of course, this could be taken as a sign of the inadequacy of Peirce's philosophy of signs. In a characteristically dismissive gesture, Richard Rorty (1982) declares that Peirce "never made up his mind what he wanted a theory of signs *for*, nor what it might look like, nor what its relation to either logic or epistemology was supposed to be" (p. 161).[5] Granted that Peirce's semeiotic is full of false starts and less than satisfactory material, Rorty's brief statement is remarkable for containing *at least* three errors; Peirce frequently reflected on the aims and functions of his theory, he described it in minute detail, and its relations to logic are laid out in his writings. The criticism concerning semeiotic and epistemology may have *some* merit; I know of only one instance where Peirce explicitly mentions the relationship, and in that context he considers epistemology to be a part of semeiotic (see CP 2.206

[1902]). Of course, such erudite arguments would hardly persuade Rorty; he might be more affected by the rather ironic fact that the theories of Peirce (the most theoretical and in a sense anti-practical of all pragmatists) are *used* in wide variety of disciplines, indeed, even in fields outside of the learned world.

Still, this is of little relevance for this study, which is definitely an academic investigation, focused on putting together as coherent a picture as possible while staying true to the sources. Luckily, I am not a pioneer. Previous investigations of Peirce's philosophy have been of invaluable assistance in my endeavour. Indeed, without the thriving community of Peirce scholars, this dissertation would not have been possible at all. Consequently, it is appropriate to consider briefly the history and current state of Peirce studies, before I explicate my interpretative strategies in more detail.

1.1 The Study of Peirce's Semeiotic

Over the years, Peirce scholars have been looking for a rational structure or a set of guiding interpretative principles that would bring at least a tolerable degree of order and coherence to Peirce's vast and often sprawling production. Royce and Kernan (1916), probably the first philosophers to offer an evaluation of Peirce's contribution as a whole, characterised his entire work as fragmentary (p. 703), and unwittingly set the scene for the longest-running debate in Peirce studies. In the 1930s, the publication of the first six volumes of the *Collected Papers of Charles Sanders Peirce* sparked a discussion concerning the nature of Peirce's philosophy. Controversially, the editors decided to re-arrange Peirce's writings according to systematic principles, setting aside all concerns with chronology. The result was rather perplexing. With the development of Peirce's thought hidden from sight, the writings seemed on the one hand to contain the promise of a grand system similar to that of Aristotle or Kant, but on the other hand they were more easily digestible as a collection of separate investigations, akin to the piecemeal studies of analytical philosophy. Hence, the first significant commentaries tended to either emphasise the unity of Peirce's philosophy (e.g.,

Feibleman, 1946; Weiss, 1940) or argue that what was valuable in Peirce's production was his minute analyses of specific problems – not his grandiose "architectonic" schemes (e.g., Buchler, 1939a; 1940).

The field of early Peirce studies was distinctly polarised; yet, both parties claimed to be faithful to the spirit (if not always to the letter) of Peirce's thought. Obviously, this was an unhappy state of affairs. It is not surprising, then, that a number of scholars attempted to explain or assimilate the contrasting interpretations by identifying internal tensions in Peirce's philosophy. Thomas A. Goudge (1950/1969, 1964) claimed to have discovered two conflicting intellectual temperaments in Peirce: a "tough-minded" naturalist and a "tender-minded" transcendentalist.[6] The naturalistic Peirce emphasised scientific method, logic, and the natural connection between human beings and the world; while the transcendentalist viewed instinct and feeling as more important sources of knowledge than scientific inquiry, accepted a more Platonic view of the mind, and preferred metaphysical construction to logical analysis. As a naturalist, Peirce abhorred pompous systematic endeavours; but his principal goal as a transcendentalist was to build a comprehensive philosophical structure. According to Goudge, this explained Peirce's ultimate failure.

At its time, Goudge's account of Peirce's intellectual schizophrenia was highly influential and its impact can still be felt. Although the proposed naturalist/transcendentalist division is rarely, if ever, accepted today, the view that there are two opposed personalities at work in Peirce's texts still lingers.[7] It would be difficult to deny that there is at least a hint of truth in Goudge's claim; Peirce is certainly not a perfectly consistent thinker, and some of his assertions do indeed conflict with each other in a manner that suggests that he had both hard-minded and tender-minded days. However, as David Savan (1981) has shown, Goudge's two-Peirce thesis does not stand up to scrutiny. At any rate, investigations of Peirce's philosophy soon moved beyond Goudge's position, as increasing attention was paid to the evolution of Peirce's thought, and fresh interpretations focusing on his semeiotic surfaced.

While the *Collected Papers* undoubtedly succeeded in saving Peirce's philosophy from threatening oblivion, this early attempt to present his system was overall a failure. It is in fact difficult to find another example of a philosophical corpus that would have been edited with such a rough cut-and-paste technique. A considerable part of the perceived tension in Peirce's thought can be attributed to unfortunate editorial decisions; almost complete manuscripts were split into pieces, and passages from different texts were regrouped with insufficient consideration for original context and chronology. As the only resource readily available to scholars, the *Collected Papers* were accepted as more or less canonical in early Peirce studies. However, the situation changed radically in the 1960s, largely owing to Murray Murphey's *The Development of Peirce's Philosophy* (1961), the first monograph on Peirce written from a resolutely developmental perspective. Murphey divided Peirce's philosophical life into four clearly demarcated periods. This trend was continued in Karl-Otto Apel's *Der Denkweg von Charles S. Peirce* (1967/1995), which also helped to introduce Peirce to a public outside of the Anglo-Saxon world. The growing awareness of the importance of Peirce's historical development culminated in a new, chronological edition of Peirce's writings, the first volume of which appeared in 1982.

Murphey's account of Peirce's philosophical phases seemed to signal the end of the unified interpretation of Peirce's thought; Peirce was perhaps a systematic thinker, but he had several systems, rather than just one. Peirce scholars tended to accept Murphey's developmental approach, but doubts were soon raised regarding his argument that discoveries in formal logic were the driving force behind the major transformations in Peirce's philosophy (see, e.g., Rosensohn, 1974, pp. 8-17). Murphey's delineations were too definite and orderly; in view of the richness and range of Peirce's philosophical and scientific interests, it was simply not feasible to hold that *all* the truly significant changes could be attributed to logical breakthroughs – even if formal logic without doubt played a central role in Peirce's systematic philosophy. Moreover, in his quest for momentous ruptures, Murphey tended to ignore certain continuities in Peirce's thought.

Not long after the "developmental turn" in Peirce studies, new perspectives began to emerge, most importantly a major re-evaluation of Peirce's sign-theoretical writings. Of course, Peirce's interest in signs had not gone completely unnoticed; the well-known *The Meaning of Meaning* (1949, orig. 1923) by I. A. Richards and C. K. Ogden included, as an appendix, an original semiotic text by Peirce, and Charles Morris's sign-theoretical programme (1938; 1946; 1964) without doubt helped to pave the way for an appreciation of Peirce's reflections on signs. Semeiotic was also quantitatively quite well represented in the *Collected Papers*; although the texts were seriously fragmented, the juxtaposition of semiotic ideas from different periods could also be suggestive. About forty years after their overdue publication, time may finally have been ripe for a serious consideration of Peirce's seemingly esoteric writings on signs. A first noteworthy indication of the new direction occurred in 1966, when John J. Fitzgerald's *Peirce's Theory of Signs as Foundation for Pragmatism* was published.

For many years, semeiotic had been viewed with a mixture of distrust and wonder; Ernest Nagel's (1933) view that Peirce's sign-theoretical ideas were "the most difficult and obscure he set down on paper" (p. 373) was endemic. While Peirce's semiotic ideas had not been ignored in early studies of his thought, no in-depth studies of semeiotic had been undertaken. The situation changed rapidly in the 1970s, with the publication of Douglas Greenlee's *Peirce's Concept of Sign* (1973), a number of seminal essays (e.g., Brock, 1975; Ransdell, 1977; Zeman, 1977b), and the *C. S. Peirce Bicentennial Congress* held in 1976. Toward the end of the decade, semeiotic had been established as one of the leading frameworks for the understanding of Peirce's philosophy. As one article (Fisch, Ketner, & Kloesel, 1979) enthusiastically proclaimed, researchers had been endowed with new tools of Peirce scholarship.

There were many reasons for the expansion of the sign-theoretical approach, both internal and external with regard to Peirce studies. Earlier discussions focusing on the perceived inconsistencies in Peirce's thought, such as the tensions between realism and idealism or between science and metaphysics, had not considered the possibility of taking on these problematic questions

from the point of view of semeiotic. The inadequacy of the *Collected Papers* led many scholars to investigate the original manuscripts, and reports of important unpublished sign-theoretical texts began to surface. Moreover, in spite of its initial plausibility, the splitting of Peirce's production into periods mostly ignored his *tendency* toward a systematic account, which he in his later years often labelled *logic conceived as semeiotic*. With the publication of the first volumes of the new chronological edition of Peirce's writings, new evidence concerning the longevity of his semiotic interests was received.

At the same time, the popularity of non-Peircean semiotics grew exponentially in disciplines outside of philosophy. Semiology or Saussurean semiotics, although in many respects incompatible with the principles of Peirce's semeiotic, popularised the idea of a study of signs; while the more biologically oriented semiotics spear-headed by Thomas A. Sebeok built more explicitly on Peircean ideas. Albeit a minority interest, the Peircean philosophy of signs established itself as a part of the growing field of semiotics – about seventy years after Peirce's pioneer prophecy.

After the breakthrough in the 1970s, studies in Peirce's semeiotic have expanded rapidly, in applications as well as in exegesis. General introductions to Peirce's theory of signs (Liszka, 1996; Savan, 1987-8) have been joined by numerous volumes and articles dealing with semeiotic from a wide range of perspectives. In terms of quantity, at least, the sign-theoretical approach seems to be the most popular way of tackling Peirce's thought today. This may have certain drawbacks. Peircean ideas have surfaced in surprising contexts, such as the writings of Jacques Derrida and Gilles Deleuze. It may be difficult to see how Peirce, with his emphasis on scientific methodology and objectivity, fits into the world of post-structuralism and deconstruction. Perhaps even more worrying from a purist perspective are writings overtly claiming to be about Peirce's thought, but which in fact present rather liberal readings of Peirce – interpretations that may be difficult to motivate based on the original texts.

Whether this situation is a cause for alarm or not is debatable. James Jakób Liszka (1998, p. 118) has suggested a useful distinction

between *priestly* and *prophetic* purposes in interpreting Peirce. The priest is the faithful exegete, trying to understand the writings in accordance with authorial intent, while the prophetic interpreter is primarily interested in showing that the texts have implications that pave the way for or fit the prophet's view of things. Without doubt, Peirce is one of the great anticipators in the history of philosophy; he has been hailed as a forerunner in logic (Hintikka, 1997) and evolutionary epistemology (Popper, 1979), to name just two examples that are *not* explicitly connected with semeiotic (although almost nothing in Peirce's thought is entirely separated from the study of signs). However, in the semiotic milieu, the prophetic reading of Peirce is not always restricted to noting that he foresaw this or that particular discovery; rather, there is often a more or less openly expressed contention that Peirce was a sage, who proposed a radically new mode of thought. In prophetic interpretations, what can be read between the lines is often as important as what the text actually states.

From a slightly different point of view, Vincent Colapietro (1996c, p. 93) has also noted the presence of two schools of contemporary Peirce scholars, namely those who tend to focus on Peirce as a *scientific* thinker, primarily concerned with a normative account of objective investigation, and those who offer a more *speculative*[8] account of his philosophy. The former faction, which would include names such as T. L. Short and Christopher Hookway, is more focused on faithful exposition than such speculative interpreters as Floyd Merrell and Robert Corrington are. There appears to be a certain degree of mistrust between the adherents of the two approaches; in particular, the supporters of a scientific interpretation tend to express worry about the neglect of Peirce's programme of exact philosophy. This criticism is partly warranted. Yet, it is important to note that neither group of inquirers is entirely free from prophetic inclinations, although such tendencies are likely to be more pronounced among the members of the speculative party.

In the end, it may be impossible to make a perfectly clear-cut distinction between priestly and prophetic interpretations of Peirce. Even if we ignore the standard arguments against attempts to grasp

an author's intentions, we are nonetheless faced with the fact that any meaningful reading of Peirce must engage in reconstructive analysis and fill in a number of gaps. Almost inevitably, some prophetic concerns will be introduced. Scholars rarely turn to Peirce's texts simply because of their historical interest; most explicators are convinced that his thought includes elements that are of value now or in the future – although there is no consensus as to what components should be emphasised. This is perhaps most evident in studies of semeiotic; even such a seemingly basic exegetical presentation as Liszka's *A General Introduction to the Semeiotic of Charles Sanders Peirce* (1996) includes a number of quite bold interpretations.

On the other hand, the impossibility of pure exegesis does not entail that we cannot make meaningful distinctions between various approaches to Peirce's thought; the divisions among Peirce scholars identified by Liszka and Colapietro are real, although their boundaries are vague. Nor should we give up on the possibility of distinguishing between good and bad interpretations; a striving for fidelity to the original texts is an ethical requirement of studies that claim to elucidate Peirce's philosophy. The problem with many prophetic readings, in my opinion, is not the attempt to go beyond Peirce in some respects; it is rather that certain expansive applications are masked, so to speak, as exegetical accounts. However, one of the undeniable strengths of Peirce's thought is its suggestiveness, the fact that it in many cases opens up new perspectives rather than offers a ready-made set of answers. Peirce studies is, on the whole, more than just an endeavour to grasp the ideas of one man. As Colapietro (1996c) notes, "Peirce's interpreters are *philosophers* who have joined him as co-inquirers; fidelity to the actual texts is dear, but fidelity to the animating purposes of this paradigmatic inquirer is even dearer to these 'interpreters'" (p. 94). Although the present study is aimed at understanding certain strands of Peirce's thought, I hope it will also be of some broader intellectual interest.

1.2 Interpretative Difficulties and Strategies

Working with Peirce's philosophy presents a number of special challenges for the interpreter. Many prospective readers have no doubt been repelled by the rather appalling state of Peirce's papers, his intricate and obscure terminology, and the winding paths of his thought. Of course, such problems are familiar to students of other philosophers as well; but there are reasons to surmise that Peirce may be a harder nut to crack than most.

Broadly, the difficulties confronting the Peirce scholar can be divided into external impediments, mainly attributable to the state and availability of the source material, and internal problems, related to the peculiarities of Peirce's thought and its expression. In practice, however, these difficulties tend to be interconnected, as the concrete fragmentation of Peirce's production is a frequent cause of intellectual conundrums.

The student of Peirce's thought certainly does not suffer from a want of material; according to Edward C. Moore (W 1:xi), a complete edition of his known papers would consist of 104 volumes of about 500 pages each. Lacking such a complete publication, supported by consistent editorial policies, interpreters are faced with the ungrateful task of wading through a veritable labyrinth of published and unpublished writings, sometimes with little or no assistance from previous scholarly efforts.

It is well known that one of the foremost causes of these troubles is Peirce himself; although a highly prolific writer, he was better at starting projects than at finishing them, as the tens of thousands of manuscript pages he left behind attest.[9] This may explain why it is often believed that Peirce published very little during his lifetime, which is simply not the case (cf. Ketner, 1987, p. 13). In fact, his published production is quite extensive, probably more voluminous than most philosophers' intellectual corpuses. True, a substantial portion of Peirce's output consists of reviews and non-philosophical writings; but we are still left with an impressive record.

The real problem with Peirce's work – published and unpublished alike – is the lack of pivotal, full-length treatises. In particu-

lar, we can only lament that his final grand project, the "logic conceived as semeiotic", failed to materialise.[10] His papers do include series of articles that are comparable to full volumes (e.g., the *Illustrations on the Logic of Science* series from the late 1870s), suggestive outlines for a systematic exposition (e.g., the *Carnegie Application* [MS L75] from 1902), full sets of lectures (e.g., the Harvard Lectures on Pragmatism from 1903), and almost complete book manuscripts (e.g., *How to Reason* from the 1890s); but in the end, the student is left wanting a published book that would serve as a focal point, a *Tractatus Logico-Philosophicus* or *Sein und Zeit* – or even a *Philosophical Investigations*. Without such central tomes, the Peirce scholar lacks beacons to guide him or her through the mass of material, distinguishing with relative ease and confidence the essential from the irrelevant.

Of course, Peirce's writings have been published in a variety of formats after his death. From the point of view of semeiotic, the *Collected Papers* is still an important collection, in spite of its faults. *The New Elements of Mathematics* (which unfortunately has been edited in a manner somewhat reminiscent of the *Collected Papers*) includes a lot of valuable material, as do the letters that have been collected in *Semiotic and Significs* and the lectures that have been published as *Reasoning and the Logic of Things*. However, of recent editions *The Essential Peirce* and the more comprehensive *Writings of Charles S. Peirce* are of unrivalled value for Peirce scholars. Sadly, the chronological *Writings* edition has only reached its sixth volume, covering Peirce's career until the year 1890. This is particularly regrettable from my point of view, as it is in the 1890s that Peirce truly begins to develop his mature semeiotic.

Due to the insufficiency of the available editions of Peirce's writings, the scholar is often faced with the need to study the original, unpublished documents. I have been fortunate in this regard, as I have been able to examine one of the microfilm editions of Peirce's manuscripts. Naturally, this kind of basic inquiry involves its own complications. The filmed manuscripts are often fragmentary and of uneven quality. Peirce's tendency for digressions is a constant source of disorientation. One cannot tell what the manuscripts contain merely by looking at the titles; some

of the most interesting passages on semeiotic are buried deep in writings, which at first blush appear to be about other things altogether. I could not have been able to make heads or tails of this unwieldy mass of text without the aid of Robin's *Catalogue* (1967).

In addition to the problems directly attributable to the state of Peirce's writings, there are difficulties related to the character of his thought. Almost inevitably, one of the first things that will strike a reader of Peirce is his peculiar terminology. Of course, it is to be expected that older philosophical texts employ strange terms, which may require explication in our day and age. However, Peirce took expression exceptionally seriously; he felt the need for a generally accepted set of technical terms for philosophy, and he put down a considerable amount of effort on finding adequate linguistic means for his ideas. On the other hand, most of these developments took place in unpublished manuscripts. This causes special difficulties for the interpreter; Peirce quite liberally tried out new terms, and rarely connected his innovations to previous attempts. Consequently, Peirce scholars are faced with a terminological arsenal full of unclear divisions and relations of synonymy. The situation is perhaps nowhere more precarious than in semeiotic, where Peirce, as a pioneer, felt free to name and re-name the newly discovered territories. It is not surprising, then, that many disputes in Peirce studies concern his conceptual apparatus, that is, what Peirce meant by various terms in various contexts and how different concepts are connected to each other. In my study, I will review several such terminological debates, for instance the discussions concerning Peirce's "interpretant". I believe that I have made certain discoveries that may help shed some light on these matters.

A more general question, which the interpreter must consider, is that of emphasis or focus; from what angle should we approach Peirce's thought? Is there one master key that opens up the locks to its secrets, or are there rather many equally promising doorways to its chambers? As I already indicated in my sketch of Peirce studies, Peirce scholars have looked for the unifying core of Peirce's philosophy, but with varying results. Over the years, the nature of the discussions has changed; whereas early debates tended to be

polarised along such lines as unity vs. fragmentation or empiricism vs. metaphysics, the present time is more accepting to the notion of explicating Peirce's thought from a number of different points of view. This is not to say that the tensions in Peirce studies would have simply disappeared; to take just one rather obvious example, the debate whether Peirce is primarily to be understood as a realist or an idealist shows no signs of subsiding.

The present study operates in the framework of semeiotic. At first, this might appear to offer a rather clear-cut demarcation of its object. However, advances in Peirce studies have shown how intricately semeiotic is connected to various other strands in Peirce's philosophy. It is by no means easy to say where the lines of semeiotic are to be drawn or to identify parts of Peirce's thought that have *no* relevance for an investigation of his theory of signs. Joseph Ransdell (1977), the leading expounder of an idealist interpretation of semeiotic, has stated that as much as 90 % of Peirce's production is directly relevant for semeiotic. In my opinion, this is an exaggeration; if Ransdell's claim were accepted, there would hardly be any means for distinguishing Peirce's theory of signs from the rest of his philosophy. Ransdell may be right in holding that a full account of Peirce's theory of signs would require a consideration of practically all of his philosophical, mathematical, and scientific writings; and one may even agree with Savan (1981) that semeiotic is a unifying force in Peirce's thought. However, for more modest purposes, some delimitation of the domain of semeiotic appears to be needed.

Naturally, my investigation is guided by its principal research questions concerning the role of the communicative point of view in semeiotic and the scope of Peirce's sign-theoretical outlook. More precisely, my study will be informed by the following principles.

1. My account of semeiotic is primarily scholarly, not comparative or "prophetic". The study is focused on Peirce's writings; the views of other philosophers and semioticians will not be considered in detail. At certain points, other positions will be briefly noted to provide illuminative

contrast to the Peircean line of thought. However, I do not claim to do justice to any other philosopher but Peirce.

2. I strive for fidelity to the original texts. On the other hand, I recognise that perfect textual faithfulness is not possible, and that my interpretative purposes do affect the study, even in rather minute details. In order that the reader should have the opportunity to judge the validity of my interpretations, I will quote many original passages from Peirce, in particular when the relevant material is obscure and hard to find.

3. In my study, I do not attempt to present a full account of Peirce's philosophy. My object of study is his semeiotic, and within that field, my more specific aims will give the investigation its focus. Many parts of Peirce's thought, which could be considered in the context of his semeiotic, such as his logic of relations, existential graphs, and scientific metaphysics, will be neglected or receive only partial illumination. Moreover, I will not attempt to present the whole of his semeiotic. A particularly noticeable omission is a complete account of Peirce's elaborate system of sign classification. Although I will discuss some of his basic divisions of signs, I am here more interested in the role of semeiotic in his thought and the "derivation" of his sign-theoretical concepts than in the complex issues pertaining to semeiotic taxonomy. On the other hand, I do recognise that Peirce is a systematic thinker, whose ideas may be difficult to understand if they are examined as isolated pieces (cf. Ketner, 1987, p. 14). Therefore, I try to provide a sufficient context for my investigations, although it entails certain discussions that would not be strictly necessary for the main lines of argumentation.

4. The present study pays attention to the development of Peirce's thought. In contrast to systematic presentations of the structure of semeiotic (such as Greenlee, 1973; Liszka,

1996; Savan, 1987-8), the manner in which Peirce's ideas emerge and evolve are discussed. Nonetheless, the approach of the study is not chronological in a strict sense; I do not trace the development of Peirce's thought year by year. Certainly, such a study of his sign-theoretical writings would be highly useful, but in the end, I feel that a mixture of the systematic and chronological approach is most appropriate for my purposes.

5. Although the study is primarily focused on Peirce's theory of signs, it can be said to move on two principal levels of inquiry. The first of these is the *phaneroscopic* field, within which Peirce proposes to examine the theory of categories; the second level is that of semeiotic. As we will see, these interests are always intertwined in Peirce's thought; yet, they need to be kept distinct. Failing to do so will lead to an untenable form of "semioticism", encapsulated in the young Peirce's dictum "all is representative" (W 1:324 [1865]). One of the objectives of this study is to show that Peirce's mature philosophy possesses the means to avoid this conclusion, while it still maintains that "the life we lead is a life of signs" (MS 1334:44 [1905]).

6. Throughout the study, I will employ characteristically Peircean language. No doubt, to many readers this vocabulary will seem unnecessarily cumbersome and complicated. However, as noted, in the world of Peirce's philosophy, nomenclature and terminological modifications are not trivial matters.[11] Therefore, I use Peirce's terms with only a few minor changes in spelling.[12] Some of Peirce's curious neologisms prove to be less strange as they are put into context and explicated; in fact, they tend to grow on the patient reader. However, I should warn that there is one central term, namely "signification", which I use in a manner that may clash with Peirce's usage. For the most part, Peirce employs "signification" as a synonym for "meaning"; I use it more generally as a name for all the functions of the sign,

whatever they may be. Thus, a "field of signification" is not merely a domain of meaning, but more broadly a distinguishable domain, within which a sign can be said to operate.[13] This use of the term is perhaps not entirely foreign to Peirce; in one manuscript, he defines "signification" as "the action of a sign" (NEM 4:297 [c. 1903?]). He later characterises "semiosis" in the same manner, specifying the kind of action involved, so perhaps "signification" can be reserved for the functions and processes of the sign in their unspecified state, whether they pertain primarily to object, interpretant, or something else.

7. In interpreting Peirce's thought, I naturally also examine the results of many of the preceding studies of his philosophy. My research has benefited greatly from earlier inquiries; it would not have been even feasible without the work of such commentators as Colapietro, Liszka, and Short. To some extent, considerations of the findings and claims of Peirce studies take us to questions not directly addressed by Peirce; as already noted, there are few, if any, purely exegetical investigations of semeiotic. Although my focus is on Peirce's ideas such as they are expressed in his writings, which in a study such as mine must be given the final say, my inquiry is also concerned with certain issues raised in the broader context of Peircean philosophy. In a few instances, I will propose extensions of Peirce's position.

1.3 The Structure of the Study

The structure of this study follows a general pattern that will be quite familiar from certain earlier studies of Peirce's semeiotic, in that I begin with a discussion of Peirce's conception of science and then move on to more specific areas of sign-theoretical inquiry. Consequently, I will not first present my central hypothesis and then defend it in relation to various parts of Peirce's philosophy.

Rather, the communicative point of view will emerge as a product of my inquiry.

This arrangement is motivated by two considerations. Firstly, by embarking from Peirce's conception of science, and moving on to the theory of signs via his theory of categories, his semeiotic is placed within its proper place within his thought. Moreover, we will see that this placement is highly relevant for understanding the purport of the central hypotheses of this study. Secondly, by not setting out from Peirce's communicative definition of the sign, I will avoid giving the impression that it is explicitly presented as a foundational position in his philosophy. Although this study is based on the belief that the communicative outlook is of central importance for the understanding of Peirce's thought, I do not mean to declare that all of semeiotic could or should simply be seen as an outgrowth of it. Rather, the point is to show that there is a somewhat neglected perspective on semeiotic – found in Peirce's writings – that may be beneficial for the understanding and the further development of his position.

Apart from the introduction and the concluding remarks, this study is divided into four main chapters, each focusing on a different part of Peirce's philosophy. They are interdependent, but can also stand on their own.

In *chapter 2*, I will discuss the nature of sign-theoretical inquiry, and its place in Peirce's conception of the sciences. If we were to stick to the explicitly semeiotic texts, the results would be rather meagre. Therefore, having made a distinction between semeiotic as *doctrine* and semeiotic as *science*, I will discuss Peirce's conception of inquiry in general, also considering issues that he does not primarily place in a semeiotic framework. The principal objective of the chapter is to provide a context for the ensuing discussions; but I believe that the examination will also cast some new light on Peirce's social conception of science and on the role of semeiotic in his scheme of inquiry.

In *chapter 3*, I will turn to Peirce's theory of categories. Although this line of inquiry is distinguishable from semeiotic in his later philosophy, it is clear that the theory of signs builds upon certain categorial principles. I am convinced that the relations of these two

fields of inquiry must be considered; although Peirce's theory of categories has been examined in detail before, my main hypothesis is supported by an interpretation of the phaneroscopic approach found in his mature philosophy. Moreover, this chapter will provide a chronological frame for the understanding of certain developments in Peirce's thought. It will be shown that the early theory of categories is all but equivalent to Peirce's early theory of signs, and that later changes in his categorial outlook have profound consequences for semeiotic.

In *chapter 4*, we will move on to the mature theory of signs, and the communicative approach to semeiotic will be outlined. In addition, a number of related issues will be discussed, notably questions pertaining to embodiment and representation. This chapter will also introduce a new way of looking at the problem of semiotic hermeticism, as it is addressed in terms of Peirce's conflicting views concerning the representational nature of objects and percepts.

In *chapter 5*, my study will move on to what I consider to be the most fertile aspect of semeiotic, its conception of the dynamics of sign action. This discussion will first focus on the question of the goal-directed character of semiosis, and then move on to examinations of Peirce's notion of the interpretant and his view of semiotic meaning. Finally, certain additional features of Peirce's semeiotic, which cast further light on the communicative sign action, will be examined, in particular the important notions of collateral experience and semiotic indeterminacy. As a secondary objective, I will attempt to show that the view that Peirce would adhere to an ideal of precision is at least partly mistaken.

Notes to the Introduction

[1] In this study, I refer to Peirce's theory of signs as "semeiotic", in contrast to the heterogeneous field of "semiotics". However, this should not be seen as a "purist" terminological stance; that is, I have no intention to argue for the superiority of "semeiotic" over "semiotics" or any other

alternative (see Deely, 2003, for a detailed account of this question of semiotic nomenclature; see also Romeo, 1977). Furthermore, I want to avoid carving the subject matter of sign-theoretical study into Peircean and non-Peircean parts. Hence, when I talk about significative phenomena that can be studied and interpreted from various perspectives, I will use "semiotic" and "semiosis" instead of "semeiotic" and "semeiosis". In other words, I reserve the term "semeiotic" for Peirce's theory, and drop the "e" when discussing the facts and processes that this theory studies. Peirce uses two terms for the activity of signs: "semiosis" and "semeiosy". In recent studies of Peirce's philosophy, the term "semeiosis" has often been employed, apparently as a more accurate translation of the original Greek concept (see, e.g., Short, 1981a; Fisch, 1986). Terminological accuracy and correct Peircean pronunciation aside, this seems to be an unnecessary complication of semeiotic nomenclature. It can also have the unfortunate side effect of further marginalising Peirce's thought, without offering any substantial advantages in terms of precision and distinction. The matter would be different if we were to indicate a special Peircean conception of semiosis by "semeiosis". Here, I should add that I do not wish to take a stand on the issue whether Peirce's semeiotic is *the* general semiotics under which all other forms of sign-theoretical pursuits should be classified or a school among others. In this study, which is almost exclusively concerned with Peirce's writings on the theory of signs, the distinction between "semeiotic" and other forms of semiotics is one of convenient delimitation mainly.

[2] Peirce recognised the difficulty; a pioneer, who attempts "a thorough revision of philosophy", washing old landmarks away, finds it difficult to explain how the new framework is to be grasped and applied (MS 299:9-10 [c. 1905]).

[3] To avoid misconceptions at this point, I should add that the reconstructive project undertaken here is not equivalent to endeavours to use Peirce's theory of signs as a foundation for a theory of communication (such as Johansen, 1993a). Rather, the current effort ought to be seen as supportive of such projects.

[4] Commenting on this passage, T. L. Short (1994a, p. 244) notes that the kind of idealism in question is a form of *epistemological idealism*, which can be distinguished from *metaphysical idealism*, according to which "mind and spiritual values are fundamental in the world as a whole" (Acton, 1967, p. 110). According to Short (1994a, p. 246) Peirce was a metaphysical idealist, but never an epistemological idealist. This study will show that Short is

partly wrong; at least, we shall see that Peirce displayed distinct tendencies toward a variant of epistemological idealism in his early philosophy (see, in particular, sects. 3.1.1; 4.3.1). However, I will not try to present any kind of systematic account of varieties of idealism or realism in this study; here, these terms are used merely to indicate the types of perspectives with which we are dealing.

[5] Furthermore, Rorty (1982, p. 160) claims that one reason for the "undeserved apotheosis" of Peirce has been that his theory of signs has been wrongly seen as an important precursor of the so-called linguistic turn in philosophy. Rorty is right in emphasising the difference between Peirce's perspective and later linguistic approaches. However, the interesting question is whether this divergence is a good or bad thing for the Peircean position. Of course, given Rorty's language-centred perspective, there is no doubt about his answer. Others might opine that Peirce's philosophy is valuable and productive *because* it can give us hints of how to move beyond the linguistic *cul-de-sac* (see, e.g., Collins & Hoopes, 1995).

[6] Goudge adopted these classes from William James's well-known distinction between tender-minded and hard-minded philosophers.

[7] This study will also show some internal conflicts in Peirce's thought; however, they are primarily attributable to differences between Peirce's earlier and later philosophy, rather than to a split personality.

[8] It may be appropriate to note that "speculative" is not necessarily a derogatory term within the context of American philosophy. (I owe this observation to Sami Pihlström.)

[9] According to Moore (W 1:xi), Peirce's intellectual remains contain approximately 80 000 unpublished handwritten pages.

[10] Umberto Eco (1976, p. 1457) suggests that even if Peirce would not have encountered serious professional setbacks, he would probably have been unable to finish his *magnum opus*. This is of course a mere surmise, but Eco's (1976) claim that Peirce's "goal was certainly an Aristotelian one but his dialogic procedures were, without any shade of doubt, Socratic" (p. 1457) is not without merit. Peirce's writings are full of revisions and internal debates; often, he openly admits that his inquiries have a tentative nature, and he invites the reader to challenge him – something that rarely happened during his lifetime. The following statement is indicative of his nature as a philosophical inquirer: "Only once, as far as I remember, in all my lifetime have I experienced the pleasure of praise – not for what it might bring but in itself. That pleasure was beatific; and the praise that

conferred it was meant for blame. It was that a critic said of me that I did not seem to be *absolutely sure of my own conclusions*." (CP 1.10 [c. 1897])

[11] For Peirce the use of terminology is a serious *ethical* issue; indeed, he calls for a special "ethics of terminology". I strive to adhere to its general spirit, which I feel is nicely summarised in the following quotation: "*The person who introduces a conception into science has both the right and the duty of prescribing a terminology and notation for it; and his terminology and notation should be followed except so far as it may prove positively and seriously disadvantageous to the progress of science. If a slight modification is sufficient to remove the objection, a much greater one should be avoided.*" (MS 530:1 [c. 1903])

[12] I do not follow Peirce in capitalising technical terms, and in certain cases, such as that of "semeiotic", I simply choose to use one of Peirce's spellings, rather than employing all of the variants on offer. However, I have not made changes to direct quotations, apart from insignificant corrections of spelling errors and punctuation.

[13] Peirce introduces the concept of a field of signification as follows: "Representation, by which I mean the function of a sign in general, is a *combinant*, or *trifile*, relation; since it subsists between the *sign*, the *object* represented, and the *interpretant* or sign of the same object determined by the sign in the mind of the person addressed, or in other field of signification" (MS 145s:11). In his Logic Notebook, Peirce speaks of "fields of interpretation" in approximately the same manner (see MS 339:258-260 [1905]; see also SS 33 [1904]). Thus, Peirce's "field of signification" would primarily refer to a field – human or not – upon which the sign has any kind of *effect*. As far as I know, he does not use the notion differently in other contexts.

2 The Nature of Semeiotic Inquiry

If there is one task that clearly occupies Peirce in all phases of his intellectual development, it is the examination of the nature of scientific inquiry. This interest influences practically all of his philosophical undertakings, from the theory of the categories to the pragmatistic analysis of meaning. Peirce lived in an era that saw the scientific point of view push into new areas of life following the Darwinian revolution; indeed, his philosophy is permeated by the ideas of the theory of evolution. However, in contrast to many philosophers who have emphasised the role of science, Peirce had ample first-hand experience of concrete scientific practice.[1] This background affects his philosophical outlook in two general ways. Firstly, philosophy is expected to say something of value about the character of inquiry; secondly, philosophy is construed as one scientific activity among others – albeit one distinguished by certain characteristic features.

It would not be erroneous to say that Peirce's central concern is to examine and refine the *logic of inquiry*; at times, it can seem as if the rest of his philosophical endeavours would be mere by-products of this primary venture. On the other hand, Peirce adamantly seeks a substantial role for philosophy in the world of science. Peirce is not a scientistic reductionist in the sense that he would contend that the philosophical disciplines ought to be replaced by such sciences as physics and psychology. In many respects, Peirce's view of the relationship between philosophical investigation and other scientific pursuits is rather old-fashioned; in his hierarchy of inquiry, philosophy is consistently placed above the special empirical sciences.

Peirce's writings are full of reflections on the nature of inquiry, the roots of scientific investigation, and the classification of the sciences. The results of Peirce's endeavours – his philosophy of science, if one wants to use that label – have been investigated from a wide variety of perspectives and in considerable detail.[2] One might expect that such studies would have firmly established what

kind of entity semeiotic is and what its role in the scheme of inquiry is supposed to be. Certainly, a number of important discoveries have been made, but many questions regarding the position of the theory of signs in Peirce's world of science have been too quickly dismissed by viewing "semeiotic" as simply another name for logic or as "logic in a broad sense". This is not false, of course; toward the end of his career, Peirce plainly affirmed this very connection. However, the picture is greatly complicated if we ask upon what foundation semeiotic is expected to stand, what its method of study is, and how it is related to other disciplines identified by Peirce.

In this chapter, I will address some of the questions concerning sign-theoretical inquiry and its position in Peirce's philosophical design. I feel that this (together with the examination of the theory of categories of the next chapter) is a necessary preliminary for the more detailed analysis of Peirce's sign-theoretical apparatus; it provides the background, against which his occasionally outlandish and seemingly disconnected reflections can be grasped. The way we understand Peircean science will affect our view of his sign-theoretical claims. In a nutshell, then, the following discussion will be concerned with the scientific status of semeiotic. It is not intended to be a full account of Peirce's views on inquiry, but rather a partial appraisal of the proposed function of the theory of signs in the life of science. However, since Peirce's characterisations of semeiotic research are rather Spartan, I will also consider such closely related topics as Peirce's social characterisation of science, his distinction between theory and practice, and his view on the foundations and aims of inquiry. None of these discussions is meant to constitute a complete account of the issue at hand; moreover, the omission of certain central Peircean concerns, such as the types of scientific reasoning, will be obvious to the reader familiar with Peirce's writings. Here, the objective is merely to prepare the canvas in broad strokes, before attempting to depict the details.

2.1 Beyond the Doctrine of Signs

When Peirce introduces the idea of a general science of representations in 1865, we are given few hints about its origin and nature. The first recorded appearance of the term "semiotic" in his writings (in his Harvard lectures on the logic of science) merely states that logic is a species of "symbolistic", which in its turn is a branch of "semiotic". This introduction follows upon a discussion of Locke's *An Essay Concerning Humane Understanding* (1690). Although Peirce does not explicitly examine Locke's division of science into three principal kinds, he must have been acquainted with Locke's characterisation of the third main branch of knowledge, the semiotic science.

> …The third Branch may be called σημιωτικὴ, or *the Doctrine of Signs*, the most usual whereof being Words, it is aptly enough termed also λογικὴ, Logick; the business whereof, is to consider the Nature of Signs, the Mind makes use of for the understanding of Things, or conveying its Knowledge to others (Locke, 1690, p. 361).[3]

Locke's and Peirce's first presentations of their respective "doctrine of signs" share more than brevity of statement; both philosophers are obviously concerned with the connection between logic – that is, the theory of reasoning – and the theory of signs. Moreover, both thinkers see words as paradigmatic instances of signs, but neither restricts the scope of the doctrine to linguistic signs. Nonetheless, it is easy to see that Peirce initially construes the relationship between logic and semeiotic differently than Locke. For the young Peirce, logic is not a synonym for the doctrine of signs, but rather the branch of the semeiotic of symbols that examines the relations of symbolic representations to their objects (W 1:303 [1865]). He does not pay much attention to the other parts of semeiotic. We are told that there is a science of copies and a science of signs,[4] which accompany the science of symbols, and that symbolistic is divided into grammar, rhetoric, and logic (see fig. 1); but only the logical part of semeiotic is described in any detail.

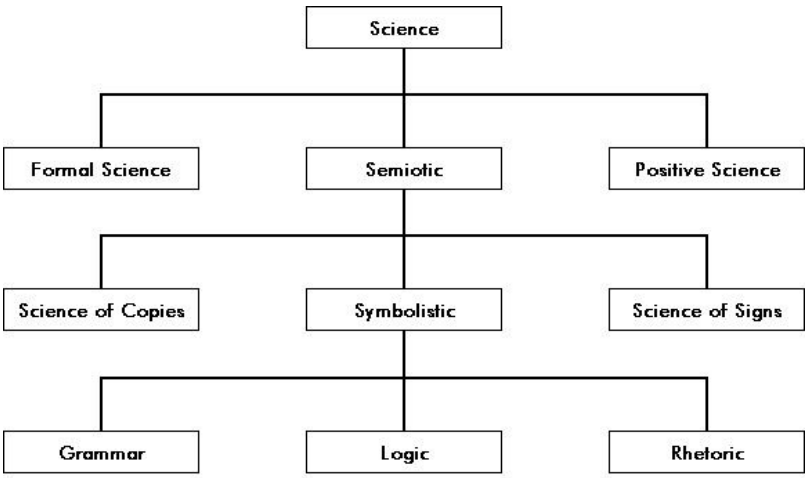


Figure 1. **Peirce's classification of the sciences in 1865.**

Peirce's characterisation of the science of representations in his youthful writings is rather meagre. It is not possible to form any substantial conception of its scope and content. Nonetheless, some general features of the proposed domain of inquiry may be discerned. In the first place, it may be noted that semeiotic is purportedly not reducible to psychology. In fact, Peirce's early attention to the science of semeiotic follows from an endeavour to find a definition of logic that would avoid the pitfalls of psychologism (see W 1:308 [1865]). Thus, it is evident that the representations, which semeiotic studies, are not to be explicated by an examination of the actual workings of the human mind. Secondly, it is of interest to note that semeiotic is one member of the basic *trivium* of science, of which the other components are the *science of forms* (formal science) and the *science of things* (positive science). In itself, this three-part division is not very informative; Peirce has even less to say about the other general disciplines than about the science of representations. However, the primary trivium can be connected to his work on the theory of categories. In "An Unpsychological View

of Logic" (W 1:307-308 [1865]; W 1:313-314 [1865]), Peirce claims that form and matter can be abstracted (or *prescinded*, see sect. 3.1.1) from the phenomenon considered as an image or a representation. All three phenomenal aspects or elements may be generalised, giving three supposable objects: *representations in general*, *things*, and *qualities*.[5] Positive science studies material things, while formal science examines qualitative forms (W 1:303 [1865]).[6] Semeiotic, as the science of representations, would naturally be concerned with objects of the first kind, that is, with internal and external representations. Using later terminology, we could say that its proper domain is objects as *thirds* (see chap. 3). Semeiotic must, therefore, be closely associated with the third category.

The anti-psychologistic bias and the intimate connection between the theory of signs and the category of thirdness are pervasive features of Peirce's semeiotic, early and late alike. In addition, the trivium of grammar, logic, and rhetoric can also be found in Peirce's mature sign-theoretical writings, although he abandons the in-between division of semeiotic into the science of copies, the science of signs, and the science of symbols (cf. sect. 2.3.4). The first presentation of the science of representations includes little information about grammar and rhetoric, and almost nothing about the companions of symbolistic; however, its greatest defect is the uncertain status of the theory of categories. In fact, there does not seem to be any place reserved for this key intellectual pursuit in the early arrangement of the sciences. Perhaps this explains why Peirce fails to mention the classification – as well as the idea of a general science of semeiotic – in his first major philosophical publications.

It is by now customary to view "On a New List of Categories" (1867) and the *Journal of Speculative Philosophy* series from 1868-9 as the texts that lay the groundwork for Peirce's semiotic philosophy (see, e.g., Fisch, 1986, pp. 322-326). They offer a derivation of the central components of representations – that is, signs – and outline its anti-Cartesian point of view. The categories are found by an examination of representational judgment. It is not surprising, then, that Peirce's categories have been interpreted as *semiotic* categories. However, it is by no means clear that the analysis presented in "On a New List of Categories" would be a part of the *science* of semeio-

tic. Bearing in mind the fact that semeiotic is concerned only with representations – objects of the third category – the investigation of categories would seem to precede the proper science of semeiotic.

We can leave Peirce's earliest conception of the science of representations here; the textual evidence is so thin and fragmentary that it is difficult to form an adequate picture of its make-up without resorting to rather bold conjectures. Instead, we may note that the idea of a general study of signs disappears from Peirce's writings soon after its initial appearance, only to return with a vengeance in the 1890s. As with the rest of the sign-theoretical concepts, which tend to temporarily disappear after the 1860s, Peirce neither explains why he abandons the idea nor why he introduces it anew in his later philosophy. It is plausible to surmise that developments in his theory of categories as well as changes in his conceptions of logic and inquiry prepare the path for the second coming.

In comparison to the early sign-theoretical texts, Peirce's later attempts to define or describe the study of signs are plentiful and suggestive. We are, for example, told that semeiotic is a *doctrine* (CP 2.227 [c. 1897]; EP 2:413 [1907] or a *science* (EP 2:327 [1904]; EP 2:403 [1907]; MS 637:34$_v$ [1909]); it is briefly characterised as "the general physiology of signs" (MS 641:1 [1909]) and more fully as the "study of the necessary conditions to which signs must conform in order to fulfill their functions as signs" (MS 693:188 [1904]) or the "general theory of all possible kinds of signs, their modes of signification, of denotation, and of information; and their whole behaviour and properties, so far as these are not accidental" (MS 634:14 [1909]). Semeiotic studies the workings of experienced signs, but also "the essential nature and fundamental varieties of possible semiosis" (EP 2:413 [1907]).

It is easy to see that there are a number of tensions between Peirce's various attempts to provide a broad characterisation of semeiotic and its objectives. To some extent, this is to be expected, given the tentative and experimental nature of many of his sign-theoretical writings. However, the variety displayed by the definitions easily leads to the reasonable suspicion that Peirce's conception of semeiotic may be too vague to be of any real use. One

quickly begins to feel a certain uneasiness concerning the actual status of semeiotic; is Peirce talking about an existing discipline, or is he rather trying to indicate the need for such a study? Is it a doctrine that can be learned from books or is it a kind of inquiry? What precisely is semeiotic supposed to study? What are its aims?

In order to make some progress in this matter it will be necessary to take a closer look at Peirce's descriptions of the study of signs. In particular, the following well-known passage is useful, as it offers a rich yet succinct account of the basic procedures of semeiotic:

> Logic, in its general sense, is, as I believe I have shown, only another name for *semiotic* […], the quasi-necessary, or formal, doctrine of signs. By describing the doctrine as "quasi-necessary", or formal, I mean that we observe the characters of such signs as we know, and from such an observation, by a process which I will not object to naming Abstraction, we are led to statements, eminently fallible, and therefore in one sense by no means necessary, as to what *must be* the characters of all signs used by a "scientific" intelligence, that is to say, by an intelligence capable of learning by experience. As to that process of abstraction, it is itself a sort of observation. The faculty which I call abstractive observation is one which ordinary people perfectly recognize, but for which the theories of philosophers sometimes hardly leave room. It is a familiar experience to every human being to wish for something quite beyond his present means, and to follow that wish by the question, "Should I wish for that thing just the same, if I had ample means to gratify it?" To answer that question, he searches his heart, and in doing so makes what I term an abstractive observation. He makes in his imagination a sort of skeleton diagram, or outline sketch, of himself, considers what modifications the hypothetical state of things would require to be made in that picture, and then examines it, that is, observes what he has imagined, to see whether the same ardent desire is there to be discerned. By such a process, which is at bottom very much like mathematical reasoning, we can reach conclusions as to what *would be* true of signs in all cases, so long as the intelligence using them was scientific. The modes of thought of a God, who should possess an intuitive omniscience superseding reason, are put out of the question. Now the whole process of development among the community of students of those formulations by abstractive observation and reasoning of the truths which must hold good of all signs used by a

> scientific intelligence is an observational science, like any other positive science, notwithstanding its strong contrast to all the special sciences which arises from its aiming to find out what must be and not merely what is in the actual world. (CP 2.227 [c. 1897])

This loaded quote includes a number of important assertions and hints about the nature of the study of signs as it is construed by Peirce in his mature philosophy. At least the following substantial claims can be distinguished:

1. Semeiotic is identical to *logic* in a general sense.
2. Semeiotic is a "*formal doctrine*".
3. Semeiotic is a *positive* science; in other words, it is based on our experience of familiar signs.
4. Semeiotic makes general claims with the aid of *abstractive observation*.
5. The goal of semeiotic is to find out what would be the characteristics of signs used by a "*scientific intelligence*", that is, a mind that is capable of learning from experience.
6. Semeiotic is *fallible*.

All of these features of semeiotic will receive illumination later in this chapter, as semeiotic is related to Peirce's general view of inquiry and his classification of the sciences. However, we may immediately note that Peirce has made something of a "Lockean turn" in his later philosophy. The young Peirce defines logic as a part of the semeiotic of symbols. In contrast, the older Peirce gradually comes to see semeiotic as another name for logic (see sect. 2.3.3).

The Lockean impression is reinforced by Peirce's use of the phrase "the doctrine of signs" – a choice of words that indicates a certain historical affiliation with Locke, Berkeley, and the medieval schoolmen.[7] However, it may be asked how well this characterisation of semeiotic accords with Peirce's more usual contention that semeiotic is a *science*. In fact, Peirce's choice of words is rather unfortunate in view of the standard dictionary definitions, according to which a doctrine is a body of teachings or principles,

often with religious overtones. As we shall see in the next section, his conception of science is definitely not doctrinal in this acceptation.

Of course, it could be argued that Peirce is employing "doctrine" in some special sense in the passages mentioned. However, since he does not discuss his conception in detail (as he does in the case of "science"), the use of the word in question is somewhat regrettable. Moreover, in a letter to Victoria Lady Welby, Peirce suggests that he is not satisfied with his own use of "doctrine".[8] The term is too static, too suggestive of rigid dogma, to capture the life of semeiotic as a pursuit of human beings; "science consists in *inquiry*, not in 'doctrine'" (SS 79 [1908]). Peirce argues that this linguistic practice is motivated by the actual history of the words, rather than by their precise etymology.

In view of these comments, the conclusion that Peirce sees semeiotic primarily as scientific inquiry and not as doctrine seems justified. The fluctuation between a doctrinal and a scientific point of view in the definitions may be attributed to two different aims; on the one hand, Peirce wishes to indicate the existence of a historical continuum and thus underlines the fact that the study of signs has a venerable past, but on the other hand, he wants to incorporate semeiotic into his overall scheme of science and therefore emphasises the future prospects of this field of inquiry. Overall, the latter point of view would seem to be more important. In any case, it is sufficiently clear that Peirce strives to pursue his studies of semiotic phenomena in a scientific spirit; semeiotic, as he presents it in his mature philosophy, could perhaps be described as an embryonic or prospective science.

The preference for "science" over "doctrine" can also be motivated by the fact that it enables us to reconstruct a more robust and fertile framework for semeiotic.[9] By examining Peirce's general view of science, his reflections on the limits of theory, and his attempts to classify the sciences, we will also learn about his attitude to sign-theoretical investigation. This survey, to be pursued in the rest of this chapter, will reveal three particularly important characteristics imputed to semeiotic; namely, the relevance of the

actual practice of semeiotic, the role of semeiotic in the scientific structure, and the common-sense basis of the theory of signs.

2.2 A Social Conception of Science

Peirce's discussions of the nature of scientific practice and method often possess a surprisingly contemporary flavour – not least because of his insistence on the sociality of science.[10] Of course, this does not mean that his views would not be affected by the time in which they were written. Peirce is a firm believer in the progress of inquiry, which according to him has "the power of self-correction and growth" (RLT 170 [1898]), as well as an advocate of a scientific approach to philosophical studies, including semeiotic.

In this day and age, Peirce's attempts to transform philosophy into a science may seem seriously misguided; to many intellectuals, "scientific philosophy" reeks of a bygone era of ill-advised positivistic agendas and dreams of unified knowledge. However, there are many important differences between Peirce's programme and the positivisms of the 19th and 20th centuries. For one thing, Peirce is not looking for epistemological foundations or building blocks in the manner typical of certain logical positivists; nor does he subscribe to the Comtean tendency to postulate absolute limits to human knowledge or approve of the tendency to justify science by its instrumental utility.[11] In view of Peirce's elaborate metaphysical theories, it is clear that Peircean "scientism" is a rather peculiar creature.

To understand why Peirce maintains that semeiotic should be pursued in a scientific spirit, we obviously need to understand how he envisages science. In the following, a number of central features of Peirce's conception of scientific inquiry will be examined. First, I will analyse his general definition of science. Then, the discussion will turn to the distinction between theory and practice, after which certain aspects of the Peircean concept of truth will be scrutinised. Finally, we will investigate the notion of a scientific intelligence capable of learning from experience, and relate it to the question of philosophical inquiry.

2.2.1 The Spirit of Inquiry

In several writings, Peirce identifies three basic views of science by distinguishing different uses of the word "science":

1. According to the classic view, "science" denotes certain knowledge. This is the conception of science typical for scholars educated in Jesuit and similar colleges (EP 2:372 [c. 1906]). In other words, the term "science" refers to the demonstrative character of certain cognition, or "knowledge through principles" (MS 618:2 [1909]; MS 339:267 [1905]). It may be the etymologically correct use of the term, but it has very little to do with the actual practice of scientific inquiries. Peirce sometimes suggests that it can be identified as the "Aristotelian" view of science (MS 618:2 [1909]).

2. On the other hand, "science" can also mean systematised knowledge (EP 2:372 [c. 1906]; MS 618:2-3 [1909]). In other words, science is understood as a body of knowledge identifiable by its well-ordered character. Such an understanding of science is common among non-scientific people, and often repeated in dictionary definitions (MS 965). According to Peirce (EP 2:372 [c. 1906]), this sense of "science" can be traced to Coleridge's definition in the *Encyclopedia Metropolitana*; it can consequently be called the "Coleridgean" conception of science.

3. Finally, Peirce claims that for practising scientists "science" means "the concrete body of their own proper activities" (EP 2:372 [c. 1906]); it denotes living inquiry guided by effective passion to find truth (MS 618:3 [1909]). This idea of science is more focused on the methods used than on the knowledge acquired; but it cannot be codified as a given methodological toolbox (cf. CP 6.428 [1893]). Rather, the scientist's conception of science, or *genuine* science as it may

> be called (see MS 618:3 [1909]), is based on moral and social considerations.

It is obvious that Peirce prefers the third conception; it is, in fact, equivalent to his own definition of *heuristic science* (EP 2:372 [c. 1906]), which he distinguishes from *practical science*, inquiry aimed at utilities, and *retrospective* science, science in the Coleridgean acceptation (cf. sect. 2.3.2). In the following discussion, "science" will be used in the sense of "heuristic science".

According to Peirce, science is not primarily a collection of facts, methods, or knowledge. Obviously, such products of inquiry are highly important, but they do not name the essential features of research. The word "science" cannot be characterised with the kind of precision and concision with which such terms as "circle" or "equation" are defined; in this respect, it is similar to concepts such as "money", "stone", or "life" (CP 7.49). For Peirce, it is important that his characterisation is not just an outcome of armchair philosophising; he is seeking a conception of science that would capture its living character as a tangible historical undertaking (cf. MS 615:10-11 [1908]). The only way to achieve such an understanding is to examine the activities of scientists, or as Peirce puts it, "scientific men".

> …there are men to whom nothing seems great but thought. In force, that which they admire and which interests them is not its exercise, but its Law. These are the Scientific Men. If we seek to define science, as it lives in history, and not merely to put it into an artificial pigeon-hole, we shall conceive it as that about which those men are busied. As such, it does not so much consist in *knowing*, nor even in "organized knowledge", as it does in diligent inquiry into truth for its own sake. (MS 1289:1; cf. CP 1.44 [c. 1896])

Before we take a closer look at what the Peircean conception of science entails, it may be in order to insert a few remarks on Peirce's notion of the "scientific man". It is based on a division of human beings into three broad classes, namely, *men of art*, *men of practice*, and *men of science* (CP 1.43 [c. 1896]). The artists are interested in appearances or qualities of feeling, and view nature as

a picture. The practical men are only impressed with worldly power and actual results; for them, nature is an opportunity to be exploited. The third group consists of human beings devoted to a life of reason; they are possessed by a passion to learn. These are scientists or "natural scientific men", as Peirce sometimes puts it (CP 1.43 [c. 1896]).[12]

Obviously, Peirce's division of human beings is rather coarse, and should perhaps not be taken literally. The classes identified are archetypes created for certain purposes.[13] Moreover, Peirce has very little to say about the character of men of art and men of practice, apart from occasionally commending the artists for their power of observation, which is supposedly superior to that of scientists (see CP 7.603 [c. 1903]). Nonetheless, the classification is of some interest, as it shows how scientists are supposed to be distinguished from other human beings by their dominating interest – their principal mode of *conduct* in life.

Yet, one may wonder whether the "scientific men" Peirce is talking about are supposed to be concrete human beings or idealisations. Although Peirce often speaks generally about the "scientific man", without references to actual scientists, he claims to base this generalisation on actual experience. On the other hand, it is clear that the Peircean scientist is an ideal figure; as we shall see when we examine Peirce's conception of science closer, the ethical demands of science are so implacable and austere that it is difficult to imagine any living human being actually being able to fulfil them.

Let us turn, then, to a more detailed look at Peirce's view of science. In this endeavour, it will be helpful first to try to identify its central components or aspects, and then to explicate these features. The following list of characteristic traits may serve as a guide in the exposition:

1. The basic starting-point of science is the desire to learn.
2. Scientific inquiry embodies certain ethical principles.
3. Science is intrinsically social.
4. Genuine research is future-oriented.
5. Scientific knowledge is fallible.

Peirce offers several different descriptions of the requirements for science, emphasising different aspects depending on the context of the exposition. Yet, there is one thing that is absolutely indispensable to genuine research, namely the unfaltering *desire* to know and learn – the *scientific spirit* or *interest* (CP 6.428 [1893]; MS 860:2$_b$ [c. 1896]; MS 326:6 [late]; MS 601:25$_v$ [late]; MS 693:48 [1904]). In a sense, it all follows from the simple principle that "in order to learn you must desire to learn and in so desiring not be satisfied with what you already incline to think" (RLT 178 [1898]). Indeed, as Susan Haack (1997, p. 241) has pointed out, this is Peirce's "First Rule of Reason" – even more fundamental than his famous maxim "do not block the way of inquiry", described by Peirce as a corollary of the primary dictate of reason.[14]

The person who pursues research in order to find corroboration for pre-given opinions, ignoring contrary evidence, cannot be a genuine scientist in Peirce's sense; "he who does not wish to learn cuts himself off from science altogether" (RLT 178 [1898]). Peirce often speaks disparagingly of "seminary philosophers", who are merely interested in devising ingenious verbal defences for their creed, instead of trying to explore the matter in a spirit of true inquiry.[15]

Taking the desire to learn to be the basic starting-point of science has interesting consequences; while not just any wish to find things out can be called research in the developed institutional sense, such a desire to inquire, however insignificant and mundane it may be, involves the essential seed of science. In other words, scientific inquiry does not miraculously appear at a higher state of intellectual development; in its most rudimentary form, as the process that follows upon the wish to escape doubt and find stable belief, it is something that belongs to the nature of all human beings (cf. sect. 2.2.2). To become a Peircean scientist, a person must elevate this natural desire above all others, and separate it from the search for individual gratification. There cannot be genuine research before such limited interests are put aside; yet, the ultimate roots of science can be located in the satisfaction of basic needs, such as feeding and reproduction.[16] Research is not

something mysterious, but a natural development from more basic activities. It never completely transcends its humble origins; "inquiry is only a particular kind of conduct" (MS 602:8 [late]). According to this stance, there is an embryonic scientist in any human being – a point of view that casts some doubt on the adequacy of Peirce's division of men.

We can now see how ethical demands emerge in the Peircean conception of science. In a sense, the first rule of reason can be construed as a moral dictum; it is the demand that a natural disposition of human beings be given a privileged position as the guide of a certain kind of conduct. It may, however, be somewhat misleading to speak of this desire as an ethical principle; in the story told by Peirce, it is such a basic human trait that it is hardly possible to reflect on it critically. In a sense, the desire is beyond intellectual appraisal; it is the given of inquiry.

Of course, elevated to the status of a principle, the first rule of reason possesses a certain moral authority; its critical edge seems to be directed against inadequate conceptions of research – against the *a priori* methods and the slavish observance of authorities typical for some philosophers. However, the true ethical substance of Peirce's conception of science – the moral attributes that are "the most vital factors in the method of modern science" (CP 7.87 [1902]) – is properly expressed by the consequences of the principle.[17] We have already identified one of these, the imperative that forbids the blocking of the path of inquiry. Another implication of the first rule is that one ought not to be satisfied with one's current fund of knowledge; the first step of finding out is *honestly* to concede that one's knowledge has flaws (MS 860:2_b [c. 1896]; CP 1.13 [c. 1897]). Nor should one build up smoke screens to avoid the criticism of others. Rather, the single-hearted desire to learn the truth entails a willingness to revise one's beliefs in the light of evidence, and the readiness to have one's errors corrected by critical examination (MS 339:267 [1905]). This requires *sincerity*, on the one hand, and *thoroughness*, on the other.

> Science consists in the sincere and thorough search for truth according to the best available methods. Its only quite indispensable condition is

> the absolute single hearted energy with which it works to ascertain the truth, regardless of what the character of that truth may be. It is not science if is not an intelligently directed research. But it will come to be so if it is absolutely sincere and highly energetic. These dispositions will generate the intelligence required. (NEM 4:xix; cf. NEM 4:227 [1905-6])

In other words, it is not individual genius (understood as an inborn disposition) which is the true mark of the scientist; it is rather a strict ethical attitude coupled with vigour.[18] Obviously, the scientific enterprise requires other talents, such as brainpower; but Peirce holds that these will be generated, almost as a secondary consequence, as long as one fulfils the basic requirements of science. In a sense, scientific intelligence is a product of inquiry, rather than the other way around.[19]

The last claim may raise a few eyebrows; is it not rather strange to maintain that intellect would be of secondary importance in the pursuit of scientific research? So it would be, if we were to understand "intelligence" to refer merely to the personal mind. For Peirce, the intelligence of scientific research is primarily *social*. In other words, the basic locus of mind is not the individual inquirer as such, but rather the scientific community that can be said to constitute *a* science.

Peirce states that science "consists in the business of a group of men organized together and specially equipped, mentally, physiologically, tactically, and materially, for the thorough survey of a province of truth, and going about it with devoted energy, with the most systematic thoroughness, and with the highest, broadest, and most detailed intelligence" (NEM 4:227 [1905-6]). This sociality is not an accidental feature of truly scientific inquiry, but almost as essential an attribute as the ethicality noted above. Indeed, it is often difficult to separate the one from the other, as the ethical requirements of science are largely communal.

As Delaney (1993b) notes, the "logical subject of the inquiry is the *scientific community over time*" (p. 44). It is important to note, however, that the sociality of science, as presented by Peirce, is both tangible and abstract. On the concrete level, it is manifested in actual collaboration and the pursuit of the best possible shared

methods (MS 339:267 [1905]; EP 2:372 [c. 1906]). For Peirce, it is a sociological fact – purportedly based upon experience of the ways of scientists – that "science" means "the total principal industry of a social group", which is bound together by a shared understanding of methods and a devotion to the pursuit (MS 655:16 [1910]). A science consists of a group of human beings who have been drawn together because they share an interest in a certain line of problems (MS 615:11 [1908]). From this point of view, scientific study can be characterised as "investigation by a considerable group [of] men who devote their lives to pursuing it according to the best established methods of their times and working in coöperation" (NEM 3:232 [1909]). The studies of a single human being are not science; science involves a wider *communicative* community (MS 1334:12-13 [1905]). Ransdell, in particular, emphasises this dimension of the Peircean conception of science. According to him, Peirce "does not identify science or the scientific by reference to any special type of property of the subject-matter of the science (its 'primary qualities', for example), or by reference to some special 'scientific method' (in the sense in which that would usually be understood), but rather by reference to the communicational relationships of its practitioners, considered members – past, present, and future – of a potentially infinite community of shared cognitive concern: truth-seekers considered just insofar as they are genuinely in search of the truth about an object of common interest" (Ransdell, 1997, §6). This is true, but Ransdell's contention that Peircean science is a *tradition* of communication about some object may need to be qualified; at least, it is important to keep in mind that the explication of the methods of science is central to the Peircean endeavour.

Cooperation and the open sharing of results are important manifestations of the social nature of science. However, Peirce notes that these do not suffice fully to explicate the sociality of scientific inquiry; true science requires critical examination by peers, that is, by all those human beings who are qualified by their life-long devotion to inquiries nearly in the same line (MS 615:10 [1908]). One of the keys to scientific success, in Peirce's opinion, is the scientists' willingness to submit findings to the judgment of the community. No discovery or item of knowledge – no matter how

true – can be considered as belonging to science before it is so published (that is, made public) as to be open to the "kind but searching and inflexible" criticism of the relevant social group (MS 615:9-10 [1908]; cf. MS 614:7-8 [1908]). If the findings sustain the critical assault, they may be taken to be temporarily established.

We see, then, that the actual publication of scientific results is not a minor feature of science in the Peircean sense. Without the possibility of public assessment, the enterprise is seriously flawed; properly speaking, it is not science after all.

While the sociality of science is readily understandable in terms of co-operative practices, there is another, more idealistic, side to Peirce's analysis of the communal aspect of science. Namely, the community of inquirers, of which he often speaks, is not restricted to the colleagues of one's generation; it is, in a pregnant sense, unlimited. Among the severe demands placed upon the scientist is a requirement for life-long devotion to the pursuit of truth. However, it is clear that many scientific practitioners never find the truth concerning the matters they investigate; nor can they rely on their companions to achieve the desired results. The true scientist is not thrown off track by this fact; the group within which he or she works is defined by the common task – or, to be more precise, the shared desire – to find the truth. It is a goal-directed community, united by a common purpose.

This brings us to the fourth general trait of the Peircean conception of science, that is, its orientation toward the future. Given that many questions will never be answered in one's lifetime, it is primarily for the benefit of future inquirers that the scientist labours. In Baldwin's *Dictionary of Philosophy and Psychology* (1902), Peirce contends that

> …the method of modern science is social in respect to the solidarity of its efforts. The scientific world is like a colony of insects, in that the individual strives to produce that which he himself cannot hope to enjoy. One generation collects premises in order that a distant generation may discover what they mean. When a problem comes before the scientific world, a hundred men immediately set all their energies to work upon it. One contributes this, another that. Another

> company, standing upon the shoulders of the first, strike a little higher, until at last the parapet is attained. (CP 7.87)

The image of soldiers advancing on the walls of the fort of truth is one of Peirce's favourite figurative representations of the scientific endeavour; in a gruesome variant of this basic theme, the troops reach the parapets by climbing on the dead bodies of those who came before (MS 615:12 [1908]). The blood-spattered metaphor is meant to illustrate the unselfishness of the scientific labourers; but it also highlights another virtue of the scientist: his or her confidence in that truth is something that could be discovered, given enough time and effort (CP 7.87 [1902]).

It is because of its orientation toward the future that science possesses a living character; it cannot be permanently codified as systems of knowledge or a "theory of everything". Furthermore, while the life of inquiry involves a sincere striving for true knowledge, it is essential for the very being of science that it is not conceived to be immune to error.

> Science is defined in the dictionaries as systematized knowledge. But that is the corpse of science. As a living thing, animating men, it need not be free from error, – nor can it be, – and it cannot be thoroughly systematized so long as it is in rapid growth. *Science is the sincere striving for knowledge for the sake of the knowledge itself*. It cannot exist as long as people think they know already or think they have an infallible teacher. (MS 965)

For Peirce, one of the self-evident facts about science is its tendency to evolve. As we saw, the scientific ethos involves the willingness to accept our individual limitations. Now, looking at the matter from a different perspective, we find that it is precisely this *fallibility* of human knowledge that fuels the growth of science (cf. sect. 2.2.4). In view of this, Peirce can state that "the most essential element of the spirit of inquiry is a swiftness to see that you have been in the wrong" (MS $860{:}2_b$ [c. 1896]). It is but a different way of saying that the essence of science is found in the passion to learn.

We may now begin to see what Peirce's claim that semeiotic is a scientific undertaking entails. Here, we receive corroboration that

the characterisation "doctrine of signs" is poorly chosen, at least if semeiotic is truly to be a science in Peirce's sense. It cannot be a system of knowledge; as scientific inquiry, semeiotic must be conceived as a mode of social activity. Therefore, it is ultimately defined by the interests of the community of semioticians – or *semeioticians*, as it might be more appropriate to say in this case. On the other hand, one may wonder what the actual status of Peirce's study of signs is; Peirce occasionally indicates that semeiotic is a science of the future, rather than an existing discipline (EP 2:413 [1907]; MS 634:14 [1909]). This causes obvious problems for the scientific conception of semeiotic; we would seem to be missing a community, or at least Peirce did so during his lifetime. How, then, could semeiotic be a science?

If we were strictly to follow Peirce's own criteria, then his theory of signs should not rank as science. This may explain why he occasionally prefers the denomination "doctrine", and why he seems to hesitate to insert semeiotic into his classification of the sciences (see sect. 2.3.3). Peirce could perhaps argue that much of what has been called "logic" is in fact what he would identify as "semeiotic".[20] Still, in the end he is forced to admit that the scientific study of signs remains a *desideratum* (MS 634:14 [1909]). The existence of semeiotic is not a self-evident fact; it is something that *may* come to blossom as an upshot of interdisciplinary co-operation (EP 2:461-462 [1909]). There is little doubt that Peirce strives to approach semeiotic in a scientific spirit; yet, as long as it lacks communal support and critical feedback, it cannot be a scientific endeavour in the full sense of the term. What we have is more like a candidate for a philosophical science, left for us, as the critics of the future, to evaluate. Peirce seems to have recognised this, as he writes that the pioneer of an entirely new line of inquiry cannot be declared a scientist, except by those who afterward follow in his or her footsteps (MS 614:8 [1908]).

2.2.2 Theory and Practice

As we have seen, the Peircean conception of science places great weight on the actual practice of science. This may come as no surprise, given that Peirce is the father (or at least one of the founders) of pragmatism. As a pragmatist, he sometimes seems to be close to such philosophers as John Dewey, who strive to overcome the sharp distinction between theory and practice; indeed, Peirce has even been interpreted as a radical denier of the dichotomy (Niklas, 1988). However, there is a different side to Peirce's conception of science; in other contexts, he emphasises that the scientific enterprise should be kept strictly *separate* from practical life.

This tension in Peirce's thought has not gone unnoticed. It is, in fact, one of the sources of Goudge's two-Peirce interpretation, which was mentioned in the introduction. According to this reading, the inconsistency in Peirce's thought can be understood as the expressions of two different intellectual personalities; the *naturalist*, who holds that theory and practice are intimately connected, and the *transcendentalist*, according to whom theoretical matters should be kept apart from practical life.

Another, more plausible, explanation for the discrepancy focuses on the development of Peirce's thought. Peirce tends to emphasise the continuity between theoretical and practical pursuits in his earlier pragmatistic philosophy, while his later writings advocate a clearer separation between these two domains. This is certainly correct, as far as it goes; but it does not make clear *why* Peirce changes his mind and what the consequences of the turn are. Albeit it does not directly affect semeiotic, the discrepancy is nonetheless a worry for the theory of signs; in the Peircean scheme, it is not just a science, it is a *theoretical* science. Thus, it is of interest to see what the later announcement of the sharp distinction between theory and practice entails. However, first we need to consider briefly the early pragmatist position to which it is usually contrasted.

Peirce presents the pragmatistic perspective on the relationship between theory and practice in the well-known articles "The

Fixation of Belief" (1877) and "How to Make Our Ideas Clear" (1878). In "The Fixation of Belief", Peirce offers an outline of the process through which thought, inquiry, and science emerge as natural products of human attempts to get by in an uncertain world. The basic idea is very simple. Peirce contends that human beings possess (in something that could be called a normal state) a set of more or less coherent beliefs. Such a belief can be defined as a readiness or disposition to act, were the suitable occasion to arise; if we believe something, then we are prepared to act based on the belief. In other words, the feeling of believing something is a more or less certain indication that a *habit of action* has been established in our nature (W 3:247 [1877]). Indeed, a "belief" could be defined as a habit of which we are aware, as Peirce does in the following later passage:

> A *Belief* is a state of mind, of the nature of a habit, of which the person is aware, and which would induce him to act, supposing he acts deliberately, in a certain way on suitable occasions. [---] We are aware of our beliefs. A habit which causes us to act in a certain way, but of which we are unconscious, so that we cannot directly control and criticise it, ought not to be called a belief. A person may deceive himself and imagine that he believes something that he does not believe. (MS 717:2 [c. 1894?])

If our habits always would work faultlessly, there would be no stimulus to or reason for inquiry; there would hardly be any need for advanced thought. We would, like the animals, cope mainly with our innate habits, or never question the patterns of action we have inherited from previous generations. However, human beings obviously *do* encounter surprises, resistances, and disappointments. Nature refuses to bow to our will; we meet people who hold different opinions and beliefs. Such occasions lead to what Peirce denotes as *doubt*. When in doubt, we become acutely aware of our beliefs – that they *are* beliefs and not self-evident facts.

Doubt and belief are related to action, but in different ways. A belief (or rather the underlying habit) *could* lead to action in certain situations; it is real, even if it is not constantly actualised. Doubt, on the other hand, is a direct incitement to action. There is a gap in the

normal pattern of behaviour, and this requires the agent to take measures. The feeling of irritation, which accompanies doubt, leads to a struggle to achieve a new state of belief. This effort is *inquiry* (W 3:247 [1877]).

Peirce's choice of terminology in the pragmatistic essays of the 1870s can be somewhat confusing. As he himself notes, "belief" and "doubt" are typically used in religious and other serious contexts (W 3:261 [1878]). Yet, Peirce holds that the dialectics between belief and doubt is an everyday phenomenon, which is not restricted to such lofty situations or to proper scientific activity. One could say that all processes, which require the active use of mind, are examples of inquiry in this very broad sense. It can concern such a mundane matter as figuring out what combination of notes and coins to use when paying for groceries. If one does not act according to a perfectly mechanical habit, the transaction involves a kind of minimal and relatively unimportant process of inquiry. This is more evident in the case of going to a shop in a foreign country, using a strange currency.

In his early pragmatist writings, Peirce straightforwardly contends that the only aim of inquiry is to fixate belief (W 3:248 [1878]). Does this mean that there is no research unless we first encounter surprises and resistance? Yes, in a certain sense. According to Peirce, the doubt that brings forth inquiry must be *genuine*. It is not sufficient to say or write that one doubts something; "paper doubt" is not real doubt. This rule applies also to philosophical activities; "Let us not pretend to doubt in philosophy what we do not doubt in our hearts" (W 2:212 [1868]).

However, this maxim does not prevent us from doing thought experiments concerning situations in which we do not actually find ourselves. Peirce offers a commonplace example; if one sits at a railway station and waits for a train, one can examine advertisements and schedules, and just to spend time try to figure out how it would be best to get from town *A* to town *B* – even if one is not planning to make such a trip (W 3:262 [1878]). This process involves a real uncertainty concerning the best path of action and a genuine attempt to establish how it would be reasonable to behave. The play of thought can establish a habit of action; in fact, Peirce

indicates that this kind of imaginary experiment exemplifies the basic model of scientific and philosophical research. It is performed with the assistance of diagrams (cf. CP 2.227 [c. 1897]).

Given that Peirce allows the use of thought experiments as inquiry inciters, one may wonder what his rejection of paper doubt actually amounts to; could not almost any faked hesitancy be defended on the grounds that it *might* prove to be productive for cognitive development? This is too large a topic to discuss in detail here,[21] but we may note that it is possible to hold that thought experiments are acceptable only as long as they relate to a really present doubt or a potentially consequential question within a particular line of inquiry; according to the Peircean point of view, attempts to find foundations for knowledge by systematically doubting everything in sight is a dead end. Thus, if we do not genuinely distrust the reality of the external world or the existence of our bodies there is nothing to be gained by a philosophical programme of methodical doubt.

Peirce's view of the interplay between doubt and belief has several implications for his conception of inquiry and science. In the following, four are noted.

1. Inquiry is always concerned with a limited part of our beliefs, never with our entire web of beliefs simultaneously. This is the basis of Peirce's anti-Cartesian position, which sets out from the fact that human beings are acting creatures, always involved in various doings. Total doubt would lead to complete paralysis of action. As Peirce notes in a late letter to Lady Welby, useless doubts "are worse than useless" (SS 141 [1911]).

2. The view of inquiry presented in the early pragmatistic writings displays certain naturalistic leanings. "Higher" cognitive activities, such as conscious thought and science, build on the interaction between the basic natural states of doubt and belief.

3. There is a continuum between thought and action as well as between thought and feeling. The goal of thought is to create the conditions for successful action, i.e., beliefs and habits of action that help us to avoid surprise and doubt (cf. W 3:263 [1878]). In this sense, it would appear that thought serves action; it is not clear whether it possesses any value in itself, as "pure" theory or speculation.

4. There is a connection between everyday practical problems and their solutions, on the one hand, and scientific and theoretical activity, on the other. In both cases, it is a matter of fixating beliefs and opinions. Of course, we are talking about different levels of activity, but the basic dynamics is the same.

Based on Peirce's early pragmatistic writings, one might conclude that he wishes to collapse the traditional dichotomy between theory and practice (cf. Niklas, 1988). In this account, inquiry is so intimately connected to action that the distinction can only denote a variation in degree. However, moving approximately 30 years forward in time, we find Peirce espousing a very different position.

In *Reasoning and the Logic of Things* (The Cambrige Conferences lectures of 1898), Peirce explicitly discusses the relationship between theory and practice, and its relevance in connection to the function of philosophy. In this context, Peirce separates the two spheres of activity, theory and practice, and argues that philosophy must be seen as a theoretical undertaking. In the lectures and a number of writings from the same period, he advocates an anti-utilitarian conception of inquiry and science, explicitly distancing himself from positivists such as Pearson. The truly scientific inquirer is not concerned with the utility of his or her activities; the idea does not even crop up (RLT 107 [1898]). Of course, Peirce admits that an empirical scientist can work on useful applications within such domains as chemistry and physiology; but from a *scientific* point of view, such things are by-products.

In philosophy, the situation is different; according to this later point of view, attempts to use philosophical reflection as a normative guide in practical life are nearly always misguided. On the one hand, they hamper free investigation by demanding that philosophy ought to justify its existence through useful applications; on the other hand, Peirce warns us of letting philosophical speculation directly affect our established – natural or social – patterns of conduct. He is not arguing that such domains of inquiry as the philosophy or religion or ethics should be discarded; but he maintains that one ought not to change one's life based on the findings of such theoretical undertakings (RLT 108 [1898]). Peirce does not assert that philosophical theories would have *no* effect on human habits; but he contends that the process of influence ought to be slow, restrained by the conservative force of mores and existing patterns of thought.

Philosophical activity should allow us to consider whether our habits of action are based on accidental conventions or laws that are more substantial. However, to draw the conclusion that incest is acceptable based on a relativistic ethical theory is a kind of intellectualistic *hubris*. It is to exaggerate the relevance of intelligence in relation to what Peirce calls the *sentiment*, our feeling for what is right and wrong in real life.

Peirce makes a basic distinction between two spheres: the *practical*, where sentiment and conventional habits guide our behaviour, and the *theoretical*, which is the proper domain of intellect. In general, our conscious processes of reasoning are less relevant for conduct than we tend to think (RLT 110 [1898]). Obviously, we often use our intelligence when confronted with practical problems in everyday life; but it does not require an expressly developed theory. Peirce claims that human beings possess what he (following medieval philosophers) calls a *logica utens*, a kind of habitual "logic in use" or a rudimentary logical theory (RLT 109 [1898]; CP 2.186 [c. 1902]; CP 2.773 [1902]; CP 4.476 [c. 1903]; PPM 212 [1903]). In most cases, we manage nicely without being fully aware of the logic we employ; in fact, to try to apply a proper logical *theory* may increase the possibility of mistakes in such circumstances.[22]

However, there are also practical situations in which reasoning has *no* place, according to Peirce. These are so-called *vital crises*, in which we are forced to make crucial decisions. They are unique predicaments; a choice must be made *here and now*. An example of such a situation is personal religious crisis. In such extreme circumstances, it is pointless – even harmful – to reason, to weigh alternatives and to construct theories.

> …in the conduct of life, we have to distinguish everyday affairs and great crises. In the great decisions, I do not believe it is safe to trust to individual reason. In everyday business, reasoning is tolerably successful; but I am inclined to think that it is done as well without the aid of theory as with it. A *Logica Utens*, like the analytical mechanics resident in the billiard player's nerves, best fulfils familiar uses. (RLT 109 [1898])[23]

We have no option but to trust to our conventional or common-sensical habits of behaviour, which are accompanied by more or less vague sentiments. Peirce argues that it is unwise to attempt a critical analysis of such feelings in a crisis; it is, simply, a matter of things seeming right or wrong. This shows, according to Peirce, that the true substance of a human being is located in his or her instincts and "sentimental" feelings (RLT 110 [1898]). Our conscious mind and our controlled cognitive capabilities are relatively superficial phenomena.

The distinction between theory and practice Peirce advocates is based on the idea that scientific activity – which according to him ought to include philosophy – should not be subordinated to the demands of practical life. The scientific problem is, in a sense, the opposite pole to the vital predicament. Reason cannot help us in truly vital crises; likewise, there is no room for sentiment in theoretical activity. Obviously, researchers often try suggestions that feel "instinctively" plausible; but in such cases, the propositions must be seen as scientific hypotheses, which one should be able to abandon without scruples (RLT 112 [1898]).

Peirce claims that the scientist's propositions are not beliefs in the full sense of the word. If we in practical life form or adopt a belief, it entails that we are prepared to act in certain way in a

possible situation. However, all beliefs – practical and theoretical alike – can be said to involve expectation and thus a reference to the future (Potter, 1996, p. 73). The proposition practically believed possesses a degree of *vital* relevance or meaning; we cannot simply *choose* to change our living beliefs. In this discussion, Peirce makes a distinction between two degrees of belief; "full belief" denotes the readiness to act according to a proposition (of which we need not have a clear conception[24]) in vitally important circumstances, while "opinion" refers to a readiness to act in a similar way only in relatively inconsequential situations (RLT 112 [1898]). According to Peirce, scientific activity, in which hypotheses are tested, is of less weight than other forms of life; human beings *could* live without science. Its accepted propositions are more like opinions than full beliefs; they can be abandoned without thereby causing irrevocable problems for everyday conduct. As Hookway (2000, p. 24) notes, Peirce at times severs scientific assent from belief in general, but it is the distinction between scientific claims and *full* beliefs that is truly important in this context.

Peirce's emphasis on the difference between scientific assent and full belief reflects his concern with the autonomy of institutionalised inquiry. Peirce holds that the assertions of science lack proper moral bearing for the scientist, who ought to avoid fixation to his or her own ideas. On the other hand, the investigator should be able to try any hypotheses – no matter how wild and revolutionary – in the context of science; "Conservatism – in the sense of a dread of consequences – is altogether out of place in science – which has on the contrary always been forwarded by radicals and radicalism, in the sense of the eagerness to carry consequences to their extremes" (CP 1.148 [c. 1897]; cf. CP 1.120 [c. 1896]). The scientist ought to be free to surmise and experiment, as long as this process is kept resolutely apart from daily life and its quandaries.[25] From this point of view, belief does not belong in *pure* science.

> …pure science has nothing to do with *belief*. What I *believe* is what I am prepared to go on today. Imagine a general besieging a city. He sits in his tent at night preparing the details of his plan of action for the

> morrow. He finds that what his orders ought to be and perhaps the whole fate of his army depend upon a certain question of topography concerning which he is in need of information. He sends for his best engineer officer, – a highly scientific man, – and asks how he is to ascertain the fact in question. The officer replies, "There is only one possible way of ascertaining that. So and so must be done." "How long will that take?" "Two or three months." The general dismisses the man of science, – as Napoleon dismissed Laplace, – and sends for another officer, not half so scientific, but good at guessing. What this officer shall say, the general will go by. He will adopt it as his belief. (CP 7.606 [c. 1903])

It seems, then, as if the older "sentimentalist" Peirce would distance himself from the younger pragmatist's union of theory and practice. Evidently, some transformations in his thought have taken place. Yet, the conclusion that Peirce would have completely abandoned the standpoint of his own early pragmatism is not satisfactory. The mature Peirce continues to adhere to pragmatism; the modifications he introduces in the later writings are more like corrections than full-scale changes of opinion. Moreover, he continues to espouse the doubt-belief theory of the origin of inquiry.[26] His criticism of the early pragmatistic texts focuses on what he sees as certain nominalistic errors in its examples. Nowhere do we find any explicit statement to the effect that his earlier position should be rejected. On the other hand, Peirce does not explain how the two views of theory and practice are supposed to fit into the same picture.

As a first step towards a reconciliation of Peirce's seemingly conflicting positions, we may note that they are focused on different levels; it may even be misleading simply to identify the kind of inquiry Peirce speaks of in "The Fixation of Belief" and "How to Make Our Ideas Clear" with the scientific research discussed in the later writings. In the early pragmatist papers, Peirce is offering a description of how inquiry, in the sense of problem-solving, emerges from the basic cognitive states of doubt and belief; in the lectures of 1898 Peirce is mainly concerned with the status of science on a more developed level. When he speaks of the rift between "theory" and "practice" in the latter context, he is

not denying that the *origin* of scientific research and theoretical endeavours could be traced back to simple human functions. In fact, the evolutionary and "synechistic" stance Peirce promotes at roughly the same time he separates theory from practice would not permit the postulation of an absolutely self-sufficient domain of pure intellectual activity.[27]

The disconnection of theory and practice in Peirce's later writings should be understood as the separation of two social domains. Theoretical activity, or science, must not be judged according to the criteria of the practical world. The very being of scientific research requires that it be freed from the burden of proving its concrete usefulness.

> True science is distinctively the study of useless things. For the useful things will get studied without the aid of scientific men. To employ these rare minds on such work is like running a steam engine by burning diamonds. (CP 1.76 [c. 1896])

Thus, we have seen that Peirce can claim that scientific research is a natural development from more rudimentary cognitive or proto-cognitive functions, and therefore originally rooted in practical contexts, while at the same time maintaining a quite strict distinction between the spheres of theory and practice. Moreover, we have established that the Peircean scientist is not concerned with the utility of his or her results; the uselessness of its object of study is, in fact, a defining characteristic of a genuine science. The tensions in Peirce's account of theory are to a large extent explainable by the fact that he rejects two different common views of theoretical investigation, which Vincent Potter (1996, p. 68) identifies as the "doctrinaire view" and the "utilitarian view". According to the former, the substance of science is to be found in its results, that is, its acquired truths. We examined Peirce's criticism of this Coleridgean position earlier (see sect. 2.2.1). The utilitarian standpoint is rejected because it reduces science to technology and philosophy to ideology (Potter, 1996, p. 68).

However, in spite of these explications and qualifications, Peirce's mature view of the autonomy of the scientific enterprise is still troubled by its seemingly unpragmatistic upshot; apart from its

origin – with which it need not actively concern itself – scientific inquiry appears to function in a sphere all of its own, and theoretical propositions are ostensibly severed from all practical concerns. As we found out in the last section, Peirce emphasises that science is oriented toward the future. This would seem to imply that no kind of practical considerations actually enter into its operations, except perhaps in the relatively unimportant theory of its own genesis.

Yet, there is a twist to the story. According to the pragmatism that Peirce never abandons, the meanings of concepts and propositions cannot be properly understood without reference to their conceivable practical consequences. Thus, we find him criticising students of theological seminaries, who think that they understand intellectual truths without considering the possible practical applications of such propositions (MS 601:12-13 [late]). In fact, Peirce explicitly asserts that "a theory cannot be sound unless it be susceptible of applications, immediate or remote, whether it be good economy so to apply it or not" (CP 2.7 [c. 1902]), and he notes that "practical considerations enter into scientific reasonings, unavoidably" (NEM 3:874 [1909]). These contentions seem to fit poorly with the autonomy of science that Peirce advocates. In fact, they do indicate certain limits to the ideal freedom of scientific inquiry. In a pragmatistic spirit, Peirce maintains that theoretical conceptions must have some kind of connection to actual or possible practice; it is the basis of their testability, their communal validity. In other words, the claims must be in some sense open for public testing, although their truth is not dependent on any actual tests.[28] Moreover, science typically gives rise to new possibilities for experimentation; "although heuretic scientists look upon their work as purely theoretical, and many of them feel a utilitarian application, even of the highest kind, is comparatively lacking in the sacredness of pure science, they are nevertheless particularly given to thinking of their results as affording conditions for new experiments, if not in the narrower, then in the broader sense of the term,[29] although they may have the vaguest possible notions of what those experiments may be" (EP 2:372 [c. 1906]). Although science, unlike food and shelter, is not a necessity of life, it is

nonetheless the primary means by which human beings can deliberately develop their cognitive capabilities. The fact that theoretical claims are always idealisations without exact correspondents in the practical world does not render them useless.

> Of course, no proposition of theoretical science is true in practice. In other words it is only true of an ideal world that differs from the actual world. What of that? It is the only way to attain any kind of mastery of the real world. (NEM 3:833 [1905])

Peirce's seemingly contradictory statements concerning the relevance of practice can be reconciled if one takes into consideration three different Peircean conceptions of the practical. Colapietro (1998, p. 248) identifies two principal acceptations of "the practical" in Peirce's writings. In the narrowest sense, "practical" refers to a restricted interest in immediate satisfaction; but Peirce also defines the term as "apt to affect conduct", adding that conduct is "voluntary action that is self-controlled, i.e. controlled by adequate deliberation" (CP 8.322 [1906]). Science and theory should be severed from practical concerns in the first sense, but cannot be wholly isolated from conduct in the second pragmatistic meaning. To these two senses, we could add the broader acceptation of practical as a sphere of life distinguishable from theory.

Putting all this together, we see that a more coherent picture begins to emerge, one that recognises a fundamental connection between theory and practice, but does not simply reduce the former to the latter. Admittedly, some of Peirce's discussions of these matters are uncomfortably one-sided and polemical,[30] but with a reasonable amount of interpretative labour, a balanced account may be obtained. Potter gives a useful reconstructive summary of the Peircean position:

> Peirce's pragmatism recognizes a fundamental connection between thought and action, between theory and practice, but without confusing the two and without inverting the order of the relation. Thought *ultimately* applies to action and theory ultimately applies to practice, at least in the sense of referring to conceivable action and to conceivable practice. But this is quite different either from making thought to

> consist in action and theory to consist in practice, or from making thought's ultimate purpose action and theory's ultimate purpose practice. Action through thought is only the upshot of inquiry; it is neither its purpose nor its legitimate motive. (Potter, 1996, p. 74)

Now, turning to semeiotic, we may note that whatever else it may be, it is definitely a theoretical undertaking in Peirce's sense. Consequently, it is not primarily focused on concrete applications, and should be allotted an autonomous space, within which to pursue its researches. Semeiotic is a highly theoretical prospect, of questionable use for the tasks of ordinary life. On the other hand, the study of signs should not be permitted to become a mere conceptual recreation for intellectuals, without any practical considerations to give it direction and meaning. Its significance is based on the connection of its findings to conceivable habits of action, present or future. Although Peirce at times writes as if scientific theories would exist in a sphere of their own, we have seen that a fuller consideration of his view of theoretical pursuits does not separate them from the world of practice. Peirce expresses this contention in relation to logic in the passage below.

> ...whatever fact had no bearing upon a conceivable application to practice would be entirely impertinent to such a science [that is, to normative logic – *MB*]. It would be easy enough – much too easy – to marshal a goodly squadron of treatises on logic, each of them swelled out with matter foreign to any conceivable applicability until, like a corpulent man, it can no longer see on what it is standing, and the reader loses all clear view of the true problems of the science. (CP 2.7 [c. 1902])

2.2.3 Truth and Hope

In our discussion of Peirce's general definition of science, we observed that he frequently refers to the desire for truth as a characteristic mark of the genuine scientist; indeed, he often asserts that it is the only thing definitely indispensable for scientific inquiry. This quality renders science essentially purposive or goal-directed. However, we now need to consider the *goal* of the activity,

that is, *truth*. Obviously, scientific research does not consist merely in the framing of hypotheses; as we saw in the discussion of theory and practice, even the most abstract propositions must possess *some* conceivable connection to practical consequences, in order to be permissible in Peircean science. In addition, scientific statements *lay claim* to being true, that is, to being in some sense accurate representations of the way things are. How, then, are we to understand this "truth" at the heart of Peirce's conception of science?

The question of the meaning of "truth" is one of the most difficult and ardently debated questions of Peirce scholarship (see, e.g., Hookway, 2000; Misak, 1991; Thayer, 1996). Robert Almeder (1985) has identified no less than thirteen distinct interpretations of what Peirce might plausibly have meant by the term. Surveying this list, we find that it appears to be possible to attribute almost any of the contemporary views of truth to Peirce, as long as we focus on certain passages and ignore others. Namely, he seems to approach truth variously in terms of correspondence, coherence, pragmatic adequacy, communal consensus, or variants or combinations of these. Numerous attempts to explain the discrepancies and reconcile the varying accounts of truth have also been proposed. We need not go into the details of these multifaceted discussions; but it will be useful to examine some of the ways in which Peirce talks about truth.

Peirce rarely stops to explicate his uses, and even seems to be deliberately vague and rhetorical when speaking of the truth. Still, a closer examination reveals some important distinctions within his concept. Firstly, it is helpful to distinguish the general adjectival use of "true", which refers to a quality that can be predicated of propositions, from "truth" as the real state of things represented in such propositions. On the one hand, "truth" is something that can be attributed to a certain class of signs; it "is a character which attaches to an abstract proposition, such as a person might utter" (CP 5.565 [1902]). On the other hand, the term denotes the propositional content of truthful assertions. Peirce does not offer a designation for the latter acceptation; we might call it *substantial truth*.

Next, it is important to see that Peirce identifies different kinds of substantial truth. He only rarely discusses these varieties, but the following passage is enlightening:

> By a *true* proposition (if there be any such thing) I mean a proposition which at some time, past or future, emerges into thought, and has the following three characters:
>
> 1st, no direct effort of yours, mine, or anybody's, can reverse it permanently, or even permanently prevent its asserting itself;
>
> 2nd, no reasoning or discussion can permanently prevent its asserting itself;
>
> 3rd, any prediction based on the proposition, as to what ought to present itself in experience under certain conditions, will be fulfilled when those conditions are satisfied.
>
> By a *reality*, I mean anything represented in a true proposition.
>
> By a *positive* reality or truth, I mean one to which all three of the above criteria can be applied, - of course imperfectly, since we can never carry them out to the end.
>
> By an *ideal* reality or truth, I mean one to which the first two criteria can be applied imperfectly, but the third not at all, since the proposition does not imply that any particular state of things will ever appear in experience. Such is a truth of pure mathematics.
>
> By an *ultimate* reality or truth, I mean one to which the first criterion can be in some measure applied, but which can never be overthrown or rendered clearer by any reasoning, and upon which alone no predictions can be based. Thus, if you are kicked by a horse, the fact of the pain is beyond all discussion and far less can it be shaken or established by any experimentation. (NEM 3:773 [1900])

If a true proposition enters into cognition, its assertion cannot be thwarted by effort, reasoning, or discussion; furthermore, it possesses predictive power. Based on these *criteria* of the truth of a proposition, Peirce distinguishes three kinds of reality or substantial truth.[31] None of them fulfils the conditions of truth perfectly. We can *apply* all three criteria to positive truth, but are not able to do so conclusively and completely. The criterion of experiential predictability does not pertain to ideal truth, which is hypothetical or abstract in nature. An ultimate truth or reality is almost beyond testing; it is, as the name implies, a *definitive* fact, which cannot

really be critically questioned. It is of little or no interest for science, as it is not subject to reasoning, experimentation, or social examination.[32]

Science is principally engaged with the first two kinds of substantial truth; mathematics discovers ideal truths, while the empirical sciences disclose positive truths (cf. sect. 2.3.2). Consequently, we find that Peirce acknowledges that different kinds of scientific research involve different conceptions of truth – or rather, different criteria for true assertion.

Yet, there is a sense in which all sciences are concerned with the one and the same idea of truth. On the most general level, "truth" can be defined in terms of the final set of propositions that inquirers are bound to reach. This is, of course, the well-known view of truth presented in "How to Make Our Ideas Clear", in which Peirce states that the "opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real" (W 3:273 [1878]). This famous position, often interpreted as a convergence or consensus theory of truth and reality, expresses the meaning of the terms "truth" and "reality" in their third, pragmatistic degree of clearness (cf. sect. 5.2.3). It has sometimes been noted that Peirce also espouses a straightforward correspondence theory of truth; but upon closer examination, it will be seen that this is best conceived of as truth in its second grade of clearness – that is, the "nominal" definition according to which truth consists in "the correspondence of a representation with its object" (EP 2:379 [c. 1906]). This basic characterisation can be to some extent elaborated by saying that the true proposition is a sign that accurately states that the predicate sign represents the same thing as the subject sign.[33]

The pragmatistic conception of truth and reality has probably been discussed more than any other issue in Peirce scholarship; we can only scratch the surface here.[34] However, two things need to be noted. First, we may observe that in order for there to be any truth in the final state, the state must be of a semiotic character; that is, it will involve propositional representation (see MS 655:30 [1910]). Peirce indicates that the end of inquiry can be reached by

developing the right methods of *transforming signs*; that is, adequate means and techniques of interpretation (EP 2:380 [c. 1906]). Still, it is notoriously difficult to determine how he pictured the end state of inquiry. Probably, it should be a condition of perfect representation, in which the object is transparently given in or through the sign. We could perhaps say that in the ideal state the internal object corresponds perfectly to the external object (cf. sect. 4.2.2). However, unless the final state is a mere brute fact, this unified object must also be intelligible, and therefore of a representational character itself; "that to which the representation should conform is itself something in the nature of a representation, or sign, – something noumenal, intelligible, conceivable, and utterly unlike a thing-in-itself" (EP 2:380 [c. 1906]).[35]

The second thing of interest concerns the ideal nature of truth (not to be confused with *ideal truth*, which was briefly discussed above). Assuming that there is an opinion toward which inquiry tends to converge, it is possible to define the truth of a proposition by relating it to the final state; "Truth is that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring scientific belief which concordance the abstract statement may possess by virtue of the confession of its inaccuracy and one-sidedness, and this confession is an essential ingredient of truth" (CP 5.565 [1902]). Peirce's choice of words is of some interest here; instead of correspondence, he speaks of *concordance*. This could be interpreted as a weaker demand on the truth of a proposition. The statement need not correspond perfectly with the object of the final opinion to be true; it is sufficient that it *agrees* or *coheres* with the propositions of the final state. The present proposition may be partially true or inaccurate; in a sense, it may include a true concession of its own deficiency in this regard. This is the character of adequate scientific statements, which are presented *as* being true, but which still involve an acknowledgement of their hypothetical and fallible nature.

Yet, this leaves the most difficult problem concerning Peirce's notion of an ideal state, toward which inquiry supposedly tends. The inevitable question that arises in this context is how we should

understand the convergence Peirce is talking about; does he mean that science *will*, given sufficient time, come to a preordained opinion, or is he rather speaking more vaguely of an inclination or ideal inherent in scientific activity. Some of Peirce's early statements suggest that it is *fate* that such a state *will* be reached, given enough time and effort (e.g., W 2:353 [1869-70]; W 2:469 [1871]; W 3:57 [1872]; W 3:79 [1873]; W 3:273 [1878]). However, in many later writings, Peirce expresses serious doubts about the adequacy of his previous account, and the "will-be" of the earlier position is replaced by the conditional "would-be" (PPM 285 [1903]; MS 655:27 [1910]; EP 2.457 [1911]; see also CP 2.661 [1910]). At the same time, Peirce begins to stress that the final state will never *in fact* be attained; it will always remain out of reach for mortal inquirers.

Almeder (1985, p. 86) has dubbed the interpretation of Peirce's development mentioned above the "received view" of his conception of truth. In Peirce scholarship there is, indeed, a near consensus, according to which whatever else the Peircean final opinion may be, it is definitely not a concrete state that will be reached. According to Almeder, this is an error; the ultimate truth should be conceived of as a destined product, rather than as a mere ideal. In contrast, the received view contends that Peirce, in his later philosophy, softens his conception of the final truth, going so far as to hold that it is an *assumption* or *hope* of inquiry.

Almeder concedes that Peirce unquestionably expresses doubt concerning the possibility of *human* inquirers ever reaching the final state; it is, after all, a distinct possibility that the planet will be destroyed some day. However, Almeder (1985, p. 88) argues that this does not mean that Peirce would have abandoned the view according to which scientific inquiry will, inevitably, reach the settled conclusions that are preordained. Intelligence is not restricted to human beings; as long as there is rational life in the universe, there will be inquiry heading toward the same destined opinion. In Almeder's reading, Peirce's faith in the unlimited extension of scientific investigation takes precedence over his misgivings concerning the final state ever being reached. Almeder claims that Peirce came to hold that belief in the indefinite

continuation of inquiry is a necessary condition for being rational; in order to act rationally, we must believe that the ultimate opinion will be attained.

Almeder uses a kind of transcendental argument in his attempt to show that the received view is mistaken. However, this is somewhat ill-advised, as Peirce explicitly distances himself from such argumentative strategies in his discussions of truth.

> …when we discuss a vexed question, we *hope* that there is some ascertainable truth about it, and that the discussion is not to go on forever and to no purpose. A transcendentalist would claim that it is an indispensable "presupposition" that there is an ascertainable true answer to every intelligible question. I used to talk like that, myself; for when I was a babe in philosophy my bottle was filled from the udders of Kant. But by this time I have come to want something more substantial. (CP 2.113 [c. 1902])

Admittedly, Peirce sometimes speaks of the final truth as a rational assumption entertained by all genuine inquirers or as a requirement of logic; but in view of the above quotation, this must be taken in a weaker, non-transcendentalist sense.

Still, the more serious deficiency in Almeder's account is that he refuses to take Peirce's distinction between what *will be* and what *would be* seriously. This is not a mere play with words, but marks a categorial leap in Peircean philosophy. The nature of the would-be is such that it will never be completely actualised; it is the being of a law or habit. The will-be, on the other hand, is merely the actuality of the future. Almeder does not seem to accept this distinction; but in doing so, he definitely parts ways with Peirce. Therefore, his account cannot represent Peirce's position adequately.

In spite of Almeder's protests, the received view is correct; there occurs a relevant shift in Peirce's account of truth and inquiry when we come to his later writings.[36] It may be more of a correction than a full-out transformation; but the change is nevertheless noticeable in passages such as the following:

> In reference to any particular investigation that we may have in hand, we must *hope* that, if it is persistently followed out, it may ultimately have some measure of success; for if it be not so, nothing that we can do

> can avail, and we might as well give over the inquiry altogether, and by the same reason stop applying our understanding to anything. So a prisoner breaks through the ceiling of his cell, not knowing what his chances of escape may be, but feeling sure there is no other good purpose to which he can apply his energies. (NEM 4:xii-xiii)

> We cannot be quite sure that the community ever will settle down to an unalterable conclusion upon any given question. Even if they do so for the most part, we have no reason to think the unanimity will be quite complete, nor can we rationally presume any overwhelming *consensus* of opinion will be reached upon every question. All that we are entitled to assume is in the form of a *hope* that such conclusion may be substantially reached concerning the particular questions with which our inquiries are busied. (CP 6.610 [1893])

> …we hope that any inquiry which we undertake will result in a complete settlement of opinion. We never need abandon that hope. The representation of the reality in such destined opinion is the reality. (MS L75c:90 [1902])

Observe that Peirce here prefers to speak of *particular* investigations. This also marks a change of perspective; while the earlier accounts of the final opinion tend to focus on inquiry in general, Peirce's mature writings are more prone to adopt the point of view of an individual line of research, that is, trying to find the truth about a certain question. Although there are no guarantees that there are no inexplicables, assuming that any given fact would be of such a character is not warranted by experience; "far less can it show that any fact is of its own nature inexplicable" (W 6:206 [1887-8]). The hope concerning *each* case is then generalised, by a cognitive leap, so as to be stated as the law of excluded middle, applicable to *all* cases (NEM 4:xiii [1913]). This constitutes the basis of the idea of *one* final opinion. In spite of appearances, this hope does not require a strong commitment to a "theory of everything"; we "must look forward to the explanation, not of all things, but of any given thing whatever" (W 6:206 [1887-8]). This is no more paradoxical than holding each of our beliefs to be true, while at the same time acknowledging that it is highly unlikely that they would all be true.

What, then, supports the hope that there will be an answer to any question? How can we be certain that there is any truth to be found? Peirce provides no guarantees; it may very well be that there is no such thing as "truth" in reality (SS 73 [1908]; MS 655:26-27 [1910]; cf. NEM 3:773 [1900]). However, he offers a couple of weaker arguments in support of the hypothesis of truth. Firstly, the practice of inquiry, as it emerges from the doubt-belief process, naturally leads us to assume that there is some truth to be found. What we believe in, we hold for true; consequently, in striving to fixate belief, we are already looking for truth.[37] This seems to point toward a conception of truth in terms of *satisfaction*, often associated with the pragmatism of Peirce's contemporaries (e.g., with James and F. C. S. Schiller). Peirce might agree to some extent, but he would add the requirements of sufficient time and effort to the definition; "when I say that a given assertion is 'true', what I mean is that I believe that, as regards that particular assertion, [...] sufficiently energetic, searching, and intelligently conducted inquiry, – could a person carry it on endlessly, – would cause him to be fully satisfied with the assertion and never to be shaken from this satisfaction" (MS 655:27 [1910]).

A second argument for the assumption that there is at least some truth in the world is provided by the history of science (MS 655:26-27 [1910]). This is only weak supporting evidence, affording no certainty; but the success of scientific inquiry renders the hypothesis of a final opinion at least plausible.

In the end, however, Peirce does not appear to be worried by the lack of a proof for the existence or reality of truth. Instead, the notion of truth is taken as more or less given, emerging from the ongoing activity of inquiry. In a sense, the desired truth is always in the future; in other words, absolute truth (as distinct from positive and ideal *truths*) is an ideal goal of investigation. On the other hand, Peirce *is* definitely concerned about the need to acknowledge the public or social dimension of truth.

> Unless truth be recognized as *public*, – as that of which *any* person would come to be convinced if he carried his inquiry, his sincere search for immovable belief, far enough, – then there will be nothing to

> prevent each one of us from adopting an utterly futile belief of his own which all the rest will disbelieve. Each one will set himself up as a little prophet; that is, a little "crank", a half-witted victim of his own narrowness.
>
> But if Truth be something public, it must mean that to the acceptance of which as a basis of conduct any person you please would ultimately come if he pursued his inquiries far enough; – yes, every rational being, however prejudiced he might be at the outset. For Truth has that compulsive nature which Pope well expressed:
>
> The eternal years of God are her's.
>
> But, you will say, I am setting up this very proposition as infallible truth. Not at all; it is a mere definition. I do not say that it is infallibly true that there is any belief to which a person would come if he were to carry his inquiries far enough. I only say that that alone is what I call Truth. I cannot infallibly know that there is any Truth. (SS 73 [1908])

If there is any such thing as a truth, it must be something that the sincere inquirer *would* be able to discover, given enough time; there are no strictly private truths. Truth and reality can be defined philosophically by reference to their capacity to bear down prejudices (NEM 4:349 [1899-1900]). The communal mode of conduct known as science is particularly efficient in eliminating unwarranted individual opinions; therefore, it tends to triumph over other methods of establishing belief, such as the method of *tenacity*, the method of *authority*, and the *a priori* method.[38] The pursuit of truth is intimately bound to the social impulse at the heart of scientific activity.

To conclude this brief overview of the connection between truth and hope in Peircean science, we may note that it suggests a special variant of *objectivity*. According to Ransdell (1979), Peirce's social conception of scientific truth entails "semiotic objectivity", where "objectivity" is not understood in terms of results or inferential procedures, but rather as "a matter of the recognition *in* one's communication with other inquirers that where one started from, and how one got to the conclusion (or how one thinks one can get to that conclusion), may be capable of being corrected by them, and hence are to be shared so that they can be subjected to the real possibility of such a correction" (p. 264). As we have seen, this

requirement of openness is indeed a crucial part of the Peircean notion of inquiry. In addition, Ransdell (1979) plausibly states that "science is primarily a *code of conduct* – something rather more like a code of honor than a linguistic code – which is constitutive of an ideal and shared form of life, that ethic being derived logically from an analysis of how we must relate to one another communicationally if we are to achieve our common goal of a shared understanding of our subject matter" (pp. 266-267). Although Peirce examines scientific truth on many levels, this pragmatistic view of objectivity is perhaps the most significant implication of his discussions; it is certainly the most relevant point of view for semeiotic.

2.2.4 The Fallible Foundations of Semeiotic Intelligence

So far, it has been established that Peirce conceives of science as a social and theoretical activity based on a sincere desire to learn. We have also seen that truth, in the general sense, is a goal of inquiry that Peirce often expresses as "the final opinion", which will never in fact be reached, but which nonetheless is omnipresent in scientific investigation in the shape of hope. Concisely, this is Peirce's ideal picture of science.

However, we still need to consider a couple of features of Peircean science that will directly affect our understanding of the semeiotic enterprise. In particular, it is important to establish upon what footing scientific inquiry is supposed to stand. At the beginning of this chapter, it was noted that semeiotic is a *positive* science – that is, based on experience. Therefore, it might be expected to be cumulative or progressive in some sense. Further, we saw that Peirce holds that the study of signs requires a *scientific intelligence*, which he characterises as an intellect capable of learning from experience. The question we are facing, then, is how to understand the "experience" he is talking about in these passages. This is, of course, one of the most loaded terms in the history of philosophy, and one that is typically associated with empiricist philosophy. However, Peirce talks about *experience of signs*, a kind of understanding not easily accommodated by classical empiricism.

At the very least, it is clear that Peirce does not mean to base semeiotic (or any other kind of science) on simple sense experiences, if these are viewed as impressions. In fact, he states that experience should not be understood as an initial condition; the "very etymology of the word tells that [it] comes *ex perito*, 'out of practice'" (MS 681:3 [1913]).

The issue at hand is complicated by the fact that Peirce appears to apply the term "experience" in a variety of senses. Justus Buchler (1939a, pp. 81-84) lists five diverse uses of the concept in Peirce's writings, perhaps exaggerating the differences to support the contention that Peirce does not have a consistent system. In a more insightful analysis, William Haas (1964, pp. 29-30) identifies two principal uses of "experience" in Peirce's philosophy. In the broad application, experience is simply anything that can be said to be experienced, whether feeling, effort, resistance, thought, or something else. In the narrow sense, it is strictly connected to the second category, and does therefore not include intellectual phenomena (see sect. 3.2).

Buchler and Haas are right in noting that there is a certain ambiguity in Peirce's usage of "experience". Furthermore, Haas correctly observes that Peirce uses experience on different categorial levels. Effort and resistance is the paradigm of the second category; hence, Peirce tends to characterise experience as strictly distinct from feeling and purposeful thought (SS 25-26 [1904]). In its narrowest sense, experience denotes something occurring here and now – more or less equivalent to what Peirce in other contexts calls "percept" (see sect. 4.3.2). It is something that is *had*, but which never can be reached in its purity in intellectual reflection. We could designate this sense of experience *singular experience*.

However, Haas's account of the other acceptation of "experience" is less satisfactory; he claims that the broad use "seems to place no limitations at all on the concept of experience" (Haas, 1964, pp. 29-30). Haas notes that Peirce defines "experience" as "the cognitive resultant" of life (CP 2.84 [c. 1902]), and thereby fails to see that this definition also includes a strong emphasis on effort and reaction, through the idea that experience is a *determination* of cognition.

> Experience is that determination of belief and cognition generally which the course of life has forced upon a man. One may lie about it; but one cannot escape the fact that some things *are* forced upon his cognition. (CP 2.138 [c. 1902])

As a contribution to cognition, experience cannot be purely singular; it is something that can be understood and analysed intellectually. Haas observes, again correctly, that Peirce stretches the field of experience to include interpretations.

> …experience can only mean the total cognitive result of living, and includes interpretations quite as truly as it does the matter of sense. Even more truly, since this matter of sense is a hypothetical something which we never can seize as such, free from all interpretative working over. (CP 7.538)

At first, the inclusion of interpretations within the domain of experience seems to indicate quite a categorial leap in Peirce's analysis. However, here the subtlety of his approach comes to the fore; while cognitive experience is complex and relational, it nevertheless retains a predominant aspect of experience in the singular sense, its character of "brute force". The cognitions are experiential because they are *forced* upon us, so to speak. They are beyond our conscious control, yet they are seen to be of an intellectual nature. In other words, we are not simply fed atomic experiences, from which we then build reasonable conceptions by interpretations; rather, there are interpretations we cannot avoid making, *as they occur*. We look around and see things such as houses and trees. At first, these experiences seem to be simply given; and so they are, at the very moment of their occurrence, as things that are undeniably there in spite of our will. It is only in later reflection that the interpretative character of the experiences can become evident. This character of opposition is typical of all experiential objects. Even imaginations present a certain degree of resistance, once they have been imagined.[39]

Haas's claim that Peirce's broad use places no limitations on experience is misleading; although the resultant of living is not singular in the sense of being absolutely definite and individual, it nevertheless possesses the essential characteristic of singular

experience – that is, appearing as an irresistible *fact*. This reading finds corroboration in Peirce's contention that thought, which clearly belongs to his third category, can play the role of an *event*; it is then "of the general nature of experience or information" (CP 1.537 [1903]). Admittedly, we do not have a direct – that is, singular – experience of generality according to Peirce; but in the perceptual judgments we cannot help making, general conceptions pour in on us "through every avenue of sense" (PPM 224 [1903]; cf. PPM 220 [1903]; see sect. 4.3). It forms the basic feature of life he calls "common sense experience".

At first blush, Peirce's definition of experience as the cognitive result of life may seem to be unrelated to the question of the basis of semeiotic inquiry. However, as we shall see, it is precisely in this sense that the familiar knowledge, from which the study of signs sets out, should be understood. Reflecting upon experience from the point of view of inquiry, Peirce distinguishes two different *scientific* senses of "experience". In the special sciences, experience is "that which their special means of observation directly bring to light, and it is contrasted with the interpretations of those observations which are effected by connecting these experiences with what we otherwise know" (CP 7.538). However, in the philosophical sense, experience is not something that requires specifically developed resources of observation.

> …in philosophy there is no special observational art, and there is no knowledge antecedently acquired in the light of which experience is to be interpreted. The interpretation itself is experience. (7.527)

In other words, the "experience" of philosophy is everyday experience, which is constantly had, and which therefore requires no other means of observation than the natural cognitive capabilities of human beings. One central element of this experience is constituted by interpretations, and this involves, according to Peirce, the use of signs.

Peirce holds that semeiotic is an observational science. However, it is also a philosophical study, and therefore concerned with everyday experience; it is the features of this kind of experience that the semiotician examines, in particular its interpretational aspects.

Still, semeiotic is not purely descriptive; it makes general claims concerning the nature of semiotic functions by abstracting from the actual occurrences of signs, performing virtual experiments in the imagination upon the abstractions, and observing the results.[40]

Now it may be asked whether the procedure of philosophical semeiotic is truly scientific; it appears to place much weight on the observations of the individual. Does it not, then, lack the sociality characteristic of science? Of course, semeiotic may fulfil a part of the requirements by making its results public and openly criticisable; but one might still contend that its objects of study are too private to form the basis for a truly scientific community. Peirce would deny the validity of such counter-arguments on the basis that experience in the broad sense is felt to be collective.

> The course of life has developed certain compulsions of thought which we speak of collectively as Experience. Moreover, the inquirer more or less vaguely identifies himself in sentiment with a Community of which he is a member, and which includes, for example, besides his momentary self, his self of ten years hence; and he speaks of the resultant cognitive compulsions of the course of life of that community as Our Experience.[41] (CP 8.101 [1900]; cf. MS 299:7-8 [c. 1905])

Moreover, Peirce argues that a person is not quite as individual as we are inclined to think. In fact, human ideas and cognitive competences are largely social. Given this continuity between the person and the community, human inquirers can make justifiable claims about the observations of any scientific intelligence.

> I have several times argued, at some length, that the unity of personality is in some measure illusory, that our ideas are not so entirely in the grasp of an*ego* as we fancy that they are, that personal identity differs rather in degree than in kind from the unity of "public opinion" and gregarious intelligence, and that there is a sort of identity of dynamic continuity in all intelligence. Accepting this opinion, a man is not radically devoid of the power of saying what every scientific intelligence must observe, if he has the power of saying what he observes himself. If he is in dynamic continuity with his whole self, he is in the same kind of continuity, albeit less intimate, with the whole range of intelligence. He can observe, in a fallible, yet genuine, observation what it is that every scientific intelligence must observe.

> Such observation will, however, require correction; because there is danger of mistaking special observations about intelligences peculiarly like our own for observations that are open to every "scientific intelligence", by which I mean an intelligence that needs to learn and can learn (provided there be anything for it to learn) from experience. I would here define experience as the resultant of the mental compulsions from the course of life; and I would define learning as the gradual approximation of representations toward a limiting definite agreement. My theory has to be that not only can *man* thus observe that certain phenomena are open to every scientific intelligence, but that this power inheres essentially in every scientific intelligence. (NEM 4:ix-x)

We see, then, how Peirce's account of the scientific intelligence connects with his social conception of science, his view of experience, and his theory of truth and final opinion. These links are crucial for the understanding of his conception of sign-theoretical inquiry; to be sure, they lead us to a much more substantial notion of semeiotic than can be obtained by Peirce's rather sparse characterisations of the discipline.

However, before we move on to Peirce's classification of the sciences, one more thing about his conception of experience needs to be noted – namely, the degree to which it can be said to be certain. As experience in the broad philosophical sense is defined as a determination, one might reasonably wonder whether it does not take on the role of a ground for knowledge. This seems accord poorly with Peirce's commitment to *fallibilism*, according to which "we cannot in any way reach perfect certitude nor exactitude" (CP 1.147 [c. 1897]), and which asserts that "our knowledge is never absolute but always swims, as it were, in a continuum of uncertainty and of indeterminacy" (CP 1.171 [c. 1897]).

Admittedly, there is a sense in which the experience examined by the philosophical sciences is simply given. Being "irresistibly forced upon us in the course of life" (MS 1336:1), such experience is beyond conscious control. As singular, experiences are not open to doubt. However, this does not mean that they would be infallible; cognitive experience can be examined and checked. While we are not in charge of experiences *as* they happen, their contents can later be reviewed critically.

Yet, Peirce disapproves of the Cartesian programme, which sets out from the assumption that knowledge ought to be built on certain foundations. We cannot begin by doubting all of our cognitions, but must start out from the beliefs and prejudices that we actually have (W 2:212 [1868]; EP 2:336 [1905]; MS 326:6 [late]). In other words, the common-sense knowledge we possess must be taken as a starting-point for philosophical inquiry.[42] Such beliefs are practically indubitable. For instance, it is hardly possible to live as a human being and deny the existence of a reality external to our thoughts and representations of it. This does not mean that the belief in question would be strictly proven, but merely that it cannot be doubted in view of the habits of cognition that have been forced upon us. The fact that a certain belief is indubitable does not mean that it is *absolutely* certain, but rather that it really cannot be doubted as things stand right now (Robin, 1964, p. 272). This does not eliminate the need for criticism; nor does it entail an acceptance of a set of absolute a priori truths.[43] However, Peirce's *critical common-sensism* does involve a recognition of the *relatively* foundational role of common sense.

According to Peirce, positive science can only rest on experience, but he adds that "experience can never result in absolute certainty, exactitude, necessity, or universality" (CP 1.55 [c. 1896]; cf. CP 1.141 [c. 1897]; CP 2.75 [c. 1902]). The experiential foundation of science is fallible, and so is the knowledge acquired by scientific methods; "there is nothing at all in our knowledge which we have any warrant at all for regarding as absolute in any particular" (CP 2.75 [c. 1902]). In other words, Peirce endorses "logical anti-cock-sure-ism"; "Whatever we know, we know only experientially, provisionally, approximately, and doubtfully" (MS 827). Theoretical science proceeds by trying explanatory hypotheses and making generalisations; it is not supported by a bedrock of firm facts. In Peirce's memorable metaphor, science is walking on a bog, and can only say that the ground it stands upon seems to hold for now (RLT 176-177 [1898]). There are no guarantees that future events will uphold the framework according to this profoundly anti-foundationalist point of view.

Since semeiotic inquiry stands on the "eminently fallible" ground of everyday experience, its results cannot be perfectly universal or necessary. Critical common-sensism does not call for outright scepticism regarding our knowledge; "there is a world of difference between fallible knowledge and no knowledge" (CP 1.37 [c. 1890]; cf. CP 1.86 [c. 1896]). Any one of our beliefs can be erroneous, but to assume that all of our common-sense beliefs are mistaken is impossible; that would simply leave us with nowhere to stand and lead to impotent despair. This is a characteristic trait of Peirce's epistemological outlook; it does not require beliefs to fulfil strict criteria of absolute lucidity and certainty in order to count as proper knowledge. While the general claims of semeiotic are fallible, they are presented as hypotheses regarding what is necessarily true of the signs used by a scientific intelligence. However, if experience goes against the propositions, or the opinions of another inquirer manage to cast doubt on them, they are to be critically reconsidered in light of new findings (cf. EP 2:25 [1895]; CP 1.55 [c. 1896]). Fallibilism teaches us to be careful in our proclamations and humble in scientific matters (cf. CP 1.9 [1897]).

Finally, it may be suggested that the primary experiential subject matter of semeiotic is not necessarily a group of things called "signs", but rather the nature and varieties of *semiosis*, that is, semiotic events and processes (cf. EP 2:413 [1907]; Fisch, 1986, p. 330). Now, the most familiar type of semiosis is communication, which can be exemplified by an ordinary conversation. In fact, Peirce's theory of signs can be interpreted as a set of generalisations, abstracted from communicational practices (Colapietro, 1995, p. 25). The theory of signs builds upon a set of beliefs and observations that human beings capable of communication do not doubt (cf. CP 3.432 [1896]; NEM 4:267 [c. 1895]). This indicates one respect, in which the sign-theoretical pursuit involves communicative considerations in its very core. Admittedly, as far as semeiotic is concerned, these claims are programmatic and unsubstantiated; we will have to wait until chapter 4 to see to what extent they can be motivated by Peirce's texts.

2.3 The Theory of Signs in the Scientific Structure

In the following sections, I will turn to another central aspect of Peirce's philosophy of science, namely his attempt to classify the sciences. From a contemporary perspective, this project may look rather antiquated; these days, few philosophers present grand classifications of types of inquiry. Obviously, Peirce's schemes are quite dated in many respects; one may wonder why we should take them seriously at all. However, for our purposes, Peirce's classification is of real interest – not so much for all of its intricate details, but for the clarifications of Peirce's conception of philosophical inquiry it provides.

The main task here is to try to find the place of semeiotic in the system of sciences. One consequence of the fact that Peirce never managed to finish his proposed system of philosophy is that the relation of semeiotic to other aspects of the system is somewhat obscure. It is sufficiently obvious that signs play a key role in most – if not all – forms of inquiry, as Peirce considers thought to be a sign process. Furthermore, there is little doubt that he more or less identified logic with the science of signs. Yet, the actual role of semeiotic in relation to other forms of inquiry is often almost agonisingly obscure – perhaps because it does not fit quite as neatly into the Peircean scheme as it should.

Here, it is not possible – nor necessary – to examine every division of science Peirce identifies. As with so many of Peirce's undertakings, the classification of sciences goes through many stages of development; we have in fact already encountered one of his earliest schemes (see fig. 1, sect. 2.1).[44] The focus of the following discussion will be almost exclusively on Peirce's mature classification, which emerges around the year 1903. Furthermore, many of the minutiae of the systems are left untouched; only the division of semeiotic – that is, logic – will be discussed in detail.[45]

2.3.1 Principles of Classification

Peirce's philosophy includes a number of different attempts at classification. Signs, sciences, instincts, and ethical motives are among the things that he proposes to put into order. Peirce scholars have not reached an agreement concerning the relevance of these expositions. For some, the classificatory schemes are the key to Peirce's systematic approach to philosophy; for others, they are more like an unfortunate manifestation of his tendency to become temporarily bogged down in overambitious and extraneous projects. According to Max Fisch (W 1:xxii [1982]), Peirce devoted more energy to the classification of signs than to any other intellectual labour. Every so often, Peirce's classificatory projects begin to resemble Hermann Hesse's glass-bead games, exclusive pastimes for idle intellectuals.[46] This impression is intensified by his terminological experiments, which often accompany the taxonomic endeavours.

Yet, it is important to note that Peirce's scientific arrangements are based on certain principles. He does not always explicate these organising ideas; nor is it self-evident that he would follow them consistently throughout his career – or even in the last phase of his philosophy. For our purposes, however, it will be useful to summarise and briefly examine the principal plan that guides the classification, since it indicates on what basis semeiotic could be singled out as a science among others in the Peircean view of inquiry.

According to Peirce, a class (in general) is simply "the total of whatever objects there may be in the universe which are of a certain description" (CP 1.204 [c. 1902]). Furthermore, Peirce holds that every classification whatever is governed by purpose (MS L75:350 [1902]; MS 1341:5). How, then, is one to distinguish an adequate arrangement from one that is merely attributable to the accidental whims of the classifier? Peirce argues that a proper classification of the sciences ought to be a *natural* classification and suggests that the term "natural class" should be taken to mean "a class of which all the members owe their existence as members of the class to a common final cause" (CP 1.204 [c. 1902]). [47] [48] According to him,

such a cause is not necessarily constituted by being the actual purpose of a human mind.

On the other hand, Peirce contends that the naturalness of a class is a relative matter; there is no such thing as an absolutely unnatural classification.

> All classification is based on a purpose. If this purpose is the idea governing the production of the objects classified, the classification is "natural". Every class which embodies information, in the sense that something is true of all its members beyond what is involved in the definition of the class, is a natural class. All classes are more or less natural; and all classification is more or less natural. (MS L75e:181-183 [1902])

At first blush, the claim that a natural class would be characterised by a final cause may seem both outdated and awkward; what would be, for instance, the defining *telos* of chemistry or history – not to speak of the philosophical sciences?

Peirce's solution is to connect final causes with *desires*. Setting out from the contention that a "purpose is an operative desire" (CP 1.205 [c. 1902]), he notes that a desire is always more or less *general*; that is, we do not desire a specific thing, but a *kind* of thing or event. If a person wants to eat cherry-flavoured ice cream, then it is not this or that piece of ice cream that is desired; any good cherry-flavoured ice-cream will do, whether it is in a cone, in a bowl, etc. Obviously, desires need to be more or less specific, but according to Peirce, they are always to some extent general.[49]

In addition, Peirce argues that desires are variable or *vague* (CP 1.206 [c. 1902]). The fact that a certain kind of thing is desired, in general, does not exclude variation. Although a person may like cherry more than lemon, the occasional lemon ice cream may be preferable to having cherry ice cream every day. Of course, it may be protested that vagueness of desire is a human trait; but Peirce holds that it is even more characteristic of communal desires, and adds that "as far as we can compare Nature's ways with ours, she seems to be even more given to variety than we" (CP 1.206 [c. 1902]). Obviously, these cases are quite different; but Peirce argues that they are equivalent for the purposes of classification.

In addition to being indeterminate – that is, general and vague[50] – a desire also possesses what Peirce calls "longitude", meaning a certain margin or flexibility in the desired object (CP 1.207 [c. 1902]). A specific kind of Italian cherry ice cream would satisfy the person's desire perfectly; but not being able to have that, he or she is content with some other type of cherry ice cream. Moreover, Peirce notes that desires tend to conflict. The desire for ice cream may clash with a desire for health; and therefore, in the interest of a good life, a compromise is struck.

> …since all the desires concerned are somewhat vague, the result is that the objects actually will cluster about certain middling qualities, some being removed this way, some that way, and at greater and greater removes fewer and fewer objects will be so determined. Thus, clustering distributions will characterize purposive classes. (CP 1.207 [c. 1902])

This, in turn, has one particularly significant consequence for classification; "it follows that it may be quite impossible to draw a sharp line of demarcation between two classes, although they are real and natural classes in strictest truth" (CP 1.208 [c. 1902]).

Now we may begin to see how Peirce's teleological approach to classification is connected to his general conception of science. As a natural class, a science should be characterised by the desired object, which acts as a final cause. The most important characteristic of the Peircean scientist is the sincere desire for truth. This, certainly, gives the general goal of science: truth, whatever it may be. With reasonable modifications, the same point of view could be applied to the more specific sciences; their unifying object is the truth concerning a certain set of questions.

Obviously, the idea that the arrangement of the sciences ought to be based on natural classes requires that we accept Peirce's notion that final causation is a real feature of the universe. According to him, this is nearly self-evident in the light of the evolutionary turn of modern science (CP 1.204 [c. 1902]). Nonetheless, even if one accepts his point of view, one should enquire on what grounds we are justified to talk about the types of final causation that are not attributed to the operation of human

minds; as Peirce himself admits, the causes of natural classes are "occult" (CP 1.204 [c. 1902]). Although Peirce does not really describe his strategy, it is clear enough that the only way we can say anything about the operation of such ideal causes is to examine the form of final cause most familiar to our experience, i.e. purpose, and generalise the findings (cf. CP 1.211 [c. 1902]). We may be suspicious of the contention that the results of such a procedure are applicable to non-human natural phenomena; but then, Peirce holds that we have no choice but to use anthropomorphic conceptions (PPM 157 [1903]; CP 1.316 [1903]; NEM 4:313 [c. 1906]; cf. sect. 4.1.2).

The requirement that the sciences should be arranged to reflect their status as natural classes seems to carry us toward a rather idealistic view of science. However, in his Adirondack lectures Peirce explicitly states that only *experiential* objects lend themselves to natural classification (MS 1334:10 [1905]; cf. CP 1.204 [c. 1902]). Further, he contends that science, as a natural object, *is* the occupation of an actual group of living inquirers (MS 1334:11 [1905]). That is, *a* science is identified as the concrete activity uniting a set of human beings; "the limits of a science are those of a social group" (MS 655:16 [1910]). We could therefore call this the *social criterion* for the individuation of a scientific discipline.

> I have already remarked that a definition of science in general which shall express a really intelligent conception of it as a living historic entity must regard it as the occupation of that peculiar class of men, the scientific men. The same remark may be extended to definitions of the different branches of science. The men who pursue a given branch herd together. They understand one another; they live in the same world, while those who pursue another branch are for them foreigners. (CP 1.99 [c. 1896])

The social criterion seems to render the classification purely descriptive; it is the actual sciences as they are pursued by concrete inquirers that are to be organised in some manner. However, Peirce is somewhat indecisive regarding the legitimacy of allowing *possible* or *likely* sciences into the arrangement. On the one hand, he states that the attempt to classify the sciences of the remote future is a

"somewhat presumptuous undertaking" (CP 1.203 [c. 1902]; cf. CP 1.233 [c. 1902]; EP 2:258 [1903]); but on the other hand, it is far from obvious that the inquiries that he mentions are really being pursued by a relatively clear-cut group of human beings. Indeed, in a late letter to James he confesses that his "classification the Sciences is […] intended to be useful in the future, and therefore is not absolutely confined to what exists" (EP 2:500 [1909]). This is a particularly sensitive point for semeiotic, the line of research in which Peirce sees himself as a pioneer. We have already seen that if Peirce's criteria are strictly followed, then his semeiotic cannot be reckoned as a science, except perhaps in retrospect. Now it would appear that the position of the study of signs in the scientific classification is uncertain because of its status as a prospective science. As we shall see, Peirce is in fact reluctant to give semeiotic a clear-cut place in his arrangement of sciences.

From the social criterion, another principle of classification follows almost as a corollary; namely, the problems of a distinct scientific discipline are supposed to be so delimited that one inquirer could devote his or her whole scientific life to them (MS L75:351 [1902]; MS 299:6-7 [c. 1905]; CP 4.9 [c. 1906]). This *criterion of devotion*, as it might be called, indicates the role of a single line of research in the totality of the scientific enterprise, in addition to further specifying the individuation of sciences.

> As a general rule, the value of an exact philosophical definition of a term already in familiar use lies in its bringing out distinct conceptions of the function of objects of the kind defined. In particular, this is true of the definition of an extensive branch of science; and in order to assign the most useful boundaries for such a study, it is requisite to consider what part of the whole work of science has, from the nature of things, to be performed by those men who are to do that part of the work which unquestionably comes within the scope of that study; for it does not conduce to the clearness of a broad view of science to separate problems which have necessarily to be solved by the same men. (NEM 4:266-267 [c. 1895])

In other words, the problems pursued indicate where reasonable boundaries are to be drawn, and how deep an adequate classification ought to go. This does not mean that all the

practitioners of one science should work on the same problem, or that they should be fully acquainted with each other's work. However, Peirce contends that their studies must be so closely allied that any one of them could take up the problem of any other after some months of preparation, and that each member of the community in question should be able to understand his or her colleagues without too much effort (MS 1334:13-14 [1905]; cf. HP 2:804 [1904]; MS 1339:2-3). Consequently, a true science requires a shared terminology, and a tolerable unity of ideas.

In addition to the individuation of distinct lines of research based on social commitment and the scope of the problems addressed, broader and finer divisions of science are identified using a variety of criteria. Of these, perhaps the most important principles are related to the fundamental aim of the inquiry and the kind of observation involved, on which the broadest distinctions of the Peircean scheme are based (see CP 1.238 [c. 1902]).

So far, we have primarily noted various ways in which Peirce proposes to identify distinct classes of science. However, he also contends that a proper classification of the sciences ought to be *hierarchical* in a special sense. In this, he applies a organisational principle borrowed from Comte;[51] "the sciences form a sort of ladder descending into the well of truth, each one leading on to another, those which are more concrete and special drawing their principles from those which are more abstract and general" (CP 2.119 [c. 1902]; cf. MS 1334:8 [1905]; MS 655:15 [1910]). In other words, the hierarchical order is based on the level of abstraction of the inquiries under consideration. Approaching the matter from a slightly different perspective, Peirce also connects the arrangement to the degree of determination of the sciences involved; "because the process of evolution both in the physical universe and in thought is mainly a process of determination, – of fixing that which had before not been fixed, – it follows that of almost any two considerable departments of study, the one is more determinate than the other, and needs to make use of the principles discovered in that other, which on its side owes nothing to the more determinate science excepting instances with which it could have dispensed" (MS 605:4-5).[52]

The principal relationship is not reciprocal; this is to a certain extent due to language, but more significantly to the very nature of scientific inquiry. According to Peirce, if the relationship between two initially distinct lines of research were one of equal give and take, the sharing of information with the aid of linguistic means would gradually lead to the unification of the sciences into one (MS 693:32-36 [1904]). In other words, the divergence between scientific vocabularies is one indicator that two inquiries do not stand on equal footing. However, the more important reason for the lack of reciprocity is that science is, by Peircean definition, characterised by its genuine interest in learning the truth about certain things, or, more properly, about certain objects. Moreover, the breadths of the sciences vary; some are relatively more general in the sense of embracing more objects within their scope of study. Upon this basis, Peirce argues that "one science cannot furnish a principle to another science to be accepted by the other unquestionably, unless the conclusions of the former science extend without reasonable doubt to all the objects of the latter" (MS 693:60 [1904]). Since no two sciences study exactly the same objects, they can be ordered according to the breadth (or level of abstraction) of their studies.

In addition, Peirce argues that the testing of the results of one science according to the criteria of another requires that they are logically independent of one another. If the disciplines were mutually dependent, their testimonies would lack integrity; they would, "like two lying witnesses in court, sustain each other's credit" (MS 1334:33 [1905]; cf. Kent, 1987, p. 124).

Of course, in their actual activities, the sciences utilise each other in a variety of ways (see MS 693:30-68 [1904]; HP 2:805-809 [1904]); but Peirce holds that the lending of principles is the most relevant and useful connecting factor (Kent, 1987, p. 122). The aim of the classificatory project is to reveal the relationships of dependency between the different forms of inquiry.

> The different sciences help one another, and that in multiform ways. No rules can be laid down as to where a science shall seek help; far less as to where it shall not. Yet in a general way the sciences are related like the rungs of a ladder. That is to say, some sciences are broader than others, look over a wider range of facts, but look less into details. The

> general rule is that the broader science furnishes the narrower science with principles by which to interpret its observations while the narrower science furnishes the broader science with instances and suggestions.[53] [---]
>
> A good classification is a diagram usefully expressive of significant interrelations of the objects classified. The best classification of sciences is a ladder-like scheme where each rung is itself a ladder of rungs; so that the whole is more like a succession of waves each of which carries other waves, and so on, until we should come to single investigations.[54] (NEM 4:227-228 [1905-6])

Before we look at Peirce's mature hierarchy of sciences, we need to consider one more issue concerning the guiding ideas of classification. A reader familiar with the kind of scientific hierarchies Peirce outlines may wonder if one central organising principle has not been forgotten, namely, his theory of categories. The Peircean tendency to find trichotomies in all fields of inquiry would appear to be manifested in such divisions as *mathematics-philosophy-idioscopy* and *esthetics-ethics-logic*. Yet, Peirce is clearly reticent about assigning a visible role to his three categories in the classificatory procedure. While he concedes that there are many significant trichotomies in his classification, he points out that this is not a general rule (EP 2:258 [1903]).

Now in view of the manner in which Peirce conceives of natural classification, it is not surprising that he downplays the role of the categories. If the being of a scientific class is primarily determined by the goal-directed activities of a group of inquirers, then it would mean disaster for the purported naturalness of the classification to have a pre-given scheme into which the inquiries are to be fitted. The actual limits of the existing social groups place demands on the classificatory project (cf. MS 655:16-17 [1910]). Therefore, Peirce indicates that it is best to leave the categories out of consideration until the classification is nearly done, in order to avoid the "high priori" method (MS 1343:17 [c. 1902-5]; cf. Kent, 1987, p. 115). However, it is reasonable to surmise that Peirce's categorial outlook affects his classificatory work in many ways, perhaps more than he is prepared to admit.

2.3.2 The Heuristic Disciplines

Peirce's classification of scientific inquiry reaches a more or less stable shape in 1903. This "perennial version", as Kent (1987) has named it, is presented in two lecture series, the Harvard lectures on pragmatism and the Lowell lectures on logic. The latter set of lectures is accompanied by a syllabus, which includes Peirce's basic scheme of the sciences. Although Peirce later makes many changes to the details of this classification, and occasionally expresses doubt concerning some of its arrangements, he introduces no major modifications during the last years of his career. As Kent confirms (1987, p. 121), Peirce finds the perennial version adequate as late as 1911.

Peirce's classification is supposed to adhere to the principles we have discussed. That is, the individual inquiries identified are purportedly real lines of research, pursued by actual groups of inquirers, and furthermore of such a character that they could occupy one human being for life. As to the broadest classes of science, they are distinguished by the most fundamental aim of the activity. On this basis, Peirce divides all science into three basic branches: *science of discovery*, *practical science*, and *science of review* (cf. sect. 2.2.1). Science of discovery, which is also known as heuristic or theoretical science, is the kind of genuine inquiry interested in learning truth, whatever it may be. The goal of the practical sciences is to turn the discoveries of the heuristic disciplines into useful applications, or to unearth truths for the sake of some *definite* pre-given purpose; while science of review or *retrospective science* aims at presenting the knowledge acquired by the sciences of discovery in a digestible format, so that it may serve any purpose, whether practical, philosophical, educational, or merely entertaining (MS 655:17 [1910]; cf. CP 1.239 [c. 1902]; EP 2:258-259 [1903]; NEM 4:227-228 [1905-6]).

While Peirce suggests rather detailed classifications of the practical sciences, it is clear that he is primarily concerned with the science of discovery. It is in this branch that the Comtean principle gives Peirce's arrangement its characteristic shape. That is, the heuristic sciences are organised in such a manner that the ones

standing above allegedly provide the ones below with principles, while the more concrete inquiries may offer data and examples to the more abstract disciplines. The result is a hierarchy of sciences, presented in a cut-down form in fig. 2.

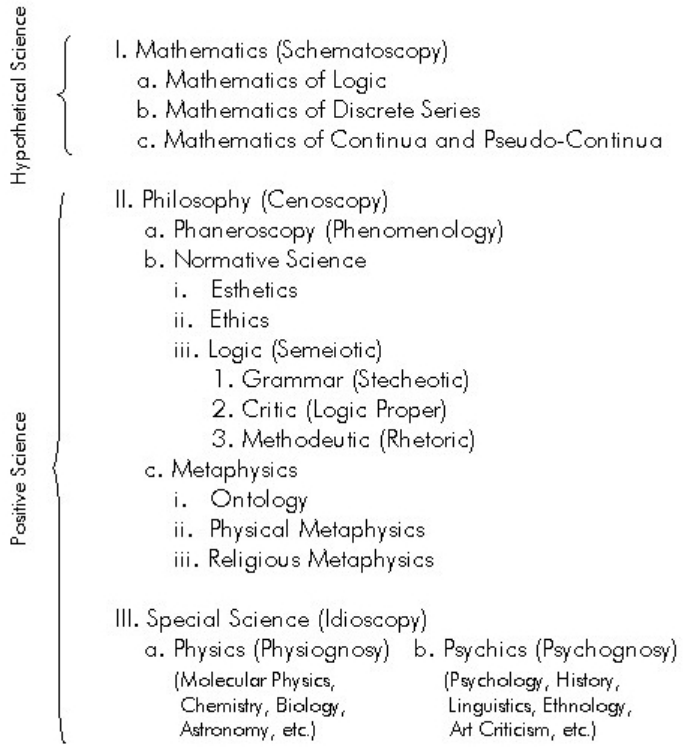


***Figure* 2. Peirce's mature classification of the sciences.** [55]

The first thing we note is that mathematics holds the position as the most abstract science. Consequently, it is not dependent on any other kind of inquiry; it is the only mode of research that is self-sufficient in the sense of not needing principles provided by the

other sciences. The reason for this is that mathematics is not a positive science based on experience; it studies *hypothetical* states of affairs merely, and deduces their consequences (MS 151:1). Yet, mathematics is an observational science "in so far as it makes constructions in the imagination according to abstract precepts, and then observes these imaginary objects, finding in them relations of parts not specified in the precept of construction" (CP 1.240 [c. 1902]). Mathematical research is performed by experimentation upon diagrams (MS 283:117$_v$ [c. 1906]). Although mathematical hypotheses are often constructed in order to provide an idealised picture of something in the real world, the pure mathematician does not care about the fact that such mathematical representations are approximately true (NEM 3:343 [1903]); he or she does not feel responsible for the actual existence of the studied objects (EP 2:259 [1903]; cf. MS 655:18 [1910]). Nonetheless, mathematics is heuristic since it aims at discovering *ideal* truths (cf. sect. 2.2.3).

> Mathematics is the most abstract of all the sciences. For it makes no external observations, nor asserts anything as a real fact. When the mathematician deals with facts, they become for him mere "hypotheses"; for with their truth he refuses to concern himself. The whole science of mathematics is a science of hypotheses; so that nothing could be more completely abstracted from concrete reality. (CP 3.428 [1896])

This is not the place for a thorough discussion of Peircean mathematics, but a few brief comments are in order. Firstly, we may note that mathematical inquiry employs necessary reasoning. As an iconic or diagrammatic mode of inference, deduction is primarily practiced in mathematics, and only secondarily studied in philosophical logic. Secondly, the placement of mathematics at the top of the hierarchy implies that certain mathematical principles are operative in the other sciences; Peirce even states that *every* science has a mathematical part (CP 1.133 [c. 1894]; CP 1.245 [c. 1902]). This might provoke protests; it certainly seems a bit far-fetched to say that such human sciences as ethnology and literary criticism must use mathematical principles in their investigations. However, Peirce does not mean that these inquiries would involve

a clear-cut mathematical section, in which ethnological geometry or literary algebra would be pursued, or that the practitioners of the sciences in question would have to master advanced logarithms before being allowed to pursue more concrete studies. His point is that all sciences include the kind of imaginary experimentation that is under close examination in mathematics; it is the kind of procedure typically employed in drawing conclusions from explanatory hypotheses ("if such and such were the case, then so and so should necessarily follow").[56] The special field of mathematical study is that of hypothetical schemas; Peirce does in fact suggest that instead of mathematics we could talk about "schematoscopy" (MS 1338:7 [c. 1905-6]).[57] In addition, it is important to note that the influence of the mathematical sciences need not be direct; the reasoning employed may possess a mathematical form, but it may nevertheless have been modified (primarily by philosophical logic) so as to be viewed as only probable. The claim that mathematics lends some principles and methods to the more concrete sciences certainly does not entail that these disciplines would possess no legitimate principles and methods of their own.

Now one could put forward a number of arguments against the claim that mathematics is the most abstract of sciences and thus self-sufficient; here, we may restrict ourselves to only one of special interest for the study at hand. Namely, one might contend that mathematics cannot be as independent as is claimed, since it investigates objects of thought and must therefore involve reasoning by signs (cf. MS 7:1 [c. 1903?]). According to Peirce, mathematics operates primarily with the kind of signs known as *icons* – or, to be more precise, with diagrammatic icons (see sect. 4.2.3). However, the fact that the mathematician uses signs does not yet entail that he or she would require a general science of signs. As noted, Peirce concedes that we all have a kind of logic in use, a *logica utens* (see sect. 2.2.2). In mathematics, this is sufficient; there is no need for an elaborate criticism of the semiotic means, because the signs used refer to hypothetical states only. Peirce repeatedly emphasises that the mathematician is in no need of logic (see, e.g., NEM 4:271 [c. 1895]; HP 2:833 [1904]). However, when mathematics is applied to real-life problems, the situation is different; then we

are faced with questions of representation and interpretation that cannot be solved by purely mathematical procedures.

Moving downward in Peirce's hierarchy, we find the class of *philosophy* or *cenoscopy*. According to Peirce, cenoscopic philosophy "aims only at so much truth as can be inferred with likelihood or plausibility from the knowledge common to all grown persons" (MS 655:18 [1910]). As a science of discovery, it ought to be distinguished from another type of philosophy, which Peirce identifies as *synthetic philosophy*.[58]

> *Two meanings of the term "philosophy"* call for our particular notice. The two meanings agree in making philosophical knowledge positive, that is, in making it a knowledge of things real, in opposition to mathematical knowledge, which is a knowledge of the consequences of arbitrary hypotheses; and they further agree in making philosophical truth extremely general. But in other respects they differ as widely as they well could. For one of them, which is better entitled (except by usage) to being distinguished as *philosophia prima* than is ontology, embraces all that positive science which rests upon familiar experience and does not search out occult or rare phenomena; while the other, which has been called *philosophia ultima*,[59] embraces all that truth which is derivable by collating the results of the different special sciences, but which is too broad to be perfectly established by any one of them. The former is well named by Jeremy Bentham's term *cenoscopy* […], the latter goes by the name of *synthetic philosophy*. (EP 2:372-373 [c. 1906])

Synthetic philosophy is not heuristic; rather, it stands at the head of the sciences of review (MS 1334:27 [1905]; EP 2:373 [c. 1906]; cf. MS 326:13 [late]). Peirce suggests that its ultimate task is to form a *philosophy of science* (EP 2:258-259 [1903]). In contrast, cenoscopic philosophy aims at the discovery of positive truths. However, it involves no special observational means; it examines common sense experience (cf. sect. 2.2.4), and its goal is to set "in order those observations which lie open to every man every day and hour" (CP 7.538; cf. CP 1.126 [c. 1905]).[60]

> Philosophy is not quite so abstract [as mathematics]. For though it makes no special observations, as every other positive science does, yet it does deal with reality. It confines itself, however, to the universal phenomena of experience; and these are, generally speaking,

> sufficiently revealed in the ordinary observations of every-day life. I would even grant that philosophy, in the strictest sense, confines itself to such observations as must be open to every intelligence which can learn from experience. (CP 3.428 [1896])

Cenoscopy is plainly distinguished from mathematics in being a science of *real* experience; it differs from special science in not being based on *individual* experiential events (MS 1338:17 [c. 1905-6]). Peirce concedes that there are some exceptions to the restriction of philosophy to everyday experience, as metaphysics may consider the generalisations made in various special sciences; but it does so only as "a mere datum for a still more sweeping generalisation" (CP 3.428 [1896]). Yet, cenoscopic philosophy is not mere speculation; as philosophers, we have no feasible alternative but to use the one method shared by all positive lines of inquiry, that of "trying key after key until we find one that fits" (EP 2:373 [c. 1906]). The experiences required for the experiments are already given; we need just manipulate them in suitable ways by employing some of the diagrammatic techniques of mathematics. On the other hand, philosophy may require a stronger appeal to communal criticism than the other positive sciences; because of the generality and breadth of its field of study, some criteria of limiting the amount of possible explanations must be employed. For Peirce it is in any case clear that "nothing in cenoscopy should be embraced without criticism" (EP 2:373 [c. 1906]).

Peirce's conception of scientific philosophy is controversial in at least three respects. From a contemporary perspective, the notion that philosophy is or should be a science may seem seriously misguided or even dangerous (Colapietro, 1998, p. 248). In particular, a strictly scientific conception of philosophy of the kind Peirce promotes would appear to exclude a large part of that which is commonly called "philosophy". The fact that he sees the practice of natural scientists as an exemplar for all scientific inquiry does nothing to reduce such fears. This worry is expressed succinctly by Colapietro (1998); "to assimilate too thoroughly the work of philosophers to that of scientists, especially natural scientists (as Peirce would have us do) tends to occlude the character of philosophy as

an ongoing quest for critical self-consciousness, one undertaken by participants in the intersecting practices dominant in their historical time and, in some form, perhaps even discernible throughout human history" (p. 251). On the other hand, Peirce's scientific philosophy is not at the mercy of the so-called special sciences. As we have seen, he repeatedly emphasises that philosophical inquiry deals with common experience, not with the kind of special data investigated by physics and psychology, for instance. Because cenoscopy does not resort to special experience, it can be characterised as science in the *seminal* condition (EP 2:374 [1906]). What Peirce finds embodied in the natural sciences is the *spirit of inquiry*; in this regard, philosophy does have something to learn from certain special disciplines. Colapietro (1998, p. 262) notes that the two most important aspects of Peirce's call for a scientific philosophy are the emphasis on everyday experience and on the communal character of genuine inquiry. It also entails a commitment to fallibilism, the ethical use of terminology, and a theoretical attitude to the findings of research.

Although one could, with some justification, criticise Peirce for promoting a too narrow conception of philosophy, it is nonetheless important to see what the constructive features of his point of view are. He is looking for a view of philosophical knowledge that would be open to criticism and avoid the pitfalls of foundationalism, absolutism, and relativism. The social view of science can act as an antidote to the kind of philosophy that tends to turn to methods of authority and introspection. The fact that the principal subject matter of philosophy – everyday experience – is so easily had makes this line of inquiry particularly susceptible to the kind of individualism Peirce finds abominable in all areas of life. On the other hand, the Peirce would also be highly sceptical of Rorty's claim that the only constraints on philosophical investigation are conversational (see Rorty, 1980, pp. 389-394; Colapietro, 1998, pp. 265-267). Philosophy is also experiential and experimental, albeit in a different sense than the natural sciences.

The second and third criticisms that could be aimed at Peirce's conception of philosophy as a mode of scientific research target the placing of philosophy in the ladder of the sciences. To start with,

one might be suspicious of the motives behind the postulation of mathematics as the leading science above philosophy. However, as we already have seen, this ordering does not imply that philosophy should look to mathematics as a provider of substantial foundations for knowledge; in this context, the role of mathematical inquiry is rather to offer principles of hypothetical reasoning and a diagrammatic method of experimentation. In addition, we should note that Peirce is critical of certain attempts to present philosophy in a strictly mathematical format. He claims that the failure of many philosophers has been due to their tendency to ape mathematics, "crudely mimicking its externals" (NEM 4:228 [1905-6]). Baruch Spinoza's *Ethics* may serve as an example of a philosophical undertaking, in which a Euclidean arrangement has been applied to a subject matter not suited for a mathematical presentation.

Lastly, Peirce's insertion of philosophy above the special sciences may cause some consternation. No doubt, most practitioners of the special sciences would frown upon the idea that philosophy could lend them principles. Furthermore, it does not seem likely that many philosophers would see this as their primary task. In fact, the hierarchical position of philosophy is perhaps better viewed from the opposite direction; it indicates the independence of philosophical inquiry in relation to the more specific lines of research. On the other hand, Peirce does think that certain special sciences are at least in some need of philosophy, the physical sciences requiring certain metaphysical principles, while the psychical sciences are more closely connected to logic or semeiotic.

In his mature classification, Peirce identifies three orders of philosophy. The first of these is *phenomenology* or *phaneroscopy*. Peirce uses both these names, but ends up preferring the latter designation.[61] The choice of term is motivated by a desire to avoid erroneous associations with Hegel's phenomenology, although Peirce thinks "it is essentially the same thing under a somewhat different aspect" (MS 602:12-13 [late]; cf. CP 8.298 [1904]; MS 655:25 [1910]; Spiegelberg, 1956, p. 176).[62] We will examine Peirce's phaneroscopy and its objects of study in more detail in the next chapter; therefore, just a few brief comments are needed here.

As the most abstract of the positive sciences, phaneroscopy is concerned with experience; it makes "the ultimate analysis of all experiences the first task to which philosophy has to apply itself" (CP 1.280 [c. 1902]). On the other hand, phaneroscopy examines experience only as it *appears* as a phenomenon (or *phaneron*), whether the appearing objects be real or illusory; concisely put, it is "the science of what might appear or seem" (MS 655:25 [1910]). Thus, phaneroscopy is close to mathematics in being nearly as abstract. Phaneroscopic investigation "ascertains and studies the kinds of elements universally present in the phenomenon; meaning by the phenomenon, whatever is present at any time to the mind in any way" (EP 2:259 [1903]). The result of the analysis is the theory of categories.

Here we begin to see that Peirce's classification of the sciences can hardly be said to be an arrangement of existing sciences, in spite of his claims to that effect. We do not find any substantial group of inquirers that would have identified themselves as "phenomenologists" or "phaneroscopists" at the time Peirce found a place for phaneroscopy in his hierarchy of inquiry, the late 1890s. Yet, Peirce expresses faith in this line of research; although he considers it to be in the condition of a "science-egg", rather than a developed discipline, he is convinced that that it will, in due time, become a strong and beneficent science (MS 645:1 [1909]).

The next order of philosophy is *normative science*, which consists of three families, esthetics, ethics, and logic. In contrast to phaneroscopy, which allegedly simply accepts the testimony of the phenomenon as it appears, normative science is based on discovering or establishing basic distinctions in experience.

> [The theories of the Normative Sciences] relate to how certain activities *should* be exercized in order to realize a deliberate ideal purpose. Each is marked, therefore, by the dual distinction that it emphasizes. Esthetics, the fine and the vulgar or not fine; ethics, the right and wrong; and logic, the true and false. This hard duality is the mark of the practical; and although the normative sciences are purely heuretic and not practical, yet they are heuretic sciences of practical activities. They are not all equally so, however, it is ethics to which this description most directly applies. (MS 283:34-35$_v$ [c. 1906].)

Peirce's conception of the normative sciences is a relatively late product of his philosophical labours. In early classifications, ethics does not rank as a theoretical science, and esthetics is rarely mentioned at all.[63] The arrangement of the three normative sciences is established around the year 1902, but Peirce continues to express some doubts concerning the scientific status of esthetics and ethics even after the presentation of the perennial version. This is not entirely surprising; while his logical production is extensive, Peircean ethics and esthetics are underdeveloped as sciences. Peirce defines ethics as "that normative science which studies the conditions of that excellence which may or may not belong to voluntary action in its relation to its purpose" (MS 693:86 [1904]), and esthetics as "the science of ideals, or of that which is objectively admirable without any ulterior reason" (EP 2:260 [1903]). In other words, ethics is concerned with what is right and wrong in action, given certain ideal purposes, while esthetics is supposed to "determine by analysis what it is that one ought deliberately to admire *per se* in itself regardless of what it may lead to and regardless of its bearings upon human conduct" (PPM 119 [1903]). Esthetics is concerned with beauty in general.

> Esthetics is the science of the general conditions of a form's being beautiful. It has to begin by finding out what this familiar but elusive idea of the beautiful really means. It has to define it, not at all with reference to its pleasing *A*, *B*, or *C*, but in terms of those universal elements of experience that have been brought to light by phenomenology. Unless this can be done, and it can be shown that there are certain conditions which would make a form beautiful in any world, whether it contained beings who would be pleased with such forms or not, there is no true normative science of esthetics. (HP 2:832 [1904])

Again, one may wonder whether Peirce actually adheres to his own principles of classification. His view of esthetics, in particular, seems to ignore the actual work of aestheticians; at least, he admits that he lacks knowledge of this field (EP 2:260 [1903]). The placing of esthetics at the head of the normative sciences seems to be dictated by other requirements. One does not need to be thoroughly entrenched in Peircean thought to see that the

normative sciences follow the categorial scheme of first, second, and third. Perhaps Peirce should have held on more closely to his principles of classification in this case, and not have forced a triadic structure on normative science; he might then been able to develop a richer view of esthetics. True, Peirce's definition of esthetics as "that normative science which studies the conditions of that kind of excellence which objects may possess in their presentation, or appearance, regardless of their relations" (MS 693:86 [1904]) may be general enough to include the activities of many aestheticians. However, the true significance of Peircean esthetics seems to lie in that it supposedly provides admirable ideals that ethics can adopt as its goals. In other words, esthetics is there to ensure that the aims adopted in ethical action are not dictated by individual taste, but have scientific grounding. However, this approach takes Peirce occasionally uncomfortably close to an almost anti-pragmatistic Platonism.

The most serious problem in Peirce's normative scheme is his insistence that philosophical esthetics ought to be concerned with the admirable as such, completely separated from purposive conduct. Even if we were to concede that there could be something of that description, it is difficult to see how it could be *studied* except in a larger context provided by thought and action. At times, Peirce appears to make this precise point, as when he says that if "conduct is to be thoroughly deliberate, the ideal must be a habit of feeling which has grown up under the influence of a course of self-criticisms and heterocriticisms; and the theory of the deliberate formation of such habits of feeling is what ought to be meant by *esthetics*" (EP 2:377-378 [c. 1906]).[64] The key to all of the normative sciences is that their subject matters are to some extent under *control*; esthetics, ethics, and logic "are confined respectively to ascertaining [...] how Feeling, Conduct, and Thought ought to be controlled supposing them to be subject *in a measure*, and only in a measure, to self-control, exercized by means of self-criticism, and the purposive formation of habit, as common sense tells us they are in a measure controllable" (MS 655:24 [1910]). Viewing the issue from the point of view of practice in his Adirondack lectures, Peirce

unexpectedly asserts that esthetics is in fact a branch of ethics (MS 1334:36 [1905]).[65]

In a more viable approach to the normative sciences, Peirce concedes that they do not form three entirely clear-cut lines of inquiry after all. In particular, he ponders that esthetics and ethics should perhaps be united as one inquiry (MS 1334:36 [1905]). Peirce even asserts that the division between ethics and esthetics is not a very important question; thinkers can draw the line of division according to convenience (MS 283:35$_v$ [c. 1906]).

> ...Esthetics, Practics, and Logic form one distinctly marked whole, one separate department of heuretic science; and the question where precisely the lines of separation between them are to be drawn is quite secondary. It is clear, however, that esthetics relates to feeling, practics to action, logic to thought. (EP 2:378 [c. 1906])

Peirce often suggests that ethics is prior to logic because logic is concerned with thought, and thought is a specific kind of action.[66] However, the same structuring principle does not work in the case of ethics and esthetics; or, at least, the suggestion that action would be a special case of feeling seems rather awkward. Instead, Peirce claims that "Ethics is only an impleted application of Esthetics; and Logic is only an impleted application of Ethics" (MS 283:32$_v$ [c. 1906]). This point of view is more feasible; esthetics pronounces certain appearances or feelings to be good or bad; ethics is broader, using esthetic goods as ideals against which deliberate action can be critically assessed (MS 693:130 [1904]). Logic extends the field to include controlled thought. However, this approach is plausible only if we allow that complex purposes in some sense precede the judgments of esthetic inquiry; even esthetics cannot be wholly self-sufficient in this regard. In fact, although Peirce at times suggests that esthetics possesses "the deepest characteristics of normative science" (EP 2:379 [1906]), ethics is the true heart of normative inquiry – the genuine "philosophy of purpose" (MS 1135:5$_v$ [c. 1897]; cf. MS 283:35$_v$ [c. 1906]).

In *A Syllabus of Certain Topics of Logic*, Peirce concedes that normative science is not accurately descriptive of all of the disciplines traditionally so called (EP 2:272 [1903]). The dual

distinction, which is characteristic of normativity, is strong in ethics, but weaker in logic and subordinate in esthetics. Indeed, Peirce suggests that "no form is esthetically bad, if regarded from the strictly esthetical point of view, without any idea of adopting the form in conduct", and adds that all "esthetic disgust is due to defective insight and narrowness of sympathy" (EP 2:272 [1903]). In a different way, logic also fails to conform to the requirements of normative inquiry; it "began historically, and in each individual still begins, with the wish to distinguish good and bad reasonings", but "develops into a general theory of signs" (EP 2:272 [1903]).

The science of logic is of special interest for our objectives because of its close connection with semeiotic. However, before we turn to the closer examination of this relationship and the normativity of logical inquiry, it is appropriate to complete the outline of the heuristic sciences with a few words about the remaining disciplines. This overview can be very brief, because they are of limited interest for the rest of the study.

The last philosophical science is *metaphysics*, which Peirce defines as "that branch of philosophy which inquires into what is *real*, that is, what has anything true of it regardless of whether anybody thinks it is true or not" (MS 693:84 [1904]). This definition of the real is inherited from the part of logic known as pragmatism (cf. sect. 2.3.4). In general, Peirce accepts Kant's viewpoint, in that he states that metaphysics "is hardly more than a corollary from logic" (MS L75a:33 [1902]; cf. MS 655:25 [1910]). On the other hand, Peirce is highly critical of the state of the third philosophical science.

> *Metaphysics* is the proper designation for the third and completing department of cenoscopy, which in places welds itself into idioscopy, or special science. Its business is to study the most general features of reality and real objects. But in its present condition it is, even more than the other branches of cenoscopy, a puny, rickety, and scrofulous science. (EP 2:375 [c. 1906])

Peirce emphasises the relevance of developing a critical metaphysics because every human being holds crude metaphysical beliefs – no one more so than the "scientific man who proposes to

get along without any metaphysics" (CP 1.129 [c. 1905]). It is better to investigate metaphysical opinions critically than to let them run wild. Peirce himself makes a number of contributions to metaphysics – such as his principles of *tychism* and *synechism*, and his "neglected argument" for the reality of God[67] – but they are presented in a rather piecemeal fashion, and nowhere joined into a sustained treatment that would correspond to the three families of the science he occasionally mentions.[68]

Leaving philosophy, we come finally to *special science*, or *idioscopy*, "which occupies its energies mostly in acquiring strange experiences, and then in inferring Truths from them mostly only Plausible" (MS 655:18 [1910]). In spite of Peirce's somewhat eccentric characterisation, we are here dealing with what is usually called scientific inquiry: physics, chemistry, psychology, sociology, etc. In short, the special sciences are positive heuristic disciplines that use special means of observation instead of or in addition to imaginary observation and observation of common experience. According to Peirce, they rely on philosophy for their principles; a "sound methodeutic requires heuretic science to found its researches upon cenoscopy, passing with as slight a gap as possible from the familiar to the unfamiliar" (EP 2:373 [c. 1906]).

Special science is divided into two parallel streams, the one "studying the Products of Finite Minds, especially of Men, *Psychic Science*; the other studying the Material Universe, *Physical Science*" (MS 655:18 [1910]). What Peirce calls *physics* or *physiognosy* is roughly equivalent to what we ordinarily refer to as the natural sciences, while *psychics* or *psychognosy* could be characterised as the "sciences of humanity" (MS 1336:2). The latter group consists mainly of inquiries that would today belong to the humanities and the social sciences.

There are many things of interest in Peirce's conception of special science; but we may restrict ourselves to observing that the two subclasses of idioscopy are, in a sense, equivalent in the hierarchy. That is, they are not dependent on each other for principles. Peirce does not hold that sciences such as molecular physics, which perform minute examinations of the constituents of matter, would be foundational inquiries. Still, this equality does not

entail that there would not be a give and take of knowledge between the physical sciences and the psychical sciences, and that the transaction might not be quite one-sided at times. At any rate, Peirce – as a "scion of natural science" (MS 326:4 [late]) – mostly looks to the physical subclass for examples of successful inquiry.

2.3.3 Logic in the Broad Sense

We may now turn to the central question at hand, the place of semeiotic in Peirce's system of sciences. As noted, the placing may seem to be self-evident because of Peirce's frequent identifications of logic with the study of signs in his mature writings. However, upon closer examination, we observe a curious fact; Peirce does not complement esthetics and ethics with semeiotic in his diagrams, but chooses to speak of logic when presenting the scheme of inquiry.

At first, this choice of terminology may seem to be just accidental; in many of the discussions surrounding the actual classifications, Peirce indicates that logic could – or even should – be understood as the science of signs (see, e.g., MS 693 [1904]). We may be pursuing a non-existent problem here. Still, it is somewhat puzzling that Peirce avoids the term "semeiotic" in most of his diagrammatic presentations. In fact, semeiotic is seemingly given a prominent position in only one of his earliest classifications, namely the 1865 system we discussed at the beginning of this chapter (see sect. 2.1). There, the theory of signs stands above symbolistic, of which logic is one branch.

Why, then, is Peirce so reluctant to insert "semeiotic" into his mature classifications? One plausible answer is that he is concerned with historical continuity and consistency of usage; in any case, he feels that the trichotomy of esthetics, ethics, and logic has a respectable past. However, in view of the fact that Peirce must have known Locke's three-part division of science, this does not seem to be a sufficient explanation. Nor is it likely that Peirce would have avoided the term because of qualms concerning its strangeness; "phaneroscopy" replaces "phenomenology" in several classifications. The reasons seem to lie deeper.

Although Peirce often speaks of the need to expand the range of logic in order to include all kinds of signs – that is, not just symbols used in reasoning – most of his concise definitions of logic remain relatively traditional, especially in the context of classification. For instance, in the *Syllabus* it is characterised as "the theory of self-controlled, or deliberate, thought" (EP 2:260 [1903]), while *Reason's Conscience* describes logic as "that branch of normative science which studies the conditions of *truth*, or that kind of excellence which may or may not belong to objects considered as representing real objects" (MS 693:88 [1904]). Even more tersely, logic is simply "the objective study of thought" (MS 12:3 [1912]) or "all that investigation which aims to discover the nature and workings of reasoning" (NEM 3:232 [1909]).

Furthermore, we should keep in mind that a substantial portion of Peirce's philosophical work is constituted by formal logic, in which he makes few explicit references to the study of signs. True, in his minute analyses of logical problems, Peirce employs a variety of semiotic means; but it is only in the existential graphs that one discerns a truly significant connection to semeiotic. On the other hand, he would place a considerable part – if not all – of what is today known as "formal logic" or "mathematical logic" into the hypothetical science of mathematics, rather than into the positive science of logic (Houser, 1992, p. 1284; see CP 4.240 [1902]).[69] According to Peirce, logicians ought to beware of making their science *excessively* formalistic (CP 3.451 [1896]; CP 8.173 [1903]; CP 8.228 [c. 1910]); logic should not be reduced to calculus (MS 283:106$_{vd}$ [c. 1906]). Peirce asserts that "formal logic must not be too purely formal; it must represent a fact of psychology, or else it is in danger of degenerating into a mathematical recreation" (W 4:421 [1883]). The key word here is "represent"; while the statement might appear to open up the doors for psychologism, it is rather a reminder of the philosophical nature of logical inquiry.

The solution to the predicament outlined above seems to be given in Peirce's distinction between two senses of "logic"; the narrow sense is more or less equivalent to how the term is usually understood, while the broader acceptation of logic corresponds to semeiotic.

> The term "logic" is unscientifically by me employed in two distinct senses. In its narrower sense, it is the science of the necessary conditions of the attainment of truth. In its broader sense, it is the science of the necessary laws of thought, or, still better (thought always taking place by means of signs), it is general semeiotic… (CP 1.444 [c. 1896])

This crucial distinction has been noted by many commentators (e.g., Buchler, 1939b).[70] To mark the difference, Peirce often calls logic in the narrow sense *logic proper*, *critical logic*, or just *critic*, while mere "logic" without specifications denotes the broad sense of the term. Still, Peirce is not consistent in his uses; many of the difficulties noted above can be attributed to his wavering between the broader and the narrower conception of logic in his brief characterisations of the third normative science.

However, there are graver problems caused by Peirce's notion of the co-extension of logic and semeiotic. Namely, the placing of logic in the classification of sciences seems to reduce the scope of the study of signs in two ways. First, as logic, semeiotic seems to be closely tied to thought. In other words, its field of study is limited to signs as they are used in reflection. Now it may be argued that this *is* the proper domain of philosophical semiotics, but Peirce does not in fact accept the restriction of semeiotic to inferential signs; it is to be "a general theory of all possible kinds of signs, their modes of signification, of denotation, and of information; and their whole behaviour and properties, so far as these are not accidental" (MS 634:14 [1909]) – "a theory of signs in the widest sense of the term" (L36 [1909]). It is difficult to see how logic can fulfil this need, if it is indeed a science of thought, since Peirce holds thought to be a *special* variety of sign (SS 195 [1906]).[71]

The second possible limitation is due to the placement of logic in the normative sciences. As noted, Peirce holds that the scope of logic, which is characteristically normative in its early stages of development, naturally tends to expand into that of a general theory of signs. However, there is a sense in which logic is primarily interested in the separation of *right* from wrong reasoning. This would seem to diminish its capacity of Peirce's theory of signs to act as a theoretical account of all possible kinds of

sign phenomena. Are we to understand that it is only concerned with signs as far as they are involved in deductions, inductions, and abductions? Are, say, the aesthetic signs involved in the appreciation of art or the kinds used in commands of no interest to semeiotic?

One can see that Peirce's answer to these questions is negative by examining some of the statements in which he suggests that logicians should expand their interests to include all kinds of semiotic entities and actions. As we have already observed, the younger Peirce tried to isolate a clear-cut domain for logic, defining it as "the science of the relations of symbols in general to their objects" (W 1:309 [1865]). In other words, the logician would be concerned with the truth of symbolic representation, leaving problems concerning the quality of signs and their interpretation to other disciplines. However, in his later writings Peirce increasingly emphasises the need for a general study of representation and interpretation, which would not only examine symbols. Surveying the field, he finds no one better equipped for this task than the logician, and therefore states that "the purpose of logic must ultimately come to be recognized as that of studying all that will be true of signs, or representations, independently of what particular signs have actually been created" (MS 452:7 [1903]), and proposes a new definition of logic as "the science which examines signs, ascertains what is essential to being signs and describes their fundamentally different varieties, inquires into the general conditions of their truth, and states these with formal accuracy, and investigates the law of the development of thought, accurately states it and enumerates its fundamentally different modes of working" (NEM 4:271 [c. 1895]). In other words, logic is now understood as "the study of the general conditions of signs fulfilling their functions" (MS 836:2_b), a distinctly Lockean point of view that clearly diverges from the early division of scientific labour.

> I at first defined logic as the general science of the relation of *symbols* to their *objects*. And I think still that this defines the Critic of Argument which is the central part of logic, – its heart. But studies of the limits of

> the sciences in general convinced me that the Logician ought to broaden his studies, and take in every *allied* subject that it was no business of anybody else to study and in short, and above all, he must *not* confine himself to *symbols* since no reasoning that amounts to much can be conducted without[72] *Icons* and *Indices*. Nor ought he to confine himself to the relations of signs to their Objects since it had always been considered the business of the logician and of nobody else to study Definition. Now a definition does not reveal the Object of a Sign, its Denotation, but only analyzes its Signification, and *that* is a question not of the sign's relation to its Object but of its relation to its Interpretant. My studies must extend over the whole of general Semeiotic. (SS 118 [1909]; cf. EP 2:387 [c. 1906])

Here, Peirce suggests two reasons for the proposed expansion. The first is his general examination of the sciences and their classification. Apparently, Peirce has come to see that there are certain crucial tasks that none of the existing sciences is fit to handle. Rather than proposing completely new sciences to fill the gap, he finds it more plausible to recommend that logicians expand their repertoire. Secondly, the inclusion of the study of definition – or meaning – broadens the horizon of logic in the direction of semeiotic. At first, this may seem to be a rather minor addition, but if we keep in mind that the Peircean analysis of definition is closely connected to his pragmatism, then we begin to discern the significance of the transformation.

Somewhat different arguments leading to roughly the same conclusion can be found in the following passages:

> The highest kind of symbol is one which signifies a growth, or self-development, of thought, and it is of that alone that a moving representation is possible; and accordingly, the central problem of logic is to say whether one given thought is truly, i.e., is adapted to be, a development of a given other or not. In other words, it is the critic of arguments. Accordingly, in my early papers I limited logic to the study of this problem. But since then, I have formed the opinion that the proper sphere of any science in a given stage of development of science is the study of such questions as one social group of men can properly devote their lives to answering; and it seems to me that in the present state of our knowledge of signs, the whole doctrine of the classification of signs and of what is essential to a given kind of sign, must be studied

> by one group of investigators. Therefore, I extend logic to embrace all the necessary principles of semeiotic… (CP 4.9 [c. 1906])

> The study of languages ought to be based upon a study of the necessary conditions to which signs must conform in order to fulfill their functions as signs. I have gradually been led to conclude that it is best to identify logic with this study, notwithstanding its thus being made to include something which has no bearing upon the strength of arguments. For there is but little of this superfluous matter, – too little to make a separate science of, – and it is needed for its linguistic and rhetorical applications, as well as having a value simply as truth; and a simpler unity is thus given to logic. I might, therefore, very well call it speculative semeiotic. (MS 693:188-190 [1904])

Peirce recognises that the proposed extension of logic is likely to bring forth certain objections, primarily related to the controversial claim that logic, as the science of reasoning, would be concerned with all kinds of signs and semiotic functions. For instance, commands are not truly open to logical criticism; nor does it seem feasible to say that a piece of music is subject to logical laws (MS 803). However, Peirce replies that as long as every logical relation is a semiotic relation (which he naturally holds it to be), then the deeper comprehension of logic requires an understanding of signs and their functions. If logic is not expanded, then an investigation of the limitation, which is required to bring signs within the jurisdiction of logic, is needed (MS 803). In several writings (e.g., MS 793 [c. 1906]; MS 640:10 [1909]; MS 645:2 [1909]; MS 499s), Peirce indicates that it is better give the subject of logic the slight extension needed so that the discipline covers all kind of signs.[73] Peirce urges logicians to widen the scope of their research; like medical men examining yeasty diseases study all kinds of yeast, so logicians ought to investigate anything that bears any real analogy to reasoning, and analyse the agreements and disagreements of such occurrences with reasoning (MS 634:15-16 [1909]). In *Essays on Meaning*, Peirce even asserts that the broader investigation is part of the *duties* of the logician; it is the reason he calls his prospective *magnum opus* "A System of Logic, considered as Semeiotic" (MS 640:10 [1909]).

However, does not the proposed expansion entail a non-normative conception of logic, as not all semiotic phenomena under consideration can reasonably be said to be true or false? Peirce is somewhat vague concerning this point. It is clear that he does not want to give up the distinction between truth and falsity as a distinguishing mark of logic altogether, in spite of the semiotic turn his thought has taken.

> By Logic I mean the study of the distinction between Truth and Falsity, and the theory of how to attain the former together with all that the investigator of that theory must make it his business to probe. It comes, in my opinion, in the present state of science, to a study of the general nature of Signs and the leading kinds of Signs. (MS 645:2 [1909])

> …one of the first discoveries of stechiology [*the first department of logic, also known as "grammar" – MB*] is that every reasoning is of the nature of a sign, and further that though reasoning is thought, yet the sole ultimate concern of logic is the truth or falsity of the thought; and this is as much as to say that logic is only concerned with thought in so far as this represents or falsely professes to represent reality. That, again, is as much as to say that it is only in so far as thought is of the nature of a sign, or representation, that logic is interested in it. Now the science of the distinction [between] truth and falsity must be more or less concerned with all signs; and consequently and more decidedly than the reader can as yet be expected to understand, there is a great advantage in making logic in general, and more especially stechiology, embrace in its scope all sorts of signs and representations. (MS 602:6-7 [late])

Furthermore, in a fragmentary manuscript, Peirce notes that semeiotic might be a better name for the third normative science, because "speculative rhetoric [*the third branch of logic – MB*] is quite as decidedly 'normative' as speculative critic is" (MS 836:4_b). Yet, in a draft of the *Carnegie Application* (MS L75d:235-237 [1902]), Peirce indicates that the formal science of logic is not completely normative; "it is only the connection of logic with esthetics through ethics which causes it to be a normative science at all" (cf. EP 2:272 [1903]). In other words, the position of logic in the scheme of the sciences makes it normative; yet there would seem to be a part of its task that is properly speaking not of a normative character. That

semeiotic might not, after all, be wholly normative is also suggested by Peirce's characterisation of the study as "the general physiology of Signs" (NEM 3:1132 [1909]). In the late manuscript "A Sketch of Logical Critics", he concedes that his conception of logic has become more concrete over the years; "In my younger days I conceived of logic in a more purely ideal and abstract way than I have now come to do" (MS 676:4 [c. 1911]).

The tension between the normative and the non-normative point of view becomes even more obvious if we consider Peirce's description of his semeiotic interests in a letter to Lady Welby:

> …it has never been in my power to study anything, – mathematics, ethics, metaphysics, gravitation, thermodynamics, optics, chemistry, comparative anatomy, astronomy, psychology, phonetics, economic, the history of science, whist, men and women, wine, metrology, except as a study of semeiotic (SS 85-86 [1908]).

Although this well-known passage may include some exaggeration – we do not find a sign-theoretical investigation of wine and women among Peirce's writings – it nonetheless suggests that semeiotic is not strictly speaking normative. In fact, if the statement were to be taken seriously, it would appear to cast some doubt on the validity of the scientific position of the study of signs. In this context, semeiotic appears to be more of an interdisciplinary approach or a perspective than a science in the proper Peircean sense of the term (cf. Deely, 1990, pp. 9-21; Eco, 1978).

Here we may have hit upon the reason for Peirce's reluctance to use the term "semeiotic" in his classification of the sciences; it does not fit into the format provided by the second order of philosophy. Yet, it would definitely be unwise to try to severe the ties between Peircean logic and semeiotic. The second branch of the logical study of signs, critic, is unquestionably normative; and this dimension is also invaluable for the other parts of semeiotic (cf. MS 836:4_b). Perhaps we could suggest that normative semeiotic forms the heart of the study, giving it life and purpose. Ultimately, semeiotic ought to provide us with means for improved self-control in certain modes of action (cf. MS 693:130-132 [1904]). In other words, the

normative dimension of the science of signs is related to its capacity to bring forth growth of semiotic habits (cf. CP 4.9 [c. 1906]).

Buchler (1939b, p. 197) suggests that Peirce could have profited from a distinction between *analytical* and *descriptive* semeiotic. Other commentators have observed that the Peircean theory of signs may be broader in scope than Peircean logic. Fisch (1986) argues that the association of logic with semeiotic does not, after all, entail that logic would cover the whole domain of the study of signs (p. 339). In addition to philosophical semeiotic, which is distinguished by such adjectives as "cenoscopic", "normative", "formal", "general", or "speculative", there ought to be *idioscopic* studies of signs, that is, semeiotic investigations that are peculiar to physics, biology, psychology, sociology, literary criticism, and so on. Peirce does not develop such lines of inquiry, but he does indicate that such specialisations are needed when he says that "psychologists ought to make, as in point of fact they are making, their own invaluable studies of the sign-making and sign-using functions" (EP 2:461 [c. 1911]).

In a similar vein, Ransdell (1977, p. 158) and Houser (1992, p. 1283) distinguish between *general* and *special* studies of signs, where the latter kind of inquiry can be seen as an application of the former. Such a distinction between various kinds of semeiotic is useful, worth adopting for purposes of the further development of Peirce's thought; it seems to be in line with the spirit of his project. General semeiotic is philosophical, and operates as a preliminary for more specialised research, which in turn puts the theoretical claims of general semeiotic to the test. In other words, general semeiotic provides special semeiotic with a theoretical and conceptual framework, while special semeiotic deals with more substantial applications, the results of which may be considered in the abstract by general semeiotic. Hence, we have a potentially productive give and take operating between these two levels of the study of signs.

However, it is important to keep in mind that the distinction between general and special semeiotic cannot entail a separation of non-experimental from experimental studies of signs; nor does it imply that general semeiotic is non-experiential (cf. Ransdell,

1982).[74] Semeiotic is, like all philosophical investigation, positive in the sense of having an experiential connection.

2.3.4 Branches of Semeiotic

In his early writings, Peirce recognises three divisions of symbolistic: grammar, logic, and rhetoric (see fig. 1, sect. 2.1). This trichotomy of semiotic inquiries is later modified in various ways; yet its basic structure is retained throughout his philosophy. The most significant change concerns its place in relation to general semeiotic or logic; from the 1890s onward, Peirce divides logic into three sub-disciplines: grammar, critic, and rhetoric. Peirce experiments with a confusing variety of different names for these branches; instead of "grammar", he sometimes uses "originalian logic" (CP 2.93 [c. 1902]) "syntax" (MS 452:6 [1903]), "stecheotic" (CP 4.9 [1906]), "stechiology" (MS 602:5-7 [late]), "hermeneutic" (MS 640:7 [1909]) , or "analytic" (NEM 3:207 [1911]). In addition, "grammar" is typically specified using such adjectives as "general", "speculative", "universal", or "formal". "Critic" is sometimes called "obsistent logic" or "logic in the narrow sense" (CP 2.93 [c. 1902]), while the third branch is known as "objective logic" (CP 3.430 [1896]), "transuasional logic" (CP 2.93 [c. 1902]), or "methodeutic" (e.g., NEM 3:207 [1911]) in addition to "rhetoric". The reasons for the different uses are rarely explained, and apart from the shift from "rhetoric" to "methodeutic" they seem to be of only minor scholarly interest.

Peirce's division of logic – or in the beginning, of symbolistic – is an indication of his interest in scholastic thought. No doubt, Peirce wants to mark a historical continuity between his undertaking and the work of his predecessors by the adoption of the names "grammar", "logic", and "rhetoric" (see MS 775:5 [c. 1904]; Savan, 1989).[75] Yet, from the beginning, he begins to forge his own understanding of the role of each of the departments. In his Harvard lectures on the logic of science, we find the following characterisation of their respective rationales:

> …Symbols, as such, are subject to three laws one of which is the *conditio sine qua non* of its standing for anything, the second of its translating anything, and the third of its realizing anything. The first law is Logic, the second Universal Rhetoric, the third Universal Grammar. (W 1:274 [1865])

In other words, the logical – or as we might by now say, semeiotic – sub-disciplines are distinguished by the fact that they focus on different semiotic functions: grammar on meaningful structure, (critical) logic on representation, and rhetoric on interpretation. This division of labour is characteristic of Peirce's early semeiotic; it is clarified in "On a New List of Categories".

> We come, therefore, to this, that logic treats of the reference of symbols in general to their objects. In this view it is one of a trivium of conceivable sciences. The first would treat of the formal conditions of symbols having meaning, that is of the reference of symbols in general to their grounds or imputed characters, and this might be called formal grammar; the second, logic, would treat of the formal conditions of the truth of symbols; and the third would treat of the formal conditions of the force of symbols, or their power of appealing to a mind, that is, of their reference in general to interpretants, and this might be called formal rhetoric. (W 2:57 [1867])

In this Peircean trivium, we may discern the basic components of his early analysis of representation: the ground, the object, and the interpretant. This association of the various semeiotic sub-disciplines with the principal parts of the sign is a feature that we also find in many of his later characterisations of grammar, critic, and rhetoric (see, e.g., CP 2.229 [c. 1897]).[76]

Peirce writes next to nothing on the division of semeiotic in the period between the "New List" (1867) and the "Short Logic" (1895); but from there on, we find numerous takes on the trivium. In general, they tend to follow along the same lines as the early characterisations, but with a few additions and changes. Most importantly, the trichotomy of grammar, critic, and rhetoric is no longer tied to symbols, but covers the whole field of semeiotic.[77] We can now conclude the discussion of semeiotic inquiry with an overview of the varieties of sign-theoretical inquiry as they are presented in Peirce's mature philosophy.

The function of grammar is to "study modes of signifying, in general" (EP 2:19 [1895]), or to examine the ways in which an object can be a sign (CP 1.444 [c. 1896]; EP 2:327 [1904]; MS 775:5 [c. 1904]). More specifically, grammar examines the conditions of signs having any significant or meaningful character (NEM 4:331 [1898]; CP 2.93 [c. 1902]); it "has for its task to ascertain what must be true of the representamen used by every scientific intelligence in order that they may embody any *meaning*" (CP 2.229 [c. 1897]). Viewed from a slightly different perspective, grammar investigates to what conditions signs must conform in order to assert anything (CP 2.206 [1901]; cf. CP 3.430 [1896]). The first sub-division of semeiotic is also characterised as logical syntax, which "performs the anatomy and histology of reasoning" (MS 452:6 [1903]); it is, in a sense, "physiological" (EP 2:272 [1903]).

In at least one passage, Peirce suggests that grammar is close to *Erkenntnistheorie* (CP 2.206 [1902]);[78] but in the end, he rejects the name because of the German logicians' tendency to base the study on psychology (MS L75d:247-248 [1902]). Peirce thinks that grammar is equivalent to a theory of cognition stripped of everything irrelevant and inadmissible. This suggests that grammar is reasonably close to *epistemology*. Peirce might have accepted the connection, were it not for his fear of psychologistic associations and his plain distaste for the word (see CP 5.496 [1907]). At any rate, Peirce gives hints that his interest in grammar was awakened by early studies of Kant's *Critique of Pure Reason*, in addition to examinations of the work of medieval philosophers (see CP 2.206 [1902]).

The logical sub-disciplines follow the Comtean principle of Peirce's classification of the sciences (see EP 2:260 [1903]); therefore, grammar precedes critic, which is primarily concerned with a more limited function of signs. Yet, Peirce characterises critic as the centre and heart of logic (MS 640:6 [1909]), undoubtedly because it is the most normative of all the three semeiotic enterprises.

Critic can be defined as "the science of the necessary conditions of the attainment of truth" (CP 1.444 [c. 1896]) or "the formal science of the conditions of the truth of representations" (CP 2.229 [c. 1897]). In general, it studies the ways in which a sign can be related

to the object of which it is a sign (EP 2:327 [1904]; MS 775:5 [c. 1904]). More specifically, its task is "to ascertain what descriptions of arguments are sound, and in what the soundness of each consists" (MS 640:6 [1909]). In other words, critic is principally a classificatory endeavour, dividing reasoning into the good and the bad (CP 2.205 [1902]; EP 2:260 [1903]; EP 2:272 [1903]).

We know from Peirce's descriptions that critic is meant to encompass traditional logic; however, we should keep in mind that some parts of formal logic belong more properly to mathematics than to critic in the Peircean framework (see CP 4.240 [1902]). Critical logic is principally characterised by three things: its focus on the reference of signs to their professed objects, its examination of the conditions of truth, and its concern with the soundness of arguments. As we have seen, Peirce's concept of truth is closely associated with his notion of reality; it is not surprising, then, that "The Regenerated Logic" states that critic investigates "to what conditions an assertion must conform in order that it may correspond to the 'reality'" (CP 3.430 [1896]).

In spite of somewhat different emphases in different contexts, Peirce's mature accounts of grammar and critic are relatively consistent and stable. In contrast, it is rather difficult to form a coherent picture of the third department of semeiotic.[79] Here, we find a definite shift in emphasis, the consequences of which are still not quite clear.

When Peirce begins to re-examine his old trivium, he at first continues to call the third branch "rhetoric" and defines it as "the study of the necessary conditions of the transmission of meaning by signs from mind to mind, and from one state of mind to another" (CP 1.444 [c. 1896]; cf. NEM 4:331 [1898]). From a slightly narrower perspective, it is "the study of those general conditions under which a problem presents itself for solution and those under which one question leads on to another" (CP 3.430 [1896]). The task of rhetoric "is to ascertain the laws by which in every scientific intelligence one sign gives birth to another, and especially one thought brings forth another" (CP 2.229 [c. 1897]). As such, the focus of rhetoric would naturally be toward interpretation and other semiotic effects.

However, approximately in 1902, the focus of the third sub-discipline of semeiotic begins to turn toward methodology, something that is reflected in Peirce's preferred name, "methodeutic" (cf. CP 4.9 [1906]). The occurrence of this shift can be seen quite concretely in the *Minute Logic*, where the two terms still co-exist, albeit somewhat uneasily. The definition of rhetoric offered in this context states that it is substantially the same as methodeutic, and that it is concerned with the "the general conditions of the reference of Symbols and other Signs to the Interpretants which they aim to determine" (CP 2.93 [c. 1902]).

At first, it does not seem that all that much has changed, apart from the name. In the *Carnegie Application*, Peirce says that "*methodeutic* looks to the purposed ultimate interpretant and inquires what conditions a sign must conform to, in order to be pertinent to the purpose" (NEM 4:62 [1902]). However, a year later we find him defining the third sub-discipline as "the principles of the production of valuable courses of research and exposition" (EP 2:272 [1903]). In another characterisation in *A Syllabus of Certain Topics of Logic*, Peirce says that methodeutic "studies the methods that ought to be pursued in the investigation, in the exposition, and in the application of truth" (EP 2:260 [1903]). More in the same vein follows. The third department of logic "considers how inquiries are to be ordered and arranged" (MS 452:6 [1903]); its "purpose is to ascertain the proper order of procedure in any inquiry" (MS 640:6 [1909]). In short, methodeutic "shows how to conduct an inquiry" (NEM 3:207 [1911]).

Thus, it would appear that Peirce has replaced rhetoric with the more concrete or better-defined methodeutic, at the same time restricting its scope to the study of effective methods. Some scholars have drawn this very conclusion; for instance, according to Lucia Santaella Braga (1999a, p. 380), the third branch of semeiotic develops from a narrow to a broad sense. However, at roughly the same time as this transformation takes place, Peirce also continues to write on rhetoric, and even proposes a quite intricate scheme of various rhetorical studies in "Ideas, Stray or Stolen, about Scientific Writing" (1904).[80] In this context, Peirce defines the third branch of semeiotic as "the science of the essential conditions under which a

sign may determine an interpretant sign of itself and of whatever it signifies, or may, as a sign, bring about a physical result" (EP 2:326 [1904]; cf. MS 836:1_b). However, not all rhetorical questions are necessarily pursued in philosophy. According to Peirce, there is, as a matter of fact, a universal art of rhetoric, which is concerned with "the general secret of rendering signs effective" (EP 2:326 [1904]). From this art, which ought to include such practical concerns as the teaching of eloquence and the improvement of organisational communications, one may abstract the science of rhetoric, which should investigate the principles of everything that the art covers or could cover. It is by no means clear how this characterisation fits with the methodeutic point of view – or even if it is meant to do so.

Now one could obviously argue that "Ideas, Stray or Stolen" is explicitly focused on scientific writing and is therefore naturally a part of methodeutic; it is concerned with the publication of scientific findings, which is a central part of science according to Peirce (see sect. 2.2.1). This is true as far as it goes, but it does not explain the discrepancies between the rhetorical and methodeutic perspectives. In fact, it would seem that many of Peirce's characterisations of methodeutic are far narrower than his comparable definitions of rhetoric; some of the methodeutic definitions appear to turn the third branch of semeiotic into a set of rules for conducting successful research. Furthermore, in "Ideas, Stray or Stolen" Peirce suggests that rhetoric could be divided into the rhetoric of art, the rhetoric of persuasion, and the rhetoric of science (see EP 2:329 [1904]). This, in turn, could be interpreted to imply that methodeutic is only the part of rhetoric known as rhetoric of science.

Yet, it may be that the contrast between rhetoric and methodeutic should not be exaggerated. By re-conceptualising the third branch of semeiotic as methodeutic, Peirce finds a concrete function for it in inquiry. On the other hand, he also wants to retain the broader conception, in which rhetoric is defined in terms of bringing forth interpretative effects or results. Ransdell (1997) enumerates three principal functions of the third semeiotic discipline; it "can be conceived variously as the general methodology of inquiry, as a theory about how beliefs are established when truth is sought,

or as a theory about the representational process considered as an autonomous interpretant-generating process" (§19). The autonomy claim is controversial (see sect. 5.1.1), but if we speak more broadly about a theory of interpretant generation and communication, then Ransdell's summary should be acceptable to all parties.

These various aspects of rhetoric/methodeutic seem to be reconciled in the following characterisation of the logical trivium

> The whole discussion of the logical nature of the different kinds of possible signs makes up the first division of logic, or Speculative Grammar. The second division, *Critic*, discusses the relation of signs to their objects, that is, their truth. The third division, *Methodeutic*, discusses the relations of signs to their interpretants, that is, their knowledge-producing value. (MS 793:20_b [c. 1906])

Even more generally, it may be suggested that the third branch of semeiotic is concerned with semiotic effects. This would allow for a division of labour between rhetoric and methodeutic; explicitly rhetorical studies would be primarily concerned with communication, while methodeutic investigation would be roughly equivalent to what is usually known as methodology. That these two forms of inquiry could reasonably co-exist and support each other is not guaranteed, but the proposal seems plausible from the point of view of Peirce's semeiotic project. Taking "rhetoric" as an umbrella term, Liszka (2000) argues that rhetoric as speculative rhetoric (i.e., as an account of the conditions of communication and the fixation of belief) and rhetoric as methodeutic (i.e., as a systematic procedure for inquiry and for the systematisation of the sciences) are reconcilable within scientific rhetoric, which "works to underscore the formal conditions of inquiry *as a practice*, including its presuppositions, purposes, principles, and procedures" (p. 470). Apart from certain doubts that could be entertained concerning the aptness of the term "formal conditions" in this context,[81] Liszka's proposal offers a good summary of the scope of Peirce's rhetoric. It retains the notion that the study of communication is an integral part of semeiotic, while at the same time paying due heed to the scientific setting of Peirce's project.

Notes to Chapter 2

[1] Many Peirce scholars have emphasised the scientific side of Peirce's intellectual persona. According to Ken Ketner (1987, p. 14), Peirce was not really a philosopher; he was a scientist and mathematician. Such comments can be valuable as they remind us that many of Peirce's philosophical insights have their roots in his work outside of philosophy; yet, it is somewhat odd to claim that the founder of semeiotic and pragmatism is not a philosopher. Ketner's contention is that Peirce is not a humanistic thinker, but rather a philosopher of the sciences. However, this can be misleading, if we by "sciences" understand the natural sciences. For as we shall see, Peirce presents a general conception of science, which does not exclude the social and human disciplines; in the hierarchy of sciences, they are, in fact, placed parallel with the physical disciplines (see sect. 2.3.2). If anything, Peirce saw himself primarily as a logician.

[2] See, e.g., Delaney, 1993b; Eisele, 1979; Haack, 1997; Kent, 1987; Lachs, 1999; Misak, 1991; Moore, 1993; Rescher, 1978; Short, 1998a; Stewart, 1991.

[3] This version of Locke's statement has been taken from Deely, Williams, & Kruse, 1986. In later editions of the *Essay*, Locke apparently added an epsilon to the name of the doctrine of signs, giving us the "semeiotic" familiar from Peirce's writings. It is, however, only probable that Peirce adopted the term from Locke; in a recent study of the history of the word 'semiotics' and its near relations, Deely (2003, p. 14) suggests that the idea of a study of signs was "in the air" in Peirce's youth.

[4] By "signs", Peirce in this context means the kind of representations later named "indices".

[5] In Peirce's early writings, the status of these supposable objects is quite unclear. They are attributed to the noumenon by hypothesis. According to Peirce (W 1:307 [1865]), representational objects are not altogether hypothetical, since there is at least something exactly similar in consciousness to representation. Things are legitimate hypotheses, but qualities are mere fictions, mental constructions without real correspondents in the external world. This position is a reflection of Peirce's early nominalism, which explicitly denies the truth of scholastic realism (see W 1:307 [1865]).

[6] In this trivium of sciences, we may discern an early anticipation of the later division of sciences into mathematics, philosophy, and special science (see sect. 2.3.2). On the other hand, it may be wise not to read too much into Peirce's earliest attempts to classify the sciences. His characterisations of the domains of formal science, positive science, and semeiotic are

sketchy at best. In particular, Peirce vacillates concerning the relationship between the sciences of representation and form; whereas formal science is clearly (albeit programmatically) distinguished from the science of representations in "Teleological Logic" (1865), logic is described as the science of the forms of thought, concerned with both internal and external representations, in "An Unpsychological View of Logic" (1865). Nor is it clear to what extent formal science and semeiotic would be dependent on each other; on the one hand, form and thing are prescinded from representations, but on the other hand, Peirce's diagram of the relationship between the three basic sciences does not suggest any relation of dependency between the disciplines (see W 1:303-304 [1865]).

[7] Although it seems reasonable to surmise that the denomination "doctrine of signs" is culled from Locke, Peirce does not explicitly say so, at least not to my knowledge.

[8] In the letter, Peirce claims that he earlier defined logic as "the doctrine of the formal conditions of the truth of symbols". This is not entirely accurate; Peirce does not use the word "doctrine" in the 1867 article to which he refers.

[9] Several semioticians influenced by Peirce seem to prefer "doctrine" (e.g., Deely, 1982; Sebeok, 1976; 1986). John Deely (1982) claims that "the Latin philosophical term *doctrina* […] expressed with great clarity and richness the notion of a level or type of knowledge which, we can see in hindsight, is critically distinct from scientific knowledge or *science* ('scientia') in the modern sense that the term has acquired since Locke's day, as also the term 'theory'" (p. 127).

[10] The claim that science is social is, of course, hardly revolutionary today. However, as John Lachs (1999, p. 75) notes, it is one thing to merely state that research is social, but quite a different thing to take this notion seriously and examine its implications. Arguably, Peirce's view of the sociality of science goes deeper in this respect than many contemporary approaches.

[11] See Peirce's 1901 review of Karl Pearson's *The Grammar of Science* (1892) for a summary of his main arguments against the instrumentalist variant of positivism (CP 8.132-152; EP 2:57-66). See also Peter Skagestad's (1983) discussion of the differences between Peirce's pragmatism and Pearson's instrumentalism.

[12] Peirce's use of the phrase "natural scientific men" may appear to restrict the field of science to that of natural science. He certainly thinks that researchers in all areas would do well to learn from the methods of the

"successful" sciences, by which he primarily means the physical sciences. On the other hand, Peirce's classification of the sciences does not place the natural disciplines in any privileged position (see sect. 2.3.2). In view of this, we may opine that "natural" should be read in the same manner as in his phrase "natural classification" – not as suggesting a clear-cut domain distinct from culture or the social world, but rather as indicative of a certain purposive outlook (see sect. 2.3.1). In other words, the "natural scientific men" would be the class of men and women distinguished by their scientific *tendency*.

[13] It is likely that Peirce devised this division in connection with an attempt to classify "great men", one of his unfinished projects. A reader familiar with Peirce's theory of categories will recognise that the classes of men correspond roughly to his categories of firstness, secondness, and thirdness (see chap. 3). There are evident weaknesses in the classification; the classes seem to be rather rigid, with few possibilities for plural outlooks. In addition, the scheme omits at least one class of human beings altogether: the ones who do not have any leading interest in their life, but are satisfied with getting by. It may be the largest group of them all.

[14] In his Cambridge Conferences lectures, Peirce lists four ways of blocking inquiry that should be avoided: (1) absolute assertion, that is, making overconfident statements; (2) maintaining that a certain fact never can be known; (3) maintaining that any element of science is basic, ultimate, absolutely independent, or inexplicable; and (4) holding that some law or truth has found its final and perfect formulation (RLT 179-180 [1898]).

[15] Peirce's references to "seminary philosophers" have a well-documented historical background. In the United States of the 19th century, philosophy was for a long time pursued mostly in theological seminaries. Peirce belonged to the first generation of American thinkers seriously to challenge this hegemony, advocating a secularised philosophy to be pursued in universities dedicated to research. (See Kuklick, 2001, for a lucid account of these phases in American philosophy.)

[16] "The instincts connected with the need of nutrition have furnished all animals with some virtual knowledge of space and of force, and made them applied physicists. The instincts connected with sexual reproduction have furnished all animals at all like ourselves with some virtual comprehension of the minds of other animals of their kind, so that they are applied psychists. Now not only our accomplished science, but even our scientific questions have been pretty exclusively limited to the

development of those two branches of natural knowledge. There may for aught we know be a thousand other kinds of relationship which have as much to do with connecting phenomena and leading from one to another, as dynamical and social relationships have. Astrology, magic, ghosts, prophecies, serve as suggestions of what such relationships might be." (RLT 173 [1898])

[17] C. F. Delaney (1993b, p. 32) lists the following moral factors of Peircean science: the love of truth, the sense of community, and the sense of confidence.

[18] This scientific ethicality should not be confused with common morality, however. In fact, Peirce often stresses that science should not be restricted by conventional norms and moral dicta; "in more ways than one an exaggerated regard for morality is unfavorable to scientific progress" (CP 1.50 [c. 1896]). The conservatism of common morality can restrict the freedom of inquiry; therefore, the scientist must, in the function as scientist, free him- or herself from the pressures of conventional society. This is why science ought to be autonomous, according to Peirce (see sect. 2.2.2 for a discussion of his distinction between theory and practice).

[19] In the manuscript "Telepathy" (c. 1903) Peirce argues somewhat differently, indicating that the scientist must possess a gift for reasoning as well as the desire to learn. On the other hand, he speculates that experience would, given enough time, probably produce these qualities in a human being; on a broader social level, this has in fact happened. "There are two qualifications which every true man of science possesses, and which, if a man possesses them, he is sure to develop into a scientific man in the course of time, if he ought not fairly to be called such already. First, the dominant passion of his whole soul must be to find out the truth in some department, regardless of what the color of that truth may be. Secondly, he must have a natural gift for reasoning, for severely critical thought. Perhaps a man who had drunk of the fountain of perpetual youth need not, at the outset of his career, possess either of those qualifications: he would infallibly become a man of science at last, because the incessant action of experience would ultimately produce those two qualities in him. For we see that, in a measure, that effect has been produced in the course of history upon civilized man at large." (CP 7.605 [c. 1903])

[20] In one manuscript, Peirce mentions a number of logicians that have contributed to the study of signs. The list consists of George Boole, Mary Everest Boole, Victoria Lady Welby, Louis Couturat, Alfred Kempe, Alfred Peano, and Bertrand Russell (MS 634:14 [1909]).

[21] The plausibility and ramifications of Peirce's conception of doubt and belief have been extensively discussed in the secondary literature (see, e.g., Almeder, 1980; Delaney, 1993b; Friedman, 1999; Haack, 1983; Hookway, 2000; Schouls, 1981). Here, many problematic aspects of Peirce's account, such as the question of the fairness of his criticism of Descartes, are ignored.

[22] "Many of our reasonings are [...] performed instinctively, and it must not, for an instant, be supposed that I should recommend that such modes of action be given up in favor of theoretical procedures, except to compare theory with practice or for some other peculiar and quite theoretical purpose" (MS 693:20 [1904]).

[23] This position can be seen as a critical comment to William James's 1896 essay *The Will to Believe* (also published in James, 1898). The crucial difference between James and Peirce in this regard is that the former emphasises individual choice, while the latter speaks more vaguely of communal sentiment.

[24] Peirce's definitions of "belief" are apparently not consistent in this regard; in the passage cited earlier in this section (MS 717:2 [c. 1894?]), he stresses that beliefs are habits of which we are aware, related to deliberate action.

[25] This does not mean that the scientist should purge his or her mind from preconceived ideas. In fact, Peirce asserts that such a programmatic demand is characteristic of a loose reasoner, and adds that to "have no preconceived idea in experimentation is to take an interrogatory position without putting any definite question" (NEM 4:xii).

[26] Late in life, Peirce planned to publish his original writings on pragmatism as a book (*Essays on Meaning*, c. 1909). The project was not completed, but the plans show that he intended to make only minor corrections and additions to the essays.

[27] Peirce's *synechism*, the metaphysical position that emphasises continuity, will not be examined in this study. See Parker, 1998, for a thorough discussion of this aspect of Peirce's thought.

[28] Another limitation of the freedom of science is posed by the material conditions under which science must, as a mode of conduct, function. While science is in principle free to entertain any proposition it likes, it is rational to try such hypotheses that could be credibly proven true or falsified, given certain initial conditions and reasonable expectations of the future. Although it is not possible to discuss these issues here, we may note

that Peirce even develops a theory of such factors under the name "the economics of research" (W 4:72-78 [1879]; RLT 178 [1898]; CP 5.600 [1903]; see also Delaney, 1993; Eisele, 1979; Rescher, 1978; Stewart, 1991).

[29] Peirce specifies the "broader sense of experiment" as "any observation made to test the hypothesis", and opposes it to the narrower sense, in which "special conditions of experience are purposely created" (EP 2:372 [c. 1906]; cf. MS 283:11$_v$ [c. 1906]).

[30] The sharpness of Peirce's assault can be partly explained by his anti-utilitarian programme. However, in the case of the 1898 lectures, coarser factors may have contributed to the manner in which he tackled the topic of theory and practice (cf. Hookway, 2000, pp. 23-24). Instructed by James to keep the talks "unmathematical" and "popular" (RLT 25), Peirce reacted by giving an opening lecture – popular in tone – about the lack of relevance of philosophy for the conduct of life. There is certainly a degree of irony at play here. (I owe this last observation to Colapietro.)

[31] These three are not the only kinds of content-bearing truth identified by Peirce. In "The Basis of Pragmaticism" he also mentions *extraordinary truth* as a possible third kind besides positive and mathematical (that is, ideal) truth, but it is added merely to avoid assuming without warrant that truth is exhausted by the other variants (MS 283:47$_v$ [c. 1906]). Ultimate truth is not mentioned in this context.

[32] Although Peirce does not say so, it would appear that an ultimate truth is a truth of *immediate perception* – if it makes sense to speak of such a thing (see sect. 4.3.3).

[33] The first grade of clearness of "truth" is the mere familiarity with the application of the word; that is, our ability to use it in meaningful sentences. Another analysis of the second level, perhaps more familiar than the one noted here, would give us the definition of truth as that which is as it is, independent of how anyone thinks it to be (CP 2.55 [c. 1902]; PPM 255 [1903]). This characterisation is practically the same as Peirce's second-grade clarification of "real" (cf. sect. 5.2.3).

[34] For a plausible and useful reconstruction of Peircean truth in terms of propositional commitment, see Hookway, 2000.

[35] Compare with the following: "since the object represented is not a predicate, the true proposition cannot directly 'agree' with it, but can only agree with a satisfactory representation of it" (MS 283:41$_v$ [c. 1906]).

[36] It is worth noting, however, that the need for hope is already suggested in some of Peirce's earliest writings, where Peirce states that dogmatism must be replaced by "faith" (e.g., W 1:78 [1862]). Cf. sect. 3.1.

[37] In the last section, it was noted that Peirce sometimes claims that belief has no place in science. This seems to invalidate the idea that the scientific tendency toward truth is, in some sense, attributable to the nature of belief formation. However, we need to keep in mind his distinction between belief and full belief. Perhaps we could say that scientific opinion is diluted belief; it does not involve the actual preparedness to act characteristic of living belief, but it still partakes of the directionality of belief.

[38] These are, of course, the three non-scientific methods of fixating belief listed by Peirce in "The Fixation of Belief" (1877).

[39] These reflections will receive further illumination in section 4.3, where Peirce's theory of perception is discussed.

[40] Such mental operations are experiments in the broad sense (see note 29 above).

[41] It would be easy to criticise Peirce's notion of "everyman's hourly experience" (NEM 4:228 [1905-6]) on the ground that this communal "everyman" is a mere abstraction, a disembodied and sexless fiction. Peirce would probably not be stirred by such arguments; if experience were completely individual, then there could be no inquiry in the proper sense. Although the success of science is not a *proof* that we share at least some experiences, it gives sufficient support to the hypothesis to render it a rational hope. On the other hand, Peirce does at times indicate that common experience is something that requires a certain level of maturity in the individual (see, e.g., MS 1334:24 [1905]; MS 655:8 [1910]).

[42] "I shall show why I do not think there can be any direct profit in going behind common sense – meaning by common sense those ideas and beliefs that man's situation absolutely forces upon him. [---] I agree, for example, that it is better to recognize that some things are red and some others blue, in the teeth of what optical philosophers say, that it is merely that some things are resonant to shorter ether waves and some to longer ones. But the difficulty is to determine what really is and what is not the authoritative decision of common sense and what is merely *obiter dictum*. In short, there is no escape from the need of a critical examination of 'first principles.'" (CP 1.129 [c. 1905])

[43] Robin (1964) has given the name "credibilism" to Peirce's emphasis on the indubitability of common-sense beliefs, further noting that Peirce's epistemological stance can be characterised as a union of fallibilist and credibilist commitments (p. 272).

[44] See Kent, 1987, for an extensive discussion of the evolution of Peirce's classification of the sciences.

[45] See Kent, 1987, and Parker, 1998, for more thorough accounts of the finer divisions.

[46] The glass-bead game is introduced in Hesse's 1943 novel *Das Glasperlenspiel*.

[47] In an alternative – perhaps somewhat more obscure – formulation of the same general idea, Peirce speaks of the "form" instead of the final cause; in "all natural classifications, without exception, distinctions of form, once recognized, take precedence over differences of matter" (NEM 4:321 [c. 1906]; cf. MS 499s). Beverley Kent (1987, p. 114) claims that virtually all of Peirce's investigations of the idea of natural classification occur around the year 1902, but this is somewhat misleading. The idea of natural classification is also prominent in the 1905 Adirondack lectures (MS 1334).

[48] In one of his manuscripts, Peirce outlines a different rationale for natural classification than the one described here. Contending that desires are phases of instincts, he suggests that the arrangement of the sciences could be based on a classification of human instincts (MS 1343:17-18 [c. 1902-5]). It is not certain that this method, which is primarily applied to the practical sciences, would give us the same classification as the one based on final causes.

[49] Against this claim, it could be argued that there is at least one kind of desire that is not general, namely the desire associated with human relationships. In particular, if we speak of a loved person as a desired object, then it seems that there could be individual desires; we do not want just any human being that fits a general description, but a certain person. This may be seen as an exception, however, and does perhaps not affect the main line of argument Peirce is pursuing.

[50] See sect. 5.3.3 for a more extensive discussion of Peirce's conceptions of generality and vagueness.

[51] However, Peirce notes that it is not quite certain that the attribution of the principle to Comte is correct (MS 1334:7 [1905]).

[52] In yet another expression of the Comtean principle, Peirce states the matter as follows: "one science, A, will often be applied by another science, B, as principles or tools wherewith to solve its problems (not, of course, without research of its own), while science B will perhaps suggest problems to science A, but will not furnish it with any great aid in solving its problems" (MS 1339:4).

[53] At times, Peirce also indicates that the narrower lines of research provide the broader sciences with *data*; because of their focus, they are able to pursue more minute investigations than the more abstract disciplines (see MS 693:66-68 [1904]).

[54] See Kent, 1987, pp. 136-138, for an attempt to illustrate what the Peircean ladder scheme might look like. Based on Peirce's discussions of adequate representation, Kent (1987) argues that "a stereoscopi*c* diagram is needed to convey Peirce's three-dimensional scheme" (p. 124). Such a diagrammatic depiction is not presented in this study.

[55] The outline presented in this figure is a simplified synthesis of some of Peirce's later classifications of science.

[56] Peirce does suggest, however, that the danger of error in philosophy can be reduced by treating its problems as mathematically as possible; this is the core idea of his "doctrine of exact philosophy" (NEM 4:x).

[57] The use of "schematoscopy" is rare, however. Overall, Peirce appears to be satisfied with the established name "mathematics". The employment of the strange name is no doubt partly due to the fact that it accords nicely with the appellations "cenoscopy" and "idioscopy", which Peirce often uses for philosophy and special science, respectively – terms closely associated with the observational methods employed in these disciplines. Liszka (1996, p. 5) suggests that mathematical observation might be called "iconoscopic". He appears to be unaware of Peirce's term "schematoscopy".

[58] Peirce has probably adopted the designation "synthetic philosophy" from Herbert Spencer's *First Principles* (1862) (cf. EP 2:259 [1903]).

[59] Peirce is most likely referring to Charles Woodruff Shields's *Philosophia Ultima or Science of the Sciences* (1888-1905). Peirce wrote a short notice of the posthumously published third volume of Shields's treatise for The Nation in 1905 (see N 3:241-242; see also CP 1.267n [c. 1902]).

[60] Peirce's views changed radically in this respect. In his earliest writings on metaphysics, he explicitly denied that the method of philosophy involves observation (W 1:59 [1861]).

[61] Peirce also uses the names "ideoscopy" (SS 23-24 [1904]), "phanerochémy" (MS 1338:22 [c. 1905-6]), and "phanerology" (MS 338) for the first philosophical inquiry.

[62] It is of course rather remarkable that Peirce introduces his phenomenological approach approximately at the same time Edmund Husserl develops his far better known phenomenology on the other side of the Atlantic. Although the simultaneity of these developments is not wholly

coincidental – Peirce and Husserl share a number of influences – there is no substantial evidence of any give and take between the two thinkers (see Spiegelberg, 1956; cf. Haas, 1964, pp. 48-53).

[63] Classifications preceding the perennial version vary a lot, even with regard to the most abstract sciences that interested Peirce the most. In particular, the arrangement of philosophy goes through many changes right up to the relatively stable version. To give just one example: in "A Classification of Ideas and Words" (MS 1135 [c. 1897]), Peirce places logic at the head of philosophy, above metaphysics and ethics. He also identifies a division of positive science, dubbed *catholonomics* or *catholonomology*, which is placed below philosophy and above the special sciences. This class of sciences, which he claims to be concerned with "the laws common to all matter", disappears from Peirce's subsequent attempts at classification. Esthetics can be found among the special sciences. (See Kent, 1987, pp. 90-121, for an account of Peirce's pre-perennial classifications.)

[64] The idea that the esthetic judgment is based on a background of practice is also evident in the claim that "the good is the attractive, – not to everybody, but to the sufficiently matured agent; and the evil is the repulsive to the same" (EP 2:379 [c. 1906])

[65] Peirce then states that the first normative science is ethics, and says that it is concerned with the existent. In the next step, ethics is divided into two branches: *axiagastics*, the ethics of the ultimate aim (*summum bonum*), and *critical ethics*, which treats of the conditions of the conformity to an ideal (MS 1334:37-38 [1905]). Axiagastics is same as esthetics, as long as esthetics is not limited to sensuous beauty, while critical ethics is primarily concerned with self-control. Compare this with "The Basis of Pragmaticism" (MS 283; EP 2:371-397 [c. 1906]), where Peirce worries about the inadequacy of the term "ethics".

[66] In a draft of his *Carnegie Application* (MS L75d:232 [1902]), Peirce indicates that he outlined the argument for the dependence of logic on ethics as early as 1869 (most likely a reference to "Grounds of Validity of the Laws of Logic: Further Consequences of Four Incapacities"; see W 2:271-2). Summarising the earlier line of reasoning, Peirce asserts that all probability depends on a "long run". Human beings, however, are finite (even if there is a future life); thus, if their purposes are purely selfish, they cannot be logical.

[67] See the 1891-3 "Monist Metaphysical Series", re-published e.g. in EP 1, and the 1908 *Hibbert Journal* article "A Neglected Argument for the Reality of God", re-published e.g. in EP 2.

[68] In *A Syllabus of Certain Topics of Logic*, the metaphysical families are identified as (i) *General Metaphysics* or *Ontology*, (ii) *Psychical* or *Religious Metaphysics*, and (iii) *Physical Metaphysics* (EP 2:260 [1903]; cf. MS 693:88 [1904]).

[69] Kent (1987) has even suggested that deductive logic does not belong to the normative science of logic, but to mathematics. Against this interpretation, Nathan Houser (1988, p. 409) argues that the study of deduction belongs to philosophical logic on the basis that mathematics is solution-oriented, while logic is analysis-oriented. There seems to be quite strong support for Kent's position; for instance, in *Reason's Conscience*, Peirce states that it "is only probable reasonings which require a special science of logic", adding that "necessary reasoning is relegated to mathematics, where it belongs" (MS 693:134 [1904]), and in the *Minute Logic*, we are told that "every apodictic inference is, strictly speaking, mathematics" (CP 4.233 [1902]). Yet, Houser is right in holding that the study of the nature of deduction is a task for the Peircean logician; the mathematician simply reasons deductively, without paying any special attention to the kind of inference used.

[70] However, Claudine Tiercelin (1991, p. 188) argues that that it is misleading to say that Peirce understood logic in a narrow and in a wide sense. She seems to have a strict separation of semeiotic from formal logic in mind. It is true that Peirce would not have approved of such a measure, but as we shall see, his distinction does at least entail an expansion of the scope of logic, which justifies the distinction between a broad and a narrow sense.

[71] Of course, if signs were restricted to thought-signs, then there would be no such problem (cf. sect. 3.1.1).

[72] The original has "with", which must be a slip of the pen.

[73] However, in the late manuscript "Notes Preparatory to a Criticism of Bertrand Russell's Principles of Mathematics", Peirce once again appears to limit logic to a certain group of signs. "Among all the thoughts that language may be used to express, – such as emotions, commands, etc. – logic limits its concerns to *assertions*, to signs of the truth of assertions, and to other signs involved in those" (MS 12:9-10 [1912]). On the other hand, he immediately adds that the logician must begin the study by looking beyond the borders of his or her own science, if only for the purposes of defining the latter. The passage in question could be interpreted as an indication of the central position of assertive acts as a primary subject matter in semeiotic.

[74] In one manuscript, Peirce describes general semeiotic as the "*a priori* theory of signs" (MS 634:15 [1909]). This characterisation fits poorly with his emphasis on the positive character of philosophy, and is perhaps best forgotten as an aberration. It is possible that Peirce uses the term "a priori" to indicate that semeiotic operates with abstractions, but in view of his conception of scientific method, it is clearly inappropriate.

[75] Peirce often attributes grammar, or *grammatica speculativa*, to Duns Scotus (see, e.g., CP 2.229 [c. 1897]; NEM 4:331 [1898]; CP 2.206 [1901]) but this is apparently erroneous. The treatise of that name is now considered to have been written by Thomas of Erfurt (Kloesel, 1981, p. 130; Perreiah, 1989, p. 48).

[76] The better-known division of semiotic disciplines into *syntax*, *semantics*, and *pragmatics*, introduced by Morris (1938, pp. 6-7; cf. Carnap, 1946, pp. 8-9), bears a distinct resemblance to Peirce's trivium in this regard. However, Morris's division is based on the identification various dyadic relations – sign-sign, sign-object, and sign-interpreter – on which the study of signs may focus. As we will see, Peirce's semeiotic divisions are not characterised in such a manner. Nor would Peirce accept the notion that the investigation of meaning is primarily a task for the second semiotic discipline; in the Peircean scheme, the most approapriate place for such a study is rhetoric. This, of course, reflects his view that meaningful relations involve an interpretant as well as sign and object.

[77] There is at least one conspicuous exception in Peirce's later writings. In "Phaneroscopy", he suggests that there is a logic of icons, a logic of indices, and a logic of symbols, and that the division into stecheotic, critic, and methodeutic applies only to the last of these (CP 4.9 [1906]). In view of the fact that Peircean grammar includes icons and indices as well as symbols, this hardly makes sense (cf. EP 2:260 [1903]). We are provided with no information about what the logic of icons or the logic of indices would actually be like.

[78] To be precise, Peirce wrote the dictionary entry in question together with Christine Ladd-Franklin, his former student.

[79] For the best account of Peirce's rhetoric to date, see Liszka's "Peirce's New Rhetoric" (2000). Liszka helpfully places Peircean rhetoric in a historical context, and discusses the various aspects of rhetorical inquiry in some detail.

[80] Curiously, Santaella Braga (1999a, p. 391) claims that it is this very text that signals Peirce's turn from rhetoric to methodeutic.

[81] Admittedly, Peirce sometimes describes the third logical science in such terms, but it might be more appropriate to use "theoretical" rather than "formal" to avoid confusions. Moreover, it seems advisable not to read "conditions" in a strong transcendental sense. Although it seems plausible to think that Peirce's characterisation points in the direction of "transcendental semiotics" (along the lines of Apel, 1998), it might be too limiting a frame for a theory that supposedly needs to examine the practical settings of inquiry closely.

3 Elemental Relations

No serious student of Peirce's philosophy can completely evade the relational scheme that pervades his thought. Repeatedly, his analyses take on a characteristic trichotomic form, with such seemingly unrelated matters as the normative disciplines, the principal types of human existence, and the varieties of signs presented in sets of three. This categorial approach is so dominating that the reader may well wonder if Peirce is not simply forcing his subject matters into too rigid a structure, without paying due attention to the varying facts of the cases; such tendencies could be detected in his classification of the sciences, for instance. Indeed, it might be tempting to write off Peirce's numerous triadic divisions and classifications as a manifestation of his misguided architectonic aspirations.[1] The quest for universal conceptions or ultimate classes, typically associated with such names as Aristotle and Kant, seems to be out of place in today's philosophical landscape, shaped by naturalistic and linguistic turns. As Ketner (1989, p. 135) notes, Peirce's categories have not received a warm welcome. Indeed, one might even wonder whether the categorial project is compatible with such Peircean endeavours as pragmatism and semeiotic.

However, to dismiss Peirce's theory of categories without considering the guiding principles of the approach and its potential consequences would be hasty and unfair. His relational point of view can also be surprisingly rich and fertile; a great variety of philosophical issues can be inspected through the lens of his theory of the categories, with interesting results. Certainly, no adequate understanding of Peirce's theory of signs can be achieved if one does not pay at least some attention to the categorial scheme at the centre of its outlook.

In this chapter, I will examine certain central features of Peirce's approach, moving first chronologically from the early derivation of the categories to the later phaneroscopic point of view, and then offering a reconstruction of the mature theory. The goal is not to cover all aspects of this complex issue; obviously, a single chapter

can offer merely a partial account of Peirce's categories. The following discussion is pursued not so much for the theory of categories itself; here, it is the connection between the categorial approach and semeiotic that is of particular interest. This association is, of course, not a new discovery; several commentators (e.g., Colapietro, 2001; Corrington, 1993; Deledalle, 2000; De Tienne, 1992; Greenlee, 1973; Kruse, 1993; Ormiston, 1977; Savan, 1987-8) have pointed out the intimate relation between Peirce's categories and his theory of signs. The Peircean approach to semiotic phenomena is clearly structured by categorial principles; in fact, in no other department of his thought can we find such a multitude of triadic divisions, ranging from the relatively familiar trichotomy of icon-index-symbol to the obscurer analyses of the varieties of interpretants. However, the semeiotic relevance of the theory of categories is not restricted to Peirce's various attempts to define the sign and to classify semiotic phenomena in accordance with the principles of his categorial system. One of the aims of this chapter is to show how the radical semiotic stance involved in his early theory of categories is gradually – at times almost imperceptibly – modified so as to accommodate a more nuanced view of the worlds of experience and knowledge in the phaneroscopic approach; this development is crucial for the plausibility the communicative interpretation to be pursued in chapters 4 and 5, as well as for the thesis that Peirce's mature semeiotic outlook does not entail a kind of semiotic hermeticism. Therefore, special attention will be paid both to the evolution of Peirce's analyses and to the strategies of derivation suggested in various phases.

3.1 The Pursuit of Categories

The quest for categories is one of Peirce's most fundamental intellectual interests; in fact, his writings on the topic constitute his first real contribution to philosophy. He never seriously doubted the meaningfulness of the endeavour, although the lack of understanding displayed by contemporaries such as James, Royce, and Russell did cause him some consternation. Throughout his

career, Peirce was convinced of the key role the categories in the construction of an adequate philosophical system; indeed, the explicit architectonic programme articulated around the year 1890 is anticipated by his early writings.

> …upon the table of the categories philosophy is erected, – not merely metaphysic but the philosophy of religion, of morals, of law, and of every science. To form a table of the categories is, therefore, the great end of logic. (W 1:351 [1866])

Nonetheless, Peirce's theory of categories goes through a number of modifications, sufficiently extensive to motivate the identification of various phases of categorial thought in his philosophy. However, the precise demarcation of these periods and the assessment of their relevance is a difficult matter; Peirce does not explicitly abandon his first categorial derivations in his later writings, although he in effect introduces several changes in his approach that could prompt such an adjustment. The interpreter is in a rather uncomfortable situation; should one ignore Peirce's testimony or try to explain away the transformations as superficial appearances instead?

With the risk of being irreverent, I opt for the developmental point of view in the following discussion, and will identify certain major changes in Peirce's categorial outlook over the years. It seems to be the only way to account for Peirce's varying analyses without ignoring a substantial part of his writings. Furthermore, as we will see in later chapters, the modifications in the theory of categories are connected to other changes in his thought; in particular, it is paralleled by Peirce's move from a representationist position toward a presentationist stance in his later analyses of representation and perception (see sect. 4.3).

3.1.1 The Early Derivation

The background and early development of Peirce's categories has been studied in some detail (see, in particular, De Tienne, 1989a; Esposito, 1980). Of these youthful endeavours, we will mostly be

concerned with the derivation of the categorial conceptions as it is presented in the landmark article "On a New List of Categories" (1867), which in spite of being one of the most extensively examined of Peirce's writings continues to puzzle commentators – not least because of the skeletal theory of signs it contains. Nonetheless, it is in appropriate to say a few words about the initial stages of Peirce's concerns, and the labours that bring him up to the dense "New List".

There is no doubt that Peirce's approach to the theory of categories is greatly influenced by Kant, his main fund of early philosophical inspiration. Yet, Peirce at no point simply adopts the Kantian system as such. Indeed, Peirce's own categorial scheme emerges as a result of a thorough criticism of the German master, flanked by considerations of other similar systems, primarily of that of Aristotle. On the other hand, we find that neither Kant nor Aristotle is the *ultimate* source of the Peircean categories; their origin can be traced to the young Peirce's study of Friedrich Schiller's *Briefe über die äesthetische Erziehung des Menschen* (1794-5). In his "Aesthetic Letters", Schiller argues that the basic human drives to subordinate feelings to principles (the *formal impulse*) and to subordinate principles to feelings (the *sensuous impulse*) must be complemented with a third, *mediating* drive, namely the *play impulse*, which enables human beings to reconcile the conflicting formal and sensuous tendencies in their own nature.[2] The young Peirce adopts this quasi-Hegelian stance, remodelling Schiller's basic drives as the formal I-impulse, the sensuous It-impulse, and the unifying Thou-impulse. These ideas form the basis of Peirce's first set of categories, named *I*, *It*, and *Thou* (see Esposito, 1980, pp. 11-13). Although short-lived, they nevertheless have a substantial influence on his subsequent take on the question of categories; his theory is from the beginning permeated by the belief in the *interdependence* of the universal conceptions (De Tienne, 1989a, p. 387). Furthermore, Peirce's emphasis on the mediating character of the third category in the later categorial writings may be attributable to Schillerian inspiration.[3]

Then again, it does not take long before the analytic way of Kant begins to overshadow the synthetic perspective of Schiller in

Peirce's early writings. Peirce sets out to develop a scientific philosophy in the early 1860s, basing metaphysics on logic and rejecting all attempts to found the former on psychology. However, attempting to move beyond Kant, he pays close attention to the *generation* of the categories (Esposito, 1980, p. 79). That is, rather than building the categories on a taxonomy of language, or postulating an *a priori* table of judgments, Peirce primarily looks for a *method* of deriving the basic conceptions, and strives to give an adequate account of its different stages.

According to André De Tienne (1989a, pp. 390-393), Peirce's search for the proper method of categorial analysis leads to three principal epistemological stands: *anti-psychologism*, *anti-dialectics*, and *anti-transcendentalism*. The first of these stances has already been noted; it is constituted by Peirce's dismissal of the idea that psychology could act as a basis for logic and metaphysics. By "anti-dialectics", De Tienne refers to Peirce's condemnation of the abuse of dogmatism, a misuse that the latter names *dialectics* (W 1:65 [1862]). In particular, Peirce is critical of the tendency to hold that all knowledge and science can be deduced from a set of self-sufficient metaphysical principles and of the doctrine of immediate perception. Of these "dialectical abuses", Peirce rejects the former throughout his career, but changes his mind concerning the latter in his later philosophy (see sect. 4.3).

The last epistemological stance, anti-transcendentalism, is perhaps the most important of the three, because it marks Peirce's break with Kant. [4] In general, Peirce characterises the transcendentalist position as "a system of investigation which thinks necessary to prove that the normal representations of truth within us are really correct" (W 1:72 [1862]). Peirce's reply, as summed up by De Tienne (1989a), is that "there is no need to prove that the forms according to which the mind normally operates are the only necessary forms of understanding to make judgments about objects" (p. 392). Attempts to provide such proofs end up regressive or circular, providing no additional support for the representations; as Peirce later opines, the "demonstrations of the metaphysicians are all moonshine" (CP 1.7 [c. 1897]), an example of the perniciousness of trying to force philosophical topics into the

confines of mathematical expression – which should not, of course, be confused with the legitimate project of using mathematical principles in philosophical reasoning.[5] Instead, Peirce argues that all knowledge rests ultimately on *faith*, in the sense that there are certain beliefs that we cannot help taking for granted. Such beliefs are not completely without foundation. However, they are "not grounded *de jure* as criticist transcendentalism would unnecessarily demand, but grounded *de facto*" (De Tienne, 1989a, p. 394). In other words, there are certain beliefs that we simply accept, and which no criticism really can shake.[6]

Based on the three epistemological stands, Peirce rejects the Kantian distinction between noumenon and phenomenon, and begins to develop a new theory of representation. Peirce adopts an *inferentialist* view of cognition and denies that human beings have a special power of intuition, by which they would be able to determine which of their representations are "first cognitions". Nor does he accept that perceiving would provide us with epistemically privileged data. In "On the Doctrine of Immediate Perception", he examines the view that consciousness provides testimony of our direct perception of the non-ego as opposed to the view that the non-ego is known inferentially (W 1:154 [1864]). In his rejection of the former position, Peirce claims that the evidence of perception is either given in the act of perceiving itself, or else it must be an axiom of perception. If the testimony is found in perception itself, then perception must contain a proposition, which is equivalent to thinking that a predicate holds of a subject. Therefore, the testimony of consciousness states that the subject is not simply given to conscious thought but is *thought of*; that is, the subject does not directly enter into the field of consciousness. On the other hand, taking immediate perception as an axiom is equivalent to postulating a first cognition, in which the relationship between ego and non-ego is given as an absolute fact. This axiomatic alternative makes the connection, which would be explainable in the inferentialist position, inexplicable. According to Peirce, this is not a satisfactory outcome; "a theory which renders any fact inexplicable is in opposition to that fact" (W 1:155 [1864]). Rejecting the doctrine of immediate perception, Peirce states that all "the cognitions

which we actually have experience of are propositions, in which the non-ego enters only as something to which certain predicates are referred, these predicates being themselves modifications of consciousness" (W 1:155 [1864]).

This inferentialist position finds its fullest expression in Peirce's *Journal of Speculative Philosophy* articles on cognition, published in 1868-9. However, it is important to note that some of its central tenets are in place before Peirce's own derivation of the categories finds its form. This also explains why his early categorial concerns intertwine so tightly with his sign-theoretical interests; since cognitions are propositions and propositions are representations, the further advancement of the theory of cognition will largely depend on the development of a theory of representation. Indeed, it is often impossible to separate these two strands of Peirce's thought from each other during the first phase of semeiotic.

The gradual mixing of categorial and semiotic matters can be followed in a series of texts written in 1865 and 1866. The fragmentary manuscript "Logic of the Sciences" (W 1:322-336 [1865]) is particularly revealing in this regard. Setting out to find an adequate conception of logic, Peirce quickly turns to an analysis of the phenomenon, or that which is immediately present to us, and notes that it is an occurrence of *what is*, i.e. *being* (W 1:324). In the following step, Peirce simply notes that the instances in question are representations, and that this representative character can be abstracted from their being addressed to us, which is a result of our selective activity. Moreover, the phenomena are representations as instances, not just representations of instances. Next, Peirce states that "the supposition of anything unrepresented […] is self-contradictory since that which is supposed is thereby represented", effectively denying the hypothesis of a noumenal thing-in-itself (W 1:324). After another bold argumentative leap, Peirce concludes that *all is representative*. Of course, this is nothing but the consistent semeiotic consequence of his inferentialist view of cognition and perception. It also constitutes the general point of view of his early theory of signs.

Further on in the same manuscript, Peirce presents one of his first systematic derivations of the categories. Again, he sets out

from the undeniable fact of experience – or "universal hypothesis" – that there is something that *is*, which he now designates *substance* and identifies as the first category (W 1:331; W 1:334). In the next steps, he argues that we discover, by *induction*, that substance possesses three *marks*, and that these three orders of marks follow in a logical sequence. First, we find that whatever is, is of some kind or *quality*; then, immediately, we realise that quality, or the being of some character, requires a comparative other, and thus the mark of *relation* is reached. In other words, *what is* "must not only have a ground for being, but an *object*" (W 1:331). In the final inductive stage, we purportedly note that whatever is in relation to something else is so for somebody; comparison supposes someone that makes the judgment. More generally, however, we infer "that whatever is in a relation to an *object* must have a *subject*, which is that which it determines in respect to its object" (W 1:333). This subject need not be a mind, although it can be a human product (W 1:335). The third order of mark is *representation* (W 1:331; W1:334). Here, a reader familiar with semeiotic will detect the rudimentary structure of Peirce's general conception of sign.

This set of four categories – substance, quality, relation, and representation – is derived by a reflection upon what is, the phenomenon, and then generalised so as to be applicable to all being. Here, the interesting thing to note is how the categorial derivation leads back to the semiotic point of view expressed at the beginning of the "Logic of the Sciences". Although the result is a set of three marks, one must keep in mind that these are supposed to be universally present in cognition. In other words, qualities and relations do not appear independently, but always within a representational phenomenon. Quality and relation can be inferentially abstracted from representation, but representation cannot be reduced to any kind of combination of quality and relation.

Let us now move on to the more polished derivation found in "On a New List of Categories".[7] In this published article, Peirce presents in condensed form the fruits of his intense labours. The result is impressive, but at times almost impenetrable in its opaqueness. It is helpful to keep in mind the epistemological

position outlined above; although Peirce does not explicate it in the article, it is clearly implicitly operative in many of its arguments.

The "New List" begins with an declaration of its guiding principle, claiming to be based on "the theory already established", according to which "the function of conceptions is to reduce the manifold of sensuous impressions to unity" (W 2:49 [1867]). The theory in question is that of Kant. However, as William L. Rosensohn (1974, p. 38) points out, the next programmatic statement does *not* stem from Kant, in spite of its Kantian style. Namely, Peirce claims that "the validity of a conception consists in the impossibility of reducing the content of consciousness to unity without the introduction of it". In other words, Peirce is looking for categorial conceptions that are so broad as to be present in *any* cognition (Rosensohn, 1974, p. 39). The categories are supposed to be truly universal, not particular, in the sense of being ubiquitous in thought.[8]

In the "New List", Peirce explains the general rationale behind the derivation of the categories as follows:

> This theory gives rise to a conception of gradation among those conceptions that are universal. For one such conception may unite the manifold of sense and yet another may be required to unite the conception and the manifold to which it is applied; and so on. (W 2:49 [1867])

The actual starting-point of Peirce's analysis is, as we have already noted, whatever happens to be present to cognition in any way; therefore, the first universal conception recognised by Peirce is "the present, in general", that conception which is nearest to sense (W 2:49 [1867]). This "it in general" is, as in the earlier writings, labelled *substance*. Although substance is a conception, it has no meaning at all; it is rather a general recognition of that which is contained in attention, that is, the mass of sensuous impressions.

The term "sensuous impression" might suggest that Peirce's derivation sets out from distinct impressions, from which conceptions are somehow built. This would be an erroneous interpretation; the first thing before the mind is supposedly

sensuous presence *in general*. "A moment in thought, a stage in thinking, complete in itself, it has no proper unity, *proper* to the understanding, which is analytic, dividing the manifold, and synthetic, uniting the abstracted elements, so as to give final meaning to what is present in consciousness in the original act of attention" (Rosensohn, 1974, p. 40). As such, substance is an undifferentiated whole; if it is conceived to have parts, it is only because the mind later recognises such parts (CP 1.384 [1887-8]; De Tienne, 1989a, p. 400). In other words, the distinction among the impressions is not given in substance; it is a cognitive product.

The second starting-point for Peirce's analysis is the unity of understanding, in which the sensuous impressions form a meaningful whole and are differentiated.

> The unity to which the understanding reduces impressions is the unity of a proposition. This unity consists in the connection of the predicate with the subject; and, therefore, that which is implied in the copula, or the conception of *being*, is that which completes the work of conceptions of reducing the manifold to unity. (W 2:49-50 [1867])

In other words, cognition, as it is given in experience, has the form of a proposition. The propositional unity, *predication* or *being*, which the copula indicates, is the next universal conception that Peirce recognises. It is the opposite of substance in that it has no content (W 2:50 [1867]).

Peirce asks: "How is the manifold of sensuous impressions reduced to the unity of a proposition?", or more specifically, "What conceptions do we need to assume to get from substance to being?" The elementary conceptions are purportedly necessary in the sense of being required by experience (W 2:52 [1867]). As we have seen, the inferentialist position does not allow for the inclusion of any non-mediated elements of perception. Therefore, the intermediate categories are to be *abstracted* from the propositional understanding, which has both substance and being. In other words, the universal conceptions are not directly given in experience, but reached by reasoning.

To facilitate the systematic derivation of the categories, Peirce specifies the kind of mental separation he will employ as *prescision*

(or *prescission*),[9] which he distinguishes from *discrimination* and *dissociation*.

> The terms "prescision" and "abstraction", which were formerly applied to every kind of separation, are now limited, not merely to mental separation, but to that which arises from *attention to* one element and *neglect* of the other. Exclusive attention consists in a definite conception or *supposition* of one part of an object, without any supposition of the other. Abstraction or precision 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 senses 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 precision, therefore, supposes a greater separation than discrimination, but a less separation than dissociation. Thus I can discriminate red from blue, space from color, and color from space, but not red from color. I can prescind red from blue, and space from color (as is manifest from the fact that I actually believe there is an uncolored space between my face and the wall); but I cannot prescind color from space, nor red from color. I can dissociate red from blue, but not space from color, color from space, nor red from color.
>
> Precision is not a reciprocal process. It is frequently the case, that, while A cannot be prescinded from B, B can be prescinded from A. (W 2:50-51 [1867])

Now, since Peirce has established this principle of derivation, one might expect that the next step in the procedure would be to use the prescissive tool to find the conception that unites the manifold of impressions, then the conception that would unite the first conception and the manifold to which it is applied, and so on, until the propositional unity is reached. That is, the derivation should progress toward greater abstraction, of which being is the limit. However, Peirce changes the direction of analysis, and starts from the most abstract conception and moves toward substance. In other words, he sets out from the propositional judgment, in which the reduction to unity is accomplished, and infers his way back to the logical origin, to substance (De Tienne, 1989a, p. 402).

This strategy has caused some puzzlement among commentators, but it is not altogether surprising in view of Peirce's inferentialist stance. Namely, what Peirce in fact attempts to do is to analyse propositional understanding. The most basic feature of a proposition is predication, in which a substance (the subject) is combined with a quality (the predicate). Therefore, the first conception required in moving from being to substance is *quality*, or the reference to a *ground* (W 2:52 [1867]). It is a pure abstraction; like "redness" is an abstraction from all actual and possible red things. That is, in the proposition "the car is red", the predicated quality is not bound to its concrete manifestation, but is rather an embodiment of abstract "redness". However, as a pure abstraction, a quality can only be known by means of contrast or similarity; thus, the conception of quality implies the next intermediate category, that of *relation* or reference to a *correlate*. This conception of relation is dyadic; it involves a grounded connection between a relate and a correlate.[10] Finally, a relation is recognised by comparison, and this leads to the third in-between conception; "every comparison requires, besides the related thing, the ground, and the correlate, *also a mediating representation which represents the relate to be a representation of the same correlate which this mediating representation itself represents*" (W 2:53 [1867]). This mediating representation is named *interpretant*, because it acts in the manner of an interpreter; and the final category is *representation* or reference to an interpretant.

These conceptions are ordered by means of prescission; relation can be prescinded from representation, quality from relation, and being from quality; but the opposite does not apply.[11] However, what about the prescindability of representation? According to Peirce, the reference to an interpretant is rendered possible by that which makes comparison possible; and that is the diversity of impressions (W 2:54 [1867]). The origin of representation is a *feeling* of complication or confusion, which leads us to differentiate one impression from another. The separated impressions demand to be brought to unity, and this is achieved by introducing a reference to an interpretant, that is, a mediating conception. In other words, representation arises from holding different impressions together. Therefore, it does not require the introduction of an additional

conception to be joined to substance; it "unites directly the manifold of the substance itself" (W 2:54 [1867]).

Peirce has thus identified five categories: *substance*, *representation*, *relation*, *quality*, and *being*. From these, five supposable objects can be obtained: *what is*, *quale*, *relate*, *representamen*, and *it* (W 2:55 [1867]). "Representamen", which essentially involves reference to ground, correlate, and interpretant, is the technical term for a representation or sign.

We do not need to delve further into the "New List", which concludes with a series of reflections on various kinds of signs and the study of logic. Let us instead consider Peirce's derivation and its outcome a bit closer. In particular, the following features of the analysis ought to be noted:

1. The categories are characterised as *conceptions*. In other words, they are intellectual cognitions.

2. Although Peirce identifies five categories, it is the intermediary conceptions, or "accidents", which truly interest him. Being and substance are more like limits of understanding than actual elemental conceptions; moreover, they are taken for granted at the outset of the analysis. In Peirce's subsequent discussions of the categories, their role is diminished; eventually they are dropped, apparently as redundant.

3. Contrary to what might be expected, quality is not the conception closest to substance; it is in fact the most abstract of the intermediary categories. Peirce explicitly denies that quality would be directly given in the impression (W 2:52 [1867]). Instead, we find that *representation* is the conception closest to the manifold of impressions; in this respect, it is the most immediate of the accidents.

4. The status of substance is ambiguous. Although the least mediate categorial conception is of the present *in general*, representation allegedly arises when the mind unites

> *diverse* impressions. This differentiation can only be a product of propositional understanding; yet it would seem that the plurality of impressions is the cause of representation.

The last of these claims requires some elaboration, as it implies certain underlying problems in the argument of the "New List". As we have seen, Peirce contends that representation arises from the need to bring together impressions in understanding. However, he has very little to say of the differentiation that calls for such unification, or the uncomfortable feeling that causes the demarcation. At the beginning of the article, Peirce speaks of the "pure denotative power of the mind" and characterises it as "the power that directs the mind to an object, in contradistinction to the power of thinking any predicate of that object" (W 2:49 [1867]). Moreover, he states that before "any comparison or discrimination can be made between what is present, what is present must have been recognized as such, as *it*". It is unclear at what point in the process the differentiation of the substance at hand is supposed to take place. On the one hand, there seems to be no distinction in presence before representation enters the scene; but on the other hand, the reference to an interpretant is purportedly caused[12] by the diversity of impressions. As we have seen, qualities are abstract conceptions. However, what is the status of the pre-representational impressions? How are we to understand the *object* of the pure denotative power of the mind?

This difficulty can be traced back to one of Peirce's epistemological stances, namely the part of anti-dialectics that denies the doctrine of immediate perception. Given his inferentialist starting-points, Peirce cannot admit non-representational experience of an object in cognition, except as a limiting general conception. Yet, Peirce seems to feel that he needs some kind of explanation or justification of representation in terms of more primary factors (see W 2:54 [1867]). It is an impasse that he is unable to resolve within the confines of the idealistic – perhaps even partly nominalistic – framework adopted in his early thought.

Another difficulty in the "New List" is the scientific status of the theory of categories. At the time of writing the article, Peirce had not developed the elaborate classification of the sciences that guides his later "architectonic" reflections; he was more interested in finding a niche for logic as a part of symbolistic. Now, if we consider the "New List" in the light of the 1865 classification (see sect. 2.1), then it would appear that the natural place for the theory of categories would be *semiotic*, the science that allegedly precedes symbolistic. Yet, Peirce characterises the formation of a table of the categories as "the great end of logic" (W 1:1351 [1866]).

It is possible that Peirce is speaking of logic in a looser sense than usual here, but it may also be an indication of uncertainty on his part. The categories are derived logically (or at least inferentially), and could therefore be considered as a result of the science of logic. Then again, logic is supposed to be restricted to the relationship between symbols and their objects. How, in that case, can the derivation of universal conceptions – the primary undertaking of philosophy – be a job for the logician? The situation is not made any clearer by Peirce's unexpected pleas to the findings of empirical psychology in his discussion of quality and relation (W 2:53 [1867]). Such references seem to constitute an outright violation of his anti-psychologistic principles. Peirce may have used the appeals for rhetorical effect; but the fact remains that they do not accord with the directives of his philosophical endeavour. In the "New List", the question of the scientific level of the categories does not come up, possibly because Peirce simply could not provide a satisfactory answer at that stage of his development.

3.1.2 Beyond the New List

In spite of the potential weaknesses noted above, "On a New List of Categories" remains one of the undeniable milestones in Peirce's philosophy. He never completely abandons it; in fact, in his later writings, he often approvingly refers to the early article as one of his strongest pieces. He even proudly calls it "one of the most perfect gems of all philosophy", adding that he has not been able to

find any positive error in the analysis, although much needs to be filled out and elaborated (NEM 3:833-834 [1905]). This is not altogether true; in his comments on the "New List", Peirce does in fact point out some mistakes in his earlier views on symbols and relations (see CP 2.340 [c. 1895]; CP 1.564-567 [c. 1899]). Nevertheless, he seems to hold that these errors are quite easily fixed, and do not call for major revisions of the article.

Based on such appraisals, one might think that Peirce remained perfectly satisfied with the core of the "New List", the derivation of the universal conceptions. However, when Peirce takes up the topic anew around the year 1885, certain changes can be detected. For one thing, the list of categories is shorter; Peirce now associates the elemental conceptions with abstract relations of different valencies or combinatory powers. The categories have become *numerical*, or perhaps more properly *ordinal*, and are now usually given as *first*, *second*, and *third* – or *firstness*, *secondness*, and *thirdness*. On the other hand, it is of some interest to note that the "New List" appears to contain the embryo of the later categories.

> The conception of a *third* is that of an object which is so related to two others, that one of these must be related to the other in the same way in which the third is related to that other. Now this coincides with the conception of an interpretant. An *other* is plainly equivalent to a *correlate*. The conception of second differs from that of other, in implying the possibility of a third. In the same way, the conception of *self* implies the possibility of an other. The *Ground* is the self abstracted from the concreteness which implies the possibility of another. (W 2:55 [1867]; see also W 2:103-104 [1867])

As he returns to the categories in the 1880s, Peirce first reaffirms his commitment to the Kantian method for deriving the categories (W 5:235 [1885]). According to Peirce, Kant's leading idea is to find distinctions that are absolutely indispensable for logic and reasoning; one would thereby be justified in holding that the conceptions involved in these distinctions possess an *a priori* character. This is, roughly, the method of the "New List", but with an added emphasis on the independence of the categories from experience – that is, on the *formality* of the categories. Moreover, Peirce contends that the Kantian project, properly carried out,

would require the creation of a perfectly analytic and exact language, in which all reasoning could be expressed and reduced to formal rules (W 5:237 [1885]). The next step would involve an analysis of the signs of the language in order to sort out their varieties.

No doubt, Peirce's work on the logic of relations is one of the most significant reasons for his renewed interest in the categories, and the revision of the earlier point of view.[13] The new logical outlook entails a rejection of the subject-predicate theory of the proposition. Murphey (1961, p. 298) claims that this shift in perspective occurs definitely in 1970, when Peirce publishes his "Description of a Notation for the Logic of Relatives". However, Emily Michael (1974) argues that Peirce's interest in the logic of relations can be traced back to the formative period 1865-7. Fred Michael (1980, pp. 187-188), on the other hand, asserts that Peirce's work on the logic of relatives in 1870 did *not* entail a radical departure from subject-predicate logic through a turn to a relational logic; it still displays an Ockhamistic tendency to view relations as nothing apart from the things related. The latter argument entails that there is a meaningful distinction to be drawn between the nominalistic logic of relatives and the realistic logic of relations; it also suggests that a relative is to be understood as a special class of individuals. This, in turn, can be interpreted in two ways; either a relative term stands for a certain class of individuals (such as "lovers"), or else it stands for a relationally defined class of individuals (such as "lover of a woman") (Merrill, 1997, p. 160; cf. Martin, 1979). Not all commentators accept these conclusions. For instance, Daniel D. Merrill (1997) strives to show that Peirce's 1870 relatives can be viewed as dyadic relations of the form – R –, in spite of the fact that Peirce, still partly under the influence of Boole and traditional subject-predicate logic, expresses his relatives substantively ("lover") rather than in verb form ("loves").

However that may be, it is evident that the emerging logic of relations gradually replaces traditional logic in Peirce's philosophy. This transformation effectively undermines the basis of the early method of deriving the categories. As Peirce later explains, the "great difference between the logic of relatives and ordinary logic is

that the former regards the form of relation in all its generality and in its different possible species while the latter is tied down to the matter of the single special relation of similarity" (CP 4.5 [1906]). In view of the centrality of comparison (with reference to similarity or dissimilarity) in the "New List", it is clear that the introduction of the fuller logic of relations invalidates some of the starting-points of its derivational strategy. Furthermore, it is essential to the argument of the "New List" that elemental conceptions are located as intermediaries at different levels of abstraction between substance and being; now, based on his logical discoveries, Peirce holds that the three relations – single reference, dual reference, and triple reference – are equally abstract in the sense of being able to function as basic predicates (Murphey, 1961, p. 298). In other words, Peirce replaces the elemental conceptions of quality, relation, and representation with monadic, dyadic, and triadic relations of predication.

In recent years, it has often been suggested that Peirce's most basic categories are mathematical (Houser, 1989; Parker, 1998; de Waal, 2001). It certainly seems like Peirce is heading in that direction in 1885, given his emphasis on the a priori nature of the most basic logical elements. Here, it should be noted that the claim is not refuted by the fact that Peirce frequently locates the basic categories in logic in the writings of the 1880s. At that time, Peirce's conception of the relationship between logic and mathematics was still somewhat hesitant; it seems viable to say that the kind of logic he is talking about in this context would properly belong to mathematics in the perennial classification of the sciences. At least, Peirce occasionally writes as if the categorial elements could be found as such in a purely logical – or more properly, mathematical – space, where they would appear as monadic, dyadic, and triadic relations.

Should we, then, conclude that the foundation of the categories is to be located in mathematics? If we inspect Peirce's writings with this question in mind, we find rather inconclusive evidence (cf. Houser, 1989). The description of the categories as a priori forms backs the hypothesis of there being mathematical categories, since all sciences except mathematics are experiential in some sense.

More support for this interpretation can be found in the hierarchical ordering of the sciences; since mathematics precedes philosophy, mathematical relations ought to be more primary than philosophical conceptions. This would appear to be the only way to consolidate Peirce's architectonic project with his mature conception of the sciences (Houser, 1989, pp. 104-105). In addition to these rather general arguments, Cornelis de Waal (2001, pp. 10-11) claims that Peirce did in fact perform an explicit mathematical derivation of the categories using a graphical method in one of his manuscripts (MS 915 [c. 1880-5]).[14] In the text to which de Waal refers, Peirce speaks of the "mathematical proposition" that *something*, *other*, and *third* is present in anything that is supposed, and suggests that the proposition in question involves or implies "all logic and all metaphysics in a nut-shell". This sweeping statement can be interpreted as an assertion of the priority of mathematical categories.

Kelly Parker (1998) takes this line of thinking one step further by asserting that the categories are properly discovered in the simplest branch of mathematics, or the "mathematics of logic", to use one of Peirce's designations. Peirce suggests that one particularly useful way of classifying mathematical inquiry is based on the complexity of the hypotheses admitted – or, in other words, on the multitude of units supposed at the outset of the investigation (CP 4.248 [1902]; PPM 137 [1903]). Putting aside plain emptiness, the most austere hypothesis imaginable would be that there is nothing but one unit (CP 4.250 [1902]; PPM 137 [1903]). However, of such a strictly *medadic* [15] universe, nothing can be asserted; because it lacks relation, it does not allow for any kind of reasoning and is therefore as impotent as mere nothingness; from a pragmatistic perspective, it is equivalent to an empty universe. Properly speaking, the simplest mathematical sub-discipline is *dichotomic* mathematics, in which two distinct objects or values, but no more, are admitted. There are only dyadic relations between the primary elements of this universe; however, there may be triadic relations between three different dyadic relations (PPM 138 [1903]). In its most important application, the system of dichotomic mathematics is interpreted as two-valued logic, in which an unknown x may be either true or

false (CP 4.250 [1902]; Parker, 1998, p. 42). It is the basis of Boolean algebra.

The next mathematical investigation in order of complexity is *trichotomic* mathematics, which sets out from the hypothesis of three elementary objects. Peirce notes that this branch is not as fundamentally important as dichotomic mathematics, and has in fact received very little attention (CP 4.308 [1902]; PPM 126 [1903]). Nonetheless, he asserts that it is of great interest because of the "generative potency" of the number three (CP 4.309 [1902]). Using chemical models as starting-points, Peirce endeavours to show that relations of higher valency than three can be produced by manipulating triadic graphs, it being understood that a genuine triad cannot be similarly constructed from dyads (cf. sect. 3.2). Without going into the details of Peirce's quasi-chemical analyses or his examinations of the permutations of three things, we may note the upshot of his examination:

> We […] see that it is impossible to deal with a triad without being forced to recognize a triad of which one member is positive but ineffective, another is the opponent of that, a third, intermediate between these two, is all-potent. The ideas of the three categories could not be better stated in so few words. (CP 4.317 [1902])

Now, it would seem that the hypothesis of mathematical categories has been corroborated. Not only does Peirce explicitly speak of categories in the context of trichotomic mathematics, but he also describes the results of the mathematical analysis in a manner that must ring bells to readers familiar with his more generous descriptions of the philosophical categories – or, indeed, with his general definition of the sign. Hence, Parker's contention appears to be right, apart from the fact that the categories are not strictly speaking presented in the *simplest* mathematics, but in the slightly more complex domain of trichotomic mathematics. However, this is needless quibbling; the important thing here is that the categories are purportedly discovered in purely mathematical analysis, without any reference to experience.

Yet, we are faced with the undeniable fact that Peirce holds that the unearthing and scrutiny of the categories is a task for

phaneroscopy, the most general philosophical science. One could argue that the need for a distinctly mathematical derivation of the categories is eliminated by the introduction of the phaneroscopic point of view around the year 1900; in the next section, we will consider whether this does in fact happen. In addition, it seems that Peirce is doubtful of the possibilities of a purely formal treatment of the categories. In "One, Two, Three: An Evolutionist Speculation", he holds that the categorial notions are so extremely broad – even vague – that abstract definitions cannot capture their significance; "it is not by any means minute accuracy which is needed to distinguish them, but the knack of attending to elements so universal as often to escape notice" (W 5:298-299 [1886]; cf. MS 907). In a variant of the same manuscript, he adds that not "even training in mathematical analysis is much aid to the analysis of them" (W 5:303 [1886]).

It is, in any case, a fact that Peirce's writings on the categories do not typically begin with a strictly mathematical or logical derivation. In the series of manuscripts that follow the revitalisation of his interest in the theory of categories in 1885, his preferred expository method is to place examples side by side, with the hope that a pattern will become discernible to the reader (W 5:299 [1885]; W 5:303 [1885]; cf. W 6:170 [1887-8]). There is little indication of any systematic technique of derivation by which the categories would be identified and ordered;[16] for the most part, Peirce simply introduces the categorial notions, and then provides illustrations from various domains of experience.

This strategy may be explained by another change in Peirce's categorial enterprise; whereas the universal conceptions of the "New List" are restricted to propositional understanding, the later writings explicitly extend their applicability to encompass nature as well as mental phenomena. This, it would seem, had been Peirce's intention from the beginning (see W 1:351 [1866]); but it is possible that the idealistic outlook of his early philosophy hindered him from carrying out the project. Certainly, Peirce's gradual adoption of a more robust realistic stance is a contributing factor in this process. It is also conceivable that he did not dare to make the generalisation until he had had more concrete acquaintance with

the practices of various sciences of nature (Rosensohn, 1974, p. 61). Be that as it may, it is at any rate clear that we can speak of a triadic world-view by the time we reach *A Guess at the Riddle* (1887-8), Peirce's most ambitious foray into speculative philosophy; in this important essay, the categories are literally everywhere.

The broadened scope of the categories is reflected in Peirce's general characterisation of their nature; instead of conceptions or definite notions, they are now portrayed as "tones or tints upon conceptions" (W 5:237 [1885]) or "moods or tones of thought" (W 5:303 [1886]; W 6:169 [1887-8]; cf. W 5:294 [1886]). In fact, Peirce increasingly emphasises that mere descriptions or definitions cannot give us an adequate understanding of the nature of his categories; rather, they have to be *observed* or *experienced* in some manner. This is particularly true of the first two categories, that is, of firstness and secondness.

Now we come to one of the most important changes in Peirce's theory of categories. As we have seen, the "New List" propounds the thesis that representation is the intermediate conception closest to substance and sense, while relation and quality are viewed as the more abstract notions, which are further removed from substance. This order is abolished in the later writings; in fact, from a certain perceptual point of view, the relationally simpler categories now precede the third. One could say that quality is re-conceptualised as the first impression of perception or experience; anything perceived, whether real or illusory, has its own qualitative feel. The early category of relation, in its turn, is specified as *dyadic* relation and associated with the category of secondness, which in experiential terms can be inadequately described as the direct perception of action and reaction, or as the blow of experience.

We have also noted that the idea of a manifold of impressions causes problems for the early theory of categories. In the later writings on categories, the conceptions of substance and being are both more or less included in firstness, that which is what it is, irrespective of anything else (Rosensohn, 1974, p. 54). The idea of being is predominantly first – not on account of its abstract nature, but because of its self-contained character (CP 1.302 [c. 1894]). The

manifold of sense is likewise first; but now Peirce emphasises its non-differentiated character.

> The idea of prime precedes all assertion, all differentiation. There is no synthetical unity in it, no wholeness nor consistency; it is the sheer wonder and manifold of first impressions. In itself, however, it is not manifold; it has no parts; but because it has no wholeness nor consistency, the understanding analyzes it into an infinitely varied manifold. Kant talks inaccurately of the manifold of sense; in fact, the first impression has no parts, any more than it has unity or wholeness; yet it may be allowed to be potentially manifold, by conceiving whatever the intellect evolves from it to lie involved within it. (W 5:304 [1886]; cf. W 5:299 [1886])

In fact, substance is not merely subsumed into firstness; as the latter part of the above passage vaguely hints, part of its role is taken over by the phenomenon – or *phaneron* – of the later theory.[17] Gradually, the talk about "impressions of sense" all but disappears from the theory of categories – which is appropriate in view of the fact that Peirce emphatically denies that there are any such things as "first impressions of sense" in his later accounts of perception.

3.1.3 The Phaneroscopic Approach

The new outlook on the categories that evolves toward the end of 1880s entails, in effect, the fading of the systematic derivation developed in the "New List".[18] However, this move also leaves Peirce's theory uncomfortably adrift in his system of inquiry. To rectify this disagreeable situation, Peirce re-arranges the philosophical sciences; from the late 1890s onwards the first part of cenoscopic philosophy is identified as phenomenology, soon to be rechristened phaneroscopy.[19] The primary – indeed, the only – task of this discipline is to examine phenomena and to describe their most general features. In practice, it is equivalent to the study of the most general positive categories.

Peirce's descriptions of the nature of phaneroscopy are somewhat vague and unsettled, as might be expected of a potential science; he admits that he does not have a definite conception of

this investigation as a whole (MS 655:25 [1910]). In the previous chapter, it was noted that phaneroscopy can be characterised as the science of what might appear or seem, and that its object of study is the phaneron[20] (see sect. 2.3.2). It is "the initial great department of philosophy […] whose task it is to make out what are the elements of appearance that present themselves to us every hour and every minute whether we are pursuing earnest investigations or are undergoing the strangest vicissitudes of experience, or are dreamily listening to the tales of Scheherazade" (PPM 152 [1903]). A somewhat more robust idea of phaneroscopy can be obtained from the following passage:

> What I term *phaneroscopy* is that study which, supported by the direct observation of phanerons and generalizing its observations, signalizes several very broad classes of phanerons; describes the features of each; shows that although they are so inextricably mixed together that no one can be isolated, yet it is manifest that their characters are quite disparate; then proves, beyond question, that a certain very short list comprises all of these broadest categories of phanerons there are; and finally proceeds to the laborious and difficult task of enumerating the principal subdivisions of those categories.
>
> It will be plain from what has been said that phaneroscopy has nothing at all to do with the question of how far the phanerons it studies correspond to any realities. It religiously abstains from all speculation as to any relations between its categories and physiological facts, cerebral or other. It does not undertake, but sedulously avoids, hypothetical explanations of any sort. It simply scrutinizes the direct appearances, and endeavors to combine minute accuracy with the broadest possible generalization. The student's great effort is not to be influenced by any tradition, any authority, any reasons for supposing that such and such ought to be the facts, or any fancies of any kind, and to confine himself to honest, single-minded observation of the appearances. The reader, upon his side, must repeat the author's observations for himself, and decide from his own observations whether the author's account of the appearances is correct or not. (CP 1.286-287 [c. 1904])

We find, then, that the first step of phaneroscopic investigation is the *direct observation* of phanerons. This is, according to Peirce, at once a very easy and a most difficult task. It is simple in the sense

of merely requiring attention to what is already before us – that we open our eyes and look, to use a metaphorical expression (cf. PPM 119 [1903]). Yet Peirce states that phaneroscopic observation may be the hardest part of philosophy, because it demands "very peculiar powers of thought, the ability to seize clouds, vast and intangible, to set them in orderly array, to put them through their exercises" (CP 1.280 [c. 1902]). In contrast to most other sciences, it hardly makes sense to speak of accumulation of knowledge or data in phaneroscopy; the endeavour requires of every practitioner to make the basic inspection for him- or herself. Peirce frequently emphasises that phaneroscopic texts can at best provide guidance; because of the stress on observation, the reader cannot simply rely on the testimony of others.

Since phaneroscopy is the first philosophical inquiry, Peirce's own principles prohibit him from using logical or metaphysical means in pure phaneroscopic investigation. The only science to which the phaneroscopist can turn for principles is mathematics. Earlier, we found indications that Peirce's logic of relations, as a part of mathematics, discovers certain truths about relations, which can be interpreted as categories. What, then, *is* the function of phaneroscopy?

To answer this question, we must keep in mind that Peircean mathematics is wholly hypothetical; that is, it provides no assurance that the states of things examined correspond to anything in actual or potential experience. Mathematical statements merely assert that if such and such objects and relations are supposed, then certain consequences must follow. The universality of the mathematical categories – if that is the appropriate designation – is qualified by the fact that they provide no evidence beyond the hypothetical state of things examined. To put the point bluntly, the experienced world does not actually consist of a numerable quantity of distinct objects. While phaneroscopy utilises certain mathematical findings and principles – notably its techniques of abstraction and diagrammatic experimentation – the *positive* investigation of the basic features of the phaneron ought to be its proper domain.

In an entry in his *Logic Notebook* (MS 339:269 [1905]), Peirce outlines the contents of his phaneroscopic study as follows:

1. The phaneron and the logical composition of concepts in general.
2. The forms of indecomposable elements of thought, i.e. of elementary ideas that are a priori possible.
3. The forms of indecomposable elements we actually find.
4. The principal kinds of firstness, secondness, and thirdness.

While this notebook entry is very sketchy, it can be read as a provisional programme for phaneroscopic study. There are two starting-points: the observation of the phaneron and certain claims about indecomposable elements, given a priori. While Peirce does not explicitly say so, it seems reasonable to assume that the "elementary ideas" in question are strictly speaking mathematical discoveries, guiding the observational work of phaneroscopy (cf. EP 2:362 [c. 1905]). It is then up to the phaneroscopist to examine the phaneron and see what forms are actually found. However, this still leaves the question of how we are to understand the basic subject matter of phaneroscopic inquiry.

As a philosophical discipline, phaneroscopy ought to be based on everyday experience. Indeed, in the *Minute Logic* Peirce asserts that "the ultimate analysis of all experiences [is] the first task to which philosophy has to apply itself" (CP 1.280 [c. 1902]); and in "On the Classification of the Sciences", he states that its material is universal experience – "experience I mean of the fanciful and the abstract, as well as of the concrete and real" (MS 602:12-13 [late]). Yet, we find him criticising James for the use of the term "experience" where "phenomenon", or more properly some technical substitute, ought to be employed (CP 8.301 [1904]). Thus, it seems that the phaneron cannot be equated with experience, which would cast some doubt on the status of phaneroscopy as a philosophical science. However, just a few paragraphs before his criticism of James's vocabulary, Peirce talks about three "constituent principles of experience" (CP 8.294 [1904]). This can hardly refer to anything but the categories.

One may reasonably wonder whether it is James's terminology that is confused; does not Peirce contradict himself by first stating that philosophy is based on common experience and then denying that the phaneron is experiential? Certainly, the above statements cast some doubt upon the accuracy of the characterisation of phaneroscopy as a positive science. However, there are reasons for Peirce's reluctance to define the phaneron in straightforward experiential terms. As we have seen, he characterises experience as what life has forced upon us (see sect. 2.2.4). In contrast, he contends that the phaneron is not limited to what we are forced to accept, but also embraces whatever we might summon up in our minds (NEM 3:834 [1905]). Therefore, there is neither a relevant metaphysical distinction between fact and figment nor any normative conception of truth within phaneroscopy; in its strictest purity, it is an examination of "seemings".

> …"phenomenon" is to be understood in the broadest sense conceivable; so that phenomenology might rather be defined as the study of what seems than as the statement of what appears. It describes the essentially different elements which seem to present themselves in what seems. Its task requires and exercises a singular sort of thought, a sort of thought that will be found to be of the utmost service throughout the study of logic. It can hardly be said to involve reasoning; for reasoning reaches a conclusion, and asserts it to be true however matters may seem; while in Phenomenology there is no assertion except that there are certain seemings; and even these are not, and cannot be asserted, because they cannot be described. Phenomenology can only tell the reader which way to look and to see what he shall see. (CP 2.197 [c. 1902])

It looks as if the phaneron lacks one crucial characteristic of experience, that of insistence or force. Yet, it is possible to maintain that phaneroscopy is experiential; while it cannot be defined as observation and analysis of experience, it is nonetheless engaged in the description of "all the features that are common to whatever is *experienced* or might conceivably be experienced or become an object of study in any way direct or indirect" (PPM 120 [1903]). That is, phaneroscopy is not restricted to actual experience, but is extended to what could conceivably become an object of experience.[21] At this juncture in Peirce's thought, the distance

between mathematics and philosophy is very short; it is merely the rather weak reference to possible experience that distinguishes phaneroscopy from a purely hypothetical science.

Another central characteristic of the subject matter of phaneroscopy is its *immediacy*. In "Common Ground", Peirce characterises the phaneron as an object of which any person is immediately aware, where "object" is taken in the most general sense to denote anything that can receive a name (MS 611:22 [1908]). This directness entails that the object in question is not inferred or suspected because of the awareness of something else. True, a sign may draw our attention to a certain phaneron – like a word comes before our minds because of letters printed on a page – but the placement in the sign relation is irrelevant to the being of the phaneron. As Peirce explains, by "direct awareness" he means "awareness not altogether through the awareness of a sign of the object, but in part at least independently of any such sign" (MS 612:13 [1908]). In other words, the phaneron is not a *semiotic* object. Peirce has now clearly abandoned the inferentialist perspective that guided the "New List". As Murphey (1961) notes, "the difference between the perceived and the conceived, or the external and the internal, is not a difference relevant to the phaneron, for those distinctions are distinctions made by inference" (p. 367). The phaneron is "whatever is entirely open to assured observation, in all the entirety of its being" (MS 337s:6-8). There is no question of underlying causes, realities, or reasons, or of reference to something external in relation to the phaneron.

Because of the directness of the phaneron, it tends to elude description. Any portrayal in words or other signs will always be to some extent removed from the seeming, and thus unable to capture the phaneron in its purity. This leads to certain problems for the phaneroscopic project; in particular, there is a noticeable tension between the recognition of the immediacy of the subject matter and the descriptive task of the investigation.

According to Peirce's most common definition, the phaneron denotes "anything that can come before the mind in any sense whatsoever" (MS 336:2 [c. 1904]). He lists several examples of such phanerons, for instance sensible objects, emotional feelings,

recollections, imaginations, feelings of comparison, pleasures, pains, efforts, resistances, rules, sympathies, etc. (MS 611:21-22 [1908]). In view of such relatively concrete sets of phanerons, De Tienne (1993, p. 283) points out that the fundamental difficulty facing the phaneroscopist is that of *determination*. What is it that warrants our identification of something as *a* phaneron? De Tienne claims that Peirce in fact specifies the phaneron in two distinct ways. On the one hand, it is a relatively clear-cut object, *some* thing that is present to the mind. From this point of view, we can speak of such *particular* phanerons as a house, a feeling of sorrow, or a habit. However, in the second place, Peirce also characterises the phaneron as the total content of all we have in mind, regardless of its cognitive value (EP 2:362 [1905]; CP 1.284 [1905]; NEM 3:834 [1905]; EP 2:363 [c. 1905]; NEM 4:320 [c. 1906]). In this *collective* sense, the "phaneron is not a particular object present to the mind but the collection of all things that present themselves together to our consciousness" (De Tienne, 1993, p. 285). Such a totality does not possess definable limits; therefore, it does not make sense to speak of one phaneron among many.

De Tienne (1993, pp. 284-286) explicates the two senses by introducing a distinction between two ways of observing the phaneron. In the first sense, the phaneron is given in everyday direct awareness, without any mediating representation. As *lived*, the phaneron is truly ubiquitous. Moreover, since the phaneron involves continuity, there can strictly speaking be only one phaneron, "from the day we are born to the day we die" (De Tienne, 1993, p. 286). The second way of observation is that of the phaneroscopist, whose task it is to describe and classify the formal and indecomposable elements of the phaneron. To do this, De Tienne argues (1993, p. 284), he or she must create a distance to the phaneron; analysis requires *objectification* of that which is before the mind by using mental separation and abstraction. In this process, particular phanerons that are isolated from the continuous stream of manifestation are produced. However, such entities are no longer lived and present; they are rather *representations* of a moment in the collective phaneron, and as such not wholly

manifest. Hence, in the strictest sense, they do not fulfil the requirement of immediacy.

If De Tienne is right, then the phaneroscopic project is compromised from the outset; it can never provide us with knowledge of the genuine phaneron. In fact, his claims may have even more worrying consequences than he recognises. The contention that only the lived phaneron is authentic seems to point toward a rather curious solipsism, in which each human being (or other being in possession of awareness) lives inside his or her own phaneron. Obviously, this cannot be Peirce's intention; he does not doubt that different people are aware of the same phanerons (MS 693:116-118 [1904]; CP 1.284 [1905]). Phaneroscopic solipsism would actually be senseless, because there is no distinction drawn between subject and object in the observation of the phaneron.

According to De Tienne (1993, p. 286), the particular and collective definitions of the phaneron can be reconciled using a suggestion found in the manuscript "Notes for a Syllabus of Logic".[22] In these notes, Peirce first characterises the phaneron as the sum total of all that is in the mind, noting that the term is necessarily and intentionally vague; then, he states that "we can discern a multitude of ingredients" in the phaneron, and also "that these are of several widely different kinds" (MS 477:3_b [c. 1905]). Furthermore, he claims that whatever is in or before the mind, "whether as feelings, as stresses, or efforts, as habits, or habit-growths, or of whatever other kind they may be" is an element of the phaneron, and adds that "whatever we at all know we must know through ingredients of the phaneron" (MS 477:9_b-10_b [c. 1905]). Consequently, it is possible to say that the phaneroscopic objects are not properly speaking phanerons, but ingredients of the phaneron – as long as one keeps in mind that the lived phaneron is not actually composed of atomic components.

However, does not this solution take us back to the predicament we noted in our examination of the "New List"? Namely, what we seem to have here is merely an account of substance and the manifold of impressions in different terms. True, the collective phaneron is not a categorial conception in the same sense as substance is; but it appears to fulfil the same function as the first

impression in the theory of categories. Similarly, the particular phanerons seem to correspond to the impressions considered as parts of the substance. However, there is at least one crucial difference. The problem with the account in the "New List" was that it depicted representation as arising from the holding together of distinct impressions (see sect. 3.1.1). The phaneroscopic objects do not materialise by an equivalent act of synthesis; rather, they are purportedly features of the appearing phaneron.

In the end, the identification of phaneroscopic objects may be less of a worry for Peirce's approach than De Tienne implies. Anything of which we are immediately aware is a particular phaneron; no *criteria* of determination are needed. Looking at a table, we may become aware of it as an object; that is one phaneron. Our attention might be drawn to one of its legs, the colour of its surface, its design, or its contribution to the harmonic totality of a room; all of these are also particular phanerons. The fact that the "phaneric" view in front of our eyes could hypothetically be carved up in innumerable different ways does not constitute a problem; it simply happens to be structured in a certain way in awareness. That is, for one reason or other, certain things manifest themselves before our minds. The phaneroscopist does not ask why or look for physiological explanations; that is a task for the psychologist.

On the other hand, we already saw that the phaneron is not a semiotic object; it is neither a representation of something other nor a represented something. Does this not exclude a number of things from the purview of phaneroscopy? Indeed, Peirce contends that an external reality is not a phaneron, since it is not, by definition, "*entirely* open to observation" (MS 337s:8). Thus, one might think that his phaneroscopy sets out from an initial division of objects into phanerons and non-phanerons. However, that would entail a misunderstanding; as far as the external object is brought before the mind, it is a phaneron. In the introduction to "Logic Viewed as Semeiotics", a critical questioner asks Peirce whether such objects as a sentence written on a piece of paper in an unknown language or a thing that existed and was annihilated before there was any mind in the universe are not outside of the scope of phaneroscopy; they do not appear to fulfil the requirement of direct presence (MS

336:2-8 [c. 1904]). However, Peirce holds that both objects *do* come before the mind in a certain sense. Although the meaning of the sentence is not understood, one is nonetheless directly aware of it as a potentially meaningful object. Furthermore, Peirce stresses that the word "phaneron" is not restricted to that which comes before a *single* mind at any *one* time. As it is mentioned, the sentence is before the mind as a phaneroscopic object, irrespective of its actual uses, its true acceptation, or the process of interpretation needed to see it as a meaningful entity.[23] The thing destroyed before the emergence of mind – perhaps the most external thing imaginable – is a phaneron as it is mentioned. As Peirce replies to his imaginary critic: "if you mean anything at all by this, your mind is referring to that object; and even if your phrase has no meaning, your pretending that is has still places the object before your mind and before mine" (MS 336:8 [c. 1904]).[24] True, we become aware of the object through the mediation of signs – words, and perhaps expressions and gestures in this case – but once our minds have been adequately directed, we also attend to the object directly as a phaneron, prescinded from its role in representation.

It can be illuminating to compare Peirce's account of the phaneron with his conception of the percept. There are certain striking likenesses between the two notions; both are supposedly objects of immediate awareness, and neither functions as a sign. The percept and the phaneron are similar in that they cannot, properly speaking, be corrected by later findings; appearances can be deceptive, of course, but it will nonetheless remain a fact that things appeared or were experienced in a certain way. Indeed, in his Harvard lectures on pragmatism, Peirce suggests that there is a close link between the examination of the phaneron and the analysis of the percept (PPM 145 [1903]; PPM 160 [1903]). Yet, a pertinent distinction between the two concepts can be made. The percept is something that strongly forces itself upon our awareness; it is in that respect quite singular (see sect. 4.3.2). The phaneron, on the other hand, may be vague or general, and is therefore not something that necessarily reacts upon us in the way a percept does (MS 337s:10). The percept is experienced as an objective fact; in contrast, we can become aware of such phanerons as feelings,

meanings, imaginations, and memories. In other words, the phaneron is not limited to an instantaneous state of consciousness (EP 2:362 [c. 1905]). The percept is objectified in a far stronger sense than the particular phaneron; it is experienced here and now, as an *other*.

> …that which is observed, as a percept is observed, must be objectified, while the mere tones of consciousness are phanerons. But though subject and object are not discriminated in these feelings, yet it is that element of them which becomes developed into the immediate object which is the phaneron.[25] (MS 337s:10)

The virtually innumerable multitude of phanerons – that is, particular phanerons available for analysis – poses a challenge for the phaneroscopist. After all, the ultimate task of phaneroscopy "is to draw up a catalogue of categories and prove its sufficiency and freedom from redundancies, to make out the characteristics of each category, and to show the relations of each to the others" (PPM 153 [1903]); Peirce even describes phaneroscopy as the "doctrine of the categories" (CP 1.280 [1902]) – perhaps a somewhat unfortunate choice of terms in view of the associations of the term "doctrine" (cf. sect. 2.1). Yet, in contrast to the "New List", the later phaneroscopic writings do not seem to provide us with a sophisticated method for deriving elemental conceptions; instead we are told that "every man who is sufficiently intelligent to testify to the matter at all will testify that whatever is at any time before his mind has certain features which it describes, and that it is not possible to think these features are not in what is before one's own mind" (MS 693:114 [1904]). There is little reasoning in phaneroscopy; "its questions are rather settled by the finest of observation" (MS 645:5 [1909]). Thus, it appears to rest on nothing firmer than the evidence of seemings, which are assumed to contain the same features for all sufficiently developed human beings.

On the other hand, the categorial classification is to be based on "complexity of structure" (CP 8.213 [c. 1905]). Moreover, Peirce contends that we do not find the elements already neatly detached in experience; they must be "separated by a process of thought that cannot be summoned up Hegel-wise on demand" (MS 602:12-13

[late]). Mathematical methods of abstraction are supposedly needed in the primary unravelling of "the tangled skein [of] all that in any sense appears" (CP 1.280 [c. 1902]). Nonetheless, mathematics does not give us the categories as such; from the point of view of the phaneroscopist, the value of mathematical methods is that they enable him or her to analyse the relations between the elemental features. Certain principles are adopted from the simple mathematics of logic; yet, the proper unearthing of the categories takes place within phaneroscopy.

Still, we may be unsure whether phaneroscopy is adequately equipped to perform its main task. In fact, Peirce asserts that phaneroscopists hardly make any positive assertions by themselves; the findings are appropriately spelled out only when the logician appeals to phaneroscopy (MS 693:114 [1904]). Hence, it may be useful to distinguish roughly between two stages of post-mathematical phaneroscopic investigation. Pure phaneroscopy is focused on discovery of certain threads in the flow of seemings, and on the detection of distinguishing marks among the appearances (cf. MS 693:118 [1904]). The subsequent work of analysis, in which the distinct forms are elaborated and their relations laid out, is pursued in close co-operation with the logician – or, more properly, the philosophical semiotician. This intermingling of phaneroscopy and semeiotic does not perfectly accord with the hierarchical principles of Peirce's classification of the sciences; but as his own production testifies, it is perhaps unavoidable. Peirce recognises that a pure phaneron is too elusive to allow precise analysis; therefore, we need to employ mathematical and semiotic means, like the diagrammatic system of existential graphs, in which the structure of the phaneron is represented as a likeness of a chemical compound (NEM 4:320 [c. 1906]). Such depictions do not capture the categories fully, but they can be taken to be adequately representative for certain purposes.

Some commentators have suggested that Peirce's categories should actually be viewed as semiotic notions. For instance, Colapietro (2001, pp. 202-203) observes that Peirce often expresses the categories as *rhemata*, i.e. as predicates with one to three blanks, representing valencies. Moreover, Colapietro (2001) asserts that

whatever "else they are, the Peircean categories are themselves *signs* operating on a somewhat unusual level" (p. 203). Such statements are false from the point of view of pure heuristic phaneroscopy; within its sphere, it does not make sense to ask what the elemental phanerons *represent*. However, Colapietro's claim can be defended if a less rigid view of the division of philosophical labour is accepted. Peirce places the discipline of phaneroscopy at the head of philosophy, but in practice, he tends to connect it closely with logical and metaphysical investigation. At any rate, it seems sensible to maintain that the scientific arrangement should not be turned into dogma, especially where prospective lines of inquiry are concerned.

Moreover, the phaneroscopic categories lose their immediacy and become involved in semiotic relations as soon as they are applied in other fields of study. Peirce contends that we are directly aware of manifestations of the categories as qualities, reactions, and signs; yet, he also maintains that it is almost impossible to obtain a more substantial conception of the first two categories except as correlates of a sign relation.

> … qualities, reacting things, and signs are three categories of which no two have being in the same sense. We have direct knowledge of all three. For every thought is a sign, every experience[26] is of a reaction between *ego* and *non-ego*, and every feeling is of a quality. This direct knowledge establishes the categories for us. Our metaphysics which extends them throughout the universe is inferential; that is, knowledge through signs. Hence, there is a difficulty in making out exactly what a reacting thing and a quality are like apart from their being the one the object, the other the meaning,[27] of a sign. (MS 8:5-6 [c. 1903?])

In view of the difficulty – perhaps even impossibility – of pursuing pure phaneroscopic analysis, one might begin to question the actual role of the study in Peirce's philosophical project. Some critics have seen it as an unsuccessful attempt to fill the gap left by Peirce's move away from the derivation presented in the "New List". Murphey, in particular, is dismissive of the whole undertaking.

> It is impossible to regard Peirce's phenomenological treatment of the categories as anything more than a quite unsuccessful sleight of hand. Even if his attempt to identify formal logic with mathematics is accepted, the most that results from it is that there is an algebra isomorphic to the logical system of relations. Now this algebra could certainly be used to classify the elements of the phaneron, if those elements should happen to exhibit characteristics which would admit of such a classification, and it is the purpose of the phenomenology to show that in fact such a classification can be made. But what the phenomenology does not show is why it should be made. There are certainly other ways of classifying the elements of the phaneron which are equally simple and exhaustive, and no reason is given as to why the classification by relations is to be preferred. (Murphey, 1961, p. 368)

Murphey's assessment is partly correct; as we have seen, Peirce's mature theory of the categories lacks the Kantian foundation based on the necessities of cognition. The early derivation of the intermediate conceptions was justified by the requirements of predication. When Peirce adopted an inferentialist position, he could maintain that whatever holds for propositional representation must also hold for knowledge in general. In the later theory, this is no longer viable, as phaneroscopy affirms the appearance of non-representational phanerons. Yet, even after the phaneroscopic turn, the analysis of predication provides Peirce with his best arguments for the short list; the categories are often treated as classes of predicates. Now, as Murphey notes, the logical account of predication belongs to the grammatical part of semeiotic; thus, the whole scientific structure seems to be left without proper groundwork. "If the basis for the categories is not demonstrable until we reach speculative grammar, then the whole argument is circular, for speculative grammar itself presupposes the categories of phenomenology" (Murphey, 1961, p. 369).

Murphey's criticism of the later theory of categories contains two potentially damaging accusations. Firstly, he claims that phaneroscopy fails to provide any kind of justification for the triadic classification of elements. It does not show why we should prefer the relational point of view, as opposed to other feasible systems of arrangement. Peirce himself admits that there are other

ways to pursue phaneroscopic classification (see, e.g., MS 611:23 [1908]). Secondly, Murphey contends that phaneroscopy does not provide a proper foundation for philosophy. Both of these charges are at least partly warranted; but is Peirce's failure to provide proofs or straightforward justifications really as disastrous as Murphey thinks? The answer depends on how we view Peirce's project. Murphey judges Peirce's efforts as parts of a grand Kant-inspired architectonic programme, which ought to build on the firm ground provided by the categories. Now Peirce definitely expresses his adherence to such an agenda at certain points in his philosophical career.[28] It is also evident that the categories structure much of his thought. However, phaneroscopy is not introduced to provide the kind of foundations Murphey expects; in fact, it seems to involve an implicit – sometimes nearly explicit – admission of the futility of attempts to prove the scheme by strict logical derivations. Such analyses can elucidate the categories, and thus provide partial support; but an unassailable proof of the reality of the categories is not forthcoming.

How, then, can the phaneroscopic approach to the categories be defended? Colapietro (2001) argues that the categories are primarily heuristic aids; they are not put forth "as a static taxonomic but rather as a dynamic interrogative framework: they are resources for posing questions" (p. 202). At first, this suggestion might seem misguided; Peirce certainly does not view the categories as mere useful tools. However, Colapietro's contention is rendered more plausible if we consider Peirce's view of science and its emphasis on the relevance of discovery. At least, Colapietro is right in holding that the purpose of the Peircean categories cannot merely be to codify existing knowledge; their ultimate aim, as elaborated conceptions, is to serve as guides for research or openers of new perspectives.

In "Pragmatism", Peirce asserts that the trichotomic theory of the categories is difficult to prove because of the underdeveloped state of logic; therefore, he has preferred "to state it problematically, as a surmise to be verified by observation" (MS 318:23 [1907]). What such phaneroscopic observation supposedly shows is that to the three mathematical classes of valency

correspond three classes of characters or predicates. Still, the best test of the soundness of the trichotomic scheme lies in its suggestive power.

> I have followed out this trichotomy into many […] ramifications, and have uniformly found it to be a most useful polestar in my explorations into the different branches of philosophy. There is no fallacy in it; for it asserts nothing, but only offers suggestions. It has preserved me, in innumerable cases, from one-sided opinions. It has had me search in directions that it has indicated for points of view that I should otherwise have overlooked. (MS 318:36/72$_b$ [1907]; cf. CP 1.351)

In Peirce's evocative metaphor, the categorial ideas are like beautiful pebbles on the beach, "worth taking home, and polishing up, and seeing what they are good for" (PPM 149 [1898]).

According to Peirce, additional backing for his theory of categories is provided by the fact that it is not a novelty in the history of thought; his "trichotomy is plainly of the family stock of Hegel's three stages of thought", an idea traceable to Kant and even further back in time (MS 318:36-37/72$_b$-73$_b$ [1907]). On the other hand, Peirce holds that he can avoid at least some of the arbitrariness of the Hegelian procedure by appealing to the logic of mathematics (MS 318:37/73$_b$ [1907]; cf. MS 602:12-13 [late]). In particular, he claims that mathematical logic provides strong support for the central non-reductionist point of view of his theory, according to which none of the members of the categorial trichotomy should be allowed to supersede the other two. If this truly is a mathematical insight, then it is plausible to hold that the phaneroscopic theory of categories rests on simple mathematics – without thereby rendering phaneroscopy void.

3.2 The Cenopythagorean Scheme

So far, our discussion has identified a number of different methods and strategies, which Peirce uses to reach his categories.[29] We have also seen that there are reasons to hold that only the logical derivation presented in the "New List" can truly stand on its own. However, given that Peirce later abandons substantial parts of the

epistemological stance that supported the early theory, it is not surprising that he tries other ways to argue for the soundness of his categorial system. These can be roughly summarised as follows:

1. Appeal to the simple logic of mathematics
2. The "crude" inductive strategy of finding examples of prominent trichotomies in various sciences, particularly logic and metaphysics
3. The direct phaneroscopic approach

In his later writings, Peirce mostly opts for the phaneroscopic alternative; indeed, phaneroscopy has no explicit function in his system of sciences apart from the determination of the categories. Yet, phaneroscopic inquiry seems to be incapable of performing its task by its own means; a free inspection of phanerons, unassisted by various modes of reasoning and additional considerations, would be an overwhelming – perhaps even unfeasible – undertaking.

As for the other arguments for the categories, the method of crude induction is in many ways the most tangible option, but it obviously fails to give any kind of assurance of the universal validity of the categorial scheme. At the end of the last section, we noted that it is futile to expect a strong proof of the categories, as long as these are taken to be experientially available in some sense. Yet, merely appealing to examples will render the procedure too weak for comfort. The possible mathematical derivation, of which we find certain hints in Peirce's writings, would seem to be the only way to guarantee the legitimacy of the categories in the context of his later thought. However, this path is cut short by the Peircean conception of mathematical inquiry; as a purely hypothetical science, mathematics will at best inform us of certain possibilities.

What, then, would be the most viable route to the categories? Of its own accord, none of the identified paths seems to reach its destination. On the other hand, the preceding examination gave some hints that a combination of techniques may be adopted. In one of the manuscripts named "The Basis of Pragmaticism" (MS 908 [c. 1905])[30] – with the words "in Phaneroscopy" appropriately

added to the title by the Peirce Edition Project in *The Essential Peirce*, vol. 2 – Peirce does in fact outline a two-stage method for finding and delimiting the categories, proceeding from an a priori (at least partly mathematical) reflection on possible relations to an experiential (phaneroscopic) examination of the forms we actually find. Albeit tentative, this seems to be the most plausible alternative; it accords with Peirce's view of the hierarchy of sciences and renders his conflicting statements concerning the empirical status of the categories more intelligible.

In what follows, I will examine the mature *cenopythagorean*[31] categories in two stages, roughly following the model of the aforementioned manuscript. However, to give more substance to the otherwise highly abstract categorial notions, I will complement the account by considerations of some of Peirce's more informative examples. Moreover, the distinction between genuine and degenerate categories will be considered in some detail, as it is of special relevance for the question of the categorial status of signs.

3.2.1 Combination and Reduction

The stated aim of Peirce's mature phaneroscopic writings is to unearth the indecomposable elements contained in the phaneron. The difficulty of the undertaking is not how to obtain the relevant observational "data" – we are constantly in possession of phanerons – but rather how to detect the categorial classes in the phenomenal multitude. In other words, we are trying to ascertain the elemental ingredients of the phaneron by examining a kind of *composite photograph*[32] of particular phanerons.

We found that Peirce often emphasises the directness and immediacy of the phaneroscopic approach – to the extent that it occasionally becomes difficult to find any serviceable method whatsoever in his phaneroscopy. However, he also states that the observation of the phaneron – like any observational work – should be preceded by "a preparation of thought, a consideration as definite as may be, of what it is possible that observation should disclose" (EP 2:362 [c. 1905]). This preliminary, a priori phase of

investigation neither tells us what we actually will find nor eliminates surprises, but as a consideration of what indecomposable elements it is possible to discover, it functions as a guide for observation.

In a first preparatory consideration, Peirce concedes that the expression "indecomposable element" may sound somewhat redundant. However, the stress on indivisibility is not superfluous; "indecomposable element" refers to something "which not only is elementary, since it seems so, and seeming is the only being a constituent of the phaneron has, as such, but is moreover incapable of being separated by logical analysis into parts, whether they be substantial, essential, relative, or any other kind of parts" (EP 2:362 [c. 1905]; cf. CP 1.294 [c. 1905]). He then proceeds to give an example, which is useful for understanding the way in which a phaneroscopist is supposed to handle his or her subject matter.

A cow, inattentively regarded, may be an element of the phaneron; to use the distinction introduced in the last section, it is a particular phaneron and as such an ingredient of the collective phaneron. However, if it is indeed such an component, it can still be analysed logically into different parts that are *not* in it as constituents of the phaneron, "since they were not in the mind in the same way that the cow was, nor in any way in which the cow, as an appearance in the phaneron, could be said to be formed of these parts" (EP 2:362 [c. 1905]). In other words, the categories are not ascertained by an analysis of particular phanerons into conceptual atoms; rather, the preparatory consideration suggests that the phaneroscopist ought to focus on the *forms* of the phanerons (rather than the *kinds*) as the indecomposable elements. Peirce does not stop to argue for this position at length; he merely notes that "it is universally admitted, in all sorts of inquiries, that the most important divisions are divisions according to *form*, and not according to qualities of *matter*, in case division according to form is possible at all" (EP 2:362 [c. 1905]).[33]

Next, Peirce remarks that doubts may arise concerning the possibility of discerning any distinctions of form among indecomposable elements (EP 2:362-363 [c. 1905]; CP 1.289 [c. 1906][34]). To alleviate such misgivings, he uses an indirect argumentative

strategy. Since it is merely the *possibility* of finding phenomenal forms that needs to be proved, it is sufficient to find a single instance of analogical distinctions to settle the matter. Peirce finds a suitable example in the field of chemistry;[35] "although the chemical atoms were until quite recently conceived to be, each of them, quite indecomposable and homogenous, yet they have for half a century been known to differ from one another, not indeed in *internal* form, but in *external* form" (EP 2:363 [c. 1905]). Possible differences in form between the indecomposable elements are manifested in the structures of their possible compounds (CP 1.289 [c. 1906]). That is, it is the *combinatorial power* of the element, indicated by its *valency*,[36] which is relevant (MS 292:34 [c. 1906]). Peirce gives several examples of such chemical unions (partly reproduced in fig. 3)

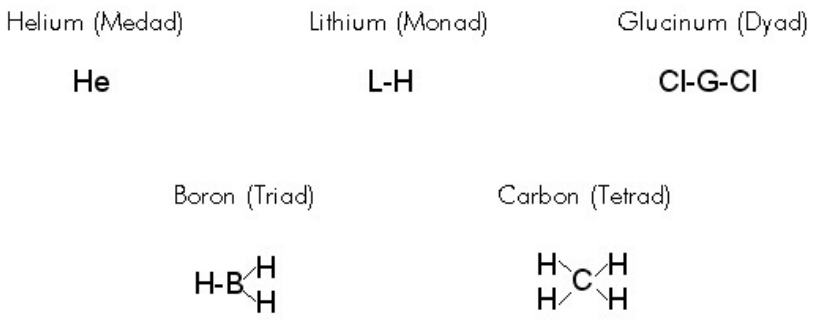


***Figure 3*. Examples of Chemical Combination in "The Basis of Pragmaticism".[37]**

The external form of the chemical elements is manifested by the bonds through which they can enter into combinations with each other. Thus, each element possesses a numerical valency: helium 0, lithium 1, glucinum 2, etc.

According to Peirce, the existence of such significant external forms in the world of chemistry gives us antecedent reason to suspect that the indecomposable elements of the phaneron may

display analogous formal differences (EP 2:363 [c. 1905]). At first blush, the correspondence seems rather fanciful; obviously, we cannot simply reason from chemical atoms to phaneroscopic or logical elements. However, Peirce presents the idea as a hypothesis to be tried by inductive inquiry; although there is no strong evidence in its favour, the suggestion is nonetheless worthy of investigation because of "the postulate of a resemblance between nature's law and what it is natural for man to think" – the idea of *il lume naturale* that Peirce holds to be involved in all physical science (EP 2:363 [c. 1905]; cf. CP 1.349).

Now, there is an obvious difficulty with Peirce's argumentative strategy. As Menno Hulswit (2002, p. 124) points out, the view that elements are indecomposable has been refuted by later developments in physics. Does this not invalidate Peirce's approach? It certainly loses some of its rhetorical force. However, the most important thing is not the actual existence of indecomposable chemical elements; the crucial fact is that the mind does so conceive of them, showing that the idea of classifying elements based on their combinatorial power of valency is at least feasible. Here, it is perhaps most useful as an illustration of Peirce's pattern of thought.

The chemical hypothesis (as it might be called) suggests that the relevant forms of the phaneron will refer to their valency, their *relational* potential (cf. MS 292:34 [c. 1906]). However, the surmise offers no implication of the number of categories, their precise identity, or their interrelations; we may simply expect to find medads, monads, dyads, and elements of higher valency in the phaneron (CP 1.292 [c. 1906]). In fact, the analogy between chemistry and phaneroscopy quickly fails if we compare elements in the two fields (cf. CP 3.470 [1897]). Peirce does not explain this discrepancy; instead, he suggests that there are further considerations, which strengthen our confidence in the expectation that we will find certain elemental forms in the phaneron rather than others. Some relations can *a priori* be deemed to be impossible. A medad, "an indecomposable idea altogether severed logically from every other", "would be a flash of mental 'heat-lightning' absolutely instantaneous, thunderless, unremembered, and altogether without effect" (CP 1.292 [c. 1906]; cf. PPM 137 [1903]). However, the most

important additional preliminary deliberation is the one that leads to the conclusion that the phaneron must include *combination* as an indecomposable element.

> … unless the Phaneron were to consist entirely of elements altogether uncombined mentally, in which case we should have no idea of the Phaneron (since this, if we have the idea, is an idea combining all the rest), which is as much as to say that there would be no Phaneron, its *esse* being *percipi* if any is so; or unless the Phaneron were itself our sole idea, and were utterly indecomposable, when there could be no such thing as an interrogation and no such thing as a judgment […], it follows that if there is a Phaneron (which would be an assertion,) or even if we can ask whether there be or no, there must be an idea of *combination* (i.e., having *combination* for its object thought of). Now the general idea of a combination must be an indecomposable idea. For otherwise it would be compounded, and the idea of combination would enter into it as an analytic part of it. It is, however, quite absurd to suppose an idea to be a part of itself, and *not the whole*. Therefore, if there is a Phaneron, the idea of combination is an indecomposable element of it. (EP 2:363-364 [c. 1905])

According to Peirce, the notion of combination is a *triad*; it involves the ideas of a whole and of two parts (EP 2:364 [c. 1905]; cf. CP 1.515 [c. 1896]). Next, he argues that it is possible to build all external forms – medads, monads, dyads, triads, tetrads, pentads, hexads, etc. – out of triads exclusively. Peirce claims that one could put forth a general description of such triadic arrangements, although no exhaustive list of possible combinations can be given. Here, it is sufficient to give just one of his sketches to illustrate the idea (see fig. 4). The principle of construction is simple; unsaturated bonds are joined together two at a time, allowing for the connection of two bonds originating in the same triad (cf. CP 1.347 [1903]). The valency of the result can be calculated using the following general formula of relational union: the combination of any μ-ad with any υ-ad gives a [μ+υ-2λ]-ad, where λ is the number of bonds combined (CP 3.484 [1897]). The procedure is closely associated to the idea of relative product or multiplication, which Peirce adopted from Augustus de Morgan and extended to be applicable to relations of any valency (Herzberger, 1981, p. 43-44; cf. Brunning, 1997).

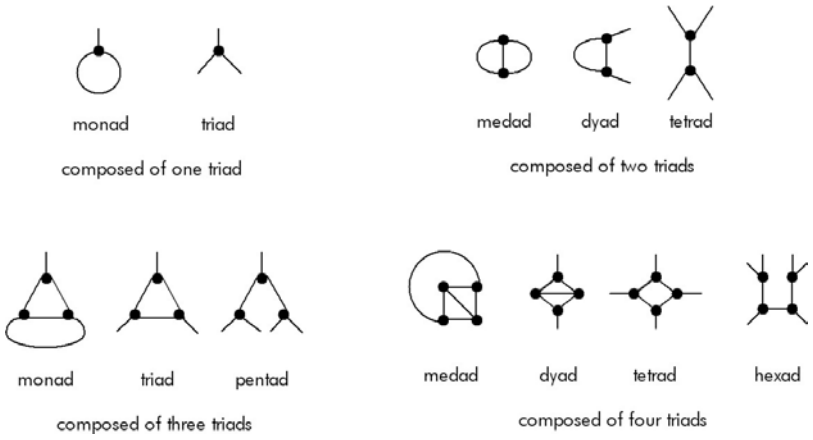


Figure 4. **External forms composed of triads.**

These preliminary considerations seem to suggest that all the elements of the phaneron would be triads; all the other forms could be construed as combinations of triadic relations. However, Peirce contends that this is blocked by "the principle that whatever is logically involved in an ingredient of the Phaneron is itself an ingredient of the Phaneron; for it is in the mind even though it be only implicitly so" (EP 2:364 [c. 1905]). This is far from clear, and appears to clash with the earlier claim concerning indecomposable elements and the example of the parts of the cow. However, we may perhaps reconstruct Peirce's principle as follows: whatever is prescindible from an indecomposable element of the phaneron is an ingredient of the phaneron. The implicitness of the prescinded elements should not be understood as indirectness, but rather as direct involvement; relations of lower valency are not brought into the mind by the mediation of triads.

A triad connects three objects, A, B, and C, of which one sets up a relation between the other two; we may assume that C establishes a relation between A and B. Thus, there is a dyadic relation between A and B, prescindible from the triadic relation involving

A, B, and C; this is the abstract relational manifestation of *secondness* or "secundanity". Similarly, in order for there to be a dyadic relation, in which A and B are in some sense opposed and to some extent independent of each other, at least one of the correlates must be capable of being viewed as more or less determinate and positive in itself (EP 2:365 [c. 1905]). This indicates a status as a *first*, or as Peirce also says, as a "priman".

So far, our examination has shown that Peirce's preliminary considerations suggest the possibility of three categories in the phaneron, relationally expressible as monad, dyad, and triad. Peirce contends that there are no a priori reasons why there should not be indecomposable firsts, seconds, and thirds in the phaneron (CP 1.295-297 [c. 1905]). Naturally, the next step is to inquire whether there are similar relational elements of higher valency, such as tetrads. Peirce insists that the answer is no; there is no need for any categorial elements apart from firstness, secondness, and thirdness, which are irreducible. This "remarkable theorem" or "reduction thesis" is one of the most central – and most debated – components of the Peircean approach (see, e.g., Anellis, 1997; Brunning, 1997; Burch, 1991; 1997; Herzberger, 1981; Ketner, 1989; cf. Mertz, 1979; Skidmore, 1971). It has two parts, a "sufficiency theorem", which states that tetrads or relations of higher valency may be composed exclusively of combinations of monads, dyads, and triads, and a "non-reduction theorem", according to which no triad can be composed of relations of lower valency than three (Ketner, 1989, pp. 135-136). Within the confines of this study, it is neither possible nor necessary to go into the intricate technical discussions concerning Peirce's claims (most fully pursued in Burch, 1991). Still, parts of his views concerning the reducibility of relations ought to be examined. In particular, it is important to establish the position that at least *some* triadic relations are irreducible to dyadic relations; without this foundation, his theory of signs will fall to pieces.[38]

We may first, however, briefly inspect Peirce's sufficiency theorem, or "the first truth about reasoning" which states "that any system of connections between more than three things can be analyzed into an aggregate [of] connections between three things or

fewer" (MS 717:5 [c. 1894?]). According to Peirce, it is an a priori impossibility that there should be an indecomposable relation of fourthness, simply because that which combines two will combine any number (CP 1.298 [c. 1905]); "the idea of combination once had, *A* and *B* can first be combined to make a whole *Z*, and then this *Z* can be combined with a new term *C* to make a new whole *Y*, and then this *Y* can be combined with a new term *D* to make a new whole *X*, and so on ad infinitum" (W 5:306 [1886]). If there were a tetrad in the phaneron, then its being – or perhaps more properly its form – would consist in its connecting four objects, A, B, C, and D (EP 2:365 [c. 1905]). Like a triad, the tetrad involves dyads, such as the pair A and B. The relationship between the tetrad and the dyad A-B is triadic; "the tetrad not only makes *A* to 'act' upon *B*, (or *B* upon *A*), but, like a triad, indeed as involving Tertianity (just as we have seen that a triad involves Secundanity), it puts together *A* and *B*, so that they make up a third object" (EP 2:365 [c. 1905]). Metaphorically speaking, a third is created, namely "the pair, understood as involving all that the tetrad implies concerning these two prescinded from *C* and *D*" (EP 2:365 [c. 1905]). Furthermore, the tetrad will involve a dyad constituted by the pair and either one of the objects C or D, this union again being a case of triadic combination resulting in a new pair. Finally, the last pair is united to D, thus connecting all the components of the original relation using nothing but triadic operations. In other words, the entire function of the tetrad can be performed by a series of triads; therefore, there cannot be any indecomposable tetrad. The same procedure can be applied to relations of higher valency than four.[39]

Strictly speaking, the preparatory phase of the phaneroscopic examination should be restricted to purely a priori or formal considerations, which provide certain guidelines for observation. However, Peirce recognises that his argument will appear both obscure and inconclusive, due to the indefiniteness of the abstract mathematical concepts employed. A simple example, which Peirce explicates in a draft of a letter to Lady Welby, may render the idea more plausible.

In general, "to say that there is a relation between four objects A, B, C, D is the same as to say that there is an object M, so related to C

and for D that A is in the given relation to B and for M" (SS 190 [1905]). If we analyse the tetradic relation "A gives B to C in exchange for D", we will find that it is equivalent to saying that there is a surrender of D by C, which takes place in consideration of the reciprocal surrender of B by A (SS 190 [1905]; cf. W 5:244 [1885]; W 6:175 [1887-8]). Thus, the tetradic relation can be conveyed as two triadic relations, although this does not constitute a full analysis. More completely, the exchange can be expressed using triads as follows:[40]

λ is an exchange of property between A and C
l is a transposition of ownership of B and D
L is an accomplishment of λ through l

μ is the surrender by A of B
m is the surrender by C of D
M is the performance of μ in reciprocal consideration of m

υ is the acquisition by A of D
η is the acquisition by C of B
N is the performance of υ in reciprocal consideration of η

L is carried out by the union of M and N

Let us now move on to the more pertinent half of Peirce's "remarkable theorem", the anti-reductionist claim that triadic relations are as irreducible to simpler components as are monads and dyads. There are several ways to defend this position; for instance, one could argue that it is not possible to construct relations of valency three or higher from monadic and dyadic relations alone, because it cannot be done without introducing the idea of combination or synthesis, which is triadic (W 6:174 [1887-8]; EP 2:366 [c. 1905]; CP 6.321 [c. 1909]). The need for triads can also be demonstrated graphically using Peirce's chemical model. We have already seen how relations of different valency can be obtained from triads (see fig. 4). However, from mere dyads only medadic

and dyadic relations can be constructed, and combinations of monads and dyads will give us only medadic, monadic, and dyadic relations. As long as we accept Peirce's principle of relational combination, according to which the unification is a kind of "welding" of two unsaturated bonds or "blanks" into one, all this is self-evident.[41]

> …we can take two […] triple relatives and fill up one blank place in each with the same letter, X, which has only the force of a pronoun or identifying index, and then the two taken together will form a whole having four blank places; and from that we can go on in a similar way to any higher number. But when we attempt to imitate this proceeding with dual relatives, and combine two of them by means of an X, we find we only have two blank places in the combination, just as we had in either of the relatives taken by itself. (W 6:175 [1887-8])

Again, it may be enlightening to complement the preparatory examination with an example; as noted, it is sufficient to identify *one* irreducible triple relation to establish the viability of the Peircean position. For this purpose, we may for a second time consider Peirce's favourite illustration, the relation of giving, expressed schematically as A gives B to C (or more properly as the rhema – gives – to –). The reductionist would claim that this is equivalent to a certain number of dyadic relations; Peirce argues that the relation cannot be so constructed. Yet, he notes that Alfred Kempe has shown how his own algebra for dual relations could be used to express the relation of giving using three dyads (CP 3.424 [1892]):[42]

> In a certain act, *D*, something is given by *A*;
> In the act, *D*, something is given to *C*;
> In the act, *D*, to somebody is given *B*.

This analysis seems to lead to a reduction of the relation of giving to three dyads, an outcome that naturally causes worries for the anti-reductionist. However, Peirce is not convinced; he asserts that the result is achieved by the addition of the abstraction "this action" to the universe of concrete things, but he remarks that the

diagram does not offer any representation of how the abstraction is introduced. Stated differently, what the analysis fails to convey is the nature of the union involved in the act.

> A triad is something more than a congeries of pairs. For example, *A* gives *B* to *C*. Here are three pairs: *A* parts with *B*, *C* receives *B*, *A* enriches *C*. But these three dual facts taken together do not make up the triple fact, which consist[s] in this that *A* parts with *B*, *C* receives *B*, *A* enriches *C*, *all in one act*. (NEM 4:307 [c. 1894?])

The last emphasis is significant; it indicates the unity of the genuine triadic act (cf. MS 717:8 [c. 1894?]). According to Peirce, Kempe's analysis is based on the view that a relationship[43] is nothing but a complex of connections of pairs of objects (CP 3.468 [1897]). Such relationships can be expressed diagrammatically using only two kinds of elements, namely spots and lines between pairs of spots (CP 3.423 [1892]; PPM 182 [1903]). Consequently, giving could be represented as a compound of dyads (as in fig. 5, adopted from Brunning, 1997, p. 256).

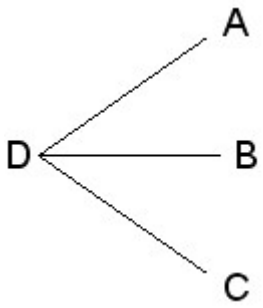


***Figure 5*. Kempe-style diagram of the relationship of giving.**

Peirce finds a number of deficiencies in Kempe's graphical model, although he concedes that it is adequate within a restricted domain. Most importantly, Peirce contends that the sufficiency of Kempe's diagrams depends on the fact that their standing for

anything is left out of view; it "is not surprising that the idea of thirdness, or mediation, should be scarcely discernible when the representative character of the diagram is left out of account" (CP 3.423 [1892]). Moreover, Peirce claims that the diagrams actually involve three kinds of elements, namely spots (firstness), two-ended lines (secondness), and the attachment of lines to spots (thirdness) (CP 3.423 [1892]; PPM 183 [1903]). In the same way, he chides his own algebra of dyadic relations for employing the very triadic relations it does not recognise (SS 30 [1904]).[44]

The effects of the challenge posed by Kempe can be discerned in Peirce's later attempts to construct a more adequate logical notation in his existential graphs. In the topological system, Peirce introduces the primitive relation of *teridentity*,[45] graphically expressed as "a point upon which three lines of identity abut" (CP 4.406 [1903]; cf. CP 4.561 [1906]) – or simply as a three-way branching line, ⅄ (SS 199 [1906]; MS 292:31$_v$ [c. 1906]; Brunning, 1997, p. 257). Importantly, teridentity is not to be interpreted as a compound of binary identities; it "is identity *and* identity, but this 'and' is a distinct concept, and is precisely that of teridentity" (CP 4.561 [1906]). The upshot is, of course, that teridentity is irreducible. Without going into the details of Peirce's existential graphs, we may note that this is a direct consequence of the assumptions of the system. As Jacqueline Brunning (1997, p. 258) points out, given that the only mode of composition allowed is relative multiplication in addition to the restrictions that distinct lines of identity may not intersect and that two lines of identity may not be attached to the same hook or bond, it follows that teridentity is not definable.

Using the system of existential graphs, the relation of giving can be presented in the following way:

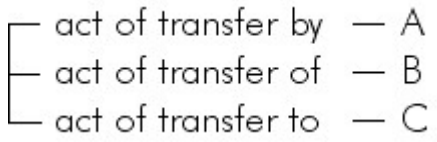


***Figure 6*. Giving as teridentity (MS 292:35 [c. 1906]).**

At first blush, the representation of giving in existential graphs might not seem to diverge significantly from the Kempe diagram (fig. 5). However, it involves a crucial difference. The symbol for teridentity (on the left in fig. 6) asserts the identity of the three transfers; or, to put the matter differently, it denotes the triadic nature of the single act. Still, Peirce notes that this graphical analysis cannot be taken to show that teridentity expresses the entire scope and purport of the triadic fact; the diagram leaves out certain relations between the three concepts of transfer (MS 292:35 [c. 1906]). Furthermore, Peirce indicates that an analysis in terms of teridentity fails to express the character of giving as a triadic *action*, something that is better captured in a simple graph utilising a branching line, as in fig. 7.

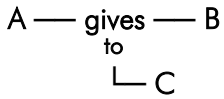


Figure 7. **Giving as triadic action (MS 292:34 [c. 1906]).**

3.2.2 Genuineness and Degeneracy

Obviously, the plausibility of the Peircean position depends on how inclined we are to agree with his conviction that there really are genuine triadic relations. Even if one is sceptical about the validity of his analysis – or of its presuppositions – it is difficult to deny the force of his common-sense appeal to examples such as giving. If the relation is reduced to a compound of dyads, something indispensable is indeed lost. Peirce occasionally identifies this essential feature of triple relations as *mentality* (SS 29 [1904]). However, this characterisation may be somewhat deceptive; the triadic fact is not necessarily attributable to the activities of an individual mind. Peirce often contends that giving involves a *law*,

an intelligible principle that guides the mechanical (dyadic) actions involved (MS 462:68-70 [1903]; CP 1.345 [1903]; SS 29 [1904]).

> A man gives a brooch to his wife. The merely mechanical part of the act consists in his laying the brooch down while uttering certain sounds, and her taking it up. There is no genuine triplicity here; but there is no giving, either. The giving consists in his agreeing that a certain intellectual principle shall govern the relations of the brooch to his wife. The merchant in the Arabian Nights threw away a datestone which struck the eye of a Jinnee. This was purely mechanical, and there was no genuine triplicity. The throwing and the striking were independent of one another. But had he aimed at the Jinnee's eye, there would have been more than merely throwing away the stone. There would have been genuine triplicity, the stone being not merely thrown, but thrown at the eye. Here, *intention*, the mind's action, would have come in. (CP 2.86 [c. 1902])

> Take, for example, the relation of *giving*. A gives B to C. This does not consist in A's throwing B away and its accidentally hitting C, like the date-stone, which hit the Jinnee in the eye. If that were all, it would not be a genuine triadic relation, but merely one dyadic relation followed by another. There need be no motion of the thing given. Giving is a transfer of the right of property. Now right is a matter of law, and law is a matter of thought and meaning. (CP 1.345 [1903]; cf. MS 462:68-70 [1903]; CP 6.323 [c. 1909])

In Peirce's terminology, irreducible relations such as giving are *genuine*; they constitute the purest manifestation of the categories. However, merely possessing the appropriate form does not make a relation genuine; obviously, there are dyads and triads, which are composed of simpler relations and which are consequently partly reducible. Such compounds might be designated *merely formal* relations in contrast to relations as true relative concepts (cf. Brunning, 1997, p. 255).[46] In addition to genuine relational categories, Peirce therefore recognises so-called *degenerate* categories.[47] Such imperfect connections are marked by their partial decomposability; if the ground of a dyadic relation can be expressed in terms of monadic relations, it is a degenerate relation of secondness, and if the ground of a triadic relation can be expressed using some kind of compound of dyadic and/or monadic relations, it is a degenerate

relation of thirdness. Because of their simplicity, monadic relations or firstnesses do not have any degenerate variants (CP 1.529 [1903]; CP 5.68 [1903]).

> A fact concerning two subjects is a dual character or relation; but a relation which is a mere combination of two independent facts concerning the two subjects may be called *degenerate*, just as two lines are called a degenerate conic. In like manner a plural character or conjoint relation is to be called degenerate if it is a mere compound of dual characters. (W 5:162 [1885])

Peirce's discussions of genuineness and degeneracy are regrettably quite fragmented and often obscure. Nonetheless, the distinction between genuine and degenerate relations is vital for the plausibility of his theory of categories. Moreover, as Peirce often contends that the sign relation is the prime example of a genuine triad, and identifies certain degenerate species of representation, the division is also a crucial component of semeiotic.[48]

If we follow Peirce's sketch for phaneroscopic study (as outlined in sect. 3.1.3), then the examination of the degenerate forms of the categories might be located in the fourth phase, the identification and analysis of the principal forms of firstness, secondness, and thirdness. Such a placement would indicate that this stage of inquiry properly ought to be pursued after the actual observation of the phaneron. Moreover, if the a priori examination is strictly restricted to the consideration of possible indecomposable elements, then it should not be concerned with the mixed degenerate types. However, since the question of degeneracy casts further light on the notion of the irreducibility of the categories, it is appropriate to give it some thought before we move on to the fuller description of the categories found in experience.

It is convenient to consider the degeneracy and genuineness of secondness first, as degenerate thirdness is partly defined in these terms. A genuine dyadic relation "essentially supposes two objects each of which is such as it is only by virtue of how the other is" (MS 304:37 [1903]). In other words, the relative properties expressed or implied by the relation cannot obtain independently of the other term or object of the relation; being an element (a second) in a

proper dyadic relation involves having an element of being dependent on another (CP 1.526 [1903]; Kruse, 1991, p. 272). Take, for instance, "A kills B"; the relation of killing is characteristically dyadic, because the property of being a killer requires or implies the property of being killed or something that is killed (A and B being the same person is an exception, rendering the relation partly degenerate [cf. W 5:308 (1886)]). In other words, there is an indispensable reciprocity between the terms; object A depends on B for its relational being, and *vice versa*, without the involvement of any third (EP 2:383 [1906]).[49] This interdependence is the *single* relational fact about two objects that constitutes genuine secondness (CP 1.526 [1903]; cf. CP 1.326 [c. 1894]). In a degenerate dyadic relation, the related objects are compounded in a weaker sense. Yet the degenerate form of the category is not mere firstness; "there is Secondness indeed, but a weak or Secondary Secondness that is not in the pair in its own quality, but belongs to it only in a certain respect" (PPM 167 [1903]).

In *A Guess at the Riddle,* Peirce introduces a criterion for identifying degenerate relations of secondness, namely their mind-dependency; they are *relations of reason*[50] in contrast to real dyadic relations. While a "real relation subsists in virtue of a fact which would be totally impossible were either of the related objects destroyed", "a relation of reason subsists in virtue of two facts, one only of which would disappear on the annihilation of either of the relates" (W 6:177 [1887-8]). Characteristic examples of relations of reason are resemblance, contrasts, and comparisons; others "arise from ideas being connected by the mind in other ways; they consist in the relation between two parts of one complex concept, or, as we may say, in the relation of a complex concept to itself, in respect to two of its parts" (W 6:177 [1887-8]). Peirce adds that there is one important kind of degenerate secondness that does not fulfil the definition of a relation of reason, namely *self-relation*. The most characteristic self-relation is *identity*, the relation that everything bears to itself; others are allurements, motives, duties, and dicta of consciousness, all of which are described in the language of forces – "as though a man suffered compulsion from within" (W 6:177 [1887-8]; cf. W 5:300 [1886]). In addition, Peirce includes the

reflective observation of our own feelings in this sub-class of degenerate secondness. Still, the most important instance of self-relation is a *relation of inherence* or *reference*, in which an abstract quality of a thing is treated "as if it were some second thing that the first thing possesses" (W 6:177 [1887-8]). Sometimes, Peirce singles out such relations as the most characteristic occurrences of degenerate secondness.

In a relation of inherence, there is a dyadic relation between a quality and the subject in which the quality inheres (CP 1.527 [1903]). Thus, "A is intelligent" expresses a degenerate dyadic relation. The quality of intelligence belongs categorially to firstness; in distinction from a genuine dyadic relation, in which both subjects are seconds in themselves, one of the subjects of a relation of inherence is a first. This "Secondness really amounts to nothing but this, that a subject, in its being a second, has a Firstness, or quality" (CP 1.528 [1903]). Thus, a categorial gap between the related objects is a characteristic feature of degeneracy of the inherence type. Nonetheless, from a certain point of view there is a stronger dependence between the relates than in a relation of reason, as the quality is construed as an attribute of the subject.

In spite of the distinction between relations of reason and self-relations, Peirce argues that all kinds of degenerate relations of secondness are alike in that "they arise from the mind setting one part of a notion into relation to another" (W 6:177 [1887-8]; cf. W 6:211 [1888]). [51] They are *internal*, in contrast to genuine secondnesses, which are properly speaking constituted by the actions and reactions of external facts. On the other hand, in "New Elements", Peirce contends that all degenerate dyadic relations – including resemblances and other relations of reason – are individual relations of identity of the form A:A (EP 2:306 [1904]). This is initially confounding; but if we in place of "identity" read "self-relation", then it can be argued that all relations of reason are degenerate in the manner of self-relations insofar as the ground of such a relation is monadic (cf. the discussion of resemblance below). Admittedly, this is left vague in Peirce's writings.

Peirce often states that there is only one principal degree of degenerate secondness; yet, his own discussions suggest that there

are certain discernable sub-classes among such relations (see, in particular, W 5:307 [1886]). In her examination of Peirce's categories, Felicia Kruse (1991) observes that Peirce intermittently indicates that genuineness and degeneracy are in some sense relative notions (see, e.g., PPM 149 [1903]; PPM 167 [1903]; SS 26 [1904]). According to Kruse (1991), there is a "realm of the relatively genuine and the relatively degenerate, where genuineness and degeneracy depend not only upon the nature of the terms of the relations themselves, but also upon the position of the relations with respect to other relations" (p. 293). Peirce's writings certainly seem to corroborate such a reading. Still, he offers no clear-cut criterion or method for identifying the relative degree of degeneracy and genuineness in a dyadic relation. *Mind-dependency* is a likely candidate. On the other hand, in *A Guess at the Riddle*, Peirce states that the secondness is more genuine if the second suffers some change from the action of the first. However, "the dependence must not go so far that the second is a mere accident or incident of the first; otherwise the secondness again degenerates" (W 6:171 [1887-8]). From a relational perspective, the grade of decomposability might be a more adequate option – albeit one may well wonder how this level is to be ascertained.[52]

Kruse contends that the relation of similarity is of a less degenerate kind than the type of degeneracy we have identified as inherence.[53] She even maintains that resemblance might better be classified as a variant of genuine secondness or a borderline case, because each of its terms is a second "insofar as the resemblance depends upon both terms of the relation for its existence" (1991, p. 276). That is, the similarity of A to B cannot obtain if B is annihilated (Kruse, 1991, p. 276). This is true, of course, but as a critical argument it misses its target. *Any* dyadic relation requires a reference to two related objects of some kind; there can be no inherence without a subject and a quality, for instance. In a genuine relation of secondness it is the *objects* that are interdependent or reciprocal; in "A kills B", the status of A as killer is dependent on B being killed.[54] From a Peircean point of view, a relation of resemblance is partly reducible, because it is based on qualities that happen to be shared by A and B. Thus, if we say that a house is

similar to a boat because both happen to be green, the relation can be stated as "'the boat is green'" and "'the house is green'", that is, as a compound of two relations of inherence.[55] If the boat is burned (and all memories of it erased), the house will still possess the *monadic* ground of the relation of similarity, its colour; it can be judged to be similar to other green objects. This is not possible in the case of an unadulterated dyadic relation, such as killing or loving. The crucial criterion for genuine secondness is that the ground of the relation is irreducibly dyadic.

In fact, based on Peirce's testimony resemblance is a poor candiate for a genuine relation of secondness. He states that similarity – "the only possible identity of Firsts" – is almost as degenerate as the self-relation of identity, the only *fully* degenerate dyadic relation (SS 28 [1904]; cf. MS 911:2_b; CP 2.91 [c. 1902]). Although Kruse is right in holding that similarity is less degenerate than identity, she is mistaken in thinking that resemblance is nearly genuine or necessarily less degenerate than a self-relation. According to Peirce, similarity is a characteristically mind-dependent relation; any two things in the world resemble each other in some respect, if regarded from an appropriate perspective (W 6:177 [1887-8]; CP 1.567 [c. 1899]).[56]

Kruse may be misled by Peirce's contention that the objects of a relation of untainted secondness are reacting singulars (PPM 263 [1903]). It is true that the subjects of resemblance may be such individuals, but that is only one condition of genuineness; the relation is degenerate in other respects. From a purely relational perspective, there seems to be two principal ways of identifying a degenerate dyad; either one of the subjects is monadic (that is, of the nature of a quality) or else the ground of the relation is to some extent monadic. There is no straightforward way of assessing whether one of these is more degenerate than the other. An inherential relation, such as "that rose is red" may be a more genuine dyadic relation than "the present president of the USA resembles the present president of Finland", in spite of the fact that the subjects of the second relation are seconds in the sense of being existents. In fact, the latter is more readily decomposable than the former.

The same general principles that distinguish degenerate from genuine secondness are applicable in the case of higher-order relations. As we have seen, unadulterated thirdness entails the interrelation of three terms; it is "where of the three terms *A*, *B*, *C*, each is related to each of the others, but by a relation which only subsists in virtue of the third term, and each has a character which belongs to it only so long as the others really influence it" (W 6:211 [1888]). That is, a genuine triad is formed by three things in a "triple relation which is not a mere mixture of dual relations"; other compounds involving three elements may constitute a triadic relation in a reduced sense (NEM 4:137). Peirce identifies two such degrees of degenerate thirdness, in which "the irreducible idea of Plurality, as distinguished from Duality, is present indeed but in a maimed condition" (PPM 168 [1903]). A *monadically* degenerate third, or a triad of second-degree degeneracy, results from the essence of three monads, its subjects (CP 1.473 [c. 1896]). A *dyadically* degenerate third, or a triad of first-degree degeneracy, is one that in some sense can be resolved into a compound of dyads (CP 1.473 [c. 1896]).

> The genuine third category is where there are three objects[57] each having a character which essentially supposes the other two. The first degenerate form is where B has a real relation to A regardless of C, and thereby A and C are brought into a real relation which B serves to bring about, but of which, when it is brought about, B forms no essential part. A still more degenerate form is where there is not even genuine duality; as when *Consciousness* is said to be a representation of itself to itself. Consciousness is what immediate feeling becomes when what it is, as it is, a positive feeling, is ignored, and it is looked upon as a sign. (PPM 150 [1903])

As in the case of degenerate secondness, Peirce discerns a number of variants of the degenerate types of thirds. For instance, in "Types of Degenerate in the Second Degree" (W 5:252-253) he identifies no fewer than eleven relations of monadically degenerate thirdness, based on the number of separate things related and the nature of the relation. The rationale is familiar from degenerate secondness; degeneracy is marked by mind-dependency, as in comparison and resemblance, or self-relation (cf. MS 909:48 [1887-

8]). The variants are obtained by combinations of these. Thus, "orange is intermediate between red and yellow" is a degenerate third of comparison,[58] "Washington is free from the selfishness of Caesar and Napoleon" involves both comparison and resemblance, while "The dramatist Marlowe had something of that character of diction in which Shakespeare and Bacon agree" is grounded on similarity. Such degenerate relations can be called *intermediate* or *comparative thirds* (W 5:301 [1886]; W 6:179 [1887-8]). They are characteristically mind-dependent relations, because the annihilation of one of the subjects will not directly affect the others; an intermediate third "mediates between its extremes by virtue of a character which it would possess even were both extremes destroyed" (W 5:301 [1886]). In other words, there are three separate grounds in the relation; the ground of the mediation is monadic. According to Peirce, "Pope imitates Horace" is a degenerate third in the second degree involving both a relation of reason and a self-relation, because it entails that Pope controls his own actions so as to make them resemble Horace (MS 909:48 [1887-8]; cf. W 5:252 [1885]). As an example of a double self-relation Peirce offers "A person educates himself to control himself".

A dyadically degenerate third can be conceived as a mere complication of secondnesses (PPM 263 [1903]). It "mediates between its extremes by virtue of two characters, one of which alone it would lose if one extreme were removed, the other if the other extreme were removed" (W 5:301 [1886]). A concrete example of such a third is provided by a pin that fastens two things together by sticking through both (W 6:178 [1887-8]). Either of the things may be annihilated without affecting the relationship between the pin and the other thing. Another example is provided by the relation "A lays x down and B subsequently picks x up". If one says that the two acts constitute a single act because of the identity of x, one thereby introduces a mental element (SS 29-30 [1904]). In other words, the thirdness is externally appended. Such triads, which are formed by the compound of two genuine dyads, may be called *accidental thirds* (W 6:178 [1887-8]). Their grounds of mediation are dyadic.

As Peirce himself admits (see SS 31-32 [1904]), his examination of the degenerate degrees of thirdness is lacking in many respects. The topic does not need to be pursued further here; enough has been said to see on what basis a triadic relation can be deemed to be deficient, while yet retaining something of the character of authentic thirdness. Instead, we may conclude our discussion of degeneracy and genuineness with some reflections on Peirce's statements concerning the varieties of genuine thirdness.

In considering the irreducibility of triads above, giving was singled out as a prime example of a genuine relation of thirdness. However, in some texts, Peirce suggests that giving not perfectly genuine and even to some extent degenerate (see, e.g., PPM 186 [1903]). This is perplexing, since he repeatedly uses the irreducibility of the relation as an argument against reductionism. Kruse (1991, pp. 281-282) interprets the curious inconsistency as a recognition of the relativity of genuineness; although giving is a relation of genuine thirdness in itself, it is nonetheless comparatively degenerate with respect to the most genuine third, the *sign relation*, in which something stands for something else to some third. This is a plausible explanation, supported by Peirce's comments on thirdness and representation, such as the following excerpt from "The Logic of Mathematics":

> Genuine triads are of three kinds. For while a triad if genuine cannot be in the world of quality nor in that of fact, yet it may be a mere law, or regularity, of quality or of fact. But a thoroughly genuine triad is separated entirely from those worlds and exists in the universe of representations. Indeed, representation necessarily involves a genuine triad. For it involves a sign, or representamen, of some kind, outward or inward, mediating between an object and an interpreting thought. (CP1.480 [c. 1896])

The passage cited above shows that Peirce does indeed discern variants of genuine thirdness; however, his treatment of these kinds leaves much to be desired. In "The Logic of Mathematics", Peirce connects genuine thirdness unequivocally with law; thoroughly genuine thirdness is distinguished from regularities of quality and fact in that it pertains exclusively to representations. Later in the

same essay, Peirce gives two examples of imperfect genuine thirdness, presented in syllogistic form:

> All colors are compounds of so much red, green, and blue;
> Yellow is a color;
> as a result, Yellow is compounded of proportions of red, green, and blue (CP 1.518 [c. 1896]).

> All bodies are attracted toward one another proportionally to their masses and inversely as the square of the distance, multiplied by a fixed modulus;
> The earth and moon have such and such masses and are at such a distance;
> as a result, The earth and moon attract one another by so much (CP 1.519 [c. 1896]).

According to Peirce, these relations are genuine expressions of law, but they still fall short of completely genuine thirdness because the middle term of the first is little more than a disjunction of qualities and the middle term of the second merely a generalised dyadic existence. In other words, one of the involved propositions is "wanting in triadic reality" (CP 1.518 [c. 1896]). In contrast, the thoroughly genuine triadic relation is such that it could not subsist were it not for the middle term that upholds it. Notably, Peirce here singles out giving as such a completely triadic relation (CP 1.520 [c. 1896]).

In what sense, then, is giving supposed to be less genuine than the sign relation is? According to Kruse (1991, pp. 281-282), the former is in one important respect inferior to the latter; it is not the case that each member of the relation of giving is a third. In contrast, the sign relation possesses a certain variability; each member has, in its own right, the potential to perform the mediating function characteristic of a sign. This explanation is supported by Peirce's assertion that "in genuine Thirdness, the first, the second, and the third are all three of the nature of thirds, or thought, while in respect to one another they are first, second, and third", and his conclusion that "in this genuine Thirdness we see the operation of a sign" (CP 1.537 [1903]).

This point of view has quite far-reaching implications. For one thing, it suggests that all the members of a thoroughly genuine relation of thirdness are signs, and indeed, we find that Peirce draws this very conclusion: "Every sign stands for an object independent of itself; but it can only be a sign of that object in so far as that object is itself of the nature of a sign or thought" (CP 1.538 [1903]). *Prima facie*, this is a rather implausible position; certainly, we can identify numerous sign relations, in which the represented object is not in itself of the nature of a sign. At any rate, it takes some stretching of concepts to say that a woman pictured by a portrait or the direction of the wind indicated by a weathercock would be signs. In fact, Peirce recognises the existence of degenerate signs, which definitely do not fulfil the strict requirements of thoroughly genuine thirdness; this privilege would appear to be reserved to thought.

Reflections such as the ones outlined above bring Peirce again close to a form of semiotic idealism, not too far removed from his early, radically semiotic standpoint. It is a controversial outlook, in many respects clashing with other streams in semeiotic; in fact, Peirce introduces many modifications to the theory in his mature writings, which seem to undercut the idealistic stance. However, a closer scrutiny of these matters will have to wait till the discussion of objects and perception in the next chapter, and the examination of semiosis and interpretation in chapter 5. It is now time to turn to the proper observational phase of phaneroscopy.

3.2.3 Inspecting the Phaneron

In the preceding sections, we have seen how Peirce's preparatory considerations suggest that there may be three cenopythagorean categories, capable of division in terms of genuineness and degeneracy, but irreducible in their basic forms. On the other hand, it has also been established that these preliminary considerations are not, by themselves, sufficient to establish the categories as philosophical conceptions. This is the task of the observational or empirical phase of phaneroscopic inquiry, which could be denomi-

nated *phaneroscopy proper*. Its principal function is to show that there really are parts of the phaneron that correspond to the possible indecomposable elements identified in the preparatory investigation. Such a validation is never absolutely accurate because of its experiential character; "each category has to justify itself by an inductive examination which will result in assigning to it only a limited or approximate validity" (CP 1.301 [c. 1894]).

Although Peirce's discussions of the formal properties of the categories are complex and often bewildering in their minute details, the abstract scheme that emerges is nonetheless quite clear and coherent – almost deceptively so, for in other contexts he emphasises how the categories are interwoven in experience. Thus, he states that "though it is easy to distinguish the three categories from one another, it is extremely difficult accurately and sharply to distinguish each from other conceptions so as to hold it in its purity and yet in its full meaning" (W 5:238 [1885]). Philosophy is a positive science; and among the experiential data of philosophy we find the fact that "the ideas of *first*, *second*, *third*, are perpetually occurring together and so as to form a complete set" (MS 717 [c. 1894?]; cf. CP 1.23 [1903]; Savan, 1987-8, p. 13).

Furthermore, it is notoriously difficult to express adequately the content of the categories. The predicament is obvious; although the first two categories are, in a sense, more primitive than thirdness, the third category is the proper domain of representation. When we attempt to explicate firstness and secondness, we do so by employing means properly belonging to thirdness. This was not a problem in Peirce's early derivation of the categories; there, the intermediate conceptions were reached by an analysis of propositional representation, taken to be the basic mode of understanding. However, the mature phaneroscopic discussions face a dilemma; although the first and second category are, in a certain respect, directly observed apart from representation, there is no way to depict these as conceptions without violating their integrity. It is not surprising, then, that Peirce concludes that an absolutely pure conception of a category is out of the question (CP 2.86 [c. 1902]).

The first question facing phaneroscopy proper is whether we can "find in the Phaneron any element logically indecomposable, which is such as it is, altogether otherwise than relatively, but positively, and regardless of aught else?" (EP 2:366 [c. 1905]) According to Peirce, there are numerous such elements. The easiest to discern could be roughly described as simple sensations or their contents, such as patches of colour – although there is properly speaking no consciousness of sensation, which involves secondness, nor a concept of content in the first categorial element. We may consider Peirce's example, the red of a stick of sealing wax he happens to have before his eyes. Peirce contends that the colour is an element, because it is not seen as composite; it is also logically indecomposable. Of course, the colour could be described using an equation, but such a scrutiny would neither express any logical analysis nor define the colour-sensation. A competent observer, "thoroughly trained to recognize his immediate feelings as they are felt, free from all the allowances which we naturally make for the circumstances of the experience, will perceive that when the stick of sealing-wax be highly illuminated, the sensation is more scarlet, and that under a dim light it verges toward a dull vermillion hue; and yet analyses by the color wheel will wholly fail to detect this" (EP 2:366 [c. 1905]). According to Peirce, an ordinary explication of the colour in terms of luminosity, chroma, and hue is more like a logical analysis; yet, it too fails as a counter-argument to the indecomposability of the colour feeling. If a human being had no other sensation than the particular red of the sealing wax, he or she would never discover that there were such aspects as luminosity, chroma, and hue, because they are not seen in the red itself, but only as the colour is compared to others (EP 2:366-367 [c. 1905]). In fact, any adequate *description* of the colour requires such comparative measures. Yet, if a person should be acquainted with none but the spectral colours, he or she would get no idea of white by being told that it is the mixture of them all; in its firstness, any colour is as simple as any other (MS 7:9 [c. 1903?]).

The status of sealing-wax red as a first requires that it be something positive in itself, and therefore not relative to anything else. Peirce notes a couple of additional potential counter-

arguments to this point of view. Firstly, it might be held that the legend of the music of the spheres is based on the idea that all sense-qualities are relative to each other; if everything in the world and in the phaneron were precisely sealing-wax red, then there would be no awareness of it. Peirce certainly admits that contrast is a prerequisite for the proper recognition of a quality (see MS 7:6 [c. 1903?]). However, he contends that though we would not be *distinctly* aware of the colour, it would nonetheless tinge our disposition and thus be, in some sense, in the mind (EP 2:367 [c. 1905]). This rejoinder is perhaps not very convincing, but Peirce maintains that the psychological facts of the matter are, in the end, irrelevant; the lack of redness "in the head" would have no effect on the quality of red. Secondly, one might argue that red is always relative to matter, that is, to a surface. Here, Peirce's reply utilises his apparatus of mental abstraction; "though we cannot prescind redness from superficial extension, we can easily distinguish it from superficial extension, owing (for one thing) to our being able to prescind the latter from the former" (EP 2:367 [c. 1905]). That is, colour can be discriminated from space; it can also be prescinded from the *relation* of colour and surface.

According to Peirce, what is true of sealing-wax red is true of any *quality of feeling*, which can be singled out as the purest phenomenal expression of firstness. Other examples of such phanerons listed by Peirce include odours, sounds, tastes, the quality of the emotion upon contemplating an elegant mathematical demonstration, and the quality of feeling of love (CP 1.304 [c. 1904]). However, here we need to keep in mind the qualifications regarding pure conceptions of the categories noted above. Peirce maintains that one cannot conceive of a one-subject fact otherwise than as more or less vaguely analogous to a feeling of one's own (CP 6.323 [c. 1909]). Yet, strictly speaking, a quality does not belong to any person. It is a presence, the awareness of which could be likened to a poetic mood (cf. PPM 140 [1903]; PPM 155 [1903]).[59] Moreover, firstness is experientially marked by its freshness and uniqueness. Consequently, it tends to elude conceptual description; "assert it, and it has already lost its characteristic innocence" (W 6:170 [1887-8]). In a sense, even "quality of feeling" may be too

concrete to capture the quintessence of the category; in "The Cenopythagorean Categories" (MS 899), Peirce provisionally introduces the meaningless word "swa" to designate a first in order to avoid such preconceptions as are typically associated with "quality" and "feeling".

A feeling-quality cannot be *known* in a state of purity; it is, in a sense, a mere non-existent "may-be", a possibility of feeling (MS 645:13 [1909]) – or, to use Savan's (1987-8, p. 8) term, a "quality space". Peirce asserts that "nowhere and never can there be in the mind an unadulterated Firstness" (MS 1338:33 [c. 1905-1906]). However, our attention can be drawn to *embodied* qualities through contrast; experientially, they can be approached "after all relations and all actual reactions of sense are left out of account" (NEM 4:348 [1899-1900]). Considerable intellectual work is involved in our attempts to grasp a first, as the quality is abstracted from all that does not belong to the quality itself, such as dimness and vividness, which describe the degree of disturbance of a personal consciousness (cf. SS 24-25 [1904]). Yet, the monadic element of experience is not to be conceived as an *abstract* "suchness", because that would involve a reference to a special determination (CP 1.303 [c. 1894]; cf. sect. 3.1.1). Moreover, characterising the first as an abstraction may be misleading; as something present in experience, it is positive (PPM 155 [1903]). On the other hand, qualitative feelings are not objects in the sense of being over against the ego; one may be only too intensely aware of grief, for instance, without thereby being conscious of it as an object (MS 609:6 [1908]).

We can reach a tolerable approximation of a qualitative first by attending to anything whatever as a whole, dropping the parts out of attention altogether (EP 2:368 [c. 1905]); the "unanalyzed total impression made by any manifold not thought of as actual fact, but simply as a quality, as simple positive possibility of appearance is an idea of Firstness" (SS 25 [1904]).[60] Peirce often suggests a thought-experiment, in which we are to imagine a consciousness filled by only one feeling, such as redness or an unvarying railway whistle; strong odours are particularly apt for this purpose (PPM 140 [1903]; PPM 155 [1903]; MS 7:6 [c. 1903?]; CP 1.312 [c. 1905]; CP 1.305 [1907]). Peirce recognises that it is difficult – if not impossible

– to attain such a state of mind, but indicates that the moment we wake up from a long sleep in strange surroundings, the objects around us blurred into one mass without distinctions, comes close (CP 1.310 [1907]; MS 12:3-4 [1912]; MS 681:4 [1913]; cf. EP 2:4 [c. 1894]). However, it may be that a pure – or at least nearly pure – state of firstness is had only once in a lifetime.

> That which is present in the state of consciousness that is properly called unmixed Sensation has no parts, since to be conscious of different "sensations" requires *discrimination*; and discrimination is an action; while Sensation proper is as absolutely passive as it is absolutely undiscriminated and unparted. Every son of Adam has been in that state of consciousness once, at least; namely, as a new-born baby. (MS 681:4 [1913]; cf. W 6:170-171 [1887-8])

Any such sensation – or, more properly, quality of feeling, since the first does not allow for any distinction between self and other – would be a kind of unity, although strictly speaking there is no such conception predicable of a first (W 6:170 [1887-8]); it would be *sui generis* and unlike any other quality of feeling (cf. MS 12:4 [1912]). Thus, the first is that whose being is simply in itself, not referring to anything nor lying behind anything (EP 1:248 [1890]; CP 1.302 [c. 1894?]; SS 24 [1904]). In themselves, qualities are wholly indifferent to each other, and are not susceptible to comparison; they cannot be represented or expressed in anything else as they are in themselves (NEM 4:133-4). As such, a quality would not even be similar to any other, because resemblance requires comparison (EP 2:367 [c. 1905]); it has no proper identity (MS 899:6). The variety of qualities is not contained in them in their presentness; "in its being as quality, each quality is its own universe" (PPM 141 [1903]; cf. PPM 155 [1903]).

According to Peirce, an untainted quality of feeling is not embodied or actualised; it can be imagined to be without any occurrence (CP 1.304 [c.1904]). Yet, a quality may be *generalised*, and can thereby enter into sign relations (cf. NEM 4:348 [1899-1900]). Such a first acts as a kind of archetype, reminiscent of "a prototype yard or pound, resemblance to which renders other objects yards or pounds, but which is *itself* the yard or pound *per se*" (MS 1338:33

[c. 1905-1906]). Obviously, we often consider qualities to be similar to or different from each other; "but this is a character of them as the meanings of icons", that is, as the objects of a certain type of signs (MS 8:5 [c. 1903?]; cf. sect. 4.2.3). On the other hand, mere "presentaments" can also become signs (*qualisigns*; see sect. 4.1.3) in their own right through association, as when a certain perfume suggests something about its bearer (CP 1.312-313 [c. 1905]). As they enter into such semiotic networks, qualities may be contemplated in various ways, and the potentially unlimited field of firstness is carved into segments. This explains how we can say that yellow resembles orange more than blue, or how the different shades of red can be considered to be variants of one colour, the experience of which is to a certain extent the same for most human beings (cf. CP 1.313 [c. 1905]; CP 1.312 [1910]). In fact, "red" is a kind of composite, as is any quality that can be named; yet, it is in a modified sense an expression of a first.

> Consider that of which you are conscious at any moment, in itself, irrespective of anything else, without regard to whether it be reality or a dream, without analyzing it into its parts, simply as a resultant, and you have what I call the *firstness*, or quality, of it. Your being wide awake or half asleep is no part of it, in any sense; although your being more vividly conscious of one part than of another will affect the resultant. Strictly speaking, it has no parts. It is an unanalyzed resultant. It is only subsequent reflection upon it which regards it as having parts. This reflection may be true in the sense of being inevitable; but it is not true of the *First*, in itself. This first has no distinct identity. In so far as it may resemble (to reflection) what is before consciousness at another time, it is the same as that. But it never is perfectly identical. This first feeling is always a sort of composite photograph, more or less vague[61] and general. Although generalization is not feeling, nor is the reflection that one feeling is a specification of another, yet the composite is none the less pure firstness for being vague and general. It does not regard itself as being general, and in that sense is rather *vague* than *general*; but true reflection inevitably leads to the conviction that it was general. Firstness is characterized by its unlimited variety. (MS 1135:2 [c. 1897])

Peirce's characterisations of firstness in terms of qualities of feeling may raise suspicions that we are, after all, faced with an

atomistic point of view, according to which the world, or our awareness of it, is ultimately built up from simple, self-sufficient components. This impression is certainly strengthened by his contention that "the whole content of consciousness is made up of qualities of feeling, as truly as the whole of space is made up of points or the whole of time of instants" (EP 2:367 [c. 1905]). However, the added qualifications are important; as Peirce says, there is a certain *protoidal aspect* – a term he coins for this purpose – under which space is really made up of points or time is made up of instants. Yet, "using the word collection to mean merely a plural, without the idea of the objects brought together", Peirce maintains that "no collection of points, no matter how abnumerable its multitude, can in itself constitute Space" (EP 2:368 [c. 1905]).[62]

A few more comments on the phaneroscopic conception of firstness are needed before we move on to the experience of secondness. First, it is worth emphasising that firstness is not restricted to "simple" sensations of the kind characteristic of classical empiricism. Anything whatever, which can be apprehended or immediately experienced as a whole, involves firstness. Accordingly, Peirce states that such things as Shakespeare, Bernard Shaw, Bach, and "The Autocrat of the Breakfast-Table" have their own peculiar flavours, qualities entirely their own (MS 645:14 [1909]; cf. CP 1.531 [1903]). Thus, even developed ideas or cultural products – typically treated as thirds – have their firstnesses, which explains why it makes sense to speak of a "first of a third". In a sense, every situation in life appears to have its own peculiar flavour (MS 7:12 [c. 1903?]) Next, it is important to stress that certain ideas may be more or less of the character of a first, that is, that firstness may be predominant without exclusively constituting the notion in question. Hence, Peirce holds that firstness is manifested in the ideas of possibility, chance, originality, spontaneity, and the immediate present (W 5:304 [1886]; W 6:170 [1887-8]; W 6:211 [1888]; SS 25 [1904]). Indeed, insofar as a quality or feeling is considered cognitively, its firstness is a matter of degree.

> The idea of First is predominant in the ideas of freshness, life, freedom. The free is that which has not another behind it, determining its actions; but so far as the idea of the negation of another enters, the idea of another enters; and such negative idea must be put in the background, or else we cannot say that the Firstness is predominant. Freedom can only manifest itself in unlimited and uncontrolled variety and multiplicity; and thus the First becomes predominant in the ideas of measureless variety and multiplicity. It is the leading idea of Kant's "manifold of sense". [---] In the idea of Being, Firstness is predominant, not necessarily on account of the abstractness of that idea, but on account of its self-containedness. It is not in being separated from qualities that firstness is most predominant, but in being something peculiar and idiosyncratic. The First is predominant in Feeling, as distinct from objective perception, will, and thought. (CP 1.302 [c. 1894])

In comparison with the elusive realm of firstness, the category of secondness is relatively easy to grasp; it is experientially manifested in effort and struggle, or the direct consciousness of action and reaction. As Peirce puts it, secondness is rendered familiar by "the rough and tumble of life" (CP 1.324 [1903]; cf. EP 2:268 [1903]; W 6:171 [1887-8]). Indeed, one cannot really conceive of a two-subject fact otherwise than as analogous to an action of one's own (CP 6.323 [c. 1909]). In Peirce's favourite illustration, somebody tries to open a door, which refuses to budge (PPM 155 [1903]; CP 1.24 [1903]; EP 2:268 [1903]; CP 1.324 [1903]; EP 2:369 [c. 1905]). The person puts his or her shoulder against the door, and exerts a force. Such an effort supposes resistance; where "there is no effort there is no resistance; where there is no resistance there is no effort, either in this world or in any of the worlds of possibility" (EP 2:369 [c. 1905]). By struggle, Peirce means mutual action between two things, regardless of any third, such as a law of action (CP 1.322 [c. 1903]; cf. SS 24 [1904]). In other words, there is an actual duality in the phaneron, a kind of two-sided consciousness "of acting and being acted on here and now" (NEM 4:348 [1899-1900]; cf. CP 1.24 [1903]); an effort is not a qualitative first, although there are almost inevitably feelings connected with it.[63] Even a feeling, as it is *actually* felt, involves an element of secondness (MS 1135:4 [c. 1897]); every feeling has a degree of intensity, "and this vividness is

a sense of commotion, an action and reaction, between our soul and the stimulus" (CP 1.322 [c. 1903]).

Secondness is marked by its lack of reason; it is, in a sense, the category of irrational phenomena or particular experiences (cf. sect. 2.2.4). A "pure dyadism is an act of arbitrary will or of blind force" (CP 1.328 [c. 1894]). It is an instantaneous but undeniable *fact*, which involves no idea of mediation; the action is, in Peirce's words, "brute" (SS 26 [1904]; cf. CP 1.24 [1903]). It may be argued that we can have no such experience, because any cognised exertion of force will always refer to a purpose. According to Peirce, this is debatable, because the purpose often drops out of view in sustained effort (SS 25 [1904]). In any case, as something appearing brutally, a dyadic occurrence is definite and individual, or anti-general (NEM 4:137; cf. EP 2:383-384 [1906]).

> The sense of effort is the sense of an opposing resistance then and there present. It is entirely different from purpose, which is the idea of a possible general regarded as desirable together with a sense of being determined in one's habitual nature (in one's soul, if you like the expression; it is that part of our nature which takes general determinations of conduct) to actualize it. But the sense of effort is not an idea of anything general or of anything as possible, but of that which actually is; and it never again can be: it is the present. (EP 2:383-384 [c. 1906])

As Peirce explains in a 1903 letter to James, to conceive of secondness "is to generalize it; and to generalize it is to miss altogether the *hereness* and *nowness* which is its essence" (in Perry, 1935, p. 429). Strictly speaking, different secondnesses do not even have any quality in common (CP 1.532 [1903]). However, as Peirce also acknowledges, an absolutely pure conception of a category is not possible. To have such a notion of secondness, one would have to "conceive an instantaneous consciousness that is instantly and totally forgotten and an effort without purpose" (CP 1.532 [1903]). Yet, is hopeless to try to explicate a state of consciousness without representation; it "would be like unexpectedly hearing a great explosion of nitroglycerine before one had recovered oneself and merely had the sense of the breaking off of the quiet" (CP 1.532 [1903]). Peirce contends that it might be close to how ordinary

common sense conceives of the collision of billiard balls – exertion without any element of representation.

As we have seen, the early theory of the "New List" associates the category of relation with comparison, making it internal to the act of representation, known only as an abstraction. In contrast, Peirce's mature philosophy emphasises the experiential autonomy of the domain of dyadic relations.

> ...a relation may be apprehended *without* thought, not indeed under a general category, but as something positive in the actual case. A man making an effort or otherwise reacting with the outer world does not necessarily think, but he knows that relation, that brute dyadic action in the particular case before him, and he has no need to look further. (NEM 3:833 [1905]; cf. MS 12:5 [1912])

The claim that a dyadic relation can be known needs to be specified; it is not a case of cognitive knowledge, but knowing in a more primitive or basic sense – perhaps better characterised as *acquaintance* or an *outward clash*. This type of experiential knowledge is not reducible to feeling, but nor can it be absorbed into the domain of thought, as it is in the philosophy of Hegel or, indeed, in many of Peirce's early writings. The objects of such acquaintances cannot be described by purely linguistic or symbolic means, but they can be indicated in discourse.

> The double relation of equiparance which constitutes duality is surd. It may be described in words, but those words can only be understood by means of reference to certain experiences; just as a person may be told that a piece of textile fabric is a yard wide, yet can never know what is meant except through an experience immediate or mediate of a certain bar laid up in the Westminster palace. The experiences [that] acquaint us with action are of two varieties, experiences of active effort and experiences of passive surprise. (EP 2:383 [c. 1906])

In our experience, dyadic relations are encountered as two principal variants: *voluntary effort*, where our modification of things is more prominent than their effect on us, and *perception*, where the effect of the things is much stronger than our modification of them (CP 1.324 [1903]). The first of these is more genuine, and acquaints

us with action, while the second is more degenerate and corresponds to reaction. As feeling can be viewed as the psychic aspect of firstness, volition may be taken to be the mode of awareness that corresponds most closely to secondness (PPM 147-148 [1903]; CP 1.532 [1903]; CP 1.332 [c. 1905]). However, occasionally Peirce specifies the genuinely dyadic element of the phaneron as "molition", or volition minus purpose (MS 645:15 [1909]). Namely, the idea of a purpose makes the act appear as a means to an end, and "means" is almost a synonym of "third" (CP 1.532 [1903]). Furthermore, being conscious of the volition compromises its character as a second, insofar as it involves the agent representing the fact to him- or herself.

According to Peirce's quasi-psychological hypothesis, "effort is a phenomenon which only arises when one feeling abuts upon another in time, and which then always arises" (EP 2:369 [c. 1905]). Peirce often uses the example of a piercing sound to illustrate his conception (see, e.g., EP 2:4-5 [c. 1894]; SS 26 [1904]). A person in a dreamy state may approach to a state of mind consisting merely of some feeling, perhaps hearing the sound of distant waves, no longer distinctly apprehended, on a warm summer's night. Suddenly, the roar of a water scooter startles the airy mind; it brutally introduces a new feeling, which forces away the tranquillity. This sense of compulsion shows that that the dreamer made an instinctive effort to resist the change; indeed, else there could have been no sense of force, because "the law of action and reaction belongs as much to consciousness as it does to physics" (MS 1135:3 [c. 1897). In themselves, both of the feelings are predominantly firsts; however, the rupture between the feelings – a definite but instantaneous moment of discontinuity – is a second. In itself, it is a mere fact; the judgment that the first feeling was in some sense preferable to the second involves interpretation and thirdness.

Obviously, characterisations and examples, such as the ones considered above, fall short of providing an untainted conception of secondness. Although genuine secondness is appropriately restricted to reactions between existents, which like firsts cannot be intellectually described without losing something of their character,

there are numerous *ideas* that are principally seconds, or in which secondness is strong, and which therefore can be singled out as phenomena of secondness.

> The idea of second is predominant in the ideas of causation and of statical force. For cause and effect are two; and statical forces always occur between pairs. Constraint is a Secondness. In the flow of time in the mind, the past appears to act directly upon the future, its effect being called memory, while the future only acts upon the past through the medium of thirds. [---] In sense and will, there are reactions of Secondness between the *ego* and the *non-ego* (which non-ego may be an object of direct consciousness). In will, the events leading up to the act are internal, and we say that we are agents more than patients. In sense, the antecedent events are not within us; and besides, the object of which we form a perception (though not that which immediately acts upon the nerves) remains unaffected. Consequently, we say that we are patients, not agents. In the idea of reality, Secondness is predominant; for the real is that which insists upon forcing its way to recognition as something *other* than the mind's creation. (Remember that before the French word, *second*, was adopted into our language, *other* was merely the ordinal numeral corresponding to *two*.) The real is active; we acknowledge it, in calling it the actual. (CP 1.325)

The passage quoted above is suggestive of the broad variety of phenomena that fall within the purview of secondness. In general, we might say that anything that acts, offers resistance, or marks an end or a point of discontinuity is typically second. Thus, reality – in the sense of being something that opposes our attempts to change it or something that "jabs you perpetually in the ribs" (CP 6.95 [1903]) – is a dyadic conception, even predominantly so, as it functions as an agent in experiential perception. Likewise, the idea of determination or efficient causation is distinctly second, as is that of the past, which to some measure compels the present, but without providing reasons for doing so (CP 2.84 [c. 1902]).[64] Identification and individuation are based on singular experience, not qualities or essences; it also marks the difference between consciousness and unconsciousness (MS 1135:3-4 [c. 1897]; EP 2:268 [1903]). All dualistic distinctions, such as good versus bad, are, quite naturally, dyadic conceptions; albeit it may be that the relation in question is

relative to a purpose and therefore not a genuine secondness. Other ideas that display a high degree of secondness are compulsion, effect, dependence, independence, another, negation, occurrence, and result (W 5:304 [1886]; W 6:171 [1887-8]). However, in many of these the secondness is quite shallow; the notions of the other, the negative, and the independent are typically degenerate instances, because "the first might in these cases be destroyed yet leave the character of the second absolutely unchanged" (W 6:171 [1887-8]).

A particularly important distinction born out of brute secondness is that between the ego and non-ego. Dyadic experience accounts for the gap between a relatively malleable internal and a relatively unyielding external world; indeed, according to Peirce "we become aware of ourselves in the not-self" (CP 1.324 [1903]). In other words, personal identity is not a simple feeling; it is a result of our clash with the outside world. A hypothetical being, which would be conscious of nothing but a quality, would have no self-awareness. This conception of the self as something that is recognised experientially, primarily through ignorance and error, constitutes Peirce's negative theory of identity. It is an early development, first published in "Questions Concerning Certain Faculties Claimed for Man" (see W 2:202-203 [1868]).[65] Because of this point of view, according to which the other is the relate to which identity is the correlate, Peirce never accepts the Cartesian problem of the subject-object rift. That is, our personal existence is only as certain as our experience of the outside world, and for Peirce there is no reason to doubt this most obvious of hard facts; the second element is directly experienced in "in our sense of present fact, which is the experience of actual reaction with a non-ego" (MS 462:76 [1903]).

Moving on to the third category, we find that it too, may be difficult to recognise in phaneroscopic observation, but for altogether different reasons than firstness and secondness are hard to grasp. Namely, thirdness is in some form present in all cognition or intellectual apprehension, be it as simple as a perceptual judgment of the type "that looks red". As Peirce notes, the third is the most overt element in experience, but attention "cannot be concentrated on that which covers the entire field; and this element is so univer-

sal that it is difficult to find a point of view from which there shall be any unquestionable contrast in this respect" (NEM 4:294 [c. 1903?]). Yet, thirdness is the only category that is quite realisable (W 5:305 [1886]).

In general, the phenomenal being of thirdness could be described as the experience of lawfulness, or perhaps even more broadly, of intelligible connection (cf. NEM 4:351 [1899-1900]). According to Peirce, we have direct knowledge of such phanerons; in fact, they are constantly present insofar as we engage in thought and communication using signs.

> …directly experiencing it, we regard outward objects as compelling one another, as exerting force upon one another. The third element is the moulding of brute reactions into conformity to ideas. It is the growth into expression of a thought which can only be thought in the expression, this expression consisting of a bending of reactions to the form of the idea. But, dear me, what a fearfully abstruse matter I am making of that which is the easiest thing in the world to understand, the *nature of a general sign*. Yes, strictly speaking the very easiest of all things to understand; for what we call understanding anything else merely consists in seeing that it is of the nature of a sign. Every little child understands it perfectly. But as he grows up and loses his gift of language, it becomes more difficult; and the more he studies and cultivates his mind the more inscrutable this simple business of a sign, which is the only comprehensible thing in the universe, appears to him. (MS 462:76-78 [1903]; cf. CP 1.349 [1903])

> This element of our daily & hourly experience, the element of the conformity of fact to thought, – this element whose being such as it is consists in this that it has such reference to an object independent of it as to bring a third thing (the interpretation) into the same triadic relation to the same object, – this character of a *sign*, the being an exponent of thought, is what I call the element of Thirdness in the phenomenon. (MS 462:84-86 [1903])

We see, then, that Peirce claims to find incontestable experiential evidence of thirdness in the basic semiotic functions of representation and mediation. In consciousness, the element of thirdness is constantly present as intellectual mediation by law; in "all such cases one idea, the object represented, influences a nother,

the interpreting idea, through a third, the representamen" (MS 1135:6 [c. 1897]). Indeed, Peirce suggests that a three-subject fact is comprehensible because it is analogous to utterance, speech, and thought (CP 6.323 [c. 1909]). It is easy to understand why semeiotic is so important if this contention is correct; as the most familiar thirds, the signs we use are our best means for comprehending the higher processes of mind and intelligence. If we further accept Peirce's view that thirdness is also operative in nature, then semeiotic analysis takes centre stage in philosophy and science (cf. PPM 194 [1903]).

This is not the place for an examination of Peirce's scholastic realism, the oft-debated anti-nominalist view that there really are apprehensible natural laws.[66] However, a few words on the relationship between law and action, as instances of the categories, are in order. As we have seen, dyadic relations are not, as such, reasonable; in itself, action is brute but efficient. However, insofar as law or purpose rules the action, thirdness is involved. According to Peirce's memorable metaphor, action is like a sheriff fulfilling the orders of the court (cf. CP 1.212-213 [c. 1902]; CP 1.23 [1903]; SS 70-71 [1908]). Without the brute force of the officer, the court is powerless to carry out its injunctions and judgments. In other words, experienced thirdness involves elements of secondness. Likewise, a third has its own *sui generis* quality, apart from involving such firstnesses as are connected to the dyadic relations.

Peirce often contends that thirds have a mental or psychical character. For instance, he asserts that "all triadic relations are without exception more or less of the nature of *thought* in a very general sense" (MS 462:68 [1903]; cf. EP 2:269 [1903]; CP 1.345 [1903]; SS 29 [1904]; MS 1338:37 [c. 1905-6]). At first blush, such statements may appear peculiar, if not utterly bizarre. However, awareness of the semiotic background of Peirce's conception renders it less outlandish. The thought-like character of triadic relations is manifested in there being something equivalent to mediation in the connection; thus, thirdness can be described as the mental or quasi-mental influence of one subject on another (MS 318:22 [1907]). From a somewhat different point of view, thirdness is present whenever there is an idea of something which combines

or connects two others, like a gift may unite giver and recipient through a kind of contract (cf. W 5:305 [1886]). In an extended sense, genuine thirdness is *social* (MS 1338:37 [c. 1905-6]).[67]

However, here we need to acknowledge a potential problem, related to the difficulties noted in our examination of the phaneroscopic point of view (see sect. 3.1.3). The semiotic associations of thirdness seem to encroach upon the basic phaneroscopic outlook, according to which phanerons are not to be treated as representatives. We appear to be faced with an inconsistency; on the one hand, Peirce explicitly insists that a phaneron is not a sign, but on the other hand, he singles out signs as typical ingredients of the phaneron.

We might begin to alleviate the tension by carving a clearer distinction between the phaneroscopic and semeiotic approach to semiotic elements; in phaneroscopy, the sign is directly observed as an ingredient of the phaneron, and the object is treated as an aspect of the sign, while the semeiotic analysis is more detached from the seeming of the sign, and asks questions concerning the causes and implications of the semiotic phenomenon. Admittedly, this is all too vague to constitute a solid solution to the problem. In particular, there is a need to account for the triadic character of the phaneroscopically apprehended sign. Therefore, we could go a bit further, and contend that phaneroscopy deals only with the *appearance* of the semiotic triad, that is, with the sign in its relation to what is sign-theoretically discerned as its immediate object and immediate interpretant (cf. sects. 4.2.2; 5.2.2). These concepts do not make sense for pure phaneroscopy; specifically, it has no conception of the immediate object as distinguished from the dynamical object. On the other hand, these semeiotic divisions constitute a kind of elaboration of the categorial scheme, the dynamical object being marked by its secondness. In the end, we may be forced to admit that there is a certain overlap between phaneroscopy and semeiotic. In particular, the analysis of thirdness tends to evolve into the theory of signs.

At times, Peirce suggests that the categories will appear in somewhat different light if considered from varying categorial points of view. For example, in *A Syllabus of Certain Topics of Logic*,

he states that the three elements are expressed or apprehended in their firstness in the ideas of firstness, secondness, and thirdness (EP 2:272 [1903]); this is evidently the most pure formal phaneroscopic stance. In the ideas of qualities, relations, and signs, the categories are seen in terms of secondness; while they "appear under their forms of Thirdness in the ideas of Signs of Firstness, or Feeling, i.e., things of beauty; Signs of Secondness, or Action, i.e., modes of conduct; and Signs of Thirdness, or Thought, i.e., forms of thought" (EP 2:272 [1903]). Such comments are suggestive of the perspectival aspect of the categories and of their flexibility; the categorial scheme can be applied to the analysis of categories itself. True, Peirce's reflections on these varying appearances of the categories are too sketchy to afford any substantial insight into the issues discussed above, but we might take his words as an indication of the way in which phaneroscopy approaches semeiotic; by the time the categories are reviewed in terms of thirdness, we are already almost in the realm of sign theory.

Peirce often writes as if thirdness would be simply a synonym for representation (see, e.g., PPM 194 [1903]). Nonetheless, it would be misleading to conclude that thirdness is straightforwardly exhausted by the world of signs. Analogously to firstness and secondness, there are notions that are characteristically thirds. Of course, as intellectual conceptions they are signs; yet their thirdness is more due to certain characteristics shared with signs than their being overt semiotic elements. Ideas involving a reference to mediation are such thirds. Typical examples include means, process, evolution,[68] continuity, intention, and expectation (W 5:305-306 [1886]; W 6:172-4 [1887-8]; CP 2.86 [c. 1902]). While firstness is typically vague, the characteristic mode of indeterminacy of thirdness is generality (RLT 265 [1898]). The conception of acceleration, in contrast to velocity, is triadic in the sense of being a relation between three positions (W 6:172 [1887-8]). The thirdness of natural laws is manifested by the fact that they govern the actions of things; "it is proper to say that a general principle that is operative in the real world is of the essential nature of a Representation and of a symbol because its *modus operandi* is the same as that by which *words* produce physical effects" (PPM 194

[1903]). While action is dyadic, purposive conduct is triadic. According to Peirce, the notion of a goal, in the sense of what one *means* to do, is intimately related to meaning. Both conceptions involve an irreducible reference to the future and the shaping of acts, and are therefore *bona fide* instances of thirdness. The only difference between them "is that when a person means to do anything he is in some state in consequence of which the brute reactions between things will be moulded [in] to conformity to the form to which the man's mind is itself moulded, while the meaning of a word really lies in the way in which it might, in a proper position in a proposition believed, tend to mould the conduct of a person into conformity to that to which it is itself moulded" (CP 1.343 [1903]).

Triadic relations will be examined in more detail in subsequent chapters, as we move on to the analysis of various kinds of sign relations and processes. Before that it may be helpful to summarise the principal elements of Peirce's mature theory of categories in tabular form (see table 1 below). This summary is meant to serve as a quick reference and aid for the ensuing discussion; but obviously, its diagrams and examples are simplifications. No single table can adequately capture the complexity and richness of Peirce's categories.

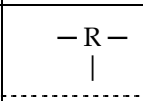
Category		Relation	Diagram	Example
I		Monad	R –	Quality of redness
II	**Genuine**	Dyad	– R –	Cain kills Abel
	Degenerate	Compound of monads	R_1–a + R_2–b	George W. Bush resembles Ronald Reagan
III	**Genuine**	Triad		A man gives a brooch to his wife
	Degenerate I	Compound of dyads	a – R_1 – b + b – R_2 – c	Two notes are held together by pin
	Degenerate II	Compound of monads	R_1–a + R_2–b + R_3–c	Orange is intermediate between red and yellow

***Table 1*. The Principal Variants of Peirce's Categories**

Notes to Chapter 3

[1] Peirce is well aware that his tendency to see three-part divisions in a wide variety of domains might cause suspicion; for instance, he half-jokingly suggests that psychiatrists should pay attention to a special kind of malady called *triadomany*, which is characterised by an "uncommon craze for trichotomies" (CP 1.568 [1910]). In another context, he concedes that the contents of the article on the categories he is working on possesses "a distinct resemblance to a certain species of demilunatic stuff of which there is so much in the world that it is likely to cumber the shelves of any elderly logician who does not take measures to get rid of it" (EP 2:363 [c. 1905]). Needless to say, Peirce does not really believe that his theory of categories is a symptom of insanity.

[2] The play impulse resurfaces in Peirce's later writings as the *play of musement* (see, in particular, "A Neglected Argument for the Reality of God" [1908], EP 2:434-450).

[3] See Barnouw, 1988, and Petry, 1992, for discussions of other possible Schillerian influences on Peirce,

[4] This rift should not be overemphasised; Kant remains a formidable influence on Peirce throughout his career. Moreover, if the "transcendental" is understood as a reference to "all knowledge which is not so much occupied with objects as with the mode of our of knowledge of objects, so far as this mode of knowledge is possible *a priori*" (Kant, 1781/1934, A11/B25), it would appear that many of Peirce's discussions of the categories and of semeiotic would fall within its purview. However, if one accepts that philosophy is a positive science in the sense indicated in chapter 1, then it cannot strictly speaking be an inquiry of *a priori* forms. Arguably, there is a first "mathematical" phase of categorical analysis, which could perhaps be construed as Kantian (see sects. 3.1.2 and 3.2). Nonetheless, it seems clear that the results of such a quasi-transcendental (hypothetical) analysis would not carry the kind of substantial philosophical weight that Kant places on his "transcendental knowledge". Here, we will not be concerned with the details of the complex Peirce-Kant relation (see Murphey, 1961, for a sustained discussion of this matter).

[5] This is Peirce's mature view. Since the position of mathematics in the classification of sciences changed a number of times, it is possible that he would not have accepted it during all phases of his career.

[6] De Tienne claims that this "fideism" can be seen as a precursor of critical common-sensism. This seems correct, but one might add that Peirce actually rejects Hamilton's doctrine of common sense in his early writings (see W 1:153-155 [1864]).

[7] Here, I skip a number of significant developmental steps, in particular "Logic Chapter I" (1866), the Lowell Lectures of 1866, and the 1866 manuscript named "On a Method of Searching for the Categories" by the editors of the first volume of the *Writings of Charles S. Peirce*.

[8] Later, when Peirce distinguishes two orders of categories, he asserts that the twelve forms of judgment identified by Kant are particular categories (cf. note 33 below). On the other hand, Peirce maintains that Kant also suggested a shorter list of universal categories by grouping the forms as quantity, quality, relation, and modality (PPM 153 [1903]; cf. W 5:236 [1885]; CP 1.563 [c. 1898]). However, Kant himself did not view the matter in this light (Rosensohn, 1974, pp. 39-40).

[9] In some contexts, Peirce also employs the term "precision" for the mental separation in question; in his mature philosophy, he condemns this earlier use as a "corruption of speech" (MS 645:11 [1909]). At any rate, Peirce employs the term "precision" in a different sense in his logic of vagueness (see sect. 5.3.3).

[10] In his later writings, having developed his logic of relatives, Peirce abandons this view of relation as essentially dyadic.

[11] The abstractive process can be roughly described as follows: relation is prescinded from representation by ignoring the interpretant; quality is prescinded from relation by ignoring the correlate; and being can be prescinded from quality by ignoring the ground.

[12] Here, "cause" is used in a vague common-sense manner, rather than in any developed philosophical sense.

[13] The emergence and development of Peirce's logic of relations, and its movement from an algebraic to a quantificational approach, will not be discussed in detail in this study. (For various takes on Peirce's logic of relations, see, e.g., Martin, 1979; Merrill, 1978; 1997; Michael, 1974; Zeman, 1986)

[14] Roughly, the graphical method of MS 915 proceeds as follows: Start from the supposition of something, and represent it by a dot on a blank paper. By that act of representation, the blank of the paper has in fact been divided into two parts, the white and the black. This shows that to represent *one* we need to use the idea of *two*. In other words, to realise *one*, some *second* must be used, although *one* does not logically involve *two* as a part. *Two* can then be represented by two dots connected by a line. If the line is omitted, it will be supplied by the mind that must combine the dots to construct the idea of *two*. Thus the conception of a *third*, or *middle*, is introduced. However, to represent three explicitly, we can use three dots connected by three lines. In other words, it does not require the introduction of anything new – anything *fourth*.

[15] Peirce often uses the term "medad" to denote an absolutely self-sufficient or completed object (see, e.g., CP 3.465 [1897]). Monads are distinct objects that can enter into relations. Thus, considered as separate objects two things in a dyadic relation to each other are monads; if they had been medads, they would have been indistinguishable and therefore one (PPM 129 [1903]).

[16] There are some exceptions. In his notes on the categories, Peirce discusses the three grades of separation at some length; but on the other hand, he does not present it as a part of a systematic derivation as in the

"New List" (see W 5:238 [1885]). In "One, Two, Three: Fundamental Categories of Thought and Nature" (1885), Peirce begins by noting the great quantity of trichotomies in logic, and then suggests that the basic triad of relations throws light on the other trichotomic divisions (W 5:243). On the other hand, at roughly the same time, Peirce suggests that the categories are due to three fundamental faculties of mind, these to three fundamental functions of the nerves, and these ultimately due to three elementary constituents of the universe (W 5:237 [1885]). This would appear to lay a metaphysical – or even cosmological – foundation for the theory. All of these lines of argument remain underdeveloped.

[17] It is debatable whether this constitutes a change in Peirce's theory of categories or not. In the manuscripts preceding the "New List", Peirce sometimes uses the term "phenomenon" in the same manner as in the later phaneroscopic writings (see, e.g., W 1:307 [1865]). In addition, one could argue that some of the characterisations of the manifold of sense are in fact roundabout descriptions of the phenomenon. On the other hand, it is clear that there is no *category* exactly equivalent to substance in phaneroscopy; it is perhaps best re-conceptualised as the phaneron *as* a first.

[18] This claim could be contested on textual grounds. For instance, in "A Classification of Ideas and Words", Peirce still expresses his approval of Aristotle's and Kant's method of deriving the categories, or fundamental conceptions, from the logical analysis of propositions (MS 1135:1 [c. 1897]). Even more damaging for my claim is "The Categories" (MS 403 [1893]), which was meant to constitute a chapter in Peirce's *How to Reason: A Critick of Arguments* (also known as the *Grand Logic*). Mainly, this manuscript repeats the derivation of the "New List"; there are no indications that any significant changes would have taken place in the years between. It is difficult to say how this should be taken; one plausible explanation is that Peirce was still not satisfied with the new approaches to the categories he had begun to develop in the 1880s, and therefore presented the tightest and most systematic account he had thus far produced. Indeed, the "New List" *is* Peirce's most orderly and methodical text on the categories.

[19] It is not quite clear when Peirce introduces phenomenology into his conception of philosophy. According to Kent's (1987, p. 100) estimate, the first classification of the sciences to mention phenomenology is from c. 1896. However, in the manuscript in question (MS 1345), phenomenology is equivalent to "empirics", which covers both the special sciences and philosophy. Around the year 1900, Peirce speaks of "high philosophy", which is more general than logic and metaphysics (CP 7.526; Kent, 1987, p.

112); and in a slightly later untitled outline of the sciences, simply of "the categories" (MS 1340). In any case, phenomenology has found its place by the time we reach the *Minute Logic* (c. 1902). The renaming of the discipline occurs in 1904-5. However, Peirce is not perfectly consistent in his terminology, and occasionally uses the name "phenomenology" after the introduction of "phaneroscopy".

[20] From here on, I will employ the term "phaneron" rather than "phenomenon" when discussing the object of study of phaneroscopy. As far as I can see, "phenomenon" would suffice, but in "How to Define" Peirce states that he will reserve the term for other uses (MS 645:2 [1909]). Since Peirce does not really specify what these other uses are, it seems safer to employ "phaneron" as a technical term when discussing phaneroscopy. In the same manuscript, Peirce actually considers a couple of different alternatives; "data" is rejected because of its many existing uses, and he opts provisionally for the curious word "prebit". Gérard Deledalle (2000, p. 9) maintains that the movement from "phenomenon" to "phaneron" marks a paradigm shift in Peirce's thought, the former being what *appears* to consciousness, and thus a psychological concept, while the latter can be characterised as what is *apparent,* independent of perception. However, in view of the fact that Peirce does not treat of perception as a merely psychological question (see sect. 4.3), this argument is not entirely convincing. At any rate, there is little evidence that this particular terminological change would mark a major transformation in Peirce's thought.

[21] According to a different formulation, phaneroscopy inquires into what "the possibilities of consciousness" are (MS 645:4 [1909]).

[22] According to Robin, "Notes for a Syllabus of Logic" is dated June 1903. De Tienne, however, gives the date as c. 1905. Based on the contents and terminology of the manuscript, the latter estimate seems more likely. The notes in question do not match the *Syllabus* prepared for the Lowell lectures of 1903.

[23] Here, one might think of the attempts to decipher ancient texts. As what is taken to be a sentence is examined, it appears as a meaningful object before the mind. It makes no difference that the interpretation might be completely mistaken; the fact remains that at a certain moment we are aware of such a phaneron.

[24] This point of view also distinguishes Peirce's phaneroscopy from the English doctrine of ideas: "English philosophers have quite commonly used the word idea in a sense approaching to that which I give to *phaneron*.

But in various ways they have restricted the meaning of it too much to cover my conception (if conception it can be called), besides giving a psychological connotation to their word which I am careful to exclude. The fact that they have the habit of saying that 'there is no such idea' as this or that, in the very same breath in which they definitely describe the phaneron in question, renders their term fatally inapt for my purpose." (CP 1.285 [c. 1904])

[25] This passage suggests an interesting connection between phaneroscopy and semeiotic, as Peirce indicates that the phaneron can be associated with the sign-theoretical concept of *immediate object* (see sect. 4.2.2). However, it is not possible to postulate an unqualified equivalence between the two notions; the conception of immediate object arises only in semeiotic, where it is understood in relation to the *dynamical object*. This distinction is not applicable in phaneroscopy.

[26] Here, Peirce clearly uses "experience" in the sense of singular experience (see sect. 2.2.4).

[27] This passage suggests an identity between quality and semiotic meaning; however, this is not Peirce's usual position. Mostly, the locus of meaning is placed on the interpretant-pole of the sign relation (see sect. 5.2.3).

[28] Two of the strongest expressions of Peirce's architectonic ambitions are *A Guess at the Riddle* (1887-8) and "The Architecture of Theories" (1891).

[29] This list is not exhaustive. Although I feel that the methods singled out are the most important categorial paths, it is certainly possible to identify other strategies for finding the categories. For instance, Paul G. Kuntz (1994) lists eight such approaches.

[30] In the microfilm edition, the incomplete manuscript in question is untitled and undated. Likewise, Robin's catalogue fails to provide a date, but the writing is christened "[The Categories]". A passage of the text has been published in the *Collected Papers* under the title "'Pragmatism', Fragment 2" (CP 1.317-21). The editors of the old collection have set the date as c. 1910, but the date given by the Peirce Edition Project (c. 1905) is no doubt nearer to the truth.

[31] Peirce calls his categories "cenopythagorean" because "like the Pythagorean, they are numerical, yet neither Pythagorean nor neo-pythagorean, but fresh, kaino-pythagorean" (MS 899:1).

[32] Peirce often claims that an idea is a kind of composite photograph, i.e. a picture made by combining or blending several distinct photographs (see Hookway, 2002). He does not seem to employ the analogy in his

description of the phaneron; however, firstness as feeling is at least once characterised as a composite photograph (MS 1135:2 [c. 1897]; cf. sect. 3.2.3).

[33] Peirce intermittently distinguishes logical and metaphysical categories, the former being relational forms of experience, such as monad, dyad, and polyad, and the latter more concrete "material" manifestations, such as quality, fact, and law (CP 1.452 [c. 1896]; Murphey, 1961, p. 306). He also concedes that "there is another series of elements imperfectly represented by Hegel's Categories" in addition to the universal categories (CP 1.284 [1905]; cf. CP 1.525 [1903]). These "particular categories form a series, or set of series, only one of each series being present, or at least predominant, in any one phenomenon" (PPM 153 [1903]). Moreover, Peirce suggests that the longer list consists of "phases of evolution" (PPM 120 [1903]), but admits that he has not been able to work out a satisfactory account of them (CP 1.284 [1905]).

Although Peirce's conception of the longer list is sketchy at best, it is probably meant to fall within the purview of phaneroscopy, the final and laborious task of which it is to enumerate the principal subdivisions of the universal categories (CP 1.286 [c. 1904]). However, at least once, Peirce reflects on the need of a follow-up study, provisionally titled "encyclopedeutics", which would study the categories "in a general way as they present themselves throughout common experience" (EP 2:272 [1903]). Unfortunately, Peirce's rather vague reference to evolutionary phases does little to clarify the matter, as it suggests a connection between the second set of categories and his developmental logic, which describes the emergence of more complex conceptions from simpler ones. This "objective logic" is not examined in detail in this study. It follows roughly the pattern sketched in note 14 of the present chapter, and can be seen as a complement to the view according to which secondness is involved in thirdness and firstness in secondness. Instead of pursuing analysis by logical involution, the evolutionary approach assumes that the perfection of the simpler conception requires the introduction of the more complex one (cf. CP 1.490 [c. 1896]). However, this evolutionary approach does not give us a more extensive list of categorial elements; rather, it presents the relationship between the universal categories in terms of logical emergence. It is unlikely that Peirce is thinking about these efforts when he laments his failure to give an adequate account of the particular categories; he is presumably alluding to his attempts to examine manifestations of the categories in different domains, such as metaphysics, psychology, and

physics – most systematically developed in his unfinished treatise on speculative philosophy, *A Guess at the Riddle*.

[34] The editors of the *Collected Papers* date the passage in CP 1.288-292 as c. 1908. Robin's catalogue gives c. 1906, which is probably correct, since MS 292, from which the passage is taken, is a draft of "Prolegomena to an Apology for Pragmaticism", published in 1906 in the *Monist*.

[35] In a letter to James, Peirce indicates that the idea was suggested by F. A. Kekulé's studies (see NEM 3:834 [1905]).

[36] Peirce notes that the vertical columns of Mendeleyev's chemical table are more important than its horizontal ranks (CP 1.289 [c. 1906]). The elements in a single column have the same valency.

[37] The symbols used in the figure (L for lithium etc.) are the ones employed by Peirce.

[38] The importance of this position is further emphasised by the fact that Peirce associates the reductionist stance with nominalism (MS 717:9 [c. 1894?]).

[39] Obviously, this falls short of any kind of incontrovertible verification of the reduction thesis. Following some leads from Peirce, Herzberger (1981) and Burch (1991) have attempted to provide fuller "valency proofs" for the hypothesis, adhering to contemporary requirements of validity and completeness. Other commentators have been critical of such endeavours; for instance, Irving H. Anellis (1997, pp. 283-284) asserts that the proofs in question have not been shown to be algebraically justified (see also Mertz, 1979). The problems associated with such a validation may partly explain why Peirce preferred the diagrammatic expression of the existential graphs in his later logical writings.

[40] There seems to be two simple slips of the pen in the analysis as it is given in *Semiotic and Significs*; they have been corrected here.

[41] Stating the matter differently, we could say that the joining of two bonds is a dyadic relation (CP 1.346 [1903]).

[42] Neither Kempe's investigations nor Peirce's reading of them will be examined in detail in this study. See Anellis, 1997, and Grattan-Guinness, 2002, for accounts of the relationship between Kempe and Peirce.

[43] Sometimes, Peirce employs a distinction between *relative*, *relationship*, and *relation*; a relative (or *relative rhema*) being defined as "the equivalent of a word or phrase which […] becomes a sentence with some number of proper names left blank", a relationship as "a fact relative to a number of objects, considered apart from those objects", and relation as "a relationship considered as something that may be said to be true of one of

the objects, the others being separated from the relationship yet kept in view" (CP 3.466 [1897]; cf. CP 3.636-643 [1902]; CP 3.571 [c. 1903]; CP 6.318 [c. 1909]). A relation is distinguished from a relationship by the fact that a certain order is detected or introduced among the subjects; one of them is taken first, rendering the others objects or correlates of the relation. Using this terminology, one could say that for each relationship there are as many relations as there are blanks. The relationship of giving would thus involve three relations. However, in "Some Amazing Mazes, Fourth Curiosity" Peirce states that the difference between relationship and relation "is little more than trifling" (CP 6.318 [c. 1909]); his own use of the defined terms is not perfectly consistent. In this study, there is no need to insist on the distinction.

[44] Ketner (1989; 1993) uses a similar argument in his discussion of W. V. O. Quine's (1954) reduction of an interpreted theory having triadic (or higher) predicates to a theory of valency two. Ketner maintains that Quine's *resources* (that is, the means employed in the reduction) are not completely dyadic; the notion of an ordered pair is triadic, because it implies a designator that sets the order in question, or a process by which the set is produced. However, it is not certain that this argument is available to Peirce, as he in fact defines a dyadic (non-triadic) relation precisely as a definite fact concerning an ordered pair (CP 3.571 [c. 1903]).

[45] Two other names for this kind of identity are *co-identity* and *comidentity* (Brunning, 1997, p. 257).

[46] In formal logic, a compound is typically expressed using a connective like *and*. In Peirce's existential graphs, objects are compounded by simply scribing them on the same sheet of assertion.

[47] The designations "genuine" and "degenerate" are borrowed from the geometry of plane curves (see, e.g., EP 1:225 [1885]; W 6:176-177 [1887-8]; EP 1:362 [1893]; PPM 148 [1903]; EP 2:268 [1903]; EP 2:306 [1904]; EP 2:390 [c. 1906]).

[48] Several commentators have detected a close link between Peirce's reflections on degeneracy and his theory of signs. Dinda Gorlée (1990) has examined the co-evolution of Peirce's semeiotic and his recognition of the degenerate variants of the basic relations, and has found that his "invention" of degeneracy occurs approximately at the same time (c. 1885) that he explicitly broadens his view of logic so as to encompass icons and indices in addition to symbols. Gorlée pursues an intricate semiotic interpretation of certain variants of degenerate thirdness, which will not be discussed here.

[49] However, in many dyadic relations the subjects occupy dissimilar positions as agent and patient. For instance, the dyad "God creates light" has two aspects, that of God compelling the existence of light and that of the light making God a creator. The first of these aspects is, relatively speaking, primary and real, and the other is derivative and formal (CP 1.327 [c. 1894]). Similarly, while there cannot be any killer without someone or something killed, the killer has a far more active role to play in the relation, and it is only in a secondary sense that we can say that the victim made a killer out of the agent – keeping in mind that we are just speaking of the single act here, not of dispositions and motives.

[50] The notion of a relation of reason stems from medieval philosophy; Peirce probably adopted the concept from Duns Scotus.

[51] In "The Basis of Pragmaticism", Peirce characterises a relation of reason as "a relation through a sign" (EP 2:382 [c. 1906]). Furthermore, Peirce notes that its counterpart is not accurately designated a relation *in re*; genuine secondness is, in proper relational terms, a *surd* (inexpressible) relation, as opposed to a *dicible* (expressible) relation.

[52] This issue is further complicated by Peirce's detailed analyses of the varieties of dyadic relations, which only partly overlap with his less systematic discussions of degenerate secondness. For instance, in "The Logic of Mathematics" (CP 1.455-470 [c. 1896]), Peirce first distinguishes varieties of dyads based on the character of the subjects, and recognises three basic types: those of which both subjects are monads (essential dyads), those of which one subject is a monad (inherential accidental dyads), and those of which neither subject is a monad (relational accidental dyads). He continues the analysis by making finer divisions of the relational dyad based on the nature of the connection between the subjects. A hierarchical structure – a catena – emerges, in which the final dyad (curiously named *poietical*) appears to be the most genuine form of secondness. However, it is not self-evident that the order of the analysis describes a straightforward progression from degeneracy toward genuineness. In "Nomenclature and Divisions of Dyadic Relations" (CP 3.571-608 [c. 1903]), Peirce presents four systems of divisions of existential relations, accompanied by a rather heavy terminological apparatus. Again, the analysis appears to be of some relevance for the notion of degeneracy, in particular its initial stage, in which existential relations that subsist between individual objects are distinguished from *modal relations* that subsist between characters or between laws, *referential relations* that subsist between two subjects of different universes of discourse, and *references* that

subsist between two subjects of different categories of being (CP 3.572-574 [c. 1903]). Unfortunately, Peirce does not stop to explicate these notions, and thus their connection to the idea of categorial degeneracy remains obscure.

[53] Kruse speaks of two principal kinds of degenerate secondness, relations of resemblance and relations of identity, meaning by the latter what is here called relations of inherence.

[54] This does not mean that dyadic relations would be reducible to the individuals involved; or, to express the matter differently, it is the relation of killing – A kills B – that constitutes person A as the killer and person B as the killed, not the mere compounding of the individuals – no matter what their inclinations may be.

[55] Although a relation of resemblance is properly speaking only a dyad, the common quality may be viewed as a third subject, in which case the relation is a degenerate triad. Occasionally, Peirce refers to such "evolutions" as *explications* of relations (CP 1.474 [c. 1896]). Such an expansion seems to be a matter of perspective. In chemistry, a bivalent element can be viewed as a third in virtue of its capacity to unify two other elements; however, in regard to its bonds, it involves only secondness (W 5:306-307 [1886]). Analogously, while relations such as comparisons and resemblances are dyadic in view of their combinatory power, they can be seen as degenerate thirds involving a purpose, which determines the relation.

[56] Of course, some resemblances may be based on existent facts. For instance, certain similarities between George W. Bush and his father – the reader ought to be able to conjure up a few – are based on very real dyadic relations; but it is the relation of father and son ("X is the father of Y") that is of a genuinely irreducible type, not the fact that they happen to look like each other. A perfect doppelganger of George W. Bush could resemble the father in all the same respects as the original; yet, there would not be a genuine father-son relation between the elder Bush and the double.

[57] These three objects are depicted as a branching triad in the original text.

[58] In "The Logic of Mathematics", Peirce offers the following syllogistic explication of the relation:

> Orange has in its own nature a certain indescribable but felt relation to red;
> Yellow has a similar relation to orange; as a result,
> Yellow has a similar relation to red (CP 1.516 [c. 1896]).

[59] In one of the manuscripts of his Harvard lectures on pragmatism, Peirce asserts that we need to try to get into a less complex state of mind in order to begin to grasp firstness, and proceeds to read a piece of poetry to his would-be audience in order to "rinse out their thoughts" (see PPM 140 [1903]). It is not certain that the lecture was actually delivered in this form, however.

[60] Here, we can see how the earlier categorial conception of substance has been subsumed into firstness.

[61] Peirce appears to waver on the issue of the vagueness of firsts; in "The Cenopythagorean Categories", he states that firstness is definite – that is, not vague (cf. sect. 5.3.3) – because a first cannot receive any further determinations; it is positively such as it is (MS 899:2-4). In another manuscript, Peirce asserts that "Elements of Firstness, or *Qualities*, are positive respects in each of which something might be determinate regardless of anything else, such as *being marketable*" (MS 151:1_b); yet, he also suggests that anything that is sufficiently vague is predominately of the character of firstness, "such as that which is signified by a character upon a Yucatan tablet of whose significance we know not whether it be that of a verb, a noun, or a particle, but only that *something* is definitely signified" (MS 1338:32 [c. 1905-1906]). The apparent conflict can perhaps be resolved as follows: A first is vague in the sense of being a possibility or something unanalysed (MS 339:251 [1905]). A quality may also be considered vague insofar as its "borders" are indefinite (potentially filling up a whole consciousness); it is, in any case, not thought of as more or less (CP 1.303 [c. 1894]). Yet, a first is definite as a *certain* quality. A pure firstness, as a limiting conception, is entirely vague; but *a* quality – one particular phaneron in distinction from others – is not vague in the sense of being determinately such as it is.

[62] A full investigation of this claim would require a detailed discussion of Peirce's conceptions of multitude, topics, and continuity, which will not be pursued here (see Parker, 1998, for a study of these issues).

[63] In "How to Define", Peirce contends that the purest experience of secondness would not even involve feeling; one could approach such a state by placing a weight on one's hand, preferably so numb from cold that one does not even feel the weight, and then attempting to lift the hand (MS 645:17 [1909). At any rate, otherness is not a quality, which is shown by the fact that the duplication of a thing does not alter its qualitative properties (MS 8:7 [c. 1903?]). On the other hand, in his Lowell lectures Peirce suggests that genuine secondnesses have unique and individual qualities

of feeling. These may be generalised so that we "may say with some approach to accuracy that the general Firstness of all true Secondness is existence, though this term more particularly applies to Secondness in so far as it is an element of the reacting first and second"; and if "we mean Secondness as it is an element of the occurrence, the Firstness of it is actuality" (CP 1.532 [1903]). However, the distinction between existence and actuality is not fundamental; the words express the same idea in different applications.

[64] In other contexts, Peirce designates the present as the temporal mode characteristic of secondness. As we have seen, a second is typically *here and now*, marked by its brute presence. However, viewed from a slightly different point of view, the *idea* of the past is pre-eminently second in being *fait accompli*; it involves the thought of irreversible fact. As somewhat vague and fluid, the notion of the present belongs more properly to firstness.

[65] This is only one aspect of Peirce's notion of the self. He never fully expounds his conception of identity and personhood, and some commentators have therefore seen the negative account as a serious weakness in his philosophical system (e.g., Thompson, 1953; Bernstein, 1971). However, more recent studies (e.g., Colapietro, 1989, 1997; Midtgarden, 2002; Muoio, 1984; Short, 1997) have shown that it is possible to reconstruct a more positive and substantial Peircean theory of human individuality based on his communal conception of the semiotic self and his account of self-control.

[66] See Boler, 1963, for a clear exposition of the central problems of Peirce's scholastic realism and its connection to medieval philosophy.

[67] Peirce also suggests that the degenerate forms of thirdness are marked by their lack of sociality, as when a particle is attracted by another (purely physical thirdness) or when we compare two ideas with reference to a standard (purely mental thirdness) (MS 1338:37-39 [c. 1905-6]).

[68] To be more precise, Peirce distinguishes three forms of evolution – evolution by chance (*tychasm*), evolution by mechanical necessity (*anancasm*), and evolution by learning or creative love (*agapasm*) (see EP 1:358-62 [1893]). Of these, only the last is a genuinely triadic conception; however, as they are conceived of developmentally, the two other modes of evolution can be viewed as degenerate cases.

4 Representation and Mediation

Questions concerning the character and function of signs are encountered on many different levels in Peirce's philosophy. The previous chapter revealed how central the concept of representation is in all phases of his categorial thought. However, we also observed certain significant transformations; while Peirce's early theory of categories builds on an epistemological stance, according to which "all is representative", the later phaneroscopic point of view affirms a more independent status for the structurally simpler relational elements. On the other hand, this autonomy is not absolute. While it is not possible to treat firstness and secondness as wholly contained in representation, any substantial notion of first and second will always be qualified by their expression and their involvement in cognitive networks.

In this chapter, I will continue the investigation of Peirce's view of signs and representation, but now within an explicitly semeiotic frame. I will first inspect Peirce's general account of the sign, and attempt to explicate its principal conditions and components. This section will focus on the ways in which the main elements of the sign are construed, or, as we might say, derived. Most importantly, I intend to show in what sense Peirce's triadic conception can be understood as a generalisation of ordinary *communicative* functions. I shall also consider certain other thorny questions pertaining to the basic semiotic relation, such as the relationship between "sign" and "representamen" and the material character of the sign. In the second part of the chapter, I turn to the principal representational axis within the general sign relation, that is, the bond between sign and object. This discussion will primarily concern the important distinction between the immediate and the dynamical aspect of the semiotic object, and the familiar, yet multi-faceted, trichotomy of icon, index, and symbol. Finally, I will reconsider the role of representation within Peirce's philosophy, this time approaching the issue from the point of view of perception. Perhaps

controversially, I will contend that Peirce, in spite of his affirmation of the interpretational aspect of perceptual experience, adopts a *presentationist* stance at odds with the *representationist* position of his early writings, using his own definitions of these positions as a starting point. This forms the second leg of my argument against the radical semiotic reading of Peirce's philosophy, complementing the considerations of chapter 3.

4.1 The Sign and Its Correlates

Peirce's semeiotic writings contain a bewildering number of definitions and less stringent descriptions of the general sign relation. Although these depictions are largely consistent in their structural outlines, their many divergences are not easily reconciled. It is notoriously difficult to ascertain which one of the many variants constitutes Peirce's most basic characterisation; some commentators stress the anti-psychologistic purity of the most formal definitions, while others argue that certain additional features might be needed for the understanding of the operation of the Peircean sign.

The simplest way to describe what distinguishes Peirce's sign relation from other conceptions is to say that its structure is irreducibly triadic, rather than dyadic. This is not wrong (albeit one may find certain premonitions of the Peircean theory in late scholastic philosophy), but nor is the explanation very enlightening. The contrast to the Saussurean sign, which with its dyadic core of *signifié* and *signifiant* is evocative of Locke's and Berkeley's "idea", tells only part of the story. Peirce and de Saussure are also united by a somewhat less obvious denominator, which partly justifies their position as the fathers of contemporary semiotics. Namely, both men, in their respective ways, stress the social character of signs and their meaning – Saussure in his account of systemic value and Peirce in his insistence that interpretation forms a part of the irreducible sign relation. Nonetheless, Peirce's definition retains the traditional conception, eschewed by de Saussure, that a sign is representative, or that it has an object.[1]

By now, it will come as no surprise that Peirce's definition of the sign, with its characteristic arrangement, is based on categorial principles. However, in what follows it will be shown that a strictly structural account of the sign is not sufficient. Instead, I shall argue that semeiotic requires a somewhat more amplified understanding of the basic semiotic components, and that Peirce offers us a path forward in his reflections on the commonsensical and communicative roots of the abstract sign relation. This is not intended to deny the relational core of the Peircean conception of the sign. The communicative approach to the correlates of the sign complements his most formalistic semeiotic discussions.

4.1.1 Formal Definitions

The semeiotic of the 1860s intertwines with Peirce's work on the theory of categories; often, the two fields of inquiry are difficult to separate. This interconnection clearly affects his early characterisations of the sign, which tend to emerge as by-products of the derivation of the categorial scheme.[2] In fact, we have already encountered one such definition of the sign, namely the description of the third intermediate conception, representation, in terms of three references, most elegantly and succinctly presented in the "New List". In the writings leading up to the "New List", Peirce tends to discuss semiotic questions in a somewhat less systematic manner. The basic structure of the triadic conception of the sign can already be discerned quite clearly in the "Logic of the Sciences":

> Representation implies first an *object* represented; 2nd a mind or rather abstracting from the personal element, a representation (itself or other) to which it addresses itself. I call this the *subject*. 3rd a *Ground* or Reason which determines it to represent that object to that subject. We have nothing else implied in the representation as representation. (W 1:327 [1865])

The passage cited above, possibly Peirce's first complete definition of the sign relation, is in certain ways reminiscent of his later treatments of the same topic. It presents the basic elements of representation – ground, object, and subject (that is, the semiotic

element later known as *interpretant*) – directly, without providing an explanation of how one arrives at this precise definition. In contrast, the "New List" offers a rationale for the derivation of the semiotic components. Starting from the presupposition that the mind synthesises impressions to unity in the form of a proposition, the elements of representation are taken to be necessary steps in the movement from manifold to completeness, with the structurally simpler conceptions of relation and quality viewed as abstractions.

However, if the argument of chapter 3 is correct, then Peirce's mature writings on signs cannot rest on the approach of the "New List"; indeed, we find that his analyses do not conform to the pattern of the propositional derivation. True, certain discussions employ some of the concepts typical of the early definition, but overall we find that Peirce quietly begins to separate the theory of signs from the theory of the categories in the 1880s; or to be more precise, when these topics re-emerge after a long hibernation, they begin to go their separate but still connected ways. The sign relation and other semiotic matters gain a more independent standing as problem areas in their own right – which again is not to say that they would be disconnected from his work on the categories. On the contrary, if we accept Peirce's hierarchy of sciences, then the later semeiotic must be explicitly dependent upon the findings of phaneroscopy.

It is obvious that the theory of categories – purportedly a result of phaneroscopic inquiry – provides the structural framework for the majority, if not all, of Peirce's mature attempts to forge an adequate definition of the sign. As we have seen, he places signs in the third category; or, more accurately, they are typically treated as genuine triadic relations. However, this theoretical background causes a certain tension in semeiotic; on the one hand, signs are treated as pervasive features of ordinary experience, but on the other hand, categorial principles are employed in the abstract description of the formal features of the general sign relation. This friction is perhaps most tangible in "Nomenclature and Divisions of Triadic Relations, as Far as They are Determined", a part of the 1903 *Syllabus*. There, Peirce first indicates that phaneroscopy provides us with certain means for describing the varieties of triadic relations,

including signs (EP 2:289). He then proceeds to show how the relational principles of combination provide us with an elaborate classification of signs.[3] However, he also states that "until we have met with the different kinds *a posteriori*, and have in that way been led to recognize their importance, the *a priori* descriptions mean little; – not nothing at all, but little" (EP 2:289).

In many of his semeiotic writings, Peirce indicates that the idea excited by the common word "sign" is hazy, and that its meaning needs to be worked out (see, e.g., MS 8:1 [c. 1903?]; EP 2:388 [c. 1906]). In the early 1900s, in particular, he strives to give a an accurate technical definition of the term. This is a difficult task; according to Peirce, we are prone to include too little or too much in our characterisations (MS 634:19 [1909]). Reflecting on the matter in a letter to Lady Welby, he asserts that if "the question were simply what we *do* mean by a sign, it might soon be resolved" (SS 31 [1904]). However, Peirce contends that we are in a situation similar to that of a zoologist, "who wants to know what ought to be the meaning of 'fish' in order to make fishes one of the great classes of vertebrates" (SS 31 [1904]; cf. EP 2:402-403 [1907]; MS 318:19/163$_b$ [1907]). This endeavour will, purportedly, give us a concept that may exclude some things ordinarily called signs, but which will almost certainly include others customarily not so called (EP 2:388 [c. 1906]). Peirce's aim is to find a general conception of "sign" that is useful for logic, and, by extension, for inquiry in general.

Now, one may object that the word "sign" does not refer to a clearly delimited entity, which could be covered by a single definition, but rather to a set of contingently – perhaps only nominally – connected phenomena of natural and cultural life. In fact, many critics of semiotics have maintained that the apparent connection between such signs as ordinary sentences and natural symptoms is an illusion brought on by linguistic usage and careless philosophy; in reality, they have little in common, and should not be forced into the same conceptual framework (see, e.g., Scruton, 1981, pp. 32-33; Wells, 1977, p. 5). For instance, Rulon S. Wells (1977, p. 1) suggests that Peirce's semeiotic is largely vitiated by empty and sterile generalisations.

Peirce's writings do not explicitly address such concerns – in part, at least, because his ideas did not get a proper hearing during his lifetime – but his theory of signs does offer us some means for thwarting the critical onslaught. Against the contention that a general definition eradicates significant differences between the phenomena identified as signs, one may retort that semeiotic actually provides means to account for the variations, using, for instance, the well-known distinction between iconic, indexical, and symbolic signs in the explication. Furthermore, it would be an error to bind Peirce's "sign" firmly to linguistic usage; his definitions are mainly technical, although as we shall see, he gradually becomes more and more convinced of the adequacy and fecundity of what he considers to be the common-sense idea of a sign. In any case, it is important to keep in mind that Peirce's concept does not exclusively refer to a class of things, but primarily to a central function of understanding and communication. We might say that his conception is first epistemological, and only secondarily ontological, although these terms may be somewhat misleading in the semeiotic context.[4]

Yet, it seems to be possible to identify certain criteria, which must be fulfilled by anything functioning as a sign. Liszka (1996, pp. 18-19) has usefully distinguished four formal conditions, purportedly present in most of Peirce's technical definitions of the sign. These are:

1. the *representative* condition, according to which a sign must represent or correlate with something, usually designated the *object* of the sign;
2. the *presentative* condition, according to which a sign represents or correlates with its object in some respect or capacity, a feature sometimes identified as the *ground* of the sign;
3. the *interpretative* condition, according to which the sign must determine, potentially or actually, a second correlate, usually designated the *interpretant* of the sign; and
4. the *triadic* condition, according to which the relation between sign, object, and interpretant is an irreducible

> interrelation, each of the components being dependent on the two others for its semiotic status.

Putting aside the closer examination of the terms involved in these conditions for the time being, certain doubts concerning the adequacy of the list need to be addressed. Because of the wealth of material on signs in Peirce's writings, it is quite easy to find characterisations that both fit and do not fit Liszka's proposal. His set of conditions summarises nicely the main features of the Peircean sign relation as they are presented in the following well-known definitions:

> A sign, or *representamen*, is something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, creates in the mind of that person an equivalent sign, or perhaps a more developed sign. That sign which it creates I call the *interpretant* of the first sign. The sign stands for something, its *object*. It stands for that object, not in all respects, but in reference to a sort of idea, which I have sometimes called the *ground* of the representamen. (CP 2.228 [c. 1897])

> 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. (EP 2:272-273 [1903])

Liszka does not explicitly claim that the conditions identified provide a necessary and sufficient criterion of signhood; yet, one may question whether his set of criteria adequately captures all that is essential in the Peircean conception of the sign. In numerous characterisations, Peirce stresses the fact that the interpretant, as a third, becomes a sign with an interpretant of its own, also capable of becoming a sign, etc. Indeed, in his entry for the *Dictionary of Philosophy and Psychology*, Peirce unequivocally states that if "the series of successive interpretants comes to an end, the sign is thereby rendered imperfect, at least" (CP 2.303 [1902]). Moreover, he argues that the interpretant, as a third, "must have a second triadic relation in which the Representamen, or rather the relation

thereof to its Object, shall be its own (the Third's) Object, and must be capable of determining a Third to this relation" (EP 2:273 [1903]). These passages, of course, allude to the open-endedness of interpretation or semiosis, a controversial feature of semeiotic that will be examined – and qualified – later in this study (see sect. 5.2.1). Yet, irrespective of whether this sequence of interpretants is conceived to be without proper termination or not, it is clear that Peirce often emphasises the mediating and generative functions of the sign in his definitions. According to Liszka (1996, p. 31), the fourth formal condition accounts for semiotic action. This is partly true; Peirce clearly states that semiosis is of a triadic character, and thus reminiscent of the relation of giving. Nonetheless, it is not possible to postulate an equivalence between semiosis and acquired triadic structure. Plainly, there are triadic relations that are not signs. Therefore, one might want to add a fifth criterion to Liszka's list; it could be dubbed the *processual* or *developmental* condition, since it brings to the fore the fact that the sign relation is not static, but prone to grow in meaning through interpretative activity – or, to put the matter differently, through the production of interpretants.

Moreover, one could argue that Liszka's characterisation does not properly take into account an important characteristic of the sign, its function as a *mediator*; Peirce often defines the sign as a medium of a special kind (see sect. 4.1.2). Liszka (1996) does state that each of the first three formal conditions of the sign is mediated through the others; "the ability of the sign to represent also requires, inherently, its power to be *interpreted* as a sign of that object *in some respect*; the ability of the sign to be interpreted can only work if it is interpreted as *representing* an object *in some respect*; and it can only be understood as representing an object in some respect if it is *interpreted* as *representing* an object as such" (p. 19). However, this interdependence between representation, interpretation, and grounding, characteristic of a genuine triadic relation, does not necessarily capture the peculiar function of mediation characteristic of a sign.

On the other hand, from a completely different point of view, one could also argue that Liszka's conditions are too loose. Namely,

they utilise functional concepts, such as "representation" and "interpretation", which may compromise the formality of the strictest sign definitions. In his *Carnegie Application*, Peirce announces that he intends to give a characterisation of the sign that "no more refers to human thought than does the definition of a line as the place which a particle occupies, part by part, during a lapse of time" (MS L75:363-364 [1902]); and in "The Basis of Pragmaticism" (MS 283), he declares that "the new concept of a 'sign' will be defined exclusively by the forms of its logical relationships; and the utmost pains must be taken to understand those relations in a purely formal, or, as we may say, in a purely mathematical way" (EP 2:389 [1906]). The conception of the sign implied by these proclamations is perhaps most purely expressed in the following definitions:

> A "sign" is anything, A, which,
> (1) in addition to other character of its own,
> (2) stands in a dyadic relation, γ, to a purely active correlate, B,
> (3) and is also in a triadic relation *to* B *for* a purely passive correlate, C, this triadic relation being such as to determine C to be a dyadic relation, ζ, to B, the relation ζ corresponding in a recognized way to the relation γ (SS 192 [1905]; MS 793:11$_b$ [c. 1906]).

> A sign is a species under the genus *representamen*, the definition of which says nothing about a mind. A representamen is an object, A, in such a triadic relation[5] *to* an object, B, *for* an object C (the prepositions merely indicating a difference between the relations), that it is fit to determine, C, to being in a similar triadic relation *to* A, and thereby (owing to the peculiar nature of this triadic relation), necessarily to B, *for* some third object, C', determined in like manner, and so on *ad infinitum*. (MS 800:3$_d$)

Such strict – one could even say *austere* – characterisations of the basic semiotic relation are resolutely anti-psychologistic. This epistemological stance permeates Peirce's entire philosophy, from its earliest stages onward (cf. sect. 3.1.1). However, he is aware of the criticism that can be directed against his generalised notion of the sign, and his attempts to account for sign relations without making explicit allusions to human minds (see NEM 4:313 [c. 1906]). Indeed, Peirce often defines the sign in a more permissive

way, sometimes even inserting references to minds and persons at the interpretative end. Writing to P. E. B. Jourdain, he admits that he has decided to limit his conception, "so as to define a sign as anything which is on the one hand so determined (or specialized) by an object and on the other hand so determines the mind of an interpreter of it that the latter is thereby determined mediately, or indirectly, by that real object that determines the sign" (NEM 3:886 [1908]). This turn away from the strictly formal account is simply motivated by a wish to be understood; but Peirce is clearly not pleased with the compromise. Famously, he laments this need in a letter to Lady Welby, describing his addition of "person" in one of his definitions as a "sop to Cerberus" (SS 81 [1908]). Yet, while Peirce concedes that his attempt to begin an analysis of the nature of the sign may seem "unnecessarily complicated, unnatural, and ill-fitting", he is convinced that anybody, who gives the matter proper thought, will reach a conclusion that will diverge from his mainly in nomenclature and arrangement, rather than in substance (MS 7:13 [c. 1903?]).

One peculiar feature of Peirce's terminology that deserves attention here is the concept of a *representamen*, which we have already encountered in a few of his formal characterisations of the sign relation.[6] Peirce adopts this term from William Hamilton, and uses it in his early philosophy as a technical replacement for "representation" (see, e.g., W 2:55 [1867]). Similarly, Peirce often employs "representamen" merely as a synonym for "sign" (see, e.g., CP 2.228 [c. 1897]). Nonetheless, in some of his later writings, he introduces a distinction between sign and representamen, which is evidently related to his endeavour to devise an adequate technical conception of the primary semiotic relation.

However, the role of the representamen in semeiotic is rather ambiguous; on the one hand, it can be interpreted as the first of the triadic sign relation, which in its turn may be simply designated "sign", but on the other hand, Peirce defines the sign as a *species* of representamen. We need to inspect both of these possibilities.

The interpretation of the representamen as a *subject* of the sign relation has been most elaborately advocated by George A Benedict (1985), who also finds considerable support for his contention in

some of Peirce's writings. For instance, commenting on the "New List", Peirce characterises the representamen as the *thing* having a representative character and a capacity to produce a semiotic effect (CP 1.564 [c. 1899]). In a dictionary entry, he explicitly distinguishes the representamen, that which represents, from representation, "the act or relation of representing" (CP 2.273 [1902]). However, the distinction is between representation and representamen, not between sign and representamen. This is evident in the following passage from the 1903 Lowell lectures:

> …as to my terminology, I confine the word representation to the operation of a sign or its relation to the object for the interpreter of the representation. The concrete subject that represents I call a sign or a representamen. I use these two words, sign and representamen, differently. By a sign I mean anything which conveys any definite notion of an object in any way, as such conveyers of thought are familiarly known to us. Now I start with this familiar idea and make the best analysis I can of what is essential to a sign, and I define a representamen as being whatever that analysis applies to. (CP 1.540)[7]

Although this quotation does not support the notion that Peirce would distinguish between sign and representamen on the basis that the former refers to the relation and the latter to the representing thing, it nonetheless appears to confirm Benedict's reading of the representamen as the *concrete* subject, which is capable of representing something and being interpreted. However, a further examination of the Lowell lectures and the *Syllabus* that accompanies them complicates the matter.

Firstly, we find that Peirce characterises the sign as a familiar but indefinite idea, while "representamen" denotes the outcome of the semeiotic analysis of this notion (CP 1.540 [1903]). In other words, the representamen is a technical concept, allegedly referring to the formal essence of the sign. Consequently, it seems that Peirce actually strives to replace the vague common-sense notion of sign with a "more general and more definite term" (CP 4.447 [c. 1903]).[8]

However, an investigation of the *Syllabus* also reveals a somewhat different approach to the relationship between sign and representamen. Namely, in line with the contention that the sign may be characterised as a species under the genus representamen,

Peirce delimits the scope of "sign", in effect providing a technical definition of this concept as well.

> A *Sign* is a Representamen with a mental Interpretant. Possibly there may be Representamens that are not Signs. Thus, if a sunflower, in turning towards the sun, becomes by that very act fully capable, without further condition, of reproducing a sunflower which turns in precisely corresponding ways toward the sun, and of doing so with the same reproductive power, the sunflower would become a Representamen of the sun. But *thought* is the chief, if not the only, mode of representation. (EP 2:273 [1903])

> A *Sign* is a Representamen of which some Interpretant is a cognition of a mind (EP 2:291 [1903]).

Here, the relation between sign and representamen is quite different from that envisaged by Benedict. The representamen is not a correlate of the sign; the sign is rather a certain kind of representamen, distinguished by the mental character of its interpretant (cf. Deledalle, 1992, p. 296). At the same time, we find that Peirce hesitates to call a representamen without a mental interpretant a representation. In other words, there may be representamens that are not subjects of representation (representation being understood as a synonym for the sign relation).

In part, this reluctance may be explained by Peirce's status as a pioneer of semeiotic; he concedes that he finds it advisable to confine his studies mainly to signs, while endeavouring to bear in mind their relations to representamens in general (MS 800:3_d). However, his caution may also be indicative of a certain uneasiness with the technical definitions of sign and representamen. As Benedict (1985, p. 259) notes, in the semeiotic writings following the Lowell lectures and the *Syllabus*, Peirce appears to abandon the term "representamen" altogether, with the exception of sporadic mentions lacking theoretical significance.[9] Instead, he suggests that the ordinary word "sign" may be adequate after all – notably in a draft of a letter to Lady Welby, immediately following one of the formal definitions cited above.

> I use "sign" in the widest sense of the definition. It is a wonderful case of an almost popular use of a very broad word in almost the exact sense

> of the scientific definition. [---] I formerly preferred the word *representamen*. But there was no need of this horrid long word. On the contrary, it requires some stretching to cover such imperative ejaculations of drivers, as "Hi!" or "Hullah", which was in my boyhood's days the signal to get out of the way of a coaster's sled on Boston Common... (SS 193 [1905])

It would appear, then, that Peirce abandons "representamen" because it excludes too much, in particular such ordinary signs as warnings. The interesting thing here is the rationale behind the change. Peirce declares that he had thought of a representamen as a representative, as something taking the place of the thing, but adds that he has come to realise that "a sign is not a substitute" (SS 193 [1905]).[10] That is, a definition that asserts that a sign (or representamen) must *stand for* its object is not wholly adequate; it may omit certain important classes of signs, such as indications. Benedict (1985, p. 262) reaches a different conclusion, asserting that the notion of a sign as a substitute would be too narrow to cover symbolic signs (cf. sect. 4.2.3). Indeed, there are symbols, such as connectives in a sentence, which might fall outside of the range of a strict representative conception of the sign, but it seems more plausible – especially in view of Peirce's example – to say that the most important class of signs excluded by the notion of representamen as substitute is that of indices. These do not properly speaking represent things, but draw our attention to objects. Thus, Liszka's representative condition may need to be somewhat qualified; at least, we ought to acknowledge that the definitions, in which Peirce describes the sign as representing an object, do not cover the full field of signification.[11] This expansion will require a closer look at the semiotic functions of the object-correlate, which will be undertaken in subsequent sections (see sects. 4.1.2 and 4.2).

In a somewhat different vein, Deledalle (1992, p. 298) argues that Peirce's reason for abandoning the term "representamen" is that it is not formal enough, since it implies certain traits associated with elected representatives. Indeed, Peirce maintains that his original use of "representamen" was meant to bring up the idea of something analogous to such deputies, and concedes that the term is defective because of its surplus associations (SS 193 [1905]).

Furthermore, he states that he fell into this error because of a lack of a proper technical definition. Nonetheless, there is something amiss in this explanation; it is not at all clear that "sign" would be more formal in any pertinent sense, or that it would suddenly have lost its linguistic vagueness. Rather, Peirce seems to realise that some of the less definite associations of the ordinary concept actually capture something important about signs, which may be lost in the strict technical definitions; in particular, he finds the connection between sign and *medium of communication* suggestive. Admittedly, this hypothesis does not accord well with Peirce's avowed aim of devising a purely formal conception of the sign, but as we shall see, the contention is supported by certain changes in his philosophy that take place after the year 1903 – notably by his development of the theory of interpretants and his turn toward critical common-sensism.

However, let us for the moment return to the question of the relation between representamen and sign, and the "nearly vicious ambiguity" caused by Peirce's failure to make a clear distinction between sign-as-first and sign-as-third, which troubles Benedict and Deledalle (1992, p. 300). Namely, one of the apparent strengths of the 1903 definitions is that the concrete subject, i.e. the representamen, is distinguished from the semiotic relation, which in this context is typically identified as representation. Benedict (1985, p. 259) notes, with some consternation, that Peirce, having abandoned this relatively clear conceptual arrangement, rather confusingly uses "sign" to cover both concepts. Thus, if we examine a portrait, the term "sign" may be used of the painting as such, considered apart from the person represented and the interpretation of the work of art; but it may also refer to the triadic relation between the components. Benedict (1985, pp. 265-266) suggests a simple clarification: use "representamen" for the concrete subject acting as first and "sign" for the complete relation. Deledalle (1992, p. 300) goes one step further and declares that Peircean semioticians ought to use "representamen" and "semiosis", while "sign" is best left to Saussurean semiology.

Benedict's proposal seems reasonable. However, it is worth stressing that it does not accord with the definition Peirce gives in

his *Syllabus*. It may also be of value to reflect on why Peirce fails to make the kind of conceptual distinction Benedict and Deledalle are looking for; he certainly has all the tools needed in his possession. It is peculiar, indeed, that Peirce, with his penchant for concept-creation, would ignore such an opportunity to clarify his terminology. He may have avoided making a clear-cut separation for certain deeper philosophical reasons, although we are hard-up trying to find any explicit statement to that effect in his writings.

We might reason as follows: As a first, the sign is not necessarily an *existent* subject fulfilling a certain semiotic function. Rather, it can be viewed – in a quasi-phaneroscopic manner – as a first of experience. It is primarily encountered as a particular phaneron, and only upon subsequent analysis is it possible to discern object and interpretant as relatively independent things. There are obviously entities that can be called signs – words, medical symptoms, portraits, etc. – but as signs, they already involve, albeit implicitly, object and interpretant. Moreover, calling the sign-as-first a concrete subject can be deceptive, as it may *materially* be classifiable as a quality or a law besides as an existent thing (see sect. 4.1.3).

It must be admitted, however, that this attempt to defend Peirce's ambiguous use of "sign" is only partly convincing. Although there are sound reasons for not equating the first of the sign relation with a concrete thing, Peirce's terminology is certainly less than lucid; in this regard, Benedict's concern is valid. However, rather than hanging on to the explicitly abandoned "representamen", it might be more appropriate to specify the term "sign" when needed, so as to bring out the particular sense in which it is being used. Thus, we would speak of a *sign relation* when definitely referring to the structural configuration of semiosis, captured as a kind of freeze frame, and of the *material aspect* of the sign when we need to denote the thing acting as sign. In this way, the polysemic character of Peirce's "sign" would be retained. At least, this terminological choice makes it easier to discuss his mature semeiotic, because we are not required to constantly correct his statements.

4.1.2 Communicative Perspectives

Our discussion of Peirce's definitions of the sign has until now circled around his attempts to find an adequate formal conception of the genuine triadic relation. This is, however, only part of the picture; as noted, Peirce's characterisations are rarely confined to a pure depiction of the basic semiotic form. More often than not, his descriptions are augmented by words indicative of the kinds of functions and processes involved, such as "representation", "signification", "interpretation", "determination", "embodiment", "effect", and so on.

According to Peirce, a general characterisation of the sign must initially be set forth in figurative expression, partly owing to the genesis and structure of speech (MS 634:18 [1909]). Further, he notes that such descriptions may, in an age dominated by physical science, be thought to be mere poetry. However, it is an error to think that poetry is false *per se*; rather, "in order to be the genuine thing, its first requisite is to be very true" (MS 634:18 [1909]; cf. PPM 275 [1903]). Not "only metaphysics, but logical and phaneroscopical concepts need to be clothed in such garments", for "a pure idea without metaphor or other significant clothing is an onion without a peel" (EP 2:392 [c. 1906]). Indeed, Peirce maintains that it is necessary that the truth should have figurative garb; no adequate technical definition can be devised without prior acquaintance with such expressions. Yet, Peirce himself does not always heed this word of caution; his most formal definitions of the sign are often severed from such considerations.

Moreover, there is a tangible tension in Peirce's writings on signs concerning the division of labour between phaneroscopy and semeiotic. In one of the manuscripts titled "The Basis of Pragmaticism", Peirce describes the endeavour to find an adequate conception of the sign as "logical analysis" (EP 2:389 [c. 1906]). Yet, he immediately adds that the designation is not entirely accurate, because the procedure lacks the sharpness characteristic of normative inquiry with its dualistic distinctions. Instead, he opines that the investigation is still operating within the realm of phaneroscopy (cf. EP 2:403 [1907]).

At first, these comments seem to indicate merely a confusing indecisiveness regarding the roles of semeiotic and phaneroscopy. However, as it was conceded that phaneroscopy, in order to have any kind of substance as a mode of inquiry, must utilise certain semeiotic means, we might have to accept that there is a kind of "grey area", in which phaneroscopic and logical investigations of signs are not clearly separated (cf. sect. 3.1.3). We could even speak of a phaneroscopic part of semeiotic inquiry.

The central problem of this first phase of semeiotic would be how to discern the vital features of the sign relation from the experiential mass in which it occurs. In other words, how are we to carve out signs, as particular phanerons, from the lived phaneron, in order to bring out their characteristic elements? A purely *a priori* examination cannot provide us with the means to grasp semiotic reality, which does not necessarily present itself as discrete entities (cf. EP 2:289 [1903]; sect. 4.1.1). This difficulty is heightened by the fact, noted by Peirce, that "the earliest way of using signs is to think *in them* without thinking of them, as signs" (MS 810:2_b).

In his Lowell lectures, Peirce suggests that grammar (or syntax, as he says in this context) could employ four different ways of dividing a whole into parts (MS 452:7-10 [1903]):

1. *additory division*, in which something is added to that which is divided (for instance, drawing a chalk line on a black-board);
2. *actual division*, in which a division that is already there is recognised (for instance, dividing the word "logic" into five letters);
3. *laniation*, in which nothing is added, but where the cuts are arbitrary (for instance, cutting meat); and
4. *ramicrime*,[12] in which the number of parts is a fact, but the precise placing of divisions is more or less a matter of taste.

Peirce then adds that the entire "anatomy of reasoning" must be performed by laniations and ramicrimes (MS 452:11 [1903]). Albeit primarily concerned with the analysis of inference, this contention seems to be expandable to signs in general; at least, Peirce

maintains that if "we look upon Sign, Object, & Interpretant in a sufficiently broad way, they become indistinguishable" (MS 339:255 [1905]). Perhaps we could say that the basic semiotic division is a ramicrime; the relation is triadic, but the precise lines of demarcation are not absolute. In a letter to Samuel Barnet, Peirce writes that the distinction between object and interpretant is a real partition, "yet it is *purely relative*, in the sense that the line of demarcation between the two can just as well be drawn in one place as another" (MS L36 [1909]; cf. Johansen, 1993a, p. 210). Peirce's point is that the artificiality of a boundary line does not prove that the secondness of the separated parts does not correspond to any secondness *in re*. Taking the argument one step further, we might surmise that a similar situation obtains in attempts to divide experience into semiotic and non-semiotic parts, as well as in the endeavour to isolate individual signs within continuous semiotic experience.[13] There are, undeniably, distinct signs; yet, they tend to be so interconnected that no self-evident lines of separation can be discerned.[14] As Peirce says, everything "is in reality welded together" (MS 452:11 [1903]).

In a helpful discussion, Wells (1977, pp. 11-12) suggests that there are three principal ways of delimiting signs: *definition*, *classification*, and *the method of more or less*. The first two of these are amply present in Peirce's writings, and have been discussed in detail by many commentators. Wells finds both methods deficient; the attempt to define the sign tends to lead to empty formalism or "pseudogeneralisation", while classification might give us a too broad class of signs, in which it is impossible to distinguish essential features of signhood from contingent ones. The third method can be found, in embryonic form, in Plato's *Phaedo*; roughly, it consists in identifying an evidently true principle, and then affirming as true whatever seems to agree with it, while that which disagrees with the exemplary principle is judged to be untrue. Wells (1977, pp. 11-12) modifies the method in a Peircean way by replacing the dichotomy of agreement and disagreement by a series of degrees of agreement. In other words, he proposes to proceed by pinpointing certain paradigmatic cases of signs, to which other instances of signs or sign-related phenomena are then

compared. Borrowing a term from Hilary Putnam, Wells characterises the conception of sign he is looking for as a "cluster-concept", which is marked by its indefinite boundaries; the touchstone will not give us clear-cut – that is, necessary and sufficient – conditions for signs. The primary standard identified by Wells is *intentionality*, covering both the common-sense acceptation, in which "intention" means "intent" and "intentional" is a synonym for "deliberate", and the technical scholastic sense (obtained via Brentano), in which the *intentional object* is the object to which a sign is taken to refer (cf. Chisholm, 1952). For Wells, the semiotic entity that best manifests these features is the conventional, linguistic sign in use. Obviously, the technical meaning of intentionality differs from familiar usage, but "in semiosis par excellence there is a certain necessary connection between them: the speaker intends in the familiar sense, and the hearer intends in the philosophical sense: the speaker intends_f that the hearer shall intend_p such and such" (Wells, 1977, p. 12). In other words, the paradigm is the communicated sign.

Prima facie, this proposal appears to be in conflict with the outlook of semeiotic. We have already encountered Peirce's technical definitions, which in their striving for unambiguousness appear to leave little room for cluster-concepts; Wells is openly dismissive of this part of Peirce's project. Moreover, according to the received view, semeiotic does not limit signs to the human world; instead, it postulates a perfusion of signs throughout the universe (cf. EP 2:394 [c. 1906]).[15] Peirce's theory of the sign is ardently anti-psychologistic, and does therefore seem to fit poorly with any conception that places the emphasis on intentionality, whether philosophical or common-sensical.

Nonetheless, Peirce's discussions of signs and related matters often proceed in a manner roughly similar to the one staked out by Wells. At least once, Peirce appears to explicitly embrace the third method, as he states that the "the only successful way of analyzing any of the concepts which belong peculiarly to this realm [of phaneroscopy] is not to begin by considering that concept in all its breadth, but rather to confine oneself, at first, to its highly characterized form, and when that has been thoroughly

comprehended, to inquire by what modifications the bordering forms attach themselves to it" (EP 2:390 [c. 1906]; see also NEM 4:297 [c. 1903?]). In the place of "highly characterized form", we might read "distinctive and familiar form". Moreover, Peirce indicates that "we ought not to limit ourselves to signs but ought to take account of certain objects more or less analogous to signs", although he admits that he has not really examined such "quasi-signs" (EP 2:257 [1903]). The proposal is, then, that we need to set out from certain well-known signs or semiotic operations, and by an analysis of them discern key features that are thought to be characteristic of signs in general, possibly extending the scope of the term to include phenomena not customarily called "signs" (cf. Short, 1981b, p. 197).

What are these signs that are supposedly immediately known to us? In an untitled and undated manuscript,[16] Peirce suggests that we become acquainted with the operation of signs through thought.

> Whenever we think there is some sort of a sign or representation, that is, something the thought of which suggests some other thought. Psychology affords this fact to the formal logician. He thence derives his conception of a sign or representation, and then goes on to investigate the formal laws of representations in general without introducing any premises of a psychological character. He can therefore reach no conclusions concerning human thought which he may not extend to any representation, in the mind or out of it. (MS 810:1_b-2_b)

While this passage does not exactly commit Peirce to full-scale psychologism, it is nonetheless rather puzzling, as he appears to claim that logic is in some respect based on a psychological fact. Moreover, the prescribed procedure may not fit well with Peirce's well-known rejection of introspection as a method of philosophical research. The quotation could perhaps be rendered more consistent with the rest of his philosophy if we in place of "psychology" read "phaneroscopy". Still, the outlook of Peirce's review of Royce's *The World and the Individual* seems to be more apposite for our purposes; in an alternative draft of the appraisal, Peirce maintains that philosophers "must not begin by talking of pure ideas, – vagabond thoughts that tramp the public roads without any human

habituation, – but must begin with men and their conversation" (CP 8.112 [c. 1900]). True, this remark could be bypassed as just a rhetorical attack on the Hegelians; but its main thrust is substantiated later when Peirce singles out ordinary conversation as "a wonderfully perfect kind of sign-functioning" (EP 2:391 [c. 1906]).

Consequently, Peirce could agree with Wells that the communicated sign can be viewed as the paradigmatic case of signhood (cf. Colapietro, 1989, p. 22; Fisch, 1986, p. 357). This impression is strengthened by certain modifications in his mature theory of signs. During the same period, approximately, that Peirce abandons the term "representamen", he also begins to characterise the sign as a *medium of communication* (see EP 2:329 [1904]; EP 2:389-391 [c. 1906]; MS 793:1 [c. 1906]; MS 339:271 [1906]; SS 196 [1906][17]). This is more than just a minor adjustment of terminology; the change entails a more dynamic conception of the sign, in line with Peirce's development of pragmaticism.[18] However, the characterisation may also lead to certain misunderstandings.

As we have seen, Peirce maintains that the ordinary conception of a sign is too hazy and needs to be specified. Now he claims that "a sign as ordinarily understood is an implement of intercommunication; and the essence of an implement lies in its function, that is, in its purpose together with the general idea, – not, however, the plan, – of the means of attaining that purpose" (EP 2:389 [c. 1906]). The general function of signs is to communicate ideas; this is equally true of thoughts, imaginary signs that convey ideas from the self of the past to the self of the future, as it is of the signs used in external exchanges of information (EP 2:388 [c. 1906]).[19] However, this does not mean that semiosis would be exhausted by communication as it is ordinarily understood. Using Peirce's pragmatistic method of conceptual analysis, Colapietro (1995, pp. 34-35) argues that Peirce's characterisation of the sign as a medium of communication expresses only the first degree of clarity of the concept; it can be further elucidated by formal definitions and pragmatic clarifications; at the highest level of clearness, "a sign is defined as a means by which utterers or interpreters of signs might

attain fuller control over the processes of utterance and interpretation" (p. 35).

Plausible as Colapietro's suggestion is, it appears to involve a conflation of the *medium* of communication, a technical term in semeiotic, with the alleged ordinary sense of sign as an *implement* of social communication. Namely, according to Peirce, the scope of "medium of communication" is in fact *broader* than that of "sign": a "sign is plainly a species of medium of communication, and medium of communication is a species of medium, and a medium is a species of third" (EP 2:390 [c. 1906]; cf. MS 339:271 [1906]).[20] These relationships can be depicted hierarchically as in fig. 8.

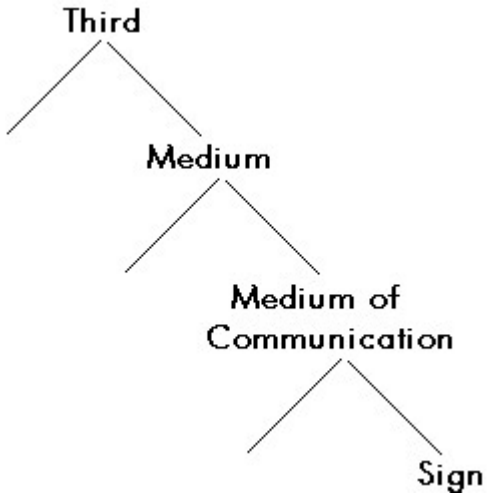


Figure 8. **The Sign as a Species of Medium of Communication.**

According to Peirce, a medium of communication can be characterised as a triadic relation characterised by its mediated determination.

> A medium of communication is something, *A*, which being acted upon by something else, *N*, in its turn acts upon something, *I*, in a manner involving its determination by *N*, so that *I* shall thereby, through *A* and only through *A*, be acted upon by *N* (EP 2:391 [c. 1906]).

Since a sign is a species of medium of communication, it must conform to this definition. However, as the sign is not simply equivalent to such a medium, it must involve some additional specifications distinguishing it from other members of the same genus. Although Peirce leaves this matter hanging, it is possible to find such supplements in his informal "derivation" of the principal components of the sign.

In the landmark essay "Pragmatism", Peirce begins by identifying the most obvious case of sign action, that is, a communicative exchange. He then notes that it is highly characteristic of signs that they "mostly function between two minds, or theatres of consciousness, of which the one is the agent that *utters* the sign (whether acoustically, optically, or otherwise), while the other is the *patient* mind that *interprets* the sign" (EP 2.403 [1907]). This does not imply that signs are merely external carriers of a meaning, which ahead of the intentional act of communication is somehow lodged in consciousness. Before the sign is uttered, it is virtually present to the mind of the utterer as a thought; however, according to Peirce, "a thought is itself a sign, and should itself have an utterer, (namely, the ego of the previous moment), to whose consciousness it must have been already virtually present, and so back" (EP 2:403 [1907]). In a similar fashion, the interpreted sign will give rise to a series of interpreters, or future selves. In other words, the publicly available sign marks a moment in a continuous process of utterance and interpretation. This does not mean that external signs would be secondary or derivative; on the contrary, from a developmental point of view, social semiosis emerges simultaneously with internal dialogue, or even precedes it in a certain sense.[21]

Next, Peirce notes that it is conceivable that the endless series of utterers and interpreters could do their work in a certain interval of time; however, he adds that it is undeniable that there are cases, in which neither series forms an infinite collection (EP 2:403-404

[1907]). This point does not need extensive argument, since signs without utterers are often employed, such as symptoms of disease and signs of the weather. It is less clear whether there can be signs without interpreters, but Peirce suggests that an automated Jacquard loom[22] provides an example (EP 2:404 [1907]; cf. MS 7:2 [c. 1903?]). In our day, one will almost inevitably think of a computer, a machine that is fed sets of instructions – signs that convey intelligence, hopefully – and gives a certain output by transforming the signals in accordance with programs. Still, a computer working unattended on a certain problem might produce a result and even display it on the screen, only to have it wiped out by a vicious virus before anyone has interpreted it. It might be argued that such an automated process is not semiosis in the proper sense (cf. sect. 5.1); but there is no denying that the computation – and the action of the virus – involves signs of certain kinds.

With reference to analogous cases, Peirce concludes that neither utterer nor interpreter is strictly speaking necessary for the function of a sign, although they are no doubt characteristic features of semiotic operations. Instead, he inquires "whether there be not some ingredient of the utterer and some ingredient of the interpreter which not only are so essential, but are even more characteristic of signs than the utterer and the interpreter themselves" (EP 2:404 [1907]). In other words, he is looking for elements that can perform the crucial roles of utterer and interpreter, and identifies these as the object and interpretant of the sign relation.

According to Peirce, the utterer constructs and puts forth the sign, and the object fulfils the same, or a similar, function. Namely, the object is that which is not expressed by the sign, but must be known by previous or *collateral* experience; it is something that "cannot be fully revealed or brought to light by any study of the sign alone, as such" (EP 2:404 [1907]). As the utterer is not created by the sign, but can be viewed as the source of the sign, the object logically precedes the sign.[23]

However, Peirce's notion, according to which the object functions as a kind of proxy for an utterer, does not necessarily mean that the object possesses a self-sustaining power to generate meaning. The object is something that is either well known to both ut-

terer and interpreter in a communicative exchange, or else it must in some way be displayed or explained in such a manner that the interpreter is capable of determining its identity to a relevant degree (MS 318:98-99 [1907]). The crucial aspects of the utterer, which the object effectively fulfils, are those of *determination* of the sign and *contextualisation* of semiosis. Serving in the capacity of initiator of communication, the utterer can be said to determine what the exchange will be about; and in a corresponding fashion, the object also delimits the action of signs.

On the other hand, Peirce also suggests that the object is similar to an utterer in that it functions as a "repository of ideas or significant forms" (MS 318:17/181_b [1907]). This is somewhat perplexing; does Peirce, after all, claim that the role of the object is that of a *source* of meaning? No doubt, we can conceive of sign situations in which the object-correlate acts in such a manner. For instance, at least part of the meaning of a non-abstract painting is typically attributable to its object; Picasso's "Guernica" supposedly communicates something about real-life events. Moreover, this construal of the semiotic object accords nicely with Peirce's definition of the sign as a medium of communication of a *form* (see MS 793:1 [c. 1906]; SS 196 [1906]; cf. sect. 5.3.1). Yet, depicting the object as a storehouse of ideas seems too restricting; at least, it is difficult to see how it would be applicable to certain classes of signs, such as indications, the primary function of which is to compel attention. Perhaps one could maintain, following Wells's model, that they are less characteristic instances, in a certain sense less sign-like than proper communicative signs. This contention would receive some support from Peirce's characterisation of symbols as genuine signs in distinction from the degenerate types icon and index. Nonetheless, this is not satisfactory; although Peirce employs a kind of exemplar argument, he is always looking for a general conception of the sign. Consequently, it seems appropriate to say that the truly crucial function of the utterer is that of determination, not that of being a source or repository of ideas.[24] Instead of saying that the object is a fund of significant forms, it seems more correct to say that the sign typically *represents* the

interpretant as an influence flowing from the object (see MS 318:14/158$_b$-15/159$_b$ [1907]).

In comparison to the semiotic function of the utterer, the role of the interpreter in semeiotic is perhaps easier to grasp. Namely, Peirce characterises the interpretant as a "close analogue of a modification of consciousness" (EP 2:411 [1907]). In other words, it corresponds to the *semiotic effect* that a sign determines in an interpreter. If there is no actual interpreter, then the interpretant is what *would be* determined in the interpreter if there were one (EP 2:409 [1907]). However, to complicate matters, Peirce notes that this essential ingredient of the interpreter could be called "meaning", since it includes all that the sign really does convey to the interpreter, its entire essential influence, in its capacity as sign (MS 318:37/227$_b$ [1907]). He often defines the interpretant plainly as the meaning of the sign; in fact, "meaning" is frequently used as a synonym for interpretant in "Pragmatism". Yet, in the very same essay, Peirce also indicates that there is a relevant distinction to be made between the interpretant and the meaning of a sign. At least, he states that until he can consult "the more delicate apprehension of Lady Welby", he prefers to use the word "meaning" for the entire significance that the sign conveys (MS 318:37/227$_b$ [1907]).

Thus, we see how the crucial semiotic functions involved in utterance and interpretation are supposed to be captured by the correlates of the sign. This communicative point of view affects Peirce's sign definition; the earlier emphasis on representation is replaced by mediation, and the idea of relative determination appears to take the place of grounding.[25] He now emphasises that the object is in a relevant semiotic sense past in relation to the sign, while the interpretant in general implies a reference to the future (see, e.g., MS 318:21/176$_b$ [1907]). This difference between the object-pole and the interpretant-pole of the sign leads to a definition of the sign relation, which involves a significant directionality.

> …a sign is anything, of whatsoever mode of being, which mediates between an object and an interpretant; since it is both determined by the object *relatively to the interpretant*, and determines the interpretant *in reference to the object*, in such wise as to cause the interpretant to be

> determined by the object through the mediation of this "sign" (EP 2:410 [1907]).
>
> …the essential nature of a sign is that it mediates between its Object, which is supposed to determine it and to be, in some sense, the cause of it, and its Meaning, or as I prefer to say, in order to avoid certain ambiguities, its *Interpretant*, which is determined by the sign, and is, in a sense, the effect of it; and which the sign represents to flow as an influence from the Object (MS 318:14/158$_b$-15/159$_b$ [1907]).

These characterisations conform to Peirce's definition of a medium of communication, cited above, but they further specify the components as sign, object, and interpretant. Moreover, the sign, as a mediator, *enables* representation. In other words, a sign is a medium that tends to represent its object-correlate as a source of an effect – not necessarily an idea – thereby causing that very effect, the interpretant. Such a mediated influence is intelligible or felt to be significant.[26]

While communication (in the ordinary sense of the word) is not exhaustive of semiosis, we can nonetheless see how the above characterisations take in something of the character of a common communicative exchange. However, a critic may enquire what justifies Peirce's contention that this analysis is applicable to signs of all kinds, and not merely to implements of intercommunication. Although the strategy employed is partly reminiscent of the method laid out by Wells, Peirce does not have recourse to the touchstones provided by the human use of signs. In other words, Peirce appears to be caught in a dilemma; on the one hand, he wants to draw up a definition of the sign that does not refer to personal minds, but on the other hand, his conception is supposedly derived from the eminently human process of conversational communication.

How serious is this impasse? Peirce could defend his position by noting that the references to sign users are merely aids for understanding. In fact, he explicitly states that although "it is not necessary that any person should originate the sign or that any person should interpret it, yet it will contribute to perspicuity to use language as if such were the case, and to speak of the *utterer*

and the *interpreter*" (MS 10:1 [c. 1903?]; cf. MS 11:1 [c. 1903?]).[27] At the same time, however, Peirce acknowledges that semiosis cannot be a mechanical process; nor can a disembodied sign have any effect. Although a sign remains a sign even if it is not actively present in any mind, it must nonetheless be vicariously embodied; "every sign even if external to all minds must be a determination of a quasi-mind" (SS 195 [1906]). In spite of its infrequency, the Peircean concept of "quasi-mind" has received some attention by commentators, mainly because of its connection to the view that semiosis is spread throughout the organic world (see, in particular, CP 4.551 [1906]). Less consideration has been paid to Peirce's contention that the sign mediates between two quasi-minds, the *quasi-utterer* and the *quasi-interpreter* (see CP 4.551 [1906]; MS 318:18/182$_b$ [1907]). Admittedly, this is one of the most obscure claims of Peirce's theory of signs; but it may be rendered slightly less mysterious by the realisation that the object is connected to utterance and the interpretant to interpretation. Indeed, insofar as they act as repositories of thought or intelligent forms, the object and interpretant are quasi-minds in Peirce's sense, that is, entities with "special qualities of susceptibility to determination" (MS 283:118$_v$ [c. 1906]).

However, lest we lose sight of the problem at hand, let us consider Peirce's contention that "we ought not to think that what are signs to us are the only signs; but we have to judge signs in general by these" (NEM 4:297 [c. 1903?]). A formalistic semiotician, who accepts Peirce's anti-psychologistic programme, might find this contention perilous; almost inevitably, it will lead to an *anthropomorphic* conception of the sign. That is, the properties of certain human signs are taken to be characteristics of all signs, without any logical guarantee of the validity of the generalisation. At the other end of the scale, humanistic thinkers could fault Peirce for expanding the boundaries of the sign beyond its proper human habitat, that is, of not being *anthropocentric* enough. Peirce's answer to such criticisms is worth quoting in full.

> If I were to attach a definite meaning to "anthropomorphism", I should think it stood to reason that a man could not have any idea that was not

> anthropomorphic, and that it was simply to repeat the error of Kant to attempt to escape anthropomorphism. At the same time, I am confident a man can pretty well understand the thoughts of his horse, his jocose parrot, and his canary-bird, so full of *espièglerie*; and though his representation of those thoughts must, I suppose, be more or less falsified by anthropomorphism, yet that there is a good deal more truth than falsity in them, and more than if he were to attempt the impossible task of eliminating anthropomorphism, I am for the present sufficiently convinced. (NEM 4:313 [c. 1906])

In other words, the attempt to escape anthropomorphism will lead to the postulation of things-in-themselves, beyond human reach. Peirce, who so vehemently opposes psychologism in logic, unexpectedly concludes that we can know only the human aspect of the universe (SS 141 [1911). In "Pragmatism" (MS 291), Peirce claims that "man is so completely hemmed in by the bounds of his possible practical experience, his mind is so restricted to being the instrument of his needs, that he cannot, in the least, mean anything that transcends those limits" (CP 5.536 [c. 1905]).[28] This human-centred stance (as we might say for a lack of a better term) does not lead to an absolute separation between the fields of human mind and nature. Although Peirce's reference to the thought of animals is somewhat casual, it is related to a deeper conviction concerning the possibilities of research; "every scientific explanation of a natural phenomenon is a hypothesis that there is something in nature to which the human reason is analogous; and that it really is so all the successes of science in its applications to human convenience is witness" (PPM 275-276 [1903]; cf. PPM 157 [1903]).

Consequently, the expansion of the results of the communicative derivation to cover all signs is an abductive hypothesis, which needs to be specified or corrected, but which is nonetheless useful as a preliminary step in the investigation of semiotic phenomena. When we expand upon the ordinary notion of sign and sign-action, so that it is applicable to sign-phenomena without utterers and interpreters, we are wandering on uncertain paths. In other words, we ought to keep in mind that semeiotic results, abstracted from the observation of familiar signs, are "eminently fallible" (CP 2.227 [c.1897]). This is perhaps most evident in the question of how we

should conceptualise the process nature of sign-phenomena in general, and the related issue of what role actual interpretative activity plays in that case.[29]

4.1.3 Embodied Significance

From what has been said, it ought to be evident that the Peircean sign cannot be reduced to a singular object; it is construed alternatively as a certain kind of triadic relation, as a first of such a relation, or as a phase in semiosis. On the other hand, Peirce also states that semeiotic is concerned with a particular class of objects, which includes pictures, natural cries, symptoms, pointing fingers, memories, dreams, letters, words, concepts, sentences, chapters, books, libraries, orders of command, microscopes, legislative representatives, concerts, and even voyages of discovery (EP 2:326 [1904]; MS 634:17-18 [1909]); MS 602:7-8 [late]). Obviously, not all of these instances are concrete, spatio-temporal things. Yet, such a listing might suggest that the world is divisible into two classes of objects, signs and non-signs. As Fisch (1986, p. 329) notes, this would be an error; the sign is simply not a kind of thing. Peirce often distinguishes the sign, such as a word, from its *replica*, and insists that the being of the sign is not constituted by its instances.

> A sign is not a real[30] thing. The same sign may occur, or as we may say, can be *uttered*, over and over again. We may call these things embodying the same sign *replicas* of it. They need not be alike as things. (MS 9:1 [c. 1903?])

This feature of the sign – its unlimited potential to be uttered or instantiated – accords with its character as a third. As a genuine triadic relation, a sign is law-like. Indeed, the capability to exist in a replica is a unique attribute of a sign; nothing else possesses this ability (MS 8:5 [c. 1903?]). If we examine a word, such as "the", we will find that it can take on many different shapes in writing and speech, and yet, in a pertinent sense, remain the same sign. This study, for instance, includes a fixed number of replicas of the sign

"the", distinguishable as singular instances as they are located on different pages and in varying linguistic contexts.[31]

According to Greenlee (1973, pp. 31-32), Peirce carefully avoids the mistake of equating the sign with its tangible embodiment; the sign in itself is what it is by virtue of its relations, not because of its concretion (cf. Liszka, 1996, p. 19). On the other hand, Peirce maintains that a sign can exist only through its replicas (NEM 4:300 [c. 1903?]). In other words, although it is not reducible to its manifestations, the sign requires some kind of embodiment in order to be able to fulfil its semiotic function; "instead of being what it is of itself, and remaining altogether such as it is even if not connected with matter, the sign's mode of being is, on the contrary, such that it consists in the existence of replicas destined to bring its interpreter into relation to some object" (NEM 4:297 [c.1903?]). Thus, Peirce also characterises the sign as "anything whatever, real or fictile, which is capable of a sensible form" (MS 654:7 [1910]).

The requirement of embodiment entails certain difficulties, however. For one thing, Peirce hesitates when it comes to postulating it as a general condition for signhood. On the one hand, he states that the sign "must be a recognizable object in itself" (MS 283:109$_v$ [c. 1906]); but on the other hand, he notes that the sign may be of the nature of a thought as well as a perceptible object, "visible through eye or imagination" (MS 634:11 [1909]). According to Peirce, the word "sign" denotes "an Object perceptible, or only imaginable, or even unimaginable in one sense – for the word 'fast', which is a Sign, is not imaginable, since it is not this word itself that can be set down on paper or pronounced, but only an instance of it, and since it is the very same word when it is written as it is when it is pronounced, but is one word when it means 'rapidly' and quite another when it means 'immovable', and a third when it refers to abstinence" (MS 637:31-32 [1909]).[32] The situation becomes even more intricate if we consider Peirce's classification of signs into a trichotomy based on the *material nature* of the sign in itself.

This classification, introduced as late as 1903, divides signs into *qualisigns*, *sinsigns*, and *legisigns* – alternatively known as *tones*, *tokens*, and *types*[33] – in accordance with the theory of categories. The qualisign is a quality or of the nature of an appearance (EP 2:291

[1903]; SS 32 [1904]). To be more precise, it is a *quality of feeling* that is significant, that is, its categorial status is that of firstness (MS 339:276 [1906]). According to Peirce, the qualisign "cannot actually act as a sign until it is embodied; but the embodiment has nothing to do with its character as a sign" (EP 2:291 [1903]). It may be described as an indefinite significant character, and can be exemplified by a tone or tune (MS 339:248 [1905]; CP 4.537 [1906]; MS 339:276 [1906]). In other words, a qualisign may be simple or complex, although in the latter case it is not a pure feeling (MS 339:276 [1906]).). Properly speaking, a qualisign has only a *potential* mode of being (SS 83 [1908]). Such a "possible array of qualities" can be illustrated by the movement of a sonata that a musician has composed, but which has never been performed; perhaps it only lives in the musical imagination of the composer (MS 318:39/229_b [1907]).

A sinsign "is an actual existent thing or event which is a sign" (EP 2:291 [1903]; cf. SS 32 [1904]; MS 339:276 [1906]). It is easy to think of examples; any existing object, such as a barometer or a pointing finger, which acts as a sign, is a sinsign. To be precise, such a sign is a "Single event which happens once and whose identity is limited to that one happening or a Single object or thing which is in some single place at any one instant of time, such event or thing being significant only as occurring just when and where it does, such as this or that word on a single line of a single page of a single copy of a book" (CP 4.537 [1906]). However, according to Peirce, it is allowable to use the term "sinsign" somewhat loosely for a sign that is an *individual thing* (MS 339:256 [1905]). The mode of being of such a semiotic entity is actuality (SS 83 [1908]); categorially, it belongs to secondness.

The legisign can be simply characterised as a law or type that is a sign (EP 2:291 [1903]; SS 32 [1904]). It is a *general* form, which can be repeated indefinitely, and is in all its recurrences one and the same sign (MS 339:276 [1906]). Any conventional sign, established by human beings, is a legisign (EP 2:291 [1903]). More generally, we could say that all signs, which in themselves are of the nature of *habits*, belong to the class of legisigns. As a necessitant, which

governs the behaviour of its instances, the legisign is categorially third in this first trichotomy of signs (cf. SS 83 [1908]).

As Peirce notes, it may be difficult to separate legisigns from qualisigns; still, they bear certain characteristic marks, which allow us to distinguish them from each other. For instance, while a legisign is identical in all its embodiments, a qualisign cannot have any identity; it has only similarity, in a vague sense (MS 339:277 [1906]). Thus, two vowels pronounced slightly differently constitute two qualisigns, but insofar as they are alike, they are the same qualisign. However, anything "that could conceivably be made absolutely definite, bearing in mind that no two things can be exactly alike in any quality whatever, cannot be a Tuone[34]" (MS 339:277 [1906]). Neither qualisign nor legisign is an individual thing; but in contrast to a qualisign, a legisign, such as the word "the", has a definite identity, which typically allows for varying appearances (SS 32 [1904]). Another distinctive feature of the qualisign is that although it may be complex, like a chemical compound in which the elements cannot be discerned, it is nonetheless *in effect* perfectly homogenous and simple. A legisign, on the other hand, is more or less complex in its relations, although it may be indecomposable (MS 339:277 [1906]). Still, it requires some skill of analysis to determine in what regard a sign is a qualisign or a legisign. For instance, a piece of music, considered as a structure, is a legisign; but considered as a whole, in its aesthetic effect, it is a qualisign. The ordinary conception of the melody is mainly of the character of a qualisign, but from the perspective of contra point, it is a legisign (MS 339:277 [1906]). Any one performance of the piece is a sinsign.

Now, if this division of the sign into qualisign, sinsign, and legisign is combined with the instantiation criterion mentioned above, we will find ourselves in a rather perplexing situation. Namely, Peirce's discussions make it clear that it is only the legisign that is manifested in replicas; indeed, he explicitly asserts that every "legisign signifies through an instance of its application, which may be termed a *Replica* of it" (EP 2:291 [1903]). However, this seems to lead to the unexpected consequence that qualisigns and sinsigns, which are not capable of such replication, are not signs at all. Only,

why should this be surprising? If the sign is truly triadic and law-like, as Peirce so often claims, then it is only natural that a sign in itself can be nothing but a legisign.

The trouble is that Peirce *does* speak of qualisigns and sinsigns as signs. Possibly, this should be understood in a qualified sense; perhaps qualisigns and sinsigns are properly speaking quasi-signs, that is, sign-like enough to be considered borderline cases (cf. EP 2:257 [1903]; Wells, 1977). In some respects, it might be more appropriate to view them as *sub-signs*. A pure firstness or secondness (if such a thing can be imagined) cannot be a sign; yet, qualisigns and sinsigns may be discerned as parts of legisigns. This is easiest to grasp in the case of the sinsign, since the replicas of a legisign *are* precisely sinsigns (EP 2:291 [1903]; SS 32 [1904]). If they were not instantiations of a habitual sign, the sinsigns would be mere things, to which we might act or react dyadically, but which would lack all semiotic significance. On the other hand, there seems to be at least one important group of sinsigns, to which this argument does not apply, that is, to indicators, such as thermometers or weathercocks. At any rate, it does not seem quite fitting to say that such a sign, which as an object of direct experience directs attention to or affords information concerning its object, would be a replica (cf. EP 2:294 [1903]).

Besides, qualisigns are not replicas. Rather, they can be viewed as limiting cases, like all firstnesses; it is practically impossible to single out a *pure* qualisign. True, it is possible to identify qualities that act as signs; certain odours or perfumes, for instance, can stand for certain properties or feelings (see CP 1.313 [c. 1905]). However, as we saw in our discussion of firstness, a quality of feeling cannot stand in any kind of relation to an other without losing its character as a first. Consequently, to be able to act as a sign, the qualisign cannot be pure; its signification is dependent on connection. An *absolutely* self-contained representation would not be a sign at all (MS 797:15). It would be a pure presentation and, as such, not intelligible. Savan (1987-8, p. 24) has noted this near paradox in the Peircean conception of a qualisign. A quality can, properly speaking, only be a sign of an identical or similar quality; but there are no criteria of identity for qualities, as Peirce often emphasises. How-

ever, Savan's contention that this lack of clear delimitation indicates that qualisigns are legisigns after all seems to involve a misunderstanding; it is true that such semiotic operations as the classification of colours or the judgment of the quality of a work of art requires a complex setting involving legisigns; but this entrenchment does not change the fact that the sign in itself is a quality.

Furthermore, if a quality, such as a melody, acts as a mere *excitant*, and not as a *symptom* of a feeling, it lies outside of the scope of "sign", although it might be considered a medium of communication (EP 2:389 [1906]). Possibly, these arguments would be analogously valid for sinsigns; at least, Peirce suggests that the semiotic power of an indexical sinsign, capable of affording information, involves categorially simpler signs, and that the complex whole is held together by a kind of syntax (EP 2:294 [1903]). This connecting feature of the sign in question cannot be a qualisign or a sinsign, but must be a legisign of some kind. Thus, although a thermometer is certainly a sinsign, as it is an existent operating as a sign, its full semiotic capability involves signs of a habitual or law-like nature.

The Peircean requirement of embodiment is perhaps best understood as a recognition of the need for sinsigns; general legisigns are inefficient without replicas, and vague qualisigns must be parts of a sinsign to be able to act representatively. Accordingly, although a sign such as a melody, evocative of certain emotions, is not in itself a singular thing, it cannot act significantly without being materialised in some determinate occurrence. As Liszka (1996) notes, a quality acting as a sign "is always embodied in a singularity, but if the quality is the predominant aspect of the sign, then it is a qualisign" (p. 36). In a similar manner, Savan (1987-8) asserts that "a qualisign is sharply distinct from a sinsign only if the quality is taken as a non-occurrence" (p. 23).

It would seem natural to connect the qualisign-sinsign-legisign trichotomy with the *ground* of the sign. Liszka (1996, p. 35) argues that this division refers to the *presentative* character of the sign, and adds that it forms the basis of its capacity as a sign to represent its object. However, if this were correct, then the first trichotomy ought to be straightforwardly parallel with that of icon, index, and

symbol, if the two would not thereby be rendered simply equivalent. For instance, it would make no sense to speak of an iconic legisign, as Peirce does (see, e.g., EP 2:294). If the representative relation is iconic, then the ground must be qualitative, and the sign ought to be a qualisign – but to say so is redundant. Rather, the qualisign-sinsign-legisign trichotomy describes signs in their firstness,[35] that is, the way they appear when their representative and interpretative functions are put aside.

This, in turn, might suggest that the classification of signs into qualisigns, sinsigns, and legisigns actually pertains to the *sign vehicle*, the specific means of signification used in sign processes. However, as Greenlee (1973, p. 32) argues, the sign *itself* is not the bare object. Any thing serving as a sign possesses a number of properties, not all of which are relevant for its semiotic function (Savan, 1987-8, p. 19). For instance, the precise colour of an instance of the word "the" is in most cases irrelevant for its signification. The trichotomy under discussion relates to the signifying thing only in its semiotic capacity.

Finally, we ought to note that "sign vehicle" is not a Peircean concept; it is culled from the semiotic of Morris (see Morris, 1946, p. 20; cf. Greenlee, 1973, pp. 32-33). Peirce prefers to keep the notions of sign and vehicle distinct.[36] A mosquito, which transfers a disease from one place to another, is perhaps a kind of medium, but it is *not* a medium of communication, because the transfer of the disease to another organism is a separate event, in no *semiotically* relevant way dependent on the determination of the mosquito by the original carrier of the malady (EP 2:391 [c. 1906]). Similarly, a thing that simply moves information from one place to another, without establishing the required mediated contact, is not a sign but a vehicle (cf. sect. 5.1).

4.2 Objective Grounds

It is commonly held that Peirce improves on the scholastic formula *aliquid stat pro aliquo*[37] – that is, the characterisation of the sign as something that stands for something else – by adding the criterion

of interpretation (see, e.g., Colapietro, 1989, p. 4; Sebeok, 1994, p. 11). This contention is supported by many of Peirce's discussions, for instance, by the well-known definition of the representamen as "something which stands to somebody for something in some respect or capacity" (CP 2.228 [c. 1897]) or by the less familiar portrayal of the sign as "anything which represents something else, its *Object*, to any mind that can *Interpret* it so" (MS 640:8 [1909]; see also NEM 4:297 [c. 1903?]). Now, apart from the fact that these characterisations appear to involve a reference to a personal mind – the infamous concession to Cerberus – one could question whether the relation of "standing for", or *renvoi*,[38] actually forms a necessary condition of signhood. Excluding a few careless formulations, Peirce emphatically denies that the sign is a substitute. In the last chapter, we saw that Peirce's later definitions of the sign relation tend to emphasise mediation and determination, rather than representation. At least, there would seem to be a shift from an emphasis on the representative office of the sign to the constraining function of the object as an enabler of representation in the later texts.

Nonetheless, Peirce's semeiotic writings are undeniably acutely concerned with the problem of representation. The question of interest, then, is whether the requirement that a sign must have an object entails that every semiosis is representative, or, alternatively, how the sign-object relation is to be understood. This is, of course, one of the outstanding issues in both semiotics and philosophy, complexly connected to various discussions of realism, idealism, and meaning; I will not attempt to make any kind of survey of these debates. Rather, I will take on the problem of representation strictly from the point of view of Peirce's thought, and try to cast some new light on the issue using the findings of the last section as a guide. This examination will lead us to the important Peircean distinction between the dynamical and the immediate aspect of the object, and the best known of all of Peirce's classifications of signs, that of icon, index, and symbol.

In contrast to the examination of the categories and the definition of sign, I am not going to discuss the differences between Peirce's early and late conceptions of the object in detail in this

section; such developmental questions as will be addressed here pertain mainly to changes in the later theory and to certain specific issues concerning the icon-index-symbol trichotomy. The reason for this omission is that I find it more fruitful to consider Peirce's early notion of the object in the context of his theory of perception, which is the topic of the last section of this chapter.

4.2.1 Self-Reference and Representational Requirements

From one point of view, Peirce's "object" is an easy concept to grasp; in its most general sense, the term refers to "anything that we can think, i.e. anything we can talk about" (MS 966) or "anything that comes before thought or the mind in any usual sense" (SS 69 [1908]). In a more semeiotic characterisation, Peirce states that every "Sign denotes something, and anything it denotes is termed an *Object* of it" (MS 849:9 [1911]). These descriptions are broad enough to be applicable to the early as well as the later semeiotic.

One possible misconception, which needs to be dispelled immediately, is that the object would be a *thing* in the ordinary sense. The Peircean "object" is a technical term, purportedly adopted from medieval philosophy.[39] During the same period, approximately, that he begins to pay more attention to the formal adequacy of his sign definition, Peirce offers some reflections on the concept of "object", which illuminate its conceptual and historical background.

> What Is a Sign? It is anything which in any way represents an object. This statement leaves us the difficulty of saying what "representing" is. Yet it affords help by pointing out that every sign refers to an *object*. Let us begin by looking at this word object. It came in with scholasticism, and is somewhat remarkable as a fundamental term of philosophy that is not translated from the Greek. Its earliest occurrence is a translation from the Greek; but there is no corresponding word in the original. Another somewhat noticeable circumstance about the word is how little it has been deflected from its original meaning, of that which a representation in some sense reproduces or aims to exhibit in its true light. (MS 599:28a [c. 1902])

> …the common use of the word "object" to mean a *thing* […] is altogether incorrect. The noun *obiectum* came into use in the XIII century, as a term of psychology. It means primarily that creation of the mind in its reaction with a more or less real something, which creation becomes that upon which cognition is directed; and secondarily, an object is that upon which an exertion acts; also that which a purpose seeks to bring about; also, that which is coupled with something else in a relation, and more especially is represented as so coupled; also, that to which any sign corresponds. (MS 693:60 [1904])

Thus, we see that Peirce identifies a number of different more or less technical uses of the term "object". Of these, it is naturally the one mentioned last in the second quotation above that is of primary interest for semeiotic.

In a letter to Lady Welby, Peirce further explains that he does not make any substantial distinction between "subject" and "object"; at least, he does not accept the "German" distinction between the subjective and the objective, which has "led to a lot of bad philosophy" (SS 69 [1908]). For Peirce the logician, "subject" is of course the correlative of "predicate" (cf. MS 659:19-20 [1910]). However, he adds that he speaks of "subjects" only in the case of signs that have a part that separately indicates what the object is (SS 69 [1908]). In other words, "subject" is reserved for propositions (or *dicisigns*), while all signs have objects.[40]

The components of the sign relation receive their semiotic character from their relationship. In other words, the object should not be understood stringently as a tangible phenomenon, but rather as something that occupies the object position in a triadic relation. For example, the reference may be an existent entity, such as the person indicated by a proper name, or something more indefinite, such as the point of view represented by a certain book. The being of an object is not determined by ontological properties, but by functional status. Consequently, objects may come in many different forms and shapes:

> The Objects – for a Sign may have any number of them – may each be a single known existing thing or thing believed formerly to have existed or expected to exist, or a collection of such things, or a known quality or relation or fact, which single Object may be a collection, or whole of

> parts, or it may have some other mode of being, such as some act permitted whose being does not prevent its negation from being equally permitted, or something of a general nature desired, required, or invariably found under certain general circumstances (MS 637:32$_v$-33$_v$ [1909] = CP 2.232).

Peirce's tendency to speak of *the* object of the sign does not mean that a sign must refer to only one object. As the above quote implies, a sign may have – and often has – more than one object (cf. EP 2:492-494 [1909]). For instance, the propositional sign "the president is a liar" involves a number of objects of different levels of abstraction and determinacy. There are such partial objects as the idea of lying, and the general ideas behind the concepts "president" and "lie" – not to mention all objects, that is, real or fictional persons, which may be connected to that assertion in an interpretation. Still, from the point of view of semiosis, it is more convenient to say that the partial objects form one complex or total object, which singularly determines the sign (EP 2:492 [1909]; MS 637:34 [1909] = CP 2.230; cf. MS 9:2 [c. 1903?]; EP 2:393 [c. 1906]).

Now, the notion that all signs have a reference to something else, identifiable as an object, can be criticised from a variety of angles. Peirce himself notes that the criterion that a sign must represent an other, distinct from itself, is disputable, because signs that refer to themselves are perfectly conceivable. His favourite example of such a self-referential sign is a map, lying on the area depicted. On "a map of an island laid down upon the soil of that island there must, under all ordinary circumstances, be some position, some point, marked or not, that represents *quâ* place on the map, the very same point *quâ* place on the island" (MS 637:32-33 [1909] = CP 2.230; cf. MS 9:1 [c. 1903?]; MS 634:20 [1909]; MS 849:6 [1911]; MS 797:15). Another example is provided by a play, in which the actor uses an authentic historical object as a sign of that very object (MS 637:32 [1909] = CP 2.230; MS 797:15). Thus, the object of the sign may be the very sign itself (MS 9:1 [c. 1903?]). However, Peirce does not concede that such examples would falsify his conception of the sign-object relation.

> The word Sign, as it will here be used, denotes any object of thought which excites any kind of mental action, whether voluntary or not, concerning something otherwise recognized. This definition has encountered the objection that a Sign may refer to itself. The definition, however, does not deny this. Provided the Sign refers principally to something else, it may refer to itself in order thereby to single out that Principal Object. (MS 849:4-5 [1911])

This is far from clear, and needs to be examined closer. In his Harvard lectures on pragmatism, Peirce elaborates on his example of the map:

> …I shall suppose that [the map] represents every part of the country that has a single boundary by a part of the map that has a single boundary; that every part is represented as bounded by such parts as it really is bounded by, that every point of the country is represented by a single point of the map, and that every point of the map represents a single point in the country. Let us further suppose that this map is infinitely minute in its representation so that there is no speck on any grain of sand in the country that could not be seen represented upon the map if we were to examine it under a sufficiently high magnifying power. Since, then, everything on the soil of the country is shown on the map, and since the map lies on the soil of the country, the map itself will be portrayed in the map, and in this map of the map everything on the soil of the country can be discerned, including the map itself with the map of the map within its boundary. Thus there will be within the map, a map of the map, and within that, a map of the map of the map, and so on *ad infinitum*. These maps being each within the preceding ones of the series, there will be a point contained in all of them, and this will be the map of itself. Each map which directly or indirectly represents the country is itself mapped in the next, that is, in the next is represented to be a map of the country. In other words each map is *interpreted* as such in the next. We may therefore say that each is a representation of the country to the next map; and that point that is in all the maps is in itself the representation of nothing but itself and to nothing but itself. It is therefore the precise analogue of pure self-consciousness. As such it is *self-sufficient*. It is saved from being insufficient, that is as no representation at all, by the circumstance that it is not *all-sufficient*, that is, is not a complete representation but is only a point upon a continuous map. (PPM 168-169 [1903])

The qualification at the end of the quotation is crucial; it emphasises the fact that a sign must refer to *something* besides itself. A sentence such as "this sentence is untrue" cannot *mean* anything. An *absolutely* self-contained representation would not be a sign at all; as a pure presentation, it would not even be intelligible (MS 797:15; cf. MS 634:22 [1909]). The point upon the map, which represents itself and nothing else, cannot *act* representatively unless it is in a certain continuum of positions representing a different continuum of positions (MS 849:6 [1911]). The single point, as such, is not a sign; nothing "can be a sign of itself except as a part common to two different wholes of which one is a sign of the other" (MS 849:6 [1911]; cf. MS 634:21 [1909]). In other words, a sign, which is a part of another sign, *can* represent itself; the requirement that the object must be something else than the sign itself only applies to a *complete* sign (MS 797:15); "the parts of a sign, though they are signs, may not possess all the essential characters of a more complete sign" (MS 7:1 [c. 1903?]).

The self-referential sign is a partial sign, self-sufficient to a certain degree, but dependent upon other signs – or as we might say, upon a semiotic web or system – for its being able to function semiotically. If the map of a country were perfect in every conceivable detail, then the map and the country would be indistinguishable, and it would not be possible to speak of the one as a representation of the other, if there were no other sign or signs in some manner displaying them to be in a representational relation. This accords with the earlier analysis of the qualitative sign; a qualisign – such as the ideal map – cannot fulfil its function, unless it is a part of a network of signs, in which its semiotic character is exhibited.

Consequently, we see that self-reference qualifies but does not invalidate the representational criterion. The following entry from the Prescott Book (dated October 28 1909) makes this clear:

> A Sign is anything which represents something else so far as it is complete, and if it represents itself it is as a part of another sign which represents something other than itself, and it represents itself in other

> *circumstances*, in other connections. A man may talk and he is a sign of what he relates. He may tell about himself as he was at another time. He cannot tell exactly what he is doing at that very moment. Yes, he may confess he is lying, but he must be a false sign, then. A Sign, then, would seem to *profess* to represent something else.
>
> Either a Sign is to be defined as something which *truly* represents something or else as something which *professes* to represent something. (MS 277)

Thus, we see how Peirce can qualify the representational requirement as a condition that a sign must at least profess to represent. However, the Peircean position is prone to call forth a far more serious criticism than the one related to the problem of self-representation. Namely, the view that the sign must have an object has been a favourite target for critics over the years – notably mostly for members of the so-called "Buchlerian" school (see, in particular, Buchler, 1939a; 1955; Greenlee, 1973; 1981; Singer, 1987).

The critics claim to identify certain counterexamples, which allegedly show that not every sign has an object in the sense intended by Peirce. Typical instances include imperative commands, questions, grammatical connectives, pieces of music, or tones. According to Greenlee (1973, p. 56), the *semantic conception*, according to which all signs stand for objects, is unable to account for such signs. Thus, the demand for objective reference would in effect jeopardise the generality of Peirce's project, the outlook of which is summarised in Fisch's (1986) succinct formulation: "whatever else anything may be, it is also a sign" (p. 357). As Colapietro (1989, pp. 2-3) concedes, Peirce's demand that the sign must have an object appears to apply only to a certain class of signs, namely to *representational signs*.

Yet, Peirce holds that musical airs and commands are signs, and even that they fall within the purview of logic in the broad sense (MS 676:4-6 [c. 1911]). This seems to leave only two options; either the representational requirement is given up, or else we must be able to explain in what sense such non-cognitive signs can be said to have objects. For the Buchlerian school, the answer is clear; the general definition of the sign ought to include no necessary reference to an object or to representation. In Buchler's (1955, p.

155) terms, Peirce errs in defining the sign as a representamen; certain "signs", such as musical phrases, do not stand for anything, but are nonetheless said to possess meaning. In opposition to the basic tenets of semeiotic, Buchler (1955, pp. 155-156) argues that the sign should be characterised as a means of further judgment, placing the emphasis on interpretation and response in a sign-situation (cf. Colapietro, 1989, pp. 7-8). This conception has been used, in various ways, in attempts to rectify the Peircean position. Beth Singer (1987, pp. 100-101) proposes that Peirce's interpretant ought to be recast as judgment, but she maintains that the ensuing conception of semiosis is triadic, because between sign and interpretant there is a further mediating judgment, denoted "interpretation". Greenlee (1973) suggests that we can "understand by 'representation' the fact that a sign possesses a specific power to be interpreted, that it have a certain duty to fulfill as something that signifies in a certain way, calling forth appropriate interpretation" (p. 97). That is, the sign is representative because it is mediative. Thus far, Greenlee's argument seems to accord more or less with the findings of the last section. However, he adds that what "establishes the sign as representative is convention; it is a habit or rule of interpretation possessed either by an individual interpreter or by a society of interpreters" (p. 98). In other words, interpretation is the only essential condition of the sign (Greenlee, 1973, pp. 54-55). This is not acceptable from a Peircean point of view.

Several Peirce scholars have attempted to reply to criticisms of the kind outlined above, and have in various ways argued for the necessity of the concept of object. In an idealist vein, Ransdell (1977) contends that "the distinction between the interpretant and the object in the sign relation is really only the distinction between an actual interpretation and the ideally correct – which is to say ultimately unquestioned – interpretation" (p. 173). That is, we could say that the object is what will be represented in the final, ideal interpretation. This point of view has some appeal, but in general, its idealism is too strong for semeiotic. In particular, it does not accord well with Peirce's claim that the object, as something with which we are acquainted, precedes the sign, while the

interpretant in a significant sense follows the sign (cf. Savan, 1987-8, p. 26). Moreover, rendering the object as interpretation cuts off semiosis from all non-semiotic influence, leading to complete semiotic hermeticism. This seems to be Ransdell's standpoint, but as we will see, there are good reasons to hold that it is not Peirce's position (see sects. 4.2.2; 4.3; 5.1).

Employing a different strategy, Short also defends the Peircean conception of object. His argument employs Peirce's distinction between *immediate* and *dynamical* object (see sect. 4.2.2). Many signs, such as "unicorn", do not refer to real objects, but according to Short (1981b, p. 217), all signs signify something, namely the immediate object or object as it is represented. In other words, the immediate object is not necessarily independent of the sign. However, as Short (1981b) notes, "if we can question whether this immediate object is real, then that is because the sign itself indicates where or how, if anywhere or anyhow, that reality is to be found" (p. 217). Consequently, the dynamical object of such a sign as "unicorn" would be the world insofar as it does or does not contain unicorns. This dynamical object is not known through strictly semiotic means, but by collateral experience of the world. In this sense, then, any sign will have both an immediate and a dynamical object.

We shall soon take a closer look at the important immediate/dynamical distinction, but before that, we need to consider whether Short's explanation suffices to thwart the critical assault. His point concerning the experiential aspect of the sign is certainly correct in view of Peirce's writings, and appears therefore to be more adequate than Ransdell's idealistic solution. Short's account of how commands can be said to have objects is particularly enlightening (see Short, 1981b, p. 216). In one of his illustrations, Peirce considers the case of an officer issuing a command to a group of soldiers, and states that the object is the will of the commander (see EP 2:493 [1909]). According to Short, this has often been misunderstood as a reference to the psychological state of the commander; but the proper dynamical object is in fact *what* the commander wills, which is a *type* of action (cf. Short, 1992, p. 111). The immediate object would be the action as it is expressed in the

sign, which will typically differ from the action intended, in that it is less specific. The officer does not mean that the soldiers should just charge, head over heels; rather, the intended action is one in which such factors as terrain and the position of the enemy are taken into account. The soldiers are expected to grasp this without explication. However, is not this shared understanding conventional, based on linguistic skills and previous training? Largely, no doubt; but no training will exhibit the particular order as it is willed.[41]

Next, let us consider the piece of instrumental music. Short (1981b, p. 216) calls it a limiting case; if the object is the feeling or the musical idea embodied, then there can be no difference between immediate and dynamical object. However, he argues that there is such a distinction with respect to a piece of music as it first presents itself to us; it may take several hearings before one discovers the qualities of the music. Now, without doubt, it is possible to conceive of cases in which a certain piece of music can be said to stand for a certain feeling or mood, such as sadness, joy, or anger. Moreover, it is clear that this representation can be quite distinct from the actual effect of the music; one can grasp that a certain piece expresses anger without thereby becoming enraged. Yet, in its purest state, the music is a qualisign that stands for nothing but the quality embodied. Does such a sign have an object in any meaningful sense? The answer seems to be no. Pure music – if such a thing is imaginable – would be a presentation rather than a representation.[42] However, there can be no cognitive processing of the qualitative piece, unless it is embedded in a semiotic network. As a qualisign, a piece of music is indeed a limiting case, albeit not quite in Short's sense; it is a partial sign, which cannot function semiotically apart from a broader context of signs. This qualifies, but does not deny, the qualitative nature of the signification.

Thus, we see how such signs as commands and pieces of music can be said to have objects; the only exception would be a pure qualisign, which marks the boundary between presentation and representation.[43] It is more like a limit of semiosis than a sign in the proper sense. However, there is still one important kind of non-

representational sign that has not been considered, namely that of linguistic or logical connectives such as "and".

Short is strangely noncommittal regarding this matter. In "Semeiosis and Intentionality" (1981b, p. 223), he states that there is no reason to insist that words like "and" are signs, if in fact they stand for no object. Colapietro (1989, p. 12), in his turn, has criticised Short's contention, claiming that all words are signs for Peirce. In his answer to this criticism, Short (1992, pp. 111-112) hedges and says that he meant to leave the question open, adding vaguely that he agrees that all signs are words too, without pursuing the matter further. In contrast, Colapietro (1989, p. 12) provides an explanation of the problematic connectives; they are *partial* signs. By themselves, they do not refer to anything, but *in context*, they have indexical functions. Thus, if "and" is used in a logical discussion to connect *A* and *B*, it will point to these items, which may be singled out as its objects.

To sum up, we may say that such problematic cases as commands, pieces of music, and connectives have objects in a certain sense, but it may be rather contrived to say that all signs represent their objects. At any rate, it seems appropriate to treat "representation" as a fractional description of semiosis. In the *Dictionary of Philosophy and Psychology* Peirce defines the term "represent" as to "stand for, that is, to be in such a relation to another that for certain purposes it is treated by some mind as if it were that other" (CP 2.273 [1902]). In this definition, the emphasis is clearly placed on the relation between sign and object; the relationship is characterised as one of substitution. Of course, according to the principles of semeiotic, representation is meaningless without an interpretant; yet, the basis of representation need not be dependent upon the interpretation of the sign. By way of abstraction, the representational relation between sign and object may be examined as such, regardless of the third correlate of semiosis. Thus, we may conclude that by "representation", Peirce means primarily *directedness* toward objects (Liszka, 1996, p. 113; cf. Pharies, 1985, p. 15).

In spite of its frequent appearances in semeiotic, Peirce does concede that "representation" is a problematic term. In a deleted

remark, he asserts that it ought to be replaced by "mediation", which is less tainted by unwanted associations (RLT 282 [1898]). Consequently, it seems appropriate to follow Greenlee's lead and say that the representational capacity of signs is in a certain sense secondary to their function as mediators. Only, we might add that as a medium of communication, the sign tends to represent the object as being effective or at least active in relation to the interpretant (cf. sect. 4.1.2). In short, the object determines the sign, not in all respects, but in such a manner that the sign is thereby capable of producing a significant effect

4.2.2 The External and Internal Object

Representation is not the only way in which Peirce characterises the sign-object relation; he also states that the object determines the sign, often adding the qualification "relatively to an interpretant". Our investigation has already indicated that this semiotic function of the object may be specified as constraint and contextualisation. However, Peirce also describes the active role of the object as influence, sometimes even asserting that the effect emanates from the object (MS 634:22 [1909]; cf. CP 2.230 [1909]). This does suggest a more substantial role for the object; but it is not altogether easy to say how the claim should be taken.

In general, the description of the sign-object relation as one of influence is likely to call forth objections. For one thing, one may wonder how erroneous signs could be determined by their objects, or what kind of influence a fictional object is supposed to emanate. Still, the most difficult critical question concerns signs that refer to future existents or events, that is, *predictive signs*. How could such a sign be influenced by its object? Pondering the case of a weather forecast in a daily newspaper, Peirce notes that the subsequent weather is, unquestionably, the object to which that sign relates; but "how, it may be asked, can the state of weather have acted upon a sheet of paper that was printed, sold, used, and destroyed long before that state of things existed?" (MS 634:23 [1909])

Peirce's reply is unfortunately rather obscure. He asserts that the notion of influence should not be interpreted too narrowly; instead, we should broaden our conception of semiotic influence or causation "so as to make it include *logical consequence*" (MS 634:24 [1909]). Furthermore, Peirce suggests that the word "determine" is to be preferred over "cause" precisely because the latter term would rule out signs relating to the future (L36 [1909]).[44] This is, as such, not very helpful; but the following quotation casts some light on the matter:

> It may be asked […] how a lying or erroneous Sign is determined by its Object, or how if, as not infrequently happens, the Object is brought into existence by the Sign. To be puzzled by this is an indication of the word "determine" being taken in a too narrow a sense. A person who says Napoleon was a lethargic creature has evidently his mind determined by Napoleon. For otherwise he could not attend to him at all. But here is a paradoxical circumstance. The person who interprets that sentence (or any other Sign whatsoever) must be determined by the Object of it through collateral observation quite independently of the action of the Sign. Otherwise he will not be determined to [the] thought of that object. (EP 2:493 [1909])

We see, then, that the determination of the sign by the object is not to be understood too concretely; it is rather construed in terms of constraint and attention to the thing denoted. As we read Peirce's sentences, our minds are supposedly determined by Napoleon, a man we have never met. Presumably, the influence of the object reaches us through other means; it would seem natural, then, to say that it is a case of logical rather than strictly efficient[45] determination. We might as well have thought of Hamlet, in which case our minds would have been determined – to some extent at least – by a fictional object.

The crucial element of this theory is that of collateral experience or observation, which is somehow obtained independently of the action of the sign. At first blush, the claim that the object must be known through such extraneous acquaintance seems too restricting; certainly, there are numerous cases, in which we have come to know an object precisely through the mediation of signs, and not by

any direct, first-hand experience. Indeed, Peirce himself suggests something along those lines in the following passage:

> Every system of signs has certain properties. In virtue of these properties certain propositions hold good in that system of signs independently of the existence of the thing signified. For example, it is true that a griffin is a winged quadruped; but there is no fact which corresponds to this proposition and makes it true, except the fact that the word griffin is so used. It is a familiar fact that the earliest way of using signs is to think in them without thinking of them, as signs; that is to say, the thought of the sign does suggest another thought, but it is not distinctly thought of as suggesting the other thought. In this simple thought, – the *first intention*, – propositions, whose validity depends on the properties of the system of signs employed, cannot be regarded as merely *verbal*, but appear to express real facts. And even after reflection has shown the true nature of such propositions, this reflection though more or less intimately associated with the thought of the sign, yet remains a second thought distinct from the first, and so more or less of the old illusion lingers, even after it is known that it is an illusion. (MS 810:2b-3b)

Here, Peirce outlines how a sign may acquire a meaning and reference in a system of signs, apparently quite apart from any experience. Furthermore, he indicates that second-order awareness of the process of representation – that is, of signs *as* signs – will reveal that the signs used may be deceptive, but notes that a certain habit of regarding the initial objects as real will remain (cf. MS 8:4 [c. 1903?]).

As it stands, the passage above leaves it unclear whether a sign could function adequately with an *internal* object merely, that is, an object attributable to the system of signs. In what sense could there be collateral experience of the object of "griffin"? Can such knowledge be had only by previous acquaintance with other signs of the system? To answer these questions within the context of semeiotic, we need to take a closer look at Peirce's distinction between two kinds of objects.

According to Peirce, the object can be defined as something outside of the sign. However, the object "determines in the sign an element corresponding to itself; so that we have to distinguish the

quasi-real object from the presented object; or as we may say, the external from the internal object" (MS 145s; cf. MS 339:263 [1905]). The internal object, or the immediate object, as Peirce usually calls it, does not strictly speaking conform to the definition of the object, in that it is dependent on the sign. In contrast, the external or dynamical object is the proper object in the sense of being independent of the sign.

> ...every sign has *two* objects. It has that object which it represents itself to have, its Immediate Object, which has no other being than that of being represented to be, a mere Representative Being, or as the pre-Kantian logicians used to say, a merely *Objective* Being; and on the other hand there is the Real Object which has really determined the sign, which I usually call the Dynamical Object, and which alone strictly conforms to the definition of the Object. The Object of a Sign is its progenitor, its father. The Dynamical Object is the Natural Father, the Objective Object is the putative father. (MS 499s)

The distinction between the immediate and dynamical objects corresponds to the two sides of secondness, action and reaction; while the internal object is passive, the external or genuine object is "purely active in the representation" (MS 793:12/14_b [c. 1906]; cf. MS 339:279 [1906]).[46] In other words, the dynamical object remains in all respects exactly as it was before it was represented. Peirce acknowledges that "the purpose of representing an Object is usually, if not always, to modify it in some respect", but adds that "by the Object Itself, or the *Real* Object, we mean the Object insofar as it is not modified by being represented" (MS 793:12/14_b [c. 1906]; cf. NEM 3:886 [1908]). Thus, the external object can be defined as the object as it influences the sign or as "the Reality which by some means contrives to determine the Sign to its Representation" (CP 4.536 [1906]).

This characterisation of the duality of the object calls for a discussion on the problem of the proper status of the semeiotic object: is it real or not? One possible answer to this question may be called the strong realist interpretation of Peirce's theory of signs.[47] That is, the solution to the problem seems to be to identify the dynamical object with a real object – an object that is real in a metaphysical sense. The being of the immediate object is dependent on

its representation in the sign, and explains the fact that signs may err, or be used to lie or to refer to fictions; but the real object is independent of all representation, and as such guarantees truth as a kind of bedrock (cf. EP 2:407 [1907]). A sign may represent its real object falsely by producing an erroneous immediate object. Furthermore, the sign is deemed senseless if there is no real object. Such a realist reading finds ostensible corroboration in several of Peirce's statements, in particular his frequent use of the term "real object".

Still, however plausible the strong realist interpretation sketched above may appear in light of Peirce's distinction, it is too simple as it stands. Peirce also states that "the dynamical object" does not indicate an entity outside of the mind (SS 197 [1906]). This is initially puzzling; how could the dynamical object – the *external* and *real* object – be a mind-dependent entity? The obvious incongruity can perhaps be resolved as follows: while the dynamical object is not dependent on any *actual* human cognition, it is nonetheless not entirely independent of the semiotic process, which for Peirce is practically a synonym for intelligent or mind-like action. As we have seen, the object is not a thing, but a correlate of the sign; consequently, there can be no objects in the proper semiotic sense without signs.

An alternative way of looking at Peirce's distinction is to construe the immediate and dynamical object as different *aspects* of the object. If we look at the object from the point of view of representation, the emphasis is placed on the immediate aspect of the object, but in considering semiosis as a process of determination or influence, the focus is on the dynamical aspect. In other words, what makes something an object is (1) the fact that it is represented as an object by the sign and (2) that it acts as a determinant in the sign-process (Liszka, 1996, p. 21). Neither aspect of the object is independent of semiosis in a wide sense, but the dynamical object lies outside of the sign as the object that is *conceived* or *represented* to be the real cause of the sign (cf. EP 2:409 [1907]).

This aspectual approach has many advantages in comparison with the strong realist interpretation. Firstly, it is less prone to cause misunderstandings, since the immediate and dynamical object are explicitly not treated as separate entities; these objects actually

describe different sides of the same object.[48] Secondly, it does not postulate a reality absolutely beyond semiosis, a sphere of "things-in-themselves" that would be in principle unknowable for thought. This accords with Peirce's opposition to incognisable entities (see, e.g., W 2:213 [1868]). Peirce explicitly rejects the idea that there is a non-semiotic core to signs; to "try to peel off signs & get down to the real thing is like trying to peel an onion and get down to onion itself, the onion per se, the onion an sich" (MS L387 [1905]). Finally, and perhaps most importantly, the aspectual interpretation does not lead to a simplistic division of signs into true and false on the basis of the existence of the dynamical object. The dynamical aspect of the object refers to the determinative role played by the object in semiosis; in fact, Peirce indicates that the adjective "dynamical" is preferable to "real" on these very grounds (see EP 2:498 [1909]). True, Peirce states that a sufficiently complete[49] sign must in some sense correspond to a real object; it "cannot even be false unless, with some degree of definiteness, it specifies the real object of which it is false" (MS 7:2-3 [c. 1903?]). However, a closer examination of this claim shows that it is compatible with the proposed reading; namely, this reference to correspondence merely suggests that the distinction between truth and falsity requires a relation to an object of some degree of definiteness.

Further support for the position defended here can be found in Peirce's discussions of signs with inexistent or "unreal" objects, such as fictional characters. What would be the object of "Hamlet"? According to the plain realist solution, such a sign would have an immediate object, but no dynamical object – a contention that can be supported by some of Peirce's statements (see, e.g., MS 318:15/159$_b$ [1907]). In other words, the scope of the dynamical object would be that of *existents* or *embodied reals* as determinants of signs.[50] This is not Peirce's position; the dynamical object may be altogether unreal in the ordinary sense of the word. One way to understand this claim is to take it to mean that the non-existent object is a mental construct, which nonetheless acquires a degree of reality once it has been imagined or presented to be in a certain way. In other words, the reality of such an object would be tied to the facts of its creation and description. Peirce often speaks of

fictional characters in this manner, for instance in his Harvard lectures, where he considers the reality of Scheherazade as a literary figure (see PPM 222 [1903]). Johansen (1993a, p. 84) accurately notes that Peirce occasionally suggests that signs with fictional objects are not full-fledged signs; they can be accepted as signs as long as they announce or display their unreal character in some manner (see, e.g., EP 2:429 [1907]). For Johansen, this seems to indicate that not all signs have dynamical objects (see Johansen, 1993a, p. 82). However, following Short, we can argue that all signs have both dynamical and immediate objects; in the case of a fiction, the sign will involve a kind of *precept* or *clue*, which indicates to what part of reality or to what universe of discourse the sign refers (see sects. 4.2.1 and 5.3). This hint, or its substance, is the immediate object (SS 83 [1908]).

This account of fictional objects might suggest that the development of mind – whether through inquiry or other modes of interpretation – will mean nothing but the gradual elimination of false signs in order to reach a foundation of real objects. However, looking at the matter from a somewhat different angle, Peirce defines the "real object" as a *supposedly* real object; it may even be created by the sign, but it is nonetheless *professedly* real from the point of view of the particular semiosis in which it is involved. Unexpectedly, he concludes that such a sign as "witch" has a real object.

> ...the phrase "the real Object of a Sign" does not imply that the Sign is altogether veracious. The word "witch" is a sign having a "real Object" in the sense in which this phrase is used, namely to mean a supposedly real Object, not the Sign, and in intention or pretension not created by the Sign, and consequently professedly real as far as the action of the Sign is concerned. It is real in the sense in which a dream is a real appearance to a person in sleep, although it be not an appearance of objects that are Real. (MS 634:26 [1909])

Peirce holds that the dynamical object is defined as such by its position in relation to semiosis, the action of the sign; it is not the ontological status of the object that is at stake, but rather its function as an determinator in semiotic activity. Consequently,

even an openly fictional sign will have a dynamical object, capable of producing real effects. As Peirce notes, such action supposes some *approach* to reality, but it does not suppose perfect reality, or even reality in the main (MS 339:279 [1906]).

Certain cognitive products, such as Shakespeare's Hamlet, may function dynamically, once they have established themselves. Obviously, we may form our first acquaintance with this object through the mediation of signs – as we do when we read about real people in newspapers, for instance. What the signs must do, then, is relate the sign "Hamlet" to objects with which we are already familiar (kings, Denmark, the universe of drama…). After a while, "Hamlet" takes on a reality of its own, and therefore acts as an object that can delimit interpretation. The reins may be looser than in the case of existent objects; but as an object, "Hamlet" prescribes a certain domain of possible interpretations. It acts as a dynamical object; but its content-bearing being is nonetheless interpretational. Socially established signs may create objects with real dynamical power. Although "no phoenix really exists, real descriptions of the phoenix are well known to the speaker and his auditor; and thus the word is really affected by the Object denoted" (CP 2.261 [c. 1903]).

What these examples show, then, is that the dynamical aspect of the object is primarily associated with the influence or action of objects on signs. The recognition of the dynamical force of certain objects does not entail that the experiential object could not be found, upon analysis, to carry representational content.

The aspectual interpretation of Peirce's two objects avoids the pitfalls of a naïve metaphysical realism, in which a pre-given sphere of reality only awaits discovery, while at the same time steering clear of full-out semiotic idealism. Namely, in addition to the reflections on fictional objects above, it should be emphasised that the object is not strictly speaking contained in any actual constellation of signs; after all, the *modus operandi* of a representational sign is to refer to something else. While the immediate aspect of the object is expressed by the sign, there is always a sense in which the sign points beyond itself. This "outside", conceptualised as the dynamical object, is unexpressed

by the sign (cf. SS 83 [1908]). In general, the dynamical aspect of the object can be defined as "that to which the Sign applies but which it does not express otherwise than through some other Sign, or through collateral experience, or through an indication of how the interpreter of it may proceed in order to identify it" (MS 640:9_v [1909]). In other words, the external object can be indicated through the internal object, but it is primarily known through experience.

> Whether the object immediately before the mind is the Real object or not seems to be a question from which it is difficult to extract any clear meaning; but it [is] quite certain that no thinking *about it* will at all modify the Real object, since this is precisely what is meant by calling it Real. It is sometimes an object shaped by thinking, – of which the very last sentence affords an example; but, so far as it is Real, it is not modified by thinking *about it*. Now in thinking, the object before the mind is under the thinker's control and is always modified by the action of his will. It is therefore not the Real thing, although the Real thing is undoubtedly the object he is thinking *about*. (MS 634:9-10 [1909])

> We must distinguish between the Immediate Object, – i.e., the Object as represented in the Sign, – and the Real (no, because perhaps the Object is altogether fictive, I must choose a different term; therefore:), say rather the Dynamical Object, which, from the nature of things, the Sign *cannot* express, which it can only indicate and leave the interpreter to find out by *collateral experience* (EP 2:498 [1909]; cf. MS 339:279 [1906]).

In sum, the dynamical object is something with which we must be familiar by previous or additional experience in order to be able to grasp the sign. It is "that with which [the sign] presupposes an acquaintance in order to convey some further information concerning it" (MS 637:31_v [1909] = CP 2.231). In general, we could say that the reference of a sign to its object serves the purpose of *identification*; namely, "the identification of the actual or supposed previous experience with which the new meaning, conveyed in the sign, is to be attached" (MS 318:18/173_b [1907]). Looking at the matter from the point of view of knowledge, the object may be characterised as "that which a sign, so far as it fulfills the function of a sign, enables one who knows the sign, and knows it as a sign, to know" (MS 599:31 [c. 1902]). Although we can say that the

dynamical object is something forced upon mind in perception, it involves more than perception reveals (SS 197 [1906]). In other words, the determination of the sign by the object is not purely efficient; it is also of such a nature as to enable the sign to function representatively and as a means for the growth of knowledge through interpretation.

The references to collateral experience imply that semiosis cannot be a matter of purely semiotic structures; a sign requires a certain experiential background in order to be able to function as such. In other words, a system of signs is empty without collateral observation, that is, "previous acquaintance with what the Sign denotes" (EP 2:494 [1909]). Hence, the basis of the dynamical aspect of the object is experiential knowledge of or familiarity with the object in question, apart from its representation in the sign. That is, this connection between interpreting agent and object is not a part of the actual sign-relation. To put this important point in Peirce's terms, the interpreter must be determined by collateral observation of the object, independently of the action of the sign (EP 2:493 [1909]).

The need for collateral experience may be illustrated with an example. Suppose somebody says, "George W. Bush is a liar". In order to be intelligible, that sign requires previous experience with some, or at least one, of the objects involved. We need to have an idea of what "being a liar" entails, and we should know who George W. Bush is. Of course, the experience of these objects need not be direct; it may be mediated by other signs. Nevertheless, some experiential background is required in order to make sense of the assertion. Not knowing precisely who George W. Bush is, but knowing something of the rules and conventions of language, we may conclude that some man called "George W. Bush" is allegedly a liar; but without further collateral observation, the sign will remain hopelessly unspecific. If we do not know what lying entails, the assertion will be close to senseless. Of course, somebody might explain that it means the opposite of "telling the truth"; but that is of no avail, if the ideas of opposition and truth are also unknown to us. In sum, mere description and definition cannot identify the

objects for us, if there is no collateral experience upon which they can build.

Yet, all this seems to lead to a dualism between semiosis and experience, and begs the question of how signs can be said to stand for experienced facts, except perhaps as poor substitutes for the real thing. However, here the subtlety of the Peircean approach comes to the fore. Signs are not separate entities, which would be brought into existence merely by singular experiences. No matter how we try, we can never get down to the first experience as such; it can only be grasped later with the help of signs (cf. Santaella Braga, 1993, p. 408). New experiences – in the sense of new to us – are brute facts, that is, dyadic relations that are not intelligible as they stand. In order to be explicable, they must be encased in triadic relations, which again are dependent on previous semioses. True, we may very well remember the first time we saw George W. Bush on the television screen and simultaneously heard his name mentioned, and consider the event to be a first experience that gave birth to our sign "George W. Bush". Yet, the experience, which taken by itself would be incomprehensible, was probably comprehended in relation to numerous familiar signs, such as "president", "man", and "Ronald Reagan" – not to mention the complex modes of understanding that are needed to make sense of the televised picture. This does not change the fact that the collateral experience of George W. Bush, or in this case of the visual image of George W. Bush, preceded a series of signs as an experience.

It is not possible to state in a non-relative and self-evident way what came first: signs or experiences. In fact, it would be pointless to try to find the absolute basis of signs; we could perhaps work our way backwards in the process of semiosis, with all its brute experiential interruptions, but it is not humanly possible to get down to some kind of base-level of pure experience. Still, our experiences are not simply subsumed into the sphere of signs. As such, they stand as brute facts that cannot be denied; but they can be examined with the help of signs, and developed into meaningful relations by connection to other signs – especially if the experiences are of a recurring type. Hence, given any sufficiently limited sign-relation, it can always be referred to a possible experiential fact or

situation. As most of us have never bumped into George W. Bush in real life, the connection is probably distant and vague, to the extent that it would be almost impossible to state what experiences constitute the background of the sign. Yet, the sign "George W. Bush" is experiential in the sense that we have some kind of idea of what it would entail to have an actual experience of George W. Bush. In fact, all complete signs - fictional as well as real - have some such experiential basis, no matter how vague, indirect, or distant. That is their ultimate dynamical object.

To conclude this discussion, let us return to the problematic case of future objects mentioned at the beginning of this section. What collateral experience can be involved in such a sign as a weather forecast? Evidently, we are not directly acquainted with the object in question, say tomorrow's weather in a certain city. Yet, this is not a conclusive counterargument against the notion that all signs have some kind of experiential connection. Obviously, the sign in question requires familiarity with such things as the weather and time. Moreover, the experiential purport (to use a somewhat contrived phrase) can be construed as follows: if you find yourself in place *x* at time *y*, then you will experience weather of the type *z*. Obviously, as we all know from experience, the forecast may be mistaken; yet it *professes* to refer to the actual weather as it *will be*; and the eventual success or failure of the sign is, in a sense, determined by this real and highly dynamical object. Even if the world were annihilated, so that there would be no place *x* and instantiation of weather of the type *z*, our minds would, nonetheless, be logically determined by the object. This experiential identification is a crucial part of making sense of the signs involved.

4.2.3 Icon, Index, and Symbol

Although the object in its dynamical aspect can be described as a determinant of the sign, it is also possible to look at the matter from a different perspective, that is, from the point of view of representation. Of all Peircean classifications of sign relations, the best known and the most discussed is no doubt the icon-index-

symbol trichotomy, which describes the representative relation between sign and object – or, in the later framework, the relation between sign and dynamical object. However, it is neither possible nor necessary to make an in-depth survey of the development of the concepts of icon, index, and symbol in this context; nor can we examine all the intricate discussions pertaining to iconicity, indexicality, and symbolicity.[51] For our purposes, it is sufficient to consider certain key moments in the evolution of Peirce's three sign types, and to relate the central trichotomy to the conception of sign and object that has been outlined above.

The icon-index-symbol trichotomy first appears in the guise of *copy*, *sign*, and *type* in the early 1860s (W 1:79-80 [1862]). This division is mostly of interest as an indication of things to come; it is certainly one of the first unmistakably semiotic trichotomies in Peirce's writings. Still, it is worth noting that the young Peirce denies the possibility of a pure copy, almost as a premonition of the coming controversies concerning iconicity and resemblance.

> The simplest kind of agreement of truth is a resemblance between the representation [52] and its object. I call this *verisimilitude*, and the representation a *copy*.
>
> Resemblance consists in a likeness, which is a sameness of predicates. Carried to the highest point, it would destroy itself by becoming identity. All real resemblance, therefore, has a limit. (W 1:79 [1862])

In general, Peirce's sign-object trichotomy tends to evolve side by side with his early theory of categories; yet, it is not quite clear how it should be viewed in the light of his categorial conceptions. In the "New List", we find the following characterisation:

> …there are three kinds of representations.
>
> 1st. Those whose relation to their objects is a mere community in some quality, and these representations may be termed *Likenesses*.
>
> 2d. Those whose relation to their objects consists in a correspondence in fact, and these may be termed *Indices* or *Signs*.
>
> 3d. Those the ground of whose relation to their objects is an imputed character, which are the same as *general signs*, and these may be termed *Symbols*. (W 2:56 [1867])

Now, we should recall that Peirce at this time defines a representamen as something that involves a triple reference: to the ground, to the correlate, and to the interpretant (W 2:55 [1867]). The reference to a correlate – that is, to an object (cf. W 1:355 [1866]) – is presumably based upon an agreement in comparison. According to Peirce, we cannot comprehend an agreement between two things, except as an agreement in some respect; and this respect is a pure abstraction – that is, an abstract quality such as "blackness" (W 2:52-53 [1867]). The reference to such an abstraction is called ground. Now it is possible to construe the likeness as a representamen, the representative quality of which is a quality possessed by the representamen as such, while the quality that forms the basis of the representative capacity of the symbol is ascribed or conventional. However, how should the representative capacity of the index be understood within the framework of the early categorial outlook? What is correspondence in fact, if all agreement is agreement in some quality, and this qualitative unity is an abstraction that only arises within judgment? Take a typical example of an index, the flag as an indicator of the direction of the wind. Since it is the mind that brings the impressions involved together, there is no recourse to objects, except as they are compared with respect to an abstract quality within a propositional judgment. The natural way to conceive of the matter would be to say that the flag is capable of representing the wind because of a physical or contiguous connection to the wind *apart* from the representation; the index would be *actualised* because of our experience of the wind and its effects. However, that option is not strictly speaking open to the hermetic position, according to which representation is a matter of comparison in some respect.

The problem in question can be discerned even more clearly in "Some Consequences of Four Incapacities". There, Peirce speaks of the "pure demonstrative application" of the sign rather than the index, and defines it as a "real, physical connection of sign with its object, either immediately or by its connection with another sign" (W 2:225 [1868]), However, a bit later in the same article the pure demonstrative application is specified as a certain kind of relation between *thought-signs*, rendering the idea of external reference

questionable. As Hookway (2000) explains, Peirce's "1868 position was that the 'pure demonstrative application' of a thought or judgement was always to another thought or judgement of the same object: the only 'existential' relations exploited in cognition were *between* judgments" (p. 130).

These difficulties point to certain conflicting tendencies in Peirce's early semeiotic. On the one hand, his early epistemological stance tends to deny the existence of anything but thought-signs; on the other hand, the semeiotic development of his central semeiotic trichotomy seems to be pulling his thought in a different direction. The dilemma is not properly resolved until the 1880s, when Peirce quietly abandons the early cognition-centred standpoint, and affirms the index as a full-fledged sign (see, e.g., W 5:163 [1885]). This revolution in his thought – as it truly might be called – goes hand in hand with his transformation of the theory of categories, notably with the affirmation of the non-abstract character of secondness (cf. sect. 3.1.2). Furthermore, the change is related to a new understanding of the function of *reference*. In his early writings, Peirce tends to defend a *descriptive* theory of reference, according to which both the subject and the predicate of a proposition are general terms (see W 2:180 [1868]; Hookway, 2000, p. 128). However, in the texts of the 1880s, Peirce explicitly adopts the view that there must be non-descriptive reference.

It is difficult to say what precisely causes this change; one factor is definitely Peirce's work on quantifiers in logic, another is the more common-sensical affirmation of the "brute" aspect or reality, or the "outward clash" (see W 5:225 [1885]). Hookway gives a lucid summary of one of the principal logical motivations:

> Interpretation and evaluation of quantified propositions require a specification of a universe of discourse or domain of quantification. This cannot be specified by a general term *within the proposition itself*, since the interpretation of that very description will itself be relative to the universe of discourse. Peirce had argued that *indexical* signs must be used to fulfil this function; and thus they were available as a theoretical device for handling problems about singular reference too. (Hookway, 2000, p. 129)

It is difficult to exaggerate the importance of this turn for Peirce's philosophy; this shift in perspective is in fact the starting-point for Peirce's later semeiotic. Moreover, the relevance of the notion that reference requires *contextualisation* within a universe of discourse stretches beyond the theory of quantification; Peirce later generalises the notion of a universe of discourse to be a requirement of any communicative semiosis – which, as we shall see, amounts to saying that it is a requirement of any higher-order human sign process, including seemingly private thought.

This special communicative relevance of the index will be elaborated later in the study (see sect. 5.3). Let us now move on to Peirce's mature conception of the icon-index-symbol trichotomy.

Although Peirce's later writings offer numerous definitions of icon, index, and symbol, which quite naturally display some divergences in expression and scope, it is safe to say that the trichotomy in question constitutes one of his most stable and readily understandable semeiotic positions. This is not to say that the division would not involve problems; for instance, the notion of iconicity has frequently been attacked by conventionalists of different stripes. Others have opined that Peirce erred in making icon, indices, and symbols pure signs.[53] In view of such criticisms, it is appropriate to cite a lengthy passage from the 1903 Lowell lectures, which not only gives an excellent summary of the three types of sign, but also serves as a pre-emptive strike to the critical assault:

> ...there are three kinds of sign. The first kind consists of Icons, which like all signs are such only by virtue of being interpreted as such, but whose significant character which causes them to be so interpreted is their possessing a quality, in consequence of which they may be taken as representative of anything that may happen to exist that has that quality. Of course, there are no signs that are exclusively iconic. But a geometrical diagram, for example, represents, say, a triangle, simply because it is like it.
>
> The second class of signs consists of *Indices*, whose significant character which causes them to be used as signs lies in a matter of *positive fact*, the fact that they are really related, rerelated, to the objects they denote. This genus of signs has two species, of which the first consists of those that are merely connected with their objects and call attention to them, of which an example would be Bunker Hill

> Monument, which its designer, Horatio Greenough, declared he meant to say "Here!" merely that, and nothing more. The other species consists of Indices of the first species which carry attached to them and calling attention to them Icons of these same objects. Such is the weathercock which is not only connected with the wind but points in the same direction.
>
> The third class of signs are Symbols, which not only, like all signs, function as such only in being interpreted as such, but further have for their special significant character merely the certainty, based on some habit, natural disposition, or convention, that they will be understood in certain ways. Thus the word "man" bears not the smallest resemblance to a man, nor is it physically connected with a man, nor otherwise sufficiently connected to make that much reason for using it as a sign of a man; but which is certain to be understood to mean a man and therefore is an excellent sign of one. (MS 462:86-88 [1903])

An icon is a sign which refers to its object based on characters of its own, i.e., qualities that it would possess whether the object would actually exist or not (CP 2.304 [1901]; EP 2:291 [1903]). The icon would retain the character, which renders it significant, even if there were neither object nor interpretant; but in that case it would no longer be able to function as a sign (MS 7:14 [c. 1903?]; cf. MS 8:3 [c. 1903?]). In phaneroscopic terms, an icon is a first. Strictly speaking, only a pure possibility can be an icon, since any concrete or conceptual connection will introduce relational complexity, which is foreign to the category of firstness (cf. EP 2:273 [1903]). However, given the fact that a proper sign must have an object and an interpretant, an icon cannot function significatively on its own. The pure icon is an abstraction, prescinded from signs that are more complex; we do not encounter pure icons in actual experience. Still, there are signs, which refer to their objects mainly by similarity. Thus, there are signs that are primarily iconic, or *hypoicons*, to use Peirce's term (see EP 2:273 [1903]). Such iconic signs are *images*, *diagrams*, or *metaphors*.

It is practically impossible to offer an example of a pure icon, except for the rather intangible case of qualitative possibilities; but it is easy to identify iconic signs. Some examples offered by Peirce are a piece of mimicry, an algebraic equation, and a drunken man exhibited in order to show the horrors of alcohol (EP 2:13 [1895]).

Of these illustrations, the first is an image, the second a diagram, and the third a metaphor. This shows that the similarity between iconic sign and object need not be one of simple likeness. The iconic sign resembles its object *in some respect*.

Now, the notion that the iconic relation is based on resemblance is a favourite target of certain critics, who maintain that representation is wholly conventional. It is not possible to go into the details of these arguments here;[54] but some observations on how the issue might be resolved from a Peircean point of view are in order. Referring to the passage cited above, we might first note that Peirce asserts that no signs are exclusively iconic. This is, of course, merely another way of saying that there are no pure icons. Alternatively, we could also say that the icon is an *incomplete* sign; it "seems to be of the very essence of an icon that it should not be perfect" (MS 277 [October 29 1908]). It is not capable of representing an object on its own, but nonetheless of utmost relevance as the only kind of sign capable of immediately exhibiting certain properties as significant.

> …a sign whose significance lies in the qualities of its replicas in themselves is an *icon*, image, analogue, or copy. Its object is whatever that resembles it its interpretant takes it to be the sign of, and is as sign of that object in proportion as it resembles it. An icon cannot be a complete sign; but it is the only sign which directly brings the interpretant to close quarters with the meaning;[55] and for that reason it is the kind of sign with which the mathematician works. (MS 7:14-15 [c.1903?]; cf. MS 8:4 [c. 1903?])

Secondly, Peirce states that the icon, like all signs, is a sign only by virtue of being interpreted as such. This should be specified as being *interpretable*; but otherwise, Peirce's contention is clear. The iconic sign *is* a sign, and as such triadic (cf. MS 12:10 [1912]).

However, the fact remains that the icon possesses the quality that makes it fit to function as a sign when the occasion arises apart from an actual relation to the object or a habitual relation attributable to the interpretant. It is therefore a doubly *degenerate* sign (CP 2.92 [c. 1902]). This might be taken to entail that the icon is not a proper sign, or in some sense derivative. Indeed, it *is* questionable

whether a pure icon should be called a sign at all; it would, at any rate, be indistinguishable from its object, a mere quality or a possibility of a quality. In general, the same kinds of qualifications that pertain to firstness apply to the icon, although Peirce sometimes distinguishes the icon and its qualitative content; one "quality is said to resemble and to differ from another; but this is a character of them as the meanings of icons" (MS 8:5 [c. 1903?]). Here, we again encounter the problem of resemblance that was considered in the context of Peirce's theory of categories (see sect. 3.2.2). The conclusions of that discussion might be taken to support a conventionalist position, since it led us to the stance that resemblance or similarity is a characteristically *mind-dependent* relation. However, that a certain likeness between two objects – for instance, the drawings of a house and the completed house – is partly dependent on the purposes of interpretation does not alter the fact that the sign is capable of representing the house because of certain qualities it possesses and would possess even if the house were never actually built. The sign is not merely conventional, although it is indexical (as a plan of *this* house) and symbolical (as the kind of sign used to represent a certain type of objects) as well. Peirce would not accept the attempt to assimilate iconicity into the symbolic sphere.

Turning to the later conception of index (or, alternatively, *seme*), we find that Peirce typically characterises it as a sign which refers to its object based on an actual connection to the object, or because it forces the interpreter to attend to the object (cf. EP 2:14 [1894]). The index would lose the character which makes it a sign if the object were annihilated, but would not lose that significant character if there were no interpretant (CP 2.304 [1902]). That is, the index is actually affected by its object (EP 2:291 [1903]). Indices assure us of the reality and nearness of the things to which they refer; but they do not offer any insights into the nature of the objects (CP 4.531 [1906]). From a phaneroscopic perspective, the index is a second. Since the index necessarily shares at least one quality with its object, it involves an icon (cf. EP 2:291 [1903]). Like the icon, the pure index is an ideal abstraction; in experienced reality, we do not meet indices as such, but rather signs that are primarily indexical.

These may be called *subindices* or *hyposemes* (EP 2:274 [1903]). To be more precise, an absolutely pure index would be equivalent to its "content" – the existential relation – and indistinguishable from it. A dyadic relation does not function semiotically, unless it is incorporated in a representational relationship, such as the indexical sign.

According to Peirce, indices, or indexical signs, may be distinguished from other signs by three marks: (1) they possess no significant resemblance to their objects; (2) they refer to individuals or single phenomena; and (3) they direct the attention to their objects by compulsion (CP 2.306 [1902]). The indexical sign is the only sign capable of compelling and directing attention; "an Index forces its Object upon the Semeiotic field, or consciousness, of the Interpreter, by brute force, disdaining gentle 'evidence'" (MS $293{:}12_{vd}$ [c. 1906]). Indexical signs may be exemplified by the hand of the clock, proper names, and pronouns (EP 2:274 [1903]). An illuminating illustration of indexicality is provided by photography. One might expect that a photograph would be an icon or a hypoicon, as it resembles its object perfectly in certain respects. However, in Peirce's scheme, it is principally indexical, because the relation between sign and object is existentially established by the circumstances of its production; it is *made* to correspond to a reality, point by point (see EP 2:6 [c. 1894]; MS $16{:}13_{v}$ [c. 1895]; CP 4.447 [c. 1903]).[56] For instance, the photograph of the president of the USA represents its object indexically because the photograph was taken in his physical presence, something of which we are aware as interpreters. Of course, the picture is also iconic, since it is obviously similar to its object, but that is not the principal basis of the reference. However, if the photograph also happens to resemble the interpreter's father, then the sign functions iconically. That is a distinct sign relation, which does not affect the indexicality of the representation of the president (except in the extended sense that the interpreter might realise that his or her father resembles the president; but that is properly a matter of interpretants).

Finally, a symbol is a sign, which refers to its object based on a habit, convention, or rule of interpretation (EP 2:292 [1903]; CP 4.447 [c. 1903]; SS 70 [1908]). It does not matter whether the habit is

natural or conventional, nor how the concrete symbol sign was originally chosen or constructed; it is precisely the fact that it is used and understood as such, which makes it a symbol (CP 2.307 [1902]).

> I think [...] that I shall not wrench the word ["symbol"] too much if I use it to mean a sign to which a general idea is attached by virtue of a habit, which may have been deliberately instituted, or may have grown up in a natural way, and perhaps have been acquired with one's mother's milk, or even by heredity (MS 797).

The symbol is connected with its object through an idea of the symbol-using mind (EP 2:9 [c. 1894]). As a result, the symbol would lose its significant character if there were no interpretant (CP 2.304 [1901]). As a general sign, the symbol is an archetypical third. The symbol has no existence, in the sense of being a single thing or event, but it is nevertheless real. Its reality consists in the fact that existents will conform to it (EP 2:274 [1903]). In order to function in concrete semiosis, a symbol must be embodied in some sense; that is, it must act through actual existents. Consequently, the symbol in practice involves indices and icons.

Examples of symbols are abundant, since cultural and conventional signs are primarily symbolic. For instance, words, sentences, and books are all symbols (EP 2:274 [1903]; CP 4.447 [c. 1903]). Still, we do not encounter and use the symbol itself in actual semiosis, but a replica of the symbol, which in itself is a legisign.

Peirce's trichotomy of icon, index, and symbol exhibits an explicit phaneroscopic progression of first, second, and third (cf. EP 2:9 [c. 1894]). In fact, the principles of phaneroscopy form the basic rationale of the division; it displays the aspectuality that is characteristic of Peirce's categorial approach. The icon-index-symbol trichotomy does not divide semiotic space into three clear-cut classes or spheres (cf. Jakobson, 1980, p. 38). As we saw in the case of the photograph, a sign can operate in many different ways, depending on the sign relation in which it is involved. In view of this, the icon, the index, and the symbol are best construed as semiotic functions, abstracted from the process of semiosis. While the same sign may be at once iconic, indexical, and symbolic, the

operations are still distinct (cf. EP 2:8 [c. 1894]). However, in an entry in the Prescott Book, Peirce states that the notion of an iconic index is self-contradictory (MS 277 [October 30 1909]). This is true, but Peirce is here taking a needlessly narrow view of the semiotic functions; a sign cannot be an icon and index (or symbol) *in the same respect*. Furthermore, it is usually reasonably clear of what kind a certain sign is. Although a fully developed sign includes all three referential functions, semiosis often requires "that a representamen should exercise one of those functions to the exclusion of the other two, or two of them to the exclusion of the third" (CP 4.448 [c. 1903]).

In sum, the representational function of a sign may be described in terms of iconicity, indexicality, and symbolicity, based on the connection between sign and object. However, indices play a central role in actual reference, because they are the only signs that have an existential connection to their objects. For instance, names are crucial indices that turn our attention to objects of collateral experience. In the statement "George Bush is the president of the USA", the sign "George Bush" serves as an index that singles out the object in question. As general, symbols are by themselves not capable of determining the reference in such a fashion. That is, if there is not a sufficiently strong indexical factor in the semiosis, the sign will remain hopelessly vague in its reference; the isolated statement "the president has declared war on terrorism" is hardly specific enough for the evening news in Finland, although many interpreters would have made the right experiential connection in the first years of the 21st century. Of course, such lack of specification, be it of the form of ambiguity, vagueness, or generality, may be intended. It is an effective tool in political rhetoric, for example. Consequently, reference is not a self-evidently given fact of a sign relation. It is often dependent on the purposes involved in the semiosis – on the goals of the process and on the projected effects of semiosis. These issues will be considered in more detail later in this study (see sects. 5.2.3; 5.3.3).

Before leaving the sign-object relation and the icon-index-symbol trichotomy, a few additional remarks on the Peircean concept of ground are in order. In the semeiotic of the "New List",

the ground indicates the abstract agreement of objects brought together in propositional judgment; the reference to a ground constitutes a quality. However, as many Peirce scholars have noted, this concept appears to be absent from the later sign definitions, apart from one oft-cited passage, in which it is characterised as "a sort of idea" that refers to the way in which the sign stands for the object.

> "Idea" is here to be understood in a sort of Platonic sense, very familiar in everyday talk; I mean in that sense in which we say that one man catches another man's idea, in which we say that when a man recalls what he was thinking of at some previous time, he recalls the same idea, and in which when a man continues to think anything, say for a tenth of a second, in so far as the thought continues to agree with itself during that time, that is to have a like content, it is the same idea, and is not at each instant of the interval a new idea. (CP 2.228 [c. 1897])[57]

The subsequent disappearance of the ground has been explained a variety of ways; for instance, it has been suggested that its role is taken over by the interpretant (Johansen, 1993a, pp. 91-93) or that it is replaced by "form" (Liszka, 1996, p. 117; cf. sect. 5.3.1). It is, in reality, almost impossible to say what becomes of the ground; with the gradual demise of the framework of the early semeiotic, it loses its rationale. Short's (1985, p. 107) notion that the ground is replaced by "relation of sign to object" is perhaps the most plausible explanation available. However, it is also possible that there is no precise equivalent to the early ground in the later theory of signs. The icon-index-symbol trichotomy certainly describes the respect in which a sign can be said to represent an object. Still, as Peirce's semeiotic expands in many directions in the early 1900s, it would appear that the whole constellation of the sign is re-arranged. The ground may have become superfluous, when the new trichotomy of qualisign, sinsign, and legisign plus the division of the object is introduced. Nonetheless, we may retain the term "ground" as a convenient mark of the basis of representation, that is, as a reference to the sign-object relation, on which a representational object may be said to be grounded – as long as the many qualifications discussed in this chapter are kept in mind.

4.3 The Threshold of Cognition

The interpretation of the representational pole of the sign relation outlined above expressly denies that the semiotic object would possess a foundational epistemological status. Even as a dynamical object, the object's reality must not be simply understood to imply a straightforward metaphysical realism; the "reality" of the dynamical object is rather of a logical (or semeiotic) nature. Admittedly, this conclusion may appear to clash with Peirce's explicit – at times almost fervent – adherence to realism. However, it is rather the severance of the connection between signs and objects that leads to the kind of nominalism that postulates a firm dualism between the world "out there" and signs (or language) "in here".

Although the last chapter showed how Peirce's youthful epistemological stance, in which representation is afforded a privileged status, is qualified, if not partly overthrown, by later writings, certain ideas concerning the character of thought and intelligence, developed early in his philosophical career, do form the permanent backbone of his views on cognition. In the well-known *Journal of Speculative Philosophy* articles of the late 1860s, Peirce's criticism of Cartesian thought gives rise to a theory of cognition that denies the privileged status of individual intuitions and affirms the dynamic, semiotic, and ultimately social nature of knowledge. Correspondingly, the mature Peirce maintains that our cognitive functions are primarily semiotic. In a characteristic remark, he states that with "the exception of knowledge, in the present instant, of the contents of consciousness in that instant (the existence of which knowledge is open to doubt) all our thought & knowledge is by signs" (SS 32 [1904]; cf. MS 8:1 [c. 1903?]).

Quite understandably, such remarks are often taken to imply a thoroughgoing semiotic stance, in which cognition, at least, is self-subsistent in the sense of being an affair of signs exclusively. However, parallel with Peirce's reflections on signs and representation, there is a different strand of thought, which seems to qualify the radical semiotic position in certain respects, namely his later writings on perception. In these texts, Peirce often indicates that we have an unmediated contact with objects; in other words, he affirms

a variant of the doctrine of immediate perception – in effect abandoning his youthful criticism of that very position (see sect. 3.1.1).

Nonetheless, Peirce's persistent recognition of an interpretational element in perception often makes it difficult to see how his theories of perceptual awareness and representational knowledge are to be understood – if, indeed, they are compatible at all. It is not surprising that leading commentators disagree on this issue; for some, Peirce's emphasis on the semiotic nature of knowledge and perceptual judgment leads to an idealist position, while for others, his observations on the immediacy of percepts constitute an argument for realism. In my modest contribution to this discussion, I take on the questions from a somewhat unusual angle, as I will frame the issue in terms of two isms defined by Peirce late in his philosophical career, namely *representationism* and *presentationism*. These overlooked terms describe two different ways of conceiving the connection of perception with what we might vaguely call the external world. However, they also display a tension in Peirce's own thought about perception and objects. Examining certain key writings, I will argue that he moves from representationism to presentationism, a development not surprisingly corresponding to changes in his theory of categories. Yet, *prima facie* the claim that Peirce would be a presentationist is rather perplexing, perhaps even controversial. However, in the final part of this chapter, I will show that it is compatible with Peirce's manifest emphasis on the semiotic nature of cognition.

Richard Bernstein (1964) has noted that many of the tensions in Peirce's account of perception can be attributed to his attempt to reconcile certain realist and idealist insights. It is now customary to think that realism and idealism are – at least in some respects – opposing positions. This does not appear to have been Peirce's opinion; but it is remains true that it is difficult to get a grasp on the different strands of idealism and realism in his philosophy, and the ways they are supposed to fit together. I suspect that this is partly because "idealism" and "realism" are terms that have too many meanings – too many uses in varying contexts (cf. chap. 1, n. 4). "Representationism" and "presentationism", although directly

related to some of the problems of idealism and realism, do not carry such a heavy load. Rather, they have the virtue of helping us to focus on a more specific problem area in Peirce's philosophy than the frequently overwhelming issue of realism versus idealism. To a large extent, Peirce's maturation from a representationist to a presentationist goes hand in hand with his move from a nominalistic idealism toward a more realistic standpoint.[58]

4.3.1 The Representationist Stance

Peirce rarely uses the terms "representationism" and "presentationism"; in fact, these isms may be quite unfamiliar to many scholars otherwise knowledgeable about his philosophy. Nor do these terms seem to be common in philosophical parlance – neither in Peirce's time nor now. As far as I know, Peirce himself presents them together only once, in a definition of the term "representationism" in the *Dictionary of Philosophy and Psychology*. As an aside, however, it might be of interest to note that some current philosophical dictionaries list *representationalism* among their entries; this is roughly characterised as the position that we have access only to our ideas of the world, not the world itself; which approximately correspond to what Peirce means by representationism, except that he speaks of percepts rather than ideas. It is also of some interest to note that Rorty, in many respects an anti-Peircean philosopher, is widely known as a leading critic of representationalism.[59]

Turning to Peirce's definition of representationism, we find that he characterises it as the "doctrine that percepts stand for something behind them" (CP 5.607 [1902]). He then goes on to explicate that position by contrasting it with presentationism, which could simply be characterised as the school of thought according to which percepts do not, properly speaking, stand for or represent something behind them.

> In a certain sense it must be admitted, even by presentationists, that percepts only perform the function of conveying knowledge of something else. That is to say, they have to be combined and

> generalized to become useful knowledge; so that they may be said to represent their own generalizations. In this, representationists and presentationists may agree. But the dispute between them consists in this, that the representationist regards the percept in the light of testimony or a picture, from which by inference, or a mental act analogous to inference, the hidden cause of the percept may become known; while the presentationist holds that perception is a two-sided consciousness in which the percept appears as forcibly acting upon us, so that in perception the consciousness of an active object and of a subject acted on are as indivisible as, in making a muscular effort, the sense of exertion is one with and inseparable from the sense of resistance. The representationist would not allow that there is any bilateral consciousness even in the latter sense, regarding the bilaterality as a quasi-inference, or product of the mind's action; while the presentationist insists that there is nothing intellectual or intelligible in this duality. It is, he says, a hard fact experienced but never understood. A representationist will naturally regard the theory that everything in the outward world is atoms, their masses, motions, and energy, as a statement of the real fact which percepts represent. The presentationist, on the other hand, will more naturally regard it as a formula which is fitted to sum up and reconcile the percepts as the only ultimate facts. These are, however, merely different points of view in which neither ought to find anything absolutely contrary to his own doctrine. (CP 5.607 [1902])

Before moving on, it might be useful to form at least a rough idea of what Peirce means by a percept. One could simply say that it is what happens to be before the mind in the act of perceiving, somewhat similar to the particular phaneron, but more concrete and resistant. If an example is needed, then perhaps Peirce's own favourite illustration will do: standing in a room, we see a number of objects, for instance chairs. In these acts, the chair, perceived *as* an object, is a percept.

Now, if we try to pick Peirce's dictionary entry to pieces, then we find that it involves at least five distinguishable characterisations of the relationship between representationism and presentationism. I rough summary, these are:

1. According to the representationists, percepts are representatives of some more fundamental reality. Presentationists,

on the other hand, can admit that percepts are representational *in a certain sense*; they can be taken to represent their own generalisations. However, this does not amount to an acknowledgement that percepts stand for something behind them, that is, a reality hidden from view in the percept itself.

2. The crucial difference between the representationist and the presentationist is that the former views the percept as a kind of mental image or pictorial evidence, from which a *hidden cause* can be *inferentially* ascertained, while the latter holds that perception is a *direct consciousness of duality*.

3. The representationist account of perception is based on an assumed division between subject and object;[60] the presentationist does not accept that there is any such division *in* perception.

4. The representationist holds that the experience of duality is a result of the mind's action, while the presentationist denies that there is anything intellectual in the duality. For the latter, it is a hard fact of experience that is essentially non-rational.

5. Representationists are inclined to accept realistic descriptions of the external world, but will also be drawn to materialistic or atomistic points of view. The percepts stand for the real facts in some manner. Presentationists tend to view such theories as formulas that bring unity to the percepts, but leaving the percepts as the only ultimate facts.

At the end of his dictionary definition, Peirce seems to suggest that the positions described are perhaps not contrary viewpoints. However, it is not clear whether this refers to the atomistic theory of reality or to the representationist and presentationist positions as wholes. The former option seems more plausible, because of the

rather strong differences of opinion that separate the presentationist from the representationist.

Of course, it may now be asked precisely who these presentationists and representationists are supposed to be. Are they mere straw men, conjured up to make a point? Locke would seem to be natural candidate for a representationist, while Berkeley's theory of vision shows marked presentationist traits. In contemporary philosophy, Rorty might be described as a presentationist, although it is not certain that he would accept such a label, as he probably would reject the whole question as useless. Putnam's "direct realism" could perhaps more plausibly be construed as a presentationist position (see, e.g., Putnam, 1994). In general, it would seem that advocates of *immediate perception* would rank as presentationists. However, a more interesting question for our purposes is on what side of the fence Peirce belongs.

The definition is, in itself, non-committal; Peirce does not take a clear stand for either of the positions. Perhaps we can discern more than a touch of sympathy for presentationism between the lines. However, it may be that Peirce was somewhat undecided at this point in his development; in 1902, when the definition was published, Peirce was still struggling with his account of perception; and certain aspects of his theory of signs pointed strongly in the direction of representationism.

Now if one looks at Peirce's philosophical production, one can identify at least two distinct phases in which he discusses matters directly related to the question of representationism versus presentationism. In both of these periods, Peirce gives a general account of perception and cognition and sets it in a semiotic framework; yet, there are somewhat confusing differences between the theories. These divergences can be explicated with the help of the notions of presentationism and representationism Peirce outlines in his dictionary definition; and in doing so, we can begin to answer the question whether Peirce is a representationist or a presentationist. The two periods referred to are the end of the 1860s – Peirce's first sign-theoretical phase – and the years surrounding 1903, when Peirce's later semeiotic system truly begins to find its shape.

The early theory of perception and cognition is most clearly presented in some articles and manuscripts from 1868, the papers sometimes called the "cognition series". In the published essays, which deal with the cognitive powers of human beings, Peirce outlines his famous semiotic criticism of Descartes – or to be more precise, of Cartesian philosophy. One crucial part of Peirce's strategy is to deny that there is such a thing as a *first* cognition (W 2:177 [1868]). This claim is intimately connected with his contention that all thought is in signs. Much simplified, the picture Peirce presents is one of thought being a chain or flow of cognitions, each cognition being a sign determined by previous cognitions and capable of determining further cognitions. In a process of such a nature, it is not possible to find a first cognition that would be the starting-point of the whole affair, because it is the nature of a sign to stand for or represent something else for a third.[61]

Now it may be asked how this early semiotic theory of thought can account for perception and the influence of an external world upon the process of cognition. Namely, the denunciation of first cognitions involves not only a rejection of the view that knowledge could be built up from absolutely indubitable basic cognitions, such as *cogito, ergo sum*, but also a rejection of the view that perception would rest on a foundation provided by simple sense-data or impressions. Perception is not clearly distinguished from other types of cognitive activity, except perhaps as involving a clearer attention to certain objects of cognition.

As a mode of cognition, perception is not perfectly autonomous. Furthermore, Peirce maintains that the act of perception does not involve a *direct* consciousness of the object. Any seemingly self-sufficient or singular perception brought before the mind in some sense is on closer inspection dependent on previous cognitions. This series of cognitive determinations is infinite in the sense that we cannot bring before our minds a first representation – or more accurately, *presentation* – that would serve as a substantial starting-point or foundation for the thought. As Peirce states the matter, "our experience of any object is developed by a process continuous from the very first" (W 2:191 [1868]). Cognition is a process that takes time, and no matter how direct and simple the apprehension

of the object of consciousness seems to be, it is always already a memory of a previous cognition by the time we contemplate it.

This is not an easy point to express clearly, but Peirce's contention may perhaps be re-stated as follows: We set out from a cognition of an object, say a chair. We know that there was a time when we were not aware of the chair in question; therefore, it must have entered our mind or consciousness at some point. Would it then be possible to identify some kind of first perception of the object in question and single that out as a foundation for knowledge? Peirce's answer is no, because when we move backwards in time in our analysis, we will not be able to locate the *absolute* moment when we became cognitively aware of the object. Even if we focus of what seems to be a direct perception of the chair, here and now, the actual cognition is still not given to us immediately; it is something that emerges in time. Therefore Peirce claims that "although the act of perception cannot be represented as whole, by a series of cognitions determining one another, since it involves the necessity of an infinite series, yet there is no perception so near to the object that it is not determined by another which precedes it – for when we reach the point which no determining cognition precedes we find the degree of consciousness there to be just *zero*, and in short we have reached the external object itself, and not a representation of it" (W 2:179 [1868]). However, that object does not exist in itself; its being is relative to thought.

> At any moment we are in possession of certain information, that is, of cognitions which have been logically derived by induction and hypothesis from previous cognitions which are less general, less distinct, and of which we have a less lively consciousness. These in their turn have been derived from others still less general, less distinct, and less vivid; and so on back to the ideal first, which is quite singular, and quite out of consciousness. This ideal first is the particular thing-in-itself. It does not exist *as such*. That is, there is no thing which is in-itself in the sense of not being relative to the mind, though things which are relative to the mind doubtless are, apart from that relation. (W 2:238-239 [1868])

Peirce illustrates his conception with a triangle standing on its apex (see fig. 9). Here, C stands for the perceptual cognition, which

might *seem* to be perfectly simple and non-inferential. The external object is marked with an O. T_o stands for the moment when the object begins to affect us, and T_c for the time when we actually become cognitively aware of the object. Peirce's point is that there is always an interval of time between T_o and T_c. It may be so short – almost immediate – that we are not directly aware of it; but Peirce holds that preceding the seemingly basic perceptual cognition there is actually an infinite series of perceptions, emanating from the external object. All this, of course, is based on the view that time is continuous and infinitely divisible, and that cognition is a temporal process. We can analytically approach the external object by increasing t in the expression T_c-t, but in doing so we will never find a determinate moment, at which we would have a self-sufficient perception of the object – a perception that would not also be a representation. The object, in this theory, is just a limit that can be approached, but never absolutely had as something substantial; if we were to entertain the hypothesis that it could be reached, we would find that there would be no consciousness or representation of it left in our minds. Another way to express the same thing would be to say that the *first impression of sense* is not cognition, but merely the limit of cognition (W 2:191 [1868]).

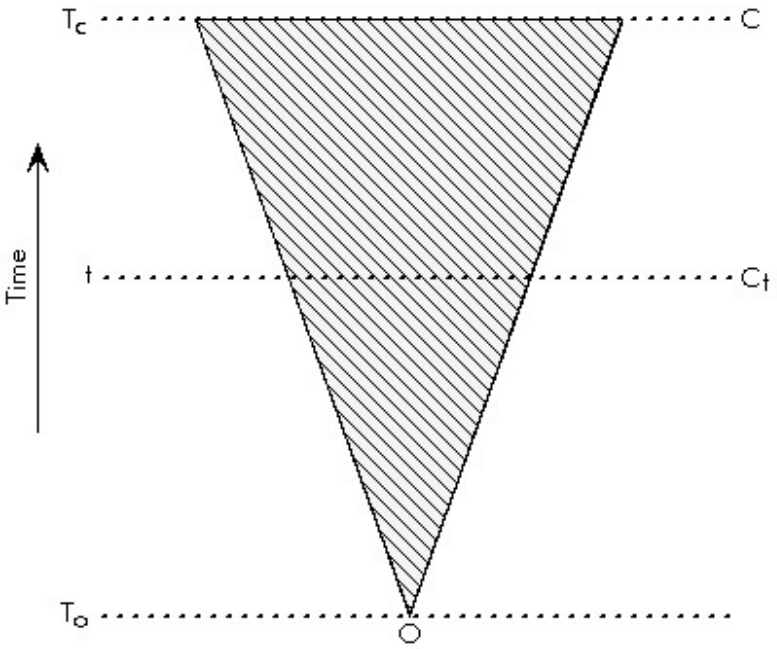


***Figure 9*. The Process of Cognition.**

Peirce states that "the process we have found to compose any step of perception, a process of the determination of one judgment by another, is one of *inference* in the strict sense. And it is, also, plain that hypothesis must enter into this process everywhere" (W 2:180 [1868]). Furthermore, this is equally true of both the subjects and the predicates of such judgments. The act of attention, which determines the subject of the thought, is determined by previous acts of attention. From this, Peirce draws a rather far-reaching conclusion. He claims that

> … inductions also take place in the process of perception. Hence every cognition we are in possession of is a judgment both whose subject and predicate are general terms. And, therefore, it is not merely the case, as

> we saw before, that universals have reality upon this theory, but also that there are nothing but universals which have an immediate reality. (W 2:180 [1868])

This is a logical outcome of Peirce's denial of first cognitions and his early inferentialist theory of perception. It also indicates a *nominalistic* aspect of his thought. The singular object, which is construed as the ideal boundary of cognition, is denied immediate reality. This, in its turn, amounts to an admission that nothing out of cognition (or, as we might say, *signification*) has any generality. In other words, thoughts, which are of the nature of signs, are the only true reality. This is, of course, a variant of idealism; it can be dubbed *semiotic idealism*.

Now Peirce notes that his position could be criticised for having the implication that we are not affected by a real external world; but this, he says, is not a consequence of the theory. Peirce argues as follows: If we examine any of our cognitions in particular, we find that it is wholly determined by a previous cognition. However, we also discover that if we take the sum of our cognitions at any given time, then at any determinate time before, we were not in possession of a set of cognitions sufficient completely to determine the present state of cognition. In other words, our cognitive world displays signs of growth, and this growth cannot be explained by cognitions determining cognitions. Therefore, we *infer* the existence of objects that cause these changes in cognition. In this way, we can see that singular objects have a reality after all; but paradoxically, that reality is not properly singular, but general.

> …a knowledge that cognition is not wholly determined by cognition is a knowledge of something external to the mind, that is the singulars. Singulars therefore have a reality. But singulars in general is not singular but general. We can cognize any part of the singulars however determinate, but however determinate the part it is still general. And therefore what I maintain is that while singulars are real they are so only in their generality; but singulars in their absolute discrimination or singularity are mere ideals. Or in other words that the absolute determination which singularity supposes, can only take place by attribution, which is essentially significative or cognitive, and that therefore it cannot belong to what is wholly out of signification or

> cognition. In short, those things which we call singulars exist, but the character of singularity which we attribute to them is self-contradictory. (W 2:180-181 [1868])

We have now enough material to answer the question whether Peirce's early theory of perception is representationist or presentationist; it is sufficiently obvious that it must be a variant of representationism. This is given by the fact that Peirce explicitly denies that there is any kind of immediate consciousness of the object in perception, and further holds that perception is representational. Peirce postulates the object as a cause, which can be known only inferentially.

It may perhaps be asked how Peirce's representationism can accommodate his well-known refusal to acknowledge any thing-in-itself; it would seem, after all, that the object is a *hidden* cause of cognition. So it would be, on Peirce's terms, *if* it were singular. However, the object can be known in its generality; therefore, Peirce is led to state that singularity (consisting of perfect definiteness and individuality) is self-contradictory. In fact, in "Potentia ex Impotentia" Peirce describes this as a *radicalised* representationist strategy:

> The representationists tell us that we can have no knowledge of things-in-themselves. But we go further and deny that we can so much as attach any consistent meaning to the "absolutely incognisable". Hence if we mean anything by the very things themselves, they are cognizable. (W 2:191 [1868])

The only way that Peirce can consistently maintain this position is to hold that reality is what would be given in final cognition, if such a thing could be reached. This is what Peirce claims that we actually mean by reality: it is the general object as known in an ideal final state of cognition. Such knowledge is not properly speaking individual, but communal; it could only be reached by a social and self-correcting process, in which individual errors are gradually eradicated [62] Here, then, we see how Peirce's early representationism fits in with his social conception of inquiry and what is often called his consensus-theory of reality.

However, when we move on from Peirce's 1868 writings we find that he soon begins to find certain aspects of the representationist position inadequate. In fact, already in the published articles from 1868 we find that Peirce displays disapproval of nominalism (W 2:239 [1868]), drawing realistic conclusions from the generality of the object; and in a 1871 review of the works of Berkeley, we can learn that he considers himself to be both a realist and a believer in immediate perception (see W 2:471). This tendency grows stronger as we move forward in time.

Yet, certain aspects of the representationist viewpoint are clearly present in Peirce's early pragmatism, as expressed in the manuscripts for a book on logic Peirce worked on in 1872 and 1873. In these writings, Peirce emphasises that any object of thought is a result of interpretation, and sharply denies that we could have immediate perceptions of external things (W 3:33 [1872]).

> All that we directly experience is our thought – what passes through our minds; and that only, at the moment at which it is passing through. We here see, thoughts determining and causing other thoughts, and a chain of reasoning or of association is produced. But the beginning and end of this chain, are not distinctly perceived. (W 3:29 [1872])

It is difficult to say precisely when Peirce truly discards this mentalistic account of perception; it is, most likely, a gradual process. Hookway (1985; 2000), perhaps more than anyone else, has emphasised that Peirce makes a turn toward realism in the mid-1880s, when he criticises Hegel and other idealists for ignoring the so-called outward clash, and at the same time recognises that certain signs (indices) can have a special connection to the external world – a bond that cannot be accounted for by reference to thought alone. At the same time, Peirce more and more emphatically embraces the doctrine of immediate perception, in declared opposition to idealism. In effect, this is a criticism of his own earlier position. However, it takes more than thirty years before he begins to formulate a viable alternative.

4.3.2 Double Awareness

In several writings of the early 1900s, Peirce presents a new theory of perception. This later approach involves its own problems; in particular, Peirce offers a couple of seemingly contradictory accounts of the percept around the year 1903. However, to simplify matters, we may first focus on Peirce's theory of perception as it is mainly given in the manuscript "Telepathy".

At first glance, it might seem that there is not a significant change after all. Peirce continues to deny that cognition would be built up from simple sensations or impressions. Moreover, perception is still approached from the point of view of cognition (see, e.g., MS 939:29 [1905]). However, a more thorough examination reveals that some substantial changes have indeed taken place. In particular, Peirce now makes a pregnant distinction between the *perceptual judgment* and the *percept*, which is the object of a perceptual judgment. Of course, Peirce could have made this distinction earlier; however, in that case he would have held that the percept, upon closer inspection, is of the nature of a sign or judgment as well. In the later theory of perception, the percept is not representational in that sense; it does not *stand for* anything, and it involves, as such, no purpose.

> Let us say that, as I sit here writing, I see on the other side of my table, a yellow chair with a green cushion. That will be what psychologists term a "percept" (*res percepta*). They also frequently call it an "image". With this term I shall pick no quarrel. Only one must be on one's guard against a false impression that it might insinuate. Namely, an "image" usually means something intended to represent, – virtually professing to represent, – something else, real or ideal. So understood, the word "image" would be a misnomer for a percept. The chair I appear to see makes no professions of any kind, essentially embodies no intentions of any kind, does not stand for anything. It obtrudes itself upon my gaze; but not as a deputy for anything else, not "as" anything. It simply knocks at the portal of my soul and stands there in the doorway. (CP 7.619 [c. 1903])

According to Peirce, the percept is "a single event happening *hic et nunc*. It cannot be generalised without losing its essential

character. For it is an actual passage at arms between the non-ego and the ego" (CP 2.146 [c. 1902]). Moreover, the percept cannot be described; one cannot adequately express in words what one sees, feels, hears, etc. (CP 2.141 [c. 1902]). We may have to settle for metaphorical characterisations; in one manuscript, Peirce notes that our percepts resemble moving pictures accompanied by feelings, sounds, and so on (MS 939:24 [1905]).

In itself, the percept does not contain any positive assertion. It is silent, but insistent (CP 7.620 [c. 1903]). We cannot dismiss it by an act of will – it is present by brute force, a fact of secondness (cf. CP 1.253 [c. 1902]; see sect. 3.2.3). The chair is there, acting upon us. It cannot be rejected by make-belief doubts; we are forced to confess that it *appears*.

According to Peirce, the percept has three identifying traits: it (1) contributes something positive to knowledge and (2) compels the perceiver to acknowledge it; but it (3) offers no reason for its appearance nor makes any pretension of reasonableness (CP 7.622 [c. 1903]). It is as it is, without appealing to anything for support.

To avoid misunderstandings, it needs to be emphasised that the percept is not a first impression or a sense-datum (CP 2.141 [c. 1902]). The percept obtrudes on the perceiver in its entirety; there is no accompanying awareness of how that object has been constructed. Peirce admits that a percept, such as the chair or a sudden yell, can be said to consist of distinct sense-perceptions, synthesised into an object by the mind; yet, we *experience* the percept as a whole. The hypothesis that the sense-qualities are "first disconnected and not objectified" is psychological theory, and does not affect Peirce's logical (or perhaps better, phaneroscopic) point of view (CP 7.624 [c. 1903]).

A percept can be said to involve two different kinds of elements. On the one hand, "there are the qualities of feeling or sensation, each of which is something positive and *sui generis*, being such as it is quite regardless of how or what anything else is" (CP 7.625 [c. 1903]). The cushion of the chair has a certain colour, for instance. These are elements of *firstness*. On the other hand, we also immediately perceive certain relations in the percept; the perception of such connections is "a perception at once of two opposed objects, –

a double awareness" (CP 7.625 [c. 1903]). These Peirce identifies as elements of *secondness*. They give the percept its characteristic singleness; in other words, the percept is a *singular* object, both definite and individual (cf. MS 515:24-25). It is not general (in Peirce's sense) because it leaves no gaps to be filled out by an interpreter. Nor is it vague in the sense of leaving something implicit or unstated. It is, naively, what it is. The percept, *as it appears*, cannot be further specified or explicated; it exhibits itself in full, and affords no range of interpretation (CP 7.625 [c. 1903]). Percepts do not contain implicit elements (CP 2.603 [1902]).

Although Peirce does not explicitly say so, the percept belongs to the category of secondness in two senses. Firstly, its singularity is directly perceived in the constellation of dyadic relations between its qualitative parts. Secondly, as something experienced as a brute force, the singular percept is in a dyadic relation to the self; in fact, the dichotomy of ego and non-ego can is constituted through relations of this kind. Appearing as an other, the percept is whole and undivided, albeit upon reflection, it can be said to contain a multitude of different parts, discernible through the connections between its firstnesses (CP 7.625 [c. 1903]).

From this brief sketch, it should be evident that the percept is not a rational or cognitive entity in the proper sense of the term. However, perception is not strictly restricted to percepts. According to Peirce, in addition to perception proper, wherein the percept is forced upon the perceiver without any reason or pretension to reason, there "will be a wider genus of things *partaking* of the character of perception, if there be any matter of cognition which exerts a force upon us *tending* to make us acknowledge it without any *adequate* reason" (CP 7.623 [c. 1903]). The percept does not involve any description, but it is apt to bring forth a judgment of the type "that appears to be a wooden table". Such a *perceptual judgment* is a mental description of a percept, in language or other symbols (MS 939:25 [1905]). The perceptual assertion is almost as compelling as the percept itself; there is very little power, if any, that the perceiver can exert on such judgments; "the propositions which, though entirely unlike percepts, [a man] deliberately finds himself forced to admit as truly representing elements of his

percepts, are beyond criticism, since they are beyond control" (MS 693:152 [1904]; cf. CP 4.540 [1906]). As Peirce states, the difference in forcefulness between the percept and the perceptual judgment is practically negligible (CP 7.627 [c. 1903]).

What, then, is the crucial difference between the percept and the perceptual judgment? It is that the perceptual judgment is a *sign* of the percept, and thus brings Peirce's third category – thirdness, the category of representation, mediation, and thought – into the picture (CP 7.630 [c. 1903]). As a sign, the perceptual judgment is representational; its object is the percept. In other words, the perceptual judgment *professes* to represent the percept. Thus, it contains an element of purposiveness or rationality, albeit very slight.

According to Peirce the perceptual judgment cannot represent the percept logically, because as non-rational the percept has no logical consequences; nor is the representative relation iconic, because the perceptual judgment does not resemble the percept in any significant manner (see PPM 160 [1903]).

> There remains but one way in which it can represent the percept; namely, as an index, or true symptom, just as a weather-cock indicates the direction of the wind or a thermometer the temperature. There is no warrant for saying that the perceptual judgment actually is such an index of the percept, other than the *ipse dixit* of the perceptual judgment itself. And even if it be so, what is an index, or true symptom? It is something which, without any rational necessitation, is forced by blind fact to correspond to its object. To say, then, that the perceptual judgment is an infallible symptom of the character of the percept means only that in some unaccountable manner we find ourselves impotent to refuse our assent to it in the presence of the percept, and that there is no appeal from it. (CP 7.628 [1903])

As a sign that professes to represent its object, the perceptual judgment does represent *something*, whether truly or falsely (CP 7.630 [c. 1903]). Peirce describes the perceptual judgments as "stenographic reports" of the evidence of the senses; and as such, they may be erroneous (CP 2.141 [c. 1902]). This dichotomy of reliability and deceptiveness is not applicable to the percept. Furthermore, a perceptual judgment – in a sense the most private

sign there is – involves a communicative element. According to Peirce, perceptual judgments can be characterised as utterances directed to a future self, called forth by the percept that in itself states nothing. Such judgments need not employ the syntax of speech – they may be diagrammatic – but they are still propositional and of the character of an *assertion* (MS 642:18 [1909]).

Another important difference between the percept and the perceptual judgment is that the percept is definite and explicit, while the perceptual judgment is to some extent indeterminate (CP 7.632-633 [c. 1903]). This means that the latter leaves certain latitudes of interpretation. Take, for instance, the perceptual judgment "the table appears brown". This gives a certain freedom to the interpreter; he or she is invited, metaphorically speaking, to take any brown thing he or she likes, and see if it agrees in colour with the table. In other words, the perceptual judgment involves *generality*. Moreover, the perceptual judgment lacks specificity; it does not say what particular hue or shade of brown it is predicating of the table. It is, in this sense, essentially *indefinite* or *vague*.[63]

In sum, the percept is, as an object, distinguished from the perceptual judgment in that it is determinate and self-sufficient. However, there is a twist to this story. Our knowledge of the percept is mediated by perceptual judgments; strictly speaking, we do not have any direct *knowledge* of the perceptual object, apart from the fact that it exerts a force on us.

> We know nothing about the percept otherwise than by testimony of the perceptual judgment, excepting that we feel the blow of it, the reaction of it against us, and we see the contents of it arranged into an object, in its totality, – excepting also, of course, what the psychologists are able to make out inferentially. But the moment we fix our minds upon it and *think* the least thing about the percept, it is the perceptual judgment that tells us what we so "perceive". For this and other reasons, I propose to consider the percept as it is immediately interpreted in the perceptual judgment, under the name of the "percipuum". The percipuum, then, is what forces itself upon your acknowledgment, without any why or wherefore, so that if anybody asks you why you should regard it as appearing so and so, all you can say is, "I can't help it. That is how I see it." (CP 7.643 [c. 1903])

The percipuum could be characterised as a quasi-inference from or a composite photograph of percepts (cf. EP 2:62 [1901]; Hookway, 2002). It is like an interpretation that is forced upon us, but for which no reason can be given (CP 7.677 [c. 1903]). Here, we may detect a familiar semeiotic distinction: within the context of perception, the percept is equivalent to the *dynamical* object, while the percipuum is practically the same as Peirce's *immediate* object.

Peirce notes that we ought not to refuse the name of perception to many things that is rightly rejected as unreal, such as dreams and hallucinations. Strictly speaking, they are not *existent* percepts; but *as* appearing, they display all the important characteristics of percepts. On the most basic level of perception, we do not encounter facts, but the appearances of facts, without any analysis (MS 12:3 [1912]). The percepts can be described as experience proper, but they afford no certainty (CP 2.142 [c. 1902]). Moreover, the perceptual judgments do not declare that certain percepts are illusory; we have no other means to find out whether a manifestation is real or not than to test it by trying to suppress it, asking others, or experimenting on the percipuum (cf. EP 2:65 [1901]; MS 641:16 [1909]; cf. CP 6.334 [c. 1909]).[64] This is a fallible process; there is no percipuum so absolute as not to be subject to possible error (CP 7.676 [c. 1903]). While our percepts may be taken to be beyond doubt *as* seconds, perception nevertheless does not provide even a weak foundation for knowledge (cf. CP 2.143 [c. 1902]; CP 6.497 [c. 1906]; Short, 2000). In this later theory of perception, there is no appeal to impressions or other simple epistemological building blocks; this much, at least, it shares with the early representationist position.

> …perceptual facts are a very imperfect report of the percepts; but I cannot go behind that record. As for going back to the first impressions of sense, as some logicians recommend me to do, that would be the most chimerical of undertakings. (CP 2.141 [c. 1902]; cf. MS 939:29 [1905])[65]

This view of the relation between the percept and the perceptual judgment forms the core of Peirce's criticism of the positivists (see CP 8.144 [1901]; CP 5.597 [1903]) – a standpoint that can be found in

his earlier as well as in his later theory of perception. In his mature philosophy, it is further explicated as an anti-nominalistic stance; according to Peirce, the "'first impressions of sense' are hypothetical creations of nominalistic metaphysics" (MS 860:15$_b$ [c. 1896]). As a part of his rejection of the "nominalistic heresy", he denies their existence.[66]

By now, it ought to be sufficiently evident that Peirce explicitly subscribes to the central tenet of presentationism – that is, to the doctrine of immediate perception of the external world – in his later philosophy. Peirce's acceptance of the doctrine is shown by the fact that we supposedly directly recognise relations in the percept (see PPM 161 [1903]). Occasionally, Peirce suggests – quite reasonably – that it might be better to speak of *direct consciousness of duplicity*, rather than of immediate perception as Kant and Reid do (PPM 145 [1903]). On the other hand, this is merely a matter of words; the important thing for our purposes is the entailed denial of semiotic hermeticism. The account of 1860s leads Peirce into representationism, because it does not allow for objects that are not signs – or, to be more precise, for any non-semiotic aspect of the perceptual object. This is precisely what percepts are in Peirce's later theory.

4.3.3 Ultimate Realities

Almost inevitably, certain objections will be raised against the above reading of Peirce's mature theory of perception and its relation to semeiotic. "Presentationism" may be felt to be entirely inappropriate as a description of his thought, for surely Peirce – the father of a whole "philosophy of representation" – must be a representationist. However, here we should keep in mind the Peircean definition of the term. Peirce's philosophy may well be classifiable as representationalist in some sense, without thereby being committed to representationism regarding perception.

However, quite apart from this somewhat trivial play with isms, it should be acknowledged that the presentationist interpretation of Peirce could be challenged on two strong grounds. To begin with, there is a complication in Peirce's later theory of perception that has

so far been ignored in our discussion; namely, Peirce does at times write as if the percept were of the nature of a sign after all (see, e.g., CP 4.539 [1906]; MS 641:19 [1909]). Obviously, this casts serious doubts on the claim that Peirce would have developed from a represantationist to a presentationist. The discrepancy is so conspicuous that it cannot simply be ignored. Only two paths are possible: either we contend that Peirce's assertion that the percept is not a sign is confused, or else we must explain how the percept can be said to be both semiotic and non-semiotic.

If the first course were chosen, it would be necessary to account for Peirce's adherence to the doctrine of immediate percpetion in purely semiotic terms. The most plausible option would then be to follow Ransdell (1986a), and argue that perceptual representation and immediacy are reconcilable through *iconicity*. That is, as the most important function of the iconic sign is to display in itself some relevant feature of the object, the icon is simultaneously representative and perceptually immediate (Ransdell, 1986a, p. 69). In other words, the icon would *reveal* its object partially or wholly – not inferentially, but directly *and* representationally.

Building on Ransdell's interpretation, one could contend that the percept functions iconically, thus acting concurrently as a sign and as a direct point of contact with the object. However, this solution leads to too many problems. Firstly, we would have to account for Peirce's explicit statements to the effect that the percept is not a sign. Moreover, one should be able to accommodate his notion that the indexical link between percept and perceptual judgment is the primary semiotic relation involved in perception. Even if such statements could be satisfactorily explained in terms of the alleged iconic character of the percept, or simply ignored, there would still be the more serious difficulty of Peirce's view that the immediate acquaintance with objects primarily belongs to the category of secondness, perception being the more passive partner of action (cf. sect. 3.2.3).

Ransdell's interpretation – which, it must be acknowledged, does not purport to be a full account of Peirce's theory of perception – would seem to render perceptual immediacy a matter of firstness merely. Keeping in mind that anything whatever has its

qualitative "flavour *sui generis*", and that firstness is the category of possibility and feeling rather than of actuality and experiential contact, we see that this reading ignores the *experience* of otherness that is the key feature of perception according to Peirce. In other words, an account of direct perception only in terms of iconicity will fail to capture Peirce's affirmation of the bruteness of experiential acquaintance. The hypothesis that the percept is an icon or an iconic sign tries to escape this recognition of an existential reality that, in a pertinent sense, is *not* semiotic. Within the framework of Peirce's mature semeiotic, this conclusion is difficult to avoid; and possibly for this very reason, Ransdell (1986a, p. 70) is led to maintain that iconicity presupposes a relation that is *not* intrinsically semiotic, namely that of *likeness*. However, as an attempt to explicate Peirce's point of view, this is plainly not satisfactory. We have already established that likeness is a degenerate relation (see sect. 3.2.2). It would be peculiar, indeed, if the supposedly crucial epistemic position of the iconic percept would rest on such relational grounds. Yet, the more devastating difficulty for Ransdell's theory is that his line of argument pushes the real object outside of the semiotic domain. The object would be in contact with the world of signs through primary non-semiotic relations of likeness. Then, either there should be some kind of direct experience of this relation, something an icon cannot provide of itself, or else the object is merely a result of inference, which concludes that our percepts are caused by something similar to those percepts. Neither option seems to be compatible with Ransdell's (1976) claim that all experience is of a semiotic character, and that the sign-relation is "omnipresent in all phenomena" (p. 98). True, he could argue that the Peircean object is also a sign, and thus self-evidently a part of the semiotic web; but then we would find ourselves defending a fully hermetic point of view, and little sense could be made of Peirce's affirmation of the outward clash. Admittedly, Ransdell does possess a kind of escape route, in that he contends that the dynamical object should be conceptualised as the *telos* of semiosis, rather than as its initiator or efficient cause; but as we shall see (in sect. 5.1.1), this path leads to another set of problems.

Richard Bernstein (1964) provides a different solution to the dilemma of the semiotic character of the percept: Peirce is simply careless in his use of terms. Sometimes when Peirce says "percept", he means the percept as interpreted, that is, as percipuum. In "What Pragmatism Is", Peirce maintains "that our very percepts are the results of cognitive elaboration" (EP 2:336 [1905]); and in his criticism of Pearson's *The Grammar of Science*, he states that the percepts, our "logically initial data", are of the nature of thought, and further maintains that they contain three kinds of psychical ingredients: their qualities of feeling, their reaction against the will, and their generalising or associating element (EP 2:62 [1901]). Ostensibly, these statements conflict with the basic ideas of Peirce's mature theory of perception, as they have been reconstructed above. However, if we accept Bernstein's solution, and in place of "percept" read "percipuum", then it is possible to preserve a tolerable level of consistency in Peirce's account of perception.

Still, Bernstein's explanation could be complemented by the observation that the percept may be viewed differently on different levels of inquiry. Peirce suggests as much when he states that "percepts are signs for psychology; but they are not so for phenomenology" (CP 8.300 [1904]). In other words, it is possible to inquire into the underlying causes of percepts in psychology, and probably in other special sciences, as when we find that a certain object appears in a certain way because of the constitution of the brain or our sensory organs. However, what is so investigated is not a percept for phaneroscopy. We could add that semeiotic involves both perspectives; as a dynamical object, the percept is not of the nature of a representation, but as an immediate object – that is, a percipuum – of a perceptual judgment, it displays a certain representational character, and is so far like a sign. Admittedly, not all of Peirce's later comments on perception are fully compatible with this reconstruction;[67] but overall, it seems to provide the most credible frame for connecting Peirce's reflections on perception with his semeiotic.

In two articles that in many respects accord with the proposed interpretation, Carl Hausman suggests that we ought to distinguish $percept_1$, the percept as dynamical object, from $percept_2$, the percept

as a result of cognitive elaboration – the latter being a *generalisation* of the former (see Hausman, 1990; 1997). While Hausman also holds that the percipuum can be understood as an immediate object, he distinguishes it from both $percept_1$ and $percept_2$ (Hausman, 1990, p. 284; 1997, pp. 188-189). Furthermore, he argues that the percept as interpreted is properly speaking a perceptual judgment, not a percipuum. The role of the percipuum is supposedly to "play a mediating role by which judgments originate initially from the prompting of percepts(1) and are terminated by the resistance of percepts(2)" (Hausman, 1990, p. 283).

Hausman is on the right track in drawing attention to the fact that percepts tend to be generalised. Only in this way can they act as substantial objects in cognition, since a $percept_1$ is a direct and non-continuous presence. However, his solution, which involves four elements ordered as $percept_1$-percipuum-judgment-$percept_2$, is somewhat contrived. At any rate, it is difficult to see what the precise role of the percipuum is, especially as Hausman presents it as an interpretation *preceding* judgment in his illustrations (see Hausman, 1997, p. 192).[68] It would be more natural to say that the percipuum is an embryonic generalisation, arising *in* the act of judgment caused by the percept, but susceptible of being contrasted and combined with other percipuums in further interpretations – that is, in more developed generalisations. Moreover, Peirce's references to the mental or cognitive character of the percept may be understood as an acknowledgement of the fact that any seemingly direct percept is a product influenced by previous habits, inherent or acquired; to take an almost too obvious example, the perception of colours may be partly determined by culture. Yet, the fact that inquiry may reveal that the "given" percept – or $percept_1$, if Hausman's terms are employed – is actually a construct does not eradicate the immediate duality of the percept. In other words, the assertion that the percept is a product of cognitive operations is not so much a matter of separating two senses of the percept, as it is of adopting a non-phaneroscopic – principally psychological – perspective on the matter.

Next, let us consider the second, perhaps more serious, problem facing the proposed reading of Peirce as a presentationist. Namely,

it may be asked how Peirce's later account of perception can be reconciled with his oft-repeated claim that the object of a sign is also a sign. Although a characteristic feature of his early semeiotic, this position can also be found in several later writings, perhaps most clearly in the following excerpt from "Reason's Rules":

> ...the object of a sign, that to which it, virtually at least, professes to be applicable, can itself be only a sign. For example, the object of an ordinary proposition is [a] generalization from a group of perceptual facts. It represents those facts. These perceptual facts are themselves abstract representatives, through we know not precisely what intermediaries, of the percepts themselves; and these are themselves viewed, and are, – if the judgment has any truth, – representations, primarily of impressions of sense, ultimately of a dark underlying something, which cannot be specified without its manifesting itself as a sign of something below. There is, we think, and reasonably think, a limit to this, an ultimate reality like a *zero* of temperature. But in the nature of things, it can only be approached, it can only be represented. The immediate object which any sign seeks to represent is itself a sign. (MS 599:36-37 [c. 1902]; cf. NEM 4:309-310 [c. 1894?])

The final sentence of this quote causes no problem for our interpretation of the relationship between perception and semiosis; in the context of perception, the immediate object Peirce mentions can be conceptualised as the percipuum, that is, as the percept as interpreted in the perceptual judgment. However, the rest of the excerpt is nothing short of a complete denial of the presentationist position. Particularly damaging is the reference to a "dark underlying something", which can be known only through representation or inferentially.

One possibility would be to treat the representationist stance of "Reason's Rules" as a problematic residue from the early semeiotic, and the theory of perception presented approximately one year later as the solution. The dates of the relevant texts would seem to support such a manoeuvre. However, in the Adirondack lectures of 1905, Peirce repeats some of the arguments of the cognition essays of 1868. In these later texts, we find that Peirce again describes the first cognition as a limiting concept. Using the metaphor of dipping an object into water, where the lines made by the surface of the

water on the object represent cognitive awareness, he states that no matter how early in the disappearance of the object we snap our "mental camera", there will always be preceding lines; if a stage without any preceding lines could be captured, it would not be a line, but a point (MS 1334:45 [1905]; cf. sect. 4.3.1, fig. 9). This is, of course, a figurative argument for the impossibility of a first cognition. Further, Peirce notes that thinkers such as James find this absurd, protesting that there must be a first line. According to Peirce, their position is an instance of the kind of thought that leads to useless paradoxes of the Achilles and the tortoise type (MS 1334:46 [1905]).

However, does this invalidate presentationism? It does not have to; in fact, the presentationist position involves no acceptance of intuitions in the sense of first cognition. Rather, the point is that there is a relevant distinction between a percept and a cognition drawn along categorial lines.

Let us consider another metaphorical argument from the Adirondack lectures, which at first blush appears to defy the presentationist position. According to Peirce, the attempt to strip off signs and get down to the bare meaning is like "trying to peel an onion and get down to the very onion itself" (MS 1334:44 [1905]). This is a very suggestive metaphor; the principal thrust of Peirce's argument is that signs are not mere superfluous extras that can somehow be eradicated, leaving only a pure object or meaning, untainted by interpretation (cf. NEM 4:310 [c. 1894?]).[69] Similarly, in passages we have already encountered in other contexts, Peirce asserts that to "try to peel off signs & get down to the real thing is like trying to peel an onion and get down to onion itself, the onion per se, the onion an sich" (MS L387 [1905]); "a pure idea without metaphor or other significant clothing is an onion without a peel" (EP 2:392 [c. 1906]).[70] In the Adirondack lectures, Peirce adds a more concrete example, that of "chair". As a word, this is obviously a sign, and so is the idea it might produce or represent. However, if we attempt to get down to "the very impressions of sense" – the atomic sensations that allegedly constitute the object of understanding – then we will find that there is no chair there.

Provocatively, Peirce concludes that "the life we lead is a life of signs. Sign under sign endlessly." (MS 1334:44 [1905])

Now, it is easy to understand how such proclamations, in conjunction with Peirce's claim that the semiotic object is also a sign, could be taken to affirm a strong representationist stance. However, it is important to see that the onion metaphor is an argument against the notion that we could ever have a cognitively simple, yet meaningful, notion of a first object. Any object taken up for cognitive inspection will partake of the character of a sign. An attempt to break it down into basic constituents will fail. The seemingly simple elements are always signs; and even if we were, by some Herculean effort, able to discern its simple qualities as such, these firsts would no longer add up to an everyday object. Anything of which we can take cognisance as an object – such as an inkstand or a computer monitor – can be judged, upon analysis of the percipuum, to be a psychical product involving inferential elements (cf. EP 2:62 [1901]). This does not mean that it is not external as an immediate percept. Nor does the recognition of the semiotic character of cognitive perception entail that the percipuum could not possess reality as a thing of a certain persistent character.

Here, it is important to recall that the percept is of the nature of a second. Its reality is that of an existent, or perhaps better, an *ultimate reality* (see NEM 3:773 [1900]).[71] Rather than describing it as a dark underlying something, it is more adequately characterised as the object as it is directly experienced, as in an outward clash. Strictly speaking, it is instantaneous. It is just a brute fact, unreasonable and in a sense absolute, like a punch in the face. There is an inevitable difficulty, familiar from our discussion of secondness, that plagues attempts to describe such a fact. According to Peirce, not even an observation provides a "pure" contact with ultimate reality; since what "is called an 'observation', or *perceptual judgment*, is a proposition which shows certain marked symptoms of being backed by the universe, although it sometimes happens that these symptoms are deceptive, and that the observation is nothing but an illusion or perhaps a hallucination" (MS 326:12-13 [late] - *emphasis added*).

To avoid further misunderstandings, it should be emphasised how narrow and restricted in effect an ultimate reality is by itself – although as a blow of secondness, such a fact may very well be the cause of death. A percept cannot be denied, but from the point of view of cognition, it is an isolated fact that leads to no growth of knowledge. Although it is not known in the full sense of the term, it is not an unknowable object; it is something directly experienced. Any cognitively substantial thing is, to some extent at least, of the character of a sign; but this does not mean that there is not something more in reality than mere representation or semiosis (MS 7:3 [c. 1903?]). Albeit any philosophical attempt to analyse knowledge into absolute perceptual atoms will fail, there is a pregnant sense in which the percept can be said to be a positive contribution to knowledge. In other words, the brute element of experience cannot be ignored or dismissed by encasing it in semiotic webs.

Above, we noted that the young Peirce's rejection of first cognitions was intimately connected to his future-oriented social theory of reality, in which the real is defined in terms of an ideal final representation. Thus, it is natural to enquire how Peirce's mature theory of perception fits this picture. Is not the percept now the most likely candidate for the real? Peirce would not accept such a line of thought; he actually states that the percept does not possess "fully developed reality"; it is an existent thing, which in Peircean terms means that it reacts (MS L427:20-21 [1904). The percepts constitute the domain of experience (CP 2.142 [c. 1902]).[72] They have a kind of "imperfect reality", but according to Peirce, proper reality belongs only to signs (CP 8.300 [1904]). The real object – if we wish to speak in these terms – is not actually a percept, but an ideal percipuum, which has been developed in interpretations under the influence of reacting percepts. It is a generalisation of percepts (cf. EP 2:65 [1901]). In this manner, we can make sense of Peirce's statement that the "Immediate Object of all knowledge and all thought is, in the last analysis, the Percept" (CP 4.539 [1906]), and reconcile it with his notion that "the highest grade of reality is only reached by signs" (SS 23 [1904]).

However, one may reasonably ask, what becomes of the dynamical object? Is there no knowledge of the object *as* agent? In

the strictest sense, there is not; we have only acquaintance with such objects. Still, keeping in mind the aspectual interpretation of the immediate-dynamical distinction, this does not mean that the object, as a whole, would be unknowable. The aim of inquiry is to find such a generalised immediate object that would account for the action in a satisfactory manner; in the ideal end of such a process, the distinction between the two aspects would be practically negligible, if not non-existent. Short of such an ideal state, there is no meaningful conception of the dynamical object, except through the development of the immediate object. The jabbing of the percepts cannot be avoided by pretending not to notice; all but automatically, we will adjust our habits and seek appropriate generalisations. In this, we will never be alone; indeed, the precariousness of the process will almost inevitably lead to social inquiry. In sum, the aim is not to eliminate interpretations from cognition, but to develop them.

In conclusion, let us note that the preceding reflections can help us make sense of a perplexing part of Peirce's definition of representationism and presentationism (quoted in full in sect. 4.3.1). Namely, at the end of his entry, Peirce states that the representationist will "naturally regard the theory that everything in the outward world is atoms, their masses, motions, and energy, as a statement of the real fact which percepts represent", while the presentationist, in contrast, "will more naturally regard it as a formula which is fitted to sum up and reconcile the percepts as the only ultimate facts" (CP 5.607 [1902]). This seems to render the presentationist a nominalist, and add another counterargument to the claim that Peirce is a presentationist. However, if we in place of "reconciled percepts" read "generalised percipuums", and replace "formula" with "system of signs", we will have a description that may accommodate the realist intuition of the representationist. It may be precisely for this reason that Peirce suggests that representationism and presentationism are more like different points of view than complete opposites, at least with regard to this particular question.

Notes to Chapter 4

[1] I will not pursue a comparative analysis of the Peircean and Saussurean frameworks in this study. Suffice it to note that Saussure's semiology is far less developed than Peirce's semeiotic. The theory of signs contained in the lectures published as *Cours de linguistique générale* (1916) is programmatic at best; its growth into a full-scale framework for semiotics is largely due to the work of followers of Saussure such as Louis Hjelmslev and Roland Barthes.

[2] See De Tienne, 1989b, and Kloesel, 1983, for further discussions of this connection.

[3] This refers to the relatively well-known ten-class system, based on the connections between the three basic components of the sign relation. After introducing certain subdivisions among the elements, Peirce sets out to devise a fuller system of 66 classes – one of the many unfinished projects of his semeiotic. These classifications have been discussed quite extensively in the secondary literature (see, e.g., Weiss & Burks, 1945; Jappy, 1989; see also Irwin C. Lieb's essay in SS 160-166). In this study, I will only take up some of the most important types of signs, and will not examine the rationale of sign classification in detail.

[4] Peirce often expresses his dislike for the term "epistemology", but occasionally uses it (or "theory of knowledge") in his characterisations of semeiotic grammar (see sect. 2.3.4). In opposition to the contention that ontology is secondary in the Peircean approach one could point out that he affirms the reality of signs in nature, apart from human beings. It is certainly true that Peirce expands the field of signs beyond human knowledge; yet, this metaphysical position builds on the supposition that signs in nature function similarly to the signs with which we are more familiar. Peirce's metaphysics falls outside of the scope of this study, but we will encounter the anthropomorphic hypothesis, which permits the leap from semiotic mind to nature, later in this chapter and in chapter 5.

[5] Peirce adds that the term "relation" is here to be understood in a familiar sense, not in the technical acceptation as a *true* relation obtaining between existents; in addition, he asserts that in a perfectly strict definition, the word "reference" ought to be employed (MS 800:3_d).

[6] See Benedict, 1985, and Deledalle, 1992, for detailed discussions of Peirce's various uses of "representamen". This is not the only substitute for "sign" to be found in his writings. According to Gérard Deledalle (1992, p. 289), Peirce ponders whether "logon" might be a more suitable replacement (see MS 675 [1911]). However, a closer inspection of the manuscript,

to which Deledalle refers, shows that "logon" is a name for a certain kind of signs, namely *cognitive* signs, the principal objects of study of logic.

[7] In the Collected Papers, this passage is full of italics; however, as Benedict (1985, p. 257) notes, these emphases have been added by the editors. They are therefore omitted here.

[8] See sect. 5.3.3 for a discussion of Peirce's concepts of vagueness and generality.

[9] According to Benedict (1985, p. 270) and Deledalle (1992, p. 300), Peirce uses the term "representamen" for the last time in "A Sketch of Logical Critics" (1911).

[10] Indeed, Peirce does occasionally define the sign as a replacement for the object. For instance, in "Notes on Topical Geometry", he states that a sign "is a thing which is the representative, or deputy, of another thing for the purpose of affecting a mind" (NEM 4:xxi [c. 1899-1900?]; cf. MS 640:8 [1909]; MS 634:19 [1909]). Such expressions are best interpreted as simplifications; it is, at any rate, clear that Peirce does not hold the kind of *surrogate* theory characteristic of the semiotics of Charles Morris (see Morris, 1946, p. 6; cf. Greenlee, 1973, pp. 55-56; Wells, 1977, pp. 6-8). William Alston's (1964, pp. 51-61) reading of Peirce may be singled out as an example of how the Peircean position can be misconstrued when the notion of "standing for" is taken to be the most central semeiotic conception, in addition to being interpreted in the terms of behaviourist semiotics.

[11] To be fair, Liszka leaves room for the broader conception by saying that the sign must represent or *correlate with* an object. The problem is mainly due to the name of the condition; while it is not exactly inaccurate to say that the Peircean sign must represent an object, it may be misleading.

[12] Peirce forms this peculiar neologism from the Latin words *ramus* (bough, branch) and *cerno* (to separate, sift, distinguish).

[13] If this contention is correct, then it qualifies Short's (1981) claim that the aim of semeiotic is "to cut nature at nature's joints" (p. 197). Although Peirce holds that certain signs are realities rather than mere nominal constructions, this does not necessarily entail that nature would present us with discrete semiotic entities.

[14] Obviously, the situation is different if we examine *replicas* of signs; there ought to be no difficulty in finding the lines of demarcation between the words printed on this page. Thus, we should perhaps add that it is primarily developed, law-like signs that tend to be continuously connected.

[15] Peirce-influenced semioticians, such as Sebeok and Deely, disagree on the extent of this perfusion; according to the former, semiosis is bound to living processes, while the latter extends it to the physical world (see Deely, 1990, pp. 83-104). I will discuss related matters in more detail in chapter 5 (see, in particular, sect. 5.1).

[16] In Robin's catalogue, the manuscript in question has been named "On the Formal Principles of Deductive Logic". It is apparently a part of a larger text, since it bears the heading "Conclusion".

[17] Notably, none of these passages was included in the *Collected Papers*, a fact with consequences for the subsequent perception of Peirce's theory of signs.

[18] This conception has been sharply criticised by Richard Parmentier (1985); his argument will be examined in some detail in chapter 5 (see sect. 5.3.1; see also Bergman, 2000).

[19] This view of thought as a dialogical and critical process is one of the features of Peirce's early theory of signs that is maintained and developed in the later semeiotic. According to Jarrett Brock (1975, p. 126), this "Peirce-Plato thesis" entails that all semiosis is dialogical. Brock makes some interesting observations in this context; based on Peirce's view of assertion as an act, in which the utterer makes him- or herself responsible for his or her propositions, Brock suggests a thoroughgoing communicative interpretation of semeiotic, in which all sign use must be viewed in terms of interaction between utterers and interpreters. Furthermore, he indicates that this perspective may account for the normativity of semeiotic. Unfortunately, Brock restricts the scope of this reconstructed semeiotic to symbols, thereby leaving it powerless to deal adequately with communicative processes. As we will see, indices are crucial for communicative determination (see sects. 4.2.3; 5.3.2; 5.3.3).

[20] On the other hand, Peirce's writings do display considerable vacillation concerning the relationship between these terms. In his Logic Notebook, he laments that his notions are too narrow, and suggests that "sign" could be replaced by "medium" (MS 339:283 [1906]).

[21] To be more precise, *developed* semiosis, such as reflexive thought and critical self-awareness, is impossible without a social setting. Obviously, animals and small children employ certain types of signs without thereby engaging in communication in the full sense. Moreover, signs can be used without any awareness of their semiotic status (cf. MS 810:2_b). However, certain higher symbolic functions are essentially connected to the possibility of communication. In taking the communicated sign to be a

paradigmatic instance, we are in effect viewing all sign use through the lenses of developed semiotic forms. The justification of this move will be considered later in this section.

[22] This machine, which was developed by Joseph-Marie Jacquard in 1804-05, used cards with patterns of punched holes, which acted as a program for the loom. This flexible control system allowed for patterns of various levels of complexity. The punched-card system of the Jacquard loom was later adopted by Charles Babbage for his "Analytical Engine", a forerunner of the contemporary computer.

[23] On the other hand, one could argue that without signs there would not be any utterers, as there would be nothing to say. Although Peirce does not explicitly state the matter in such terms, it may be more accurate to say that signs precede utterers, if we view the matter from a wider developmental perspective. Similarly, if there were no signs, there would not be any objects in the semiotic sense.

[24] This is not to say that the concept of determination would be unproblematic in the context of semeiotic. The constraining function of the object and role of collateral experience in semiosis will be considered in more detail later in the study (see, in particular, sects. 4.2, 5.1, and 5.3.2).

[25] It is not a coincidence that the discussion of the communicative roles precedes Peirce's well known – indeed, his only – definition of semiosis (see EP 2:411 [1907]).

[26] In one variant of "Pragmatism", Peirce specifies the determination characteristic of a sign-medium as "intelligent determination" (MS 318:38/228_b [1907]).

[27] See also MS 1338:35-36 (c. 1905-6), where Peirce simply defines the sign in terms of human utterance and interpretation – plainly a *bona fide* "sop to Cerberus".

[28] The connection between the pragmatistic and the anthropomorphic outlook is confirmed in a draft of a review of the first volume of Herbert Nichols's *A Treatise on Cosmology*; according to Peirce, the general leaning of pragmatism is "toward what the idealists call the naïve, toward common sense, toward anthropomorphism" (CP 8.191 [c. 1904]). On the other hand, this emphasis on concrete praxis ought to be qualified by the fact that Peirce often appeals to anthropomorphism in his references to God (see, e.g., CP 8.262 [1905]).

[29] These questions will be discussed in chapter 5 (see, in particular, sect. 5.1).

[30] Peirce's use of "real" is ambiguous. In this context, it is used as a synonym for "existent". We might say, however, that the sign possesses a reality that is not dependent on its concrete manifestations. As Peirce notes, "there is a sense in which a sign is not a reality; although in another sense the very entelechy of reality is of the nature of a sign" (NEM 4:297 [c. 1903?]).

[31] The linguist Roy Harris (1996, p. 160) has criticised this view of sign and replica by claiming that it is too flexible; it does provide us with the needed criteria for identifying the signs that act as types. For instance, on what grounds are we to say that a plain "the" and an italicised "*the*" are replicas of the same sign, and not of two different signs? Harris's discussion is not without merit; it shows that signs are not disconnected from purpose, a position with which Peirce should wholeheartedly agree. However, in other respects, Harris's endeavour to reveal the type-sign as a metalinguistic illusion is seriously misguided. Peirce is not looking for the kind of criteria that Harris seems to require; the point is not to make an inventory of linguistic types. Nor is the fact that it is possible to construct conflicting sign-replica analyses of the same text a solid argument against the Peircean position; signs are not necessarily linguistic entities. Harris wonders how we would know that the first three letters of "theatre" are not a replica of the sign "the", but the question he poses is somewhat absurd. We *do* know. Harris appears to read too much into the Peircean notion of type; at any rate, it does not imply a Platonic entity, but rather a semiotic function. The being of a type is dependent on the possibility of producing existent tokens; yet, it is not reducible to those tokens.

[32] This passage, from "Meaning Preface", has also been published in the *Collected Papers* (CP 2.230), where it is dated 1910.

[33] Here, I choose to employ Peirce's earlier terminology of "qualisign", "sinsign", and "legisign"; it has the virtue of being both technical and descriptive, and it is more often used in Peirce scholarship than "tone", "token", and "type" (cf. Savan, 1987-8, p. 19). Peirce also provisionally introduces the terms "potisign", "actisign", and "famisign" in his correspondence with Lady Welby (CP 8.347 [1908]). The choice of terms used here can also be motivated by the fact that it avoids certain potential confusions with the more familiar type-token pair used in the tradition of analytical philosophy. The proper Peircean equivalent of this distinction is that of a legisign and its replicas or instances (see, e.g., CP 4.537 [1906]).

[34] In his Logic Notebook, Peirce suggests that the qualisign might be denominated "tuone", since it is like a blend of a tone and a tune.

[35] If we were to follow Benedict's example, this sign-as-firstness could be called "representamen" (cf. sect. 4.1.1).

[36] However, Peirce may not adhere entirely consistently to this distinction. In one of his more problematic definitions, he says that the sign is "a vehicle conveying into the mind something from without" (NEM 4:309 [c. 1894?]).

[37] This version of the formula has become the standard in contemporary semiotic literature. According to Winfried Nöth (1995, p. 84), the medieval philosophers usually employed a different formulation: *supponit aliquid pro aliquo*, "something serves in place of something else".

[38] This notion of "renvoi", or *referral* as an essential feature of the sign, is primarily associated with Roman Jakobson (see Jakobson, 1980, p. 22; cf. Deely, 1990, p. 61).

[39] This claim may need to be qualified; Peirce uses the term "object" both in the technical sense of a semiotic object and in the broader sense as something that can come before the mind or that can be mentioned.

[40] This applies primarily to Peirce's later philosophy; in the early writings, the term "subject" is employed rather carelessly in a variety of uses (cf. sects. 3.1.1 and 5.2.1).

[41] In his Logic Notebook, Peirce asserts that the object of an imperative sign is the occasion, while the desired state of things is the interpretant (MS 339:254 [1905]). In another manuscript, Peirce suggests that an order might also include the idea of duty as an object (MS 634:25 [1909]).

[42] Using Susanne K. Langer's (1957, pp. 79-102) distinction, we might say that music is a *presentational* rather than *discursive* form. This is not the place for a comparison between Peirce and Langer's philosophy of "symbolism"; suffice it to say that there is a rough analogy between iconicity and presentational forms, on the one hand, and between symbolicity (in the Peircean sense) and discursive forms, on the other. Langer's framework is not well suited for a consideration of indexicality.

[43] In this context, references to presentation are plagued by similar problems as the discussions of firstness (see sect. 3.2.3). In a certain sense, the presentational sign is a contradiction in terms; if we can grasp that something presents or exhibits something, it thereby becomes a representation (cf. Short, 1992, p. 110).

[44] Ransdell (1986b, p. 683) asserts that the term "determine" and its cognates carry both a logical and causal sense for Peirce. In the logical sense, determination entails that whatever the sign refers to must be referred to by the interpretant, which according to Ransdell is a

generalisation of the idea that the predicate of a proposition refers to whatever the subject-term denotes. Causal determination refers to the causation, production, or generation of a sequence of interpretants through the action of the sign; Ransdell adds that this causal chain involves a *real tendency* of the object to manifest itself. This explication has certain unquestionable merits, as it connects the later semeiotic with the earlier analysis of the "New List" and distinguishes reference from causation. However, Ransdell's account does not explicate in what sense the object "president" denoted in the sentence "the president is a liar" can be said to be the cause of the sign. It would seem to be more natural to say that the object is picked out by the sign, and leave it at that. Moreover, the idea of the object causally manifesting itself through the sign seems to entail a conception of semiosis, in which the role of the interpretant is diminished to that of an imperfect manifestation of reality or of a Platonic form. (See sect. 5.1 for a further discussion of causation and determination in the context of semeiotic.)

[45] Here, "efficient causation" refers to causation by brute force, rather than to a Humean notion of causes (cf. Ransdell, 1986b).

[46] Peirce struggles to find appropriate names for these objects. For instance, in the Logic Notebook, he declares that he would say "representer as external" and "representer as internal", or better "representer as real" and "representer as imaginary", were it not for certain unwanted associations; therefore, he chooses to characterise the objects as "active" and "passive" (MS 339:274 [1906]).

[47] This "strong realist interpretation" may be something of a straw man. However, it is quite common to see casual remarks to the effect that the dynamical object is a real object. This is not strictly speaking false, but as we shall see, the claim needs to be qualified.

[48] In the manuscript posthumously christened "On Signs", Peirce describes the unity of the objects as follows: "those characters of the Real Object which are essential to the identity of the Sign constitute an *ens rationis* called the 'Immediate Object'" (MS 793:11/12_b [c. 1906]). On the other hand, the immediate object is also immediately present in the sign. Looking at the matter from a different angle, Peirce describes the immediate object as the mark that the sign represents its object to be distinguished by (MS 339:275 [1906]).

[49] These "complete signs" should be understood as the counterpart to partial signs, such as the self-referential signs examined earlier (see sect. 4.2.1).

[50] This kind of realism is easily transformed into nominalism, if only existents are admitted.

[51] For an extensive discussion of the icon-index-symbol trichotomy, see Johansen, 1993a, pp. 90-144.

[52] Here, "representation" stands for the concept later called "sign".

[53] Wells (1967, p. 104) finds two errors in Peirce's icon-index-symbol classification. Firstly, Peirce should have recognised that the classification is not of signs, but of aspects of signs. As we will see, Wells is just poorly informed regarding this issue; Peirce did characterise icons, indices, and symbols precisely as such aspects. Secondly, Wells opines that that the trichotomy presupposes Peirce's categorial framework, which renders it scientifically unsuitable because of the idealism of the theory of categories. This might be a valid criticism of Peirce's early semeiotic; it is not effective against the later position, in which the categories are principally phaneroscopic.

[54] There are numerous debates circling around the notion of iconicity, not all concerned with Peirce's theory of signs. One such assault is constituted by E. H. Gombrich's (1977) and Nelson Goodman's (1976) criticisms of the notion of resemblance (see Dipert, 1996, for a discussion of their positions from a Peircean perspective).

[55] In this passage, Peirce equates the ground of the representational relation with its meaning. It is not his final view on the matter (see sect. 5.2.3).

[56] Peirce is not quite consistent regarding this, however. In the Prescott Book (MS 277 [October 30 1909]), Peirce states that the photograph is clearly an icon.

[57] In addition to this passage, the semeiotic concept of "ground" is found in "On the Foundations of Mathematics" (MS 7 [c. 1903?]). However, there it is primarily mentioned in connection with the icon and vaguely characterised as meaning or reason (MS 7:14 [c. 1903?]).

[58] This progress has been documented by Fisch in a landmark article, originally published in 1967 (see Fisch, 1986, pp. 184-200).

[59] Of course, Rorty's criticism of representationalism is far more radical than the Peircean rejection of certain representationist theses we will be discussing. In "Putnam and the Relativist Menace", Rorty (1993) proclaims that he follows Donald Davidson in thinking that it "is good to be rid of representations, and with them the correspondence theory of truth, for it is thinking that there are representations which engenders thoughts of relativism" (p. 448). Although it is not clear what Rorty precisely means by

"representation", it is evident that Peirce could never subscribe to the view that there are no representations, or think that they are something that can be removed by fiat. He must remain a representationalist of some grade, even if he accepts some presentationist positions.

[60] Here, the terms "subject" and "object" are evidently used in the "German" sense that Peirce mostly finds objectionable (cf. sect. 4.2.1).

[61] In view of the later semeiotic, this is a partial picture of the function of the sign; but we may let it pass here to avoid unnecessary complications.

[62] In "Questions on Reality", one of the manuscripts preceding the published cognition series, Peirce characterises this theory as nominalistic, adding only the qualification that it is "quite opposed to that individualism which is often thought to be coextensive with nominalism" (W 2:175 [1868]).

[63] See sect. 5.3.3 for a closer examination of the Peircean conceptions of generality and vagueness.

[64] "Our percepts approach closely to the character of pictures, moving pictures accompanied by feelings and sounds etc. It appears to me to be clearly open to doubt whether those appearances are real or not. But we find that all the 'willing' we can do won't affect them. We call upon others. Those others may not be real. Still, it is remarkable that their testimony is such as we might ourselves give. A camera (again perhaps not real) agrees. All this is a strong inductive argument that those percepts are real." (MS 939:24 [1905])

[65] Peirce's use of "first impression of sense" (and of "sense-perception") is not wholly consistent. While the quoted passage suggests a clear distinction between "percept" and "impression", Peirce occasionally uses the latter for the former. If one wants to find a proper Peircean meaning for the "first impression of sense", it ought to be the phaneron in its firstness. Peirce suggests something along these lines when he states that the "Feeling of light without any attribution to it of extension or position exemplifies […] a First Impression of Sense. One need not necessarily suppose that we are conscious of it at all. I think, myself, that one is not conscious of it as an Object before one, (or, as we say, 'before one's mind'), since it is pure Feeling, and as such involves no idea of Relation, while what we mean by an Object seems to be something over against the person (or the Soul, or the 'mind', or the '*ego*'), for whom it is an Object. But no more is one conscious of grief as an Object, though [one] may be only too intensely conscious of it." (MS 609:5-6 [1908])

[66] In the *Carnegie Application*, Peirce states that he finds first impressions of sense and immediate consciousness dubious (MS L75c:110-118 [1902]). This should not be taken to mean that percepts are open to doubt as they are directly experienced; rather, the purport is that there are no simple constituents – whether external or internal – that can act as foundations for knowledge.

[67] Perhaps the most troublesome text is "Significs and Logic", where Peirce explicitly states that the percept is a "plain sign" or indication of the existence of matter (MS 641:19 [1909]). Obviously, if this is understood as an assertion to the effect that the percept simply stands for a primary physical world of inscrutable matter, it cannot be reconciled with the proposed interpretation of Peirce's conception of perception. However, the statement is also problematic from the point of view of Peirce's earlier representationism, as he seems to postulate a straightforward dualism between the sign-percept and matter, rather than a genuine semiotic continuum pointing toward an inferred object. This latter problem is not solved by a charitable reading, in which "percept" is taken to mean "percipuum"; nor can the situation be saved by an appeal to different levels of inquiry, if we are not prepared to submit to a rather coarse form of metaphysical realism. As far as I can see, there is no other recourse but to admit that Peirce is inconsistent on this point.

[68] The term "percipuum" would suggest that it is of the nature of a continuum. As Hausman notes, Peirce characterises the percipuum as encompassing both percept and perceptual judgment. This would indicate that the percipuum is nothing but a reminder that the percept and the perceptual judgment are not cleanly separable by cognitive means. However, the definition of the percipuum as an interpreted percept affords the concept a more substantial theoretical role.

[69] Peirce's position seems to be qualified by his assertion that the particular signs employed are not the thought "no whit more than the skins of an onion are the onion" (CP 4.6 [1906]). Peirce adds that the languages used are vehicles that do not affect the propositions involved; thus, one "selfsame thought may be carried upon the vehicle of English, German, Greek, or Gaelic; in diagrams, or in equations, or in graphs: all these are but so many skins of the onion, its inessential accidents" (CP 4.6 [1906]). Ostensibly, this conflicts with the position of the Adirondack lectures. The tension may be alleviated by drawing attention to the fact that Peirce is speaking of *particular* signs in the passage where the skins of the onion are treated as accidental factors. The formulation is careless; it would

have been more appropriate to speak of replicas of the same sign, rather than giving the impression that there is an essential gap between thought and sign. We should keep in mind Peirce's insistence that thought is itself of the nature of a sign; his point cannot be that we could find a hard core of the propositions by peeling off the superficial layers of signs. The situation is partly resolved by his acknowledgement that the thought must have "some possible expression for *some* possible interpreter"; it is its very being (CP 4.6 [1906]). Yet, in this instance, Peirce could be criticised for paying insufficient attention to the power of signs to shape or guide thought.

[70] Surprisingly, Peirce would seem to be in almost perfect agreement with the arch-relativist Goodman, who in his *Ways of Worldmaking* (1978) uses a remarkably similar metaphor; "When we strip off as layers of convention all differences among describing it, what is left? The onion is peeled down to its empty core." (p. 118) We should probably not make too much of this coincidence; Peirce may be arguing for the ubiquity of signs in all cognitive activity, but he definitely does not adhere to the kind of conventionalism that turns everything into *mere* descriptions.

[71] Often, Peirce contrasts reality to existence in his mature philosophy, the former being defined by its simultaneously being cognitive and non-dependent upon actual thought, while the latter is connected to reaction with the environment (see, e.g., CP 5.503 [c. 1905]). Here, however, the distinction introduced in sect. 2.3.3 is employed.

[72] More specifically, we might say that the percepts are equivalent to the domain of singular experience, while perception in general is a part of the field of experience in the broad sense (see sect. 2.2.4).

5 Spaces of Communication

In the previous chapter, we saw that it is possible to approach Peirce's general definition of the sign from a communicative perspective; the correlates of object and interpretant are seen as semiotic functions abstracted from the concrete dialogical situation involving utterer and interpreter. Thus, the primary hypothesis of the study has been shown to be at least feasible in view of Peirce's texts. So far, our discussion of semeiotic has primarily been framed by considerations of the sign-object relation, where the dynamical object has been construed in terms of the constraining function characteristic of the sign-producer. Moreover, the secondary thread concerned with the possible hermeticism of Peirce's semeiotic has been examined in some detail; indeed, as Peirce has been shown to be a kind of presentationist, the prospects for interpreting his thought in terms of radical semiotic idealism look distinctively poor.

However, an important – in fact, the most vital – part of the endeavour remains. Namely, while the relationship between sign and object forms a significant part of the Peircean study of signs, the arguably most promising aspect of semeiotic is its in-built acknowledgement of sign action and interpretation, conceptualised as semiosis and interpretant.

In this chapter, I will take up three important aspects of semeiotic particularly concerned with the action of signs and their significative effects. Firstly, I will discuss the concept of semiosis, focusing on the question of what the driving force in the process is. Here, the question of semiotic hermeticism will be reconsidered, this time in connection with certain debates between Ransdell and Short concerning the role of the interpreter in semiosis. Next, I will turn to the seminal Peircean concept of interpretant, investigate its variants, and attempt to ascertain its relation to semiotic meaning. Finally, I will discuss some pertinent issues related to Peirce's communicative definition of the sign - not to be confused with the

communicative *derivation* of the sign components, although the two are certainly related. In the last sections, the idea of collateral experience will be re-examined in the light of its role in communicative interaction, and the related questions of indeterminacy and communicative specificity will be considered. Throughout these discussions, I will stay focused on Peirce's texts, but as this journey into the labyrinthine world of semeiotic draws to its close, I will allow myself somewhat more liberal interpretations than in the preceding chapters. These slight extensions to Peirce's theory, which help us form a more coherent picture of the communicative drift in his thought, may be taken as indications of future possibilities.

5.1 Semiosis and Interpretation

Within contemporary Peirce scholarship, it is often held that the most basic concept of semeiotic is not that of *sign* or *sign relation*, but rather that of *semiosis* or *sign action*. In a sense, the recent revival of Peircean sign theory is based on this insight, which makes it possible to ascertain and construct connections between Peirce's explicitly sign-theoretical writings and the rest of his production. This approach also seems to open up Peirce's doctrine of signs for further development, outgrowths that may go beyond Peirce's perspectives.

Given the enthusiasm and assurance of some Peirce scholars and other semioticians, one might expect that Peirce's writings would be full of references to "semiosis". However, this is not the case; Peirce rarely uses the term. It does not surface in the writings that were published during his lifetime, and even in the unpublished manuscripts, it is not a common concept. The idea of semiosis is, obviously, prominently present in the 1907 manuscript "Pragmatism" (MS 318), one of Peirce's most important essays; but its absence from numerous other key semeiotic texts is equally evident. Of course, Peirce may have avoided using the word so as not to overburden his readers with yet another strange concept; but there is no real support for such a hypothesis.

In view of this scarcity of the concept of semiosis in Peirce's writings, one could question the view – almost consensual in some quarters – that Peirce thought of semeiotic primarily in terms of semiosis. Such criticism would not be without justification, and should even be welcomed as a healthy reminder of the textual facts. Naturally, this does not mean that the emphasis on the action of signs in studies of Peirce's theory has to be abandoned. However, it may be advisable to consider carefully what we attribute to Peirce in this regard. At the very least, the straightforward claim that Peirce privileged semiosis (over sign definitions, sign relations, or classifications of signs) ought to be checked by the acknowledgement that this prioritisation is mostly implicit, and that much interpretative work is required to render this approach to Peirce's sign-theoretical output clearer and more plausible.

In what follows, I will not attempt to give a full account of the Peircean conception of semiosis. The discussion will primarily be concerned with one aspect of the action of signs, namely its goal-directedness or purposiveness; but the examination will have its limits in this regard as well. Namely, I will not pursue the question of final causation, which is often linked with semiotic action, in detail here.[1] In this study, the emphasis is on the less comprehensive, but crucial, question of the driving force of semiosis, and of the role played by the interpreter in the process. Taking up a debate between Ransdell and Short, also discussed by Hulswit, I will explore the notion that semiosis is always teleological and introduce an important distinction between purposive and finious processes.

5.1.1 Determination and the Power of Signs

On one level, semiosis is an easy concept to grasp. It simply denotes the action proper to signs, whatever that action may be. In other words, semiosis can be characterised as the type of activity or process that distinguishes signs from other kinds of activities and processes.[2] As long as the concept is kept sufficiently indeterminate in content, delimited only by what it is not (that is, mechanical or

brute events), we may feel relatively confident in our use of it. The emphasis in Peirce's oft-cited definition of semiosis is indeed on the *distinction* between two principal modes of action.

> It is important to understand what I mean by *semiosis*. All dynamical action, or action of brute force, physical or psychical, either takes place between two subjects, – whether they react equally upon each other, or one is agent and the other patient, entirely or partially, – or at any rate is a resultant of such actions between pairs. But by "semiosis" I mean, on the contrary, an action, or an influence, which is, or involves, a cooperation of *three* subjects, such as sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs. (EP 2:411 [1907])

We begin to encounter difficulties when we attempt to specify or describe the kind of activity typical of signs within the framework of Peirce's semeiotic. In the literature on the topic, one can find characterisations of semiosis as a triadic, intelligent, dialogic, and teleological mode of action (see, e.g., Santaella Braga, 1999b; Seager, 1988; Short, 1981b). All of these have relatively firm grounding in Peirce's writings. However, on closer examination these descriptions often prove problematic. Intelligence and triadic action can perhaps be grouped together under the common denominator of "Peirce's broad conception of mind" (cf. Santaella Braga, 1994). This still leaves the question whether semiosis is a special kind of intelligent phenomenon or simply a synonym for mind-like processes in general.

Discussions of Peirce's notion of sign action have largely revolved around the theme of causality. In this case, commentators tend to agree that Peirce conceived of semiosis as a paradigmatic case of final causation, if not as coextensive with this mode of causation. However, as Hulswit (2002), has shown, the relation between Peirce's conception of causation and his idea of semiosis is both complex and fraught with possible inconsistencies; at any rate, it cannot be easily compressed into one simple formula. It seems that Peirce conceived of causation as an interplay between chance, efficient cause, and final cause; but pinpointing the precise semiotic functions of these elements is certainly not an easy task. For our purposes, Hulswit's summary of the Peircean position will suffice:

> According to Peirce, final causes are (a) general types that tend to realize themselves by determining processes of efficient causation. They are (b) not future events, but general (physical) possibilities. The symptoms of final causation are: (i) the end state of a process can be reached in different ways, and (ii) the process is irreversible. (Hulswit, 2002, p. 95 - *italics removed*)[3]

This definition can be complemented by Peirce's characterisation of *developmental teleology*, presented in the context of his metaphysical writings of the 1890s. The main thrust of this position is an affirmation of the evolutionary character of the end state or goal.

> …this teleology is more than a purposive pursuit of a predetermined end; it is a developmental teleology. This is personal character. A general idea, living and conscious now, it is already determinative of acts in the future to an extent which is not now conscious. This reference to the future is an essential element of personality. Were the ends of a person already explicit, there would be no room for development, for growth, for life; and consequently there would be no personality. The mere carrying out of predetermined purposes is mechanical. (EP 1.331 [1892])

Obviously, this excerpt involves a number of problematic concepts, such as "consciousness" and "personality", which would require more explication than can be given here. However, it is particularly important to emphasise that the "personal character", which is characteristic of human beings, is not necessarily restricted to individuals. In "What Pragmatism Is", Peirce claims that "man's circle of society (however widely or narrowly this phrase may be understood) is a sort of loosely compacted person, in some respects of higher rank than the person of an individual organism" (EP 2:338 [1905]). Furthermore, certain ideas may display the kind of developmental character that Peirce calls "personality". These are metaphorical expressions, which could be criticised for being excessively vague, perhaps even deliberately ambiguous. Here, however, the important thing is to recognise that the tendency toward an end state, the central trait of a teleological process, does not entail a rigid route to a predetermined end. In a developmental process, the paths may diverge and the goals evolve.

Now, in order to render the issue of semiotic action more tangible, it is useful to reformulate the question, and enquire what the driving force that gives semiosis its alleged tendential or goal-directed character may be. Is it to be understood as something inherent or immanent in the process itself, or rather as something that can be properly grasped only through the functions and uses interpretative agents make of signs? Both positions have been defended with weighty arguments, most notably by Ransdell and Short.

Ransdell is a firm adherent of the idea of the *autonomy* of the semiosis process. That is, he takes Peirce's most general sign definition as his guiding light, and argues that uttering or interpreting agencies are definitely not essential for the being of signs; object, sign, and interpretant will suffice in a "puristic" analysis (Ransdell, 1986b, p. 692). References to interpreting minds, other than the signs themselves, are not permitted, unless it is possible to eliminate the extrinsic factor by further analysis. Of course, this is strictly speaking correct in view of Peirce's most formal sign definitions. However, left as such, Ransdell's claim would imply a rather meagre view of semiosis; indeed, it would be devoid of action or process in any significant sense of the word, and reducible to a structuralist conception of a triadic variant. Obviously, that is not his intention. The solution for Ransdell, then, is to locate the driving force of semiosis within the basic sign relation, strictly distinct from human or other outside agencies.

According to Ransdell's causal point of view (in contrast to the logical perspective of representation; cf. sect. 4.2.2), signs possess a *power* of generating interpretants, a kind of immanent principle that pushes forth the development of the sign by its own semiotic force. Seen from this vantage point, it is not interpreters that produce interpretants, but rather signs that have the disposition to produce interpretants in agents. The contributions of interpreters are negligible, although Ransdell claims that human agency does have an important role to play in the occurrence of meaning and its development. As Ransdell (1992) explains, "an interpreter's interpretation is to be regarded as being primarily a *perception* or *observation* of the meaning exhibited by the sign itself" (§2). The

human control over signs is limited to setting them in interaction with one another in a way that will be favourable in view of a desired result.

Still, Ransdell holds that the generation of interpretants is not blind, but rather telic. In Ransdell's hermetic view, it is the object, or rather the dynamical object, that acts as the final cause of semiosis. In other words, the whole process is geared toward the complete manifestation of the object through the interpretant-generating powers of the sign. This amounts to saying that the dynamical object and the truly final interpretant are the same in the end; they are the ideal goal or end state of the semiotic process. This is encapsulated in the contention that the term "object" should actually be understood as aim or purpose (Ransdell, 1981, p. 203; cf. Weinsheimer, 1983, p. 242). As the object is an essential correlate of the sign relation, the goal of semiosis is always somehow given in the sign; semiosis is teleological because of its peculiar form, its tendency toward the truth or the one correct interpretation – the object as distinguished from actual interpretations, which are conceptualised as the interpretant of the sign. According to Ransdell (1986b), "the semiosis process could be thought of as being the object itself in its protracted manifestation or self-actualization in time" (p. 676). If a final interpretant were ever realised – something that will never *actually* happen – it would be nothing but the object itself. Thus, the crucial function of the object is to act as the goal of the tendential process.

> …the object of a sign [...] is to be understood primarily as being the generic aim of a semiosis process. To say, as Peirce did, that all semiosis involves reference to an object is to say that semiosis is essentially a purposive process whose purpose is truth... And what is truth, in Peirce's view? The answer is, of course, that it is the "opinion" – that is, the interpretation – that is fated to be the one that the community of interpreters ultimately settles upon. Thus the semiotic object is the ideal correct and complete interpretation of the sign, or rather of it along with the complete set of all signs with which it is linked through indexical cross-reference. (Ransdell, 1981, p. 203)

> …what is meant in saying that every sign has an object is that every sign-interpretational process tends toward an end-state, that is, has a

> final causational form. That end state *is* the object of the process. [---] …the distinction between the interpretant and the object in the sign relation is really only the distinction between an actual interpretation and the ideally correct – which is to say ultimately unquestioned [or true - *MB*] – interpretation. (Ransdell, 1977, p. 168; p. 173)

As Ransdell (1981, pp. 203-204) explicitly concedes, his position can be characterised as semiotic idealism in two respects. Firstly, he holds that the object or reality towards which interpretation is directed is an ideal. Secondly, he locates the object of thought within thought, "rather than positing it as something to which the thought process externally refers" (Ransdell, 1981, p. 204). Ransdell would perhaps not accept the contention that this amounts to semiotic hermeticism, but it seems unavoidable, if we by a hermetic account understand one that does not accept any kind of external reference in the theory of signs.

The most obvious difficulty with Ransdell's position is that it does not agree with Peirce's discussions of the object of the sign. True, there are exceptions, like the rather obscure passages, in which Peirce speaks of the sign as a kind of *emanation* from the object (see MS 634:23 [1909]; Hulswit, 2002, pp. 148-149). However, how are we to make any sense of Peirce's claim that the dynamic object precedes the sign in the sense that it is what is known by collateral experience *outside* of the sign in question? Furthermore, Peirce often explicitly identifies the dynamic object as the actual determinant of semiosis. In contrast to Ransdell, Short (1981b, p. 221) interprets this determination in a non-causal way as *delimitation* of the possible (see also Joswick, 1996, p. 98; Liszka, 1996, p. 23). In effect, the object determines the sign only in the sense that it restricts what can be a sign of it, and the sign performs the same function in relation to the interpretant (Short, 1982, p. 290). Hulswit (2002, p. 161) cites the following passage, which shows that Peirce does in fact make a distinction between cause and determinant:

> In order that a Sign should truly represent that which it undertakes to represent, it must be caused, or, to use a wider term, must be *determined* by that Object; and then it must determine the mind that it addresses in such a way that that mind is in turn determined mediately by that

> Object. This is my definition of a Sign and it applies even to mendacious Signs. Of course, the objection that would be raised if I used the word "cause" in place of "determine" would be that in that case there would be no Sign of the future, whereas one may say that all signs relate to the future. (L 36 [1909])

Hulswit notes that Peirce's use of the term "cause" is rather liberal in semeiotic contexts; it is frequently employed as a synonym for determination. Furthermore, Peirce occasionally speaks of the object as an *efficient* cause of the sign (see, e.g., EP 2:429 [1907]). This may lead to confusions. Not all signs are efficiently caused by their objects; strictly speaking, this characterisation applies only to indices. However, it is not certain that we should replace determination as cause with determination as necessary condition, as Hulswit (2002, p. 161) suggests. True, this may nicely account for the way determination works in certain problematic cases, in which the object is an object of the future (cf. sect. 4.2.2). In the case of the weather forecast, the weather of tomorrow constrains the signs of today as conditions of representation. However, in other cases, the determination is more direct – more efficient – as in the case of perception.

In "Essays toward the Interpretation of Our Thoughts", Peirce defines a determination as a *virtual habit*, and explains that by "virtual", followed by any common noun *N*, is meant anything that is not an *N*, but which nevertheless possesses the characteristic behaviour and properties of *N* (MS 620:24-25 [1909]). In the almost identical definition in Baldwin's *Dictionary of Philosophy and Psychology*, he states that a "virtual *X* (where *X* is a common noun) is something, not an *X*, which has the efficiency (*virtus*) of an *X*" (CP 6.372 [1902]).[4] According to Peirce, this is the proper scholastic meaning of the word. However, it is often confounded with "potential", which is almost its contrary; for "the potential *X* is of the nature of *X*, but is without actual efficiency" (CP 6.372 [1902]).[5] Peirce gives some examples of the correct use. The sun can be said to be virtually on the earth because of its effects. A virtual velocity is something that is not a velocity, but a displacement; yet, it is equivalent to velocity in the formula "what is gained in velocity is

lost in power" (CP 6.372 [1902]). The proper usage can also be found in the following excerpt from John Milton's *Paradise Lost*:

> To love, thou blamest me not; for
> Love, thou sayest,
> Leads up to Heaven, is both the way and guide;
> Bear with me then, if lawful what I ask:
> Love not the heavenly Spirits, and how their love
> Express they? by looks only? or do they mix
> Irradiance, virtual or immediate touch?

Peirce contends that a determination is not a habit, since it does not result from the repeated performances, on the same type of occasions, of the kind of action that it will cause to be again performed when the appropriate situation arises; yet, it works all the effects of habit. Unfortunately, Peirce does spell out the connection of this habitual determination to semiotic determination. In particular, the notion of "efficiency" is left wanting explication. Still, the context makes it clear that it is not a matter of efficient causation; it might be better to call it a "power". This, in turn, would seem to support Ransdell's view, in particular if it is complemented with Peirce's contention that "Signs have the power of regulating things and of creating signs" (MS 8:7-8 [c. 1903?]). However, a few qualifications need to be noted. Firstly, Peirce's discussion in "Essays toward the Interpretation of Our Thoughts" is not concerned with semiotic determination, but with the establishment of habits of action by experiments in the imagination, as when we imagine the consequences of different acts, and thereby determine our dispositions. Secondly, in the semeiotic context, the virtual habit cannot mean an entity, of which the sign would be in possession regardless of its relations; this would lead to the kind of substitution theory Peirce emphatically rejects. In "Some Consequences of Four Incapacities", Peirce emphasises that the meaning of a thought is virtual because it is not something self-sufficient, but relational (W 2:227 [1868]; cf. W 2:192 [1868]). Importantly, as Peter Skagestad (1999, p. 554) points out, the virtuality of signs entails that a sign is what it is in virtue of its possible later interpretations – or to be more precise, its interpretants. Thirdly, we should keep in

mind that the original question concerned the determinative function of the object in its dynamical aspect, while Peirce's definition of "virtual" focuses on the notion of a determination as something more substantial. As we have seen, the action of object upon sign entails a constraint on semiosis rather than some kind of transfer of power. Parenthetically, we might add that the latter notion would probably also be unacceptable to Ransdell.

In view of these considerations, it seems appropriate to abide by the view that determination entails delimitation of the possible in the semeiotic context. This does not mean that we would have to abandon Peirce's notion of significant determination as virtual habit altogether; as we shall see, this idea can shed some light on Peirce's rather obscure characterisation of communicated form (see sect. 5.3.1).

Let us now turn to Short. With his non-causal view of semiotic determination, he paints a picture of semiosis that makes the activity of interpreting agents, whether human or non-human, necessary for the process. Within the Peircean framework, this is rendered plausible by Short's (1981b, p. 200; 1996, p. 490) distinction between *significance*, the relation that makes an interpretation possible, and actual interpretation, as it is performed by sign users.[6] Significance, for Short, is equivalent to justified interpretability. It is determined by the ground, that is, the iconic, indexical, or symbolic connection between sign and object. This grounding justifies the interpretability. However, significance also involves the type of potential interpretant Peirce sometimes calls "immediate"; it is thus a *triadic relation*, which can be real without any *actual* interpretation occurring (cf. Short, 1985, p. 108; sect. 5.2.2). In other words, Short's conception of significance allows for signs that are not actualised in semiosis. In effect, his proposal amounts to a distinction between the being of a sign and the action of the sign; or, to put the matter even more simply, between sign and semiosis. Short's position is supported by Peirce's contention that until a sign is interpreted, it does not *function* as a sign (MS 637:36 [1909]).[7]

Now, given Short's distinction, what are we to make of the goal-directedness of semiosis? In Ransdell's framework, this was to be

explained as internal to the semiotic process, directed toward the ideal final object. Short takes on the problem from a different angle, focusing on Peirce's characterisations of intelligent action and triadic production. The distinguishing mark of intelligent activity, according to Short, is that it involves the anticipation of a future event or state. In a discussion of how a scientist can detect intelligence in organisms, Peirce observes that the characteristic mark of intelligence is that a certain event is produced as a *means* of achieving another event, the goal of the action (CP 5.473 [1907]). This amounts to saying that intelligent action is *purposive*. Furthermore, Peirce claims that a sign is something that functions triadically (MS 318:39/75_b [1907]). This could be taken as a statement to the effect that signs are engendered in order to be interpreted; but according to Short, it does not entail that the sign would necessarily be produced triadically. Something may be a sign without the active involvement of any intelligence, as in the case of natural signs, such as symptoms of disease or signs of the weather.

However, we find that semiosis, if it is to taken to be a mode of intelligent action, must involve the triadic production of interpretants (CP 5.473 [1907]). In other words, it is the interpreting activity, in which interpretants are produced, which is the source of intelligence and direction in the process. According to Short, this is best understood as the production of *dynamic*, actual interpretants in order to achieve some goal, conceptualised as the *final* interpretant.

Consequently, the purposiveness of semiosis is ultimately derived from the sign user, a living being that acts interpretatively. In itself, a sign is not necessarily teleological; proper semiosis requires at least the contribution of some sign-interpreting agency. However, this does not mean that the semiotic development could be entirely attributed to the interpreter. In Short's account, it is not the object that is the aim of the process, but rather the final or ideal interpretant, which depends on the grounding involved in the significance of the sign as well as on the goal of interpretation (Short, 1981b, p. 213). Furthermore, in order to avoid misconceptions, it should be emphasised that Short's position does not entail

that the teleological power of semiosis would necessarily reside in a human interpreter. The interpretant-producing agent may be a non-human organism.

To do justice to Short's position, we should note that it is primarily directed against the so-called Brentano's thesis, according to which intentionality is characteristic of psychical phenomena. "Intentionality" is here used as a technical term to designate the peculiar sense in which certain things can be about or of other things, regardless of whether those other things exist (Short, 1998b, p. 49; cf. sect. 4.1.2). This conception has been used as an argument against behaviouristic theories of signs (such as Morris, 1946; Ogden & Richards, 1949). Roderick Chisholm (1952), in particular, has maintained that it is practically impossible to describe sign relations or semiotic action without using intentional concepts, such as "believing", "expecting", or "wishing", thereby concluding that Brentano's thesis holds for signs; they are psychical or, to use Short's (1998b) characterisation, derivative of thoughts (p. 50). This, in turn, could be used as a criterion for separating humans from animals; only human beings use signs intentionally.

Obviously, such a stance is incompatible with Peirce's anti-psychologistic outlook. According to Short (1998b, pp. 50-51), Chisholm's position leads to an unacceptable dualism, in which intentionality is an inexplicable datum of human consciousness. In contrast, Peirce's teleological view of semiosis provides an explanation of the phenomenon. To be more specific, semiosis is coexistent with a certain kind of teleological process, namely *acting for a purpose*; all "sign-interpretation is purposeful and all purposeful action interprets signs" (Short, 1998b, p. 51).

> …it is the process of interpretation […], and not the interpretant *per se*, that confers intentionality on the sign. It confers intentionality on both the sign and the interpretant. And it does so, only because it is goal-directed. It is the teleological structure of semeiosis that explains the intentionality of its parts. (Short, 1996, p. 527)

If Short's contention is correct, then any act that can be said to be purposive will entail semiosis, even if it is a matter of a seemingly instinctive action, such as a rabbit that startled by a noise flees from

an invisible predator (Short, 1998b, p. 53). The obvious objection to such an example is that the rabbit is acting by instinct, not because of any conscious awareness of the predator as an object. Short's point, however, is that the action is intentional because the rabbit's interpretation of the sign could be mistaken; the object might not exist. That the purpose of the action – survival – is a product of evolution rather than a conscious choice does not alter the fact that the purposive interpretation renders the situation intentional.

Short's account of semiosis involves conceptions of interpretation and purpose that are significantly broader than the ordinary understanding of those notions. It may be asked on what grounds this position could be defended. Are we not just attributing features of our own interpretative activity to the rabbit? Perhaps, but if we follow the Peircean line of thought, such an anthropomorphic conception is not automatically damaging (see sect. 4.1.2). Furthermore, it may be argued that many human uses of signs are as "instinctive" as the action of the rabbit. Recall Peirce's contention that "the earliest way of using signs is to think in them without thinking of them, as signs" (MS 810:2_b). This does not apply merely to some primitive or immature phase of human development; rather, it is typical that we lose awareness of the semiotic character of our signs in use – at least if Peirce is right in his contention that practically all human activity, from perception to cognition, is pervaded by signs. We repeatedly make misinterpretations without even being aware that we were making interpretations; indeed, it is typically error that awakes us to the semiotic character of seemingly self-evident perceptions and cognitions. The intentionality of such pre-mistake signs cannot be explained by consciousness.

Ransdell's and Short's differing conceptions of semiosis represent two manifestly contradictory views of the action of signs. The core disagreement between the two scholars concerns the role and character of *purpose* in the process. Whereas Ransdell considers the sign-relation as such to be goal-directed, irrespective of any interpretation, Short holds that not all signs are teleological, but only those which are interpreted by a sign user – not necessarily human – with some purpose in view. Now what would seem to lend support to Ransdell in this matter is Peirce's claim that

purposes are only those teleological phenomena we know best; they do not exhaust the field of such processes. However, this is only so if we consider *all* goal-directed processes to be semioses in themselves; Short does not subscribe to that view. Hulswit (2002, p. 143) criticises Short for inconsistency; but his arguments are largely misplaced, as they are based on the assumption that Short considers all irreversible physical processes to be semioses. This is not the case; for Short, semiosis is limited to living nature.[8]

Quite apart from the question of the scope of semiosis, we may ask how well the two rivalling conceptions of the character of semiotic goal-directedness accord with such semioses that we know. Obviously, Ransdell's point of view is more abstract and totalising than Short's more easily graspable notion of purposiveness. There is a common-sensical robustness in Short's account, which is clearly missing from Ransdell's idealistic point of view. Indeed, it can be rather difficult to argue constructively for or against Ransdell's position, as he builds his reading of Peirce on the fundamental premise that semiosis universally tends toward an end state, the truth. However, it is of some interest to note that Ransdell (1977, pp. 171-173) refers to Peirce's relatively common-sensical communicative derivation of the sign relation from the basic conversational situation for intuitive support for his view of the object. The utterer, from which Peirce abstracts the semiotic function of the object, can be seen as the possessor of the correct interpretation, the meaning to be communicated. Erroneous interpretations can only be corrected by paying attention to the signs emanating from the utterer. Therefore, Ransdell (1977, p. 173) concludes that if the concept of "utterer" is stripped down to its "semiotic essentials", it is shown to be simply the general idea that is required as a basis for rectification of misinterpretations on the part of the interpreter. This could also serve as a possible explanation for the alleged dialogical character of semiosis; there is a kind of interplay between signs and interpretants that tends toward the discovery of the true meaning, the object.

In most of his discussion, however, Ransdell ignores a distinction that Peirce often insists upon, namely that between the object of the sign and the meaning of the sign. Although Peirce on

occasion speaks of the sign as a medium for the communication of a form, this does not mean that the meaning would be transmitted from the object to the interpretant (see Bergman, 2000; sect. 5.3.1). Peirce tends to locate the meaning – or perhaps more accurately the *developed* meaning – on the interpretant-side of the relation, sometimes even straightforwardly defining the interpretant as a technical term for meaning (cf. sect. 5.2.3). For Ransdell meaning, object, and truth are more or less equivalent on the wider scale of semiosis. According to Peirce, however, meaning is associated with the idea of the future, just the element that is missing from the object. Signs tend to grow in meaning, while the object in an important sense remains the same. Take any sign with a history, the word "philosophy" for instance, and consider how its meaning has changed over the years. On the one hand, it has altered so much that we could say that philosophy today is not what it was one-hundred years ago, but on the other hand, it is delimited precisely by the fact that it is a sign of the *object* philosophy. It is what our understanding of the sign "philosophy" is about, its referential dimension.

So what, then, are we to make of Peirce's claim that semiosis tends toward an end state? It would seem that Short's more naturalistic conception – whether it perfectly represents Peirce's position or not – constitutes a more plausible answer to this question than Ransdell's idealistic account. However, a qualification is called for here. Short examines semiosis as a process connected to the habits and purposes of living organisms, while Ransdell is primarily looking at semiosis from the point of view of inquiry in an idealised community of scientists. Therefore, it is conceivable that their accounts could be rendered compatible after all, as long as we accept that the questions at hand can be conceptualised on different levels. Yet, perhaps surprisingly, Ransdell's abstract account is not readily applicable to sign-phenomena in general, as one might expect of an account focusing only on the basic sign-relation. In contrast, it is possible to generalise Short's point of view so that the interpretative agency that gives the wider process of semiosis its goal-directedness is a

social agent – even an idealised one such as the community of inquirers. This certainly adds to the appeal of Short's point of view.

5.1.2 Finious and Purposive Processes

In the preceding overview of Ransdell's and Short's conflicting positions, the question of the scope of semiosis surfaced several times, but was not discussed in detail. Obviously, this is one of the major issues in semiotics, and a topic of considerable interest for Peirce studies – one that would require a more extensive investigation than can be pursued here. However, in order to tie together some loose ends it will be useful to briefly consider some problems connected to the limits of sign action before moving on to a more detailed investigation of Peirce's concept of interpretant and his notion of meaning.

As noted, Peirce tends to characterise semiosis by distinguishing it from dyadic or brute action. This constitutes a first, relatively uncontroversial demarcation of the domain of sign action; semiosis is distinguished from dyadic, brute action – the kind of process that involves no lawfulness, goal-directedness, or tendency to an end state. However, this still leaves a number of unanswered questions concerning the scope and the forms of the action of signs. There is the issue of the relationship between sign and semiosis, which was already touched upon, and the even more difficult question whether all forms of teleological or tendential processes are necessarily semioses. In both these cases, we find rather contradictory hints as to what Peirce's view on the matter may have been.

Still, there are certain reasons to hold that not all telic processes are semioses in Peirce's sense. As Short (1998b, pp. 46-47) notes, Peirce maintains that there are goal-directed processes within the domain of statistical mechanics, such as non-conservative actions within thermodynamics. However, Peirce hesitates to call such mechanical operations teleological, and in fact proposes to use the characterisation "finious" for processes that tend asymptotically toward an end state without necessarily involving any purpose to

do so (see RLT 220 [1898]). Such events are irreversible as well as directional. Although Peirce unfortunately does not discuss this matter much further, and never mentions it in semeiotic contexts, we may take the introduction of the idea of finious processes as an indication that he recognised that there may be reason to introduce distinctions among various kinds of goal-directed actions. Finious processes could then be divided, again employing Short's terminology, into purposive and non-purposive processes (see Short, 1998b, p. 47). Purposive processes would be the ones that Peirce in other contexts call "teleological". Peirce, of course, views purposive action as a special mode of teleological activity, the one that is most familiar to us. Still, it is plausible to say that there is purpose in a wide sense whenever something produces something else as a *means* for the achievement of a third thing (cf. CP 5.473 [1907]).

Here, we should naturally ask how the conception of semiosis would be affected by this distinction, were it to be accepted, and whether this approach is acceptable in view of Peirce's rather sparse comments on semiotic action. Certain semioses are obviously telic; but they do not necessarily cover the entire field of finious processes. In fact, there are good reasons to restrict the applicability of the term "semiosis" to purposive processes in the broad sense, and perhaps even introduce further qualifications. At least, Peirce seems to be heading for such a limitation of semiosis, when he says that "semeiosy" is an idea completely opposite to that of automatic regulation of the kind that is found in thermometers (CP 5.473 [1907]). Now this does not mean that the thermometer would not be a sign of the temperature; obviously, its ground of significance is indexical. However, its action is not a part of semiosis before it is interpreted in interpretants with the intention of discerning what the correct temperature is. Consequently, it is possible to say that the thermometer as such, before it is interpreted, is a sign with significance, without thereby claiming that its actions are always instances of semiosis. In fact, Peirce sometimes appears to be even more careful than this, as he suggests that we could call signs without interpreters, such as jacquard looms, quasi-signs (CP 5.473 [1907]).

Note that the *actual* cause of the indication of the thermometer need not be the correct temperature that constitutes the interpreter's goal. If the thermometer is placed too close to some heating device, for instance, there will be misinterpretation of the sign. Yet the semiosis in question is purposive – not because it is directed toward the dynamic object, but because of the purposes of the interpreter. Of course, in the correction of the mistake, further signs must interact with the purposes of the interpreter. Ransdell is right in insisting on the role of the object in the rectification of misinterpretations; yet, the process is not auto-semiotic, because the purposes of the interpreter also play a crucial part in determining what the goal of the process is. To better accommodate Ransdell's contention, we might accede that it is rarely up to the sign user exclusively to establish the course of semiosis; signs – or perhaps better, sign systems – often have a tendency of their own that is not easily budged by individual efforts. Indeed, the formulation of higher-level goals is only possible within the framework of developed signs. This seems to be the gist of the young Peirce's emphasis on the connection between a human being and his or her language.[9]

> Man makes the word, and the word means nothing which the man has not made it mean, and that only to some man. But since man can think only by means of words or other external symbols, these might turn round and say: "You mean nothing which we have not taught you, and then only so far as you address some word as the interpretant of your thought". In fact, therefore, men and words reciprocally educate each other; each increase of a man's information involves and is involved by, a corresponding increase of a word's information. (W 2:241 [1868]; cf. W 1:491-499 [1866])

Now, it should be noted that there are certain possible counter-arguments against the view of semiosis that has been presented here. In particular, we should acknowledge certain problematic passages in Peirce's writings, which do not accord with the proposed reading.

Firstly, there is one of Peirce's most curious examples of a sign process: a line of bricks standing on end, so arranged that if the first (or last) in the series is tipped over in the direction of the others,

then this action will cause a chain-reaction and all of the bricks will fall over (see NEM 4:313-314 [c. 1906]). Now, to simplify matters we may assume that there are only three bricks in the line: brick *A* acts upon brick *B*, which in turn acts upon brick *C*. In a sense, brick *B* acts as a mediator, since it conveys the effect of *A* to *C*. In other words, *B* would be a sign, as it transmits the action (or the habit of action) of *A* to *C*; each brick is a sign to the succeeding bricks of the original effect (NEM 4:314 [c. 1906]). In our simplified case, this would seem to be easily reducible to two separate dyadic actions; brick *A* acts upon brick *B* and brick *B* acts upon brick *C*. The process is then one of efficient causation, in which mechanical energy or something similar is transferred from one point to another. Yet, Peirce chooses to characterise the dynamical reaction in the line as a sign relation – and even more intriguingly, as a process of communication.

It is important to note what kind of sign is involved in the case of the bricks; it is not a symbol, but an index (NEM 4:314 [c. 1906]). An index can be defined as a sign that is fit to act as such because of an existential relation between sign and object – that is, the kind of relation that can be found in the action of one brick upon another. As such, it does not *function* as a sign – for that a dynamical interpretant is required (cf. sect. 5.2.2) – but it possesses the grounding relation that makes it an indexical sign apart from any possible relation to an interpretant. Now, the true difficulty of Peirce's brick example is not the status of the bricks as indices (or perhaps one should say as potential indices), but the fact that he seems to take the line to involve an interpretant as well, namely the third brick. We would then have a semiosis in the transmitted dynamical effect, independent from any actual or potential interpretation of it. That is, we would be faced with a conception of semiosis, in which communication could consist of nothing but mechanical determination. What seems to be totally lacking from this picture is any kind of *purposiveness* – that which ought to distinguish semiosis from mere dynamical action (see, in particular, EP 2:411 [1907]; cf. CP 2.86 [c. 1902]; CP 1.532 [1903]). It may be suggested that the problem can be solved by taking the cause of the original effect into account; the first brick is perhaps tipped over *in*

order to bring about a certain effect, and the intention to produce such a reaction would introduce an element of purposive mind or final causation into the proceedings. However, Peirce's formulation does not really support such a reading. Even if the first effect is purely accidental – someone may kick over the first brick by mistake – it would still appear to be communicated in the series of falling bricks, if the crucial condition for signhood is that of mediated determination

The problem stems from an interpretation of the sign as a vehicle, which in effect reduces the alleged sign relation to a compound of three separate components and two or more dyadic relations. This cannot be a proper sign; in fact, the line of bricks accords perfectly with Peirce's definition of a dyadic, non-semiotic action: event *a* produces *b*, which in turn produces *c*, but the fact that the event *c* is about to be produced by *b* has no influence at all upon the production of *b* by *a* (MS 318:25-26 [1907]). The action of *b* in producing *c* is a contingent future event at the time *b* is produced; at each step, only a pair of objects is involved. We simply are not able to imagine a semiotic relation that would be less than triadic, since a sign cannot function as such without an interpretant. Prescissive abstractions make it possible to speak of the relation between sign and object as such (as iconic, indexical, or symbolic) or the sign as it is as such (as qualisign, sinsign, or legisign); but the *comprehended* sign always involves three correlates. Now the function of the sign is not merely to transmit a determinate form from one subject to another; it also operates to bring these subjects into connection with each other. In this sense, its function is similar to the gift in the relation of giving (cf. sect. 3.2.2).

It is possible that the line of bricks falling over would be accurately characterised as a process of mediation; *B* certainly mediates between *C* and *A* in the transfer of the effect. However, *B* is not a sign; indeed, it is not even a medium of communication (cf. sect. 4.1.2). We have no choice but to conclude that Peirce's illustration is unusually poorly chosen. Although it is possible to interpret the chain-reaction semiotically, if there is an appropriate purpose to do so, it is blatantly false to call the process as such semiosis. Such a case simply falls outside the scope of sign action.

Another argument against limiting semiosis to purposive finious processes comes from the fact, emphasised by Santaella Braga (1994), that Peirce's idea of semiosis is closely connected to his broad conception of mind, and that he tends to see intelligent action throughout the universe, in non-living as well as in living nature. There is no denying that the combination of Peirce's objective idealism with his semeiotic would point in that direction. The following oft-cited passage provides strong support for the pan-semiotic reading of Peirce.

> Thought is not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world; and one can no more deny that it is really there, than that the colors, the shapes, etc., of objects are really there. Consistently adhere to that unwarrantable denial, and you will be driven to some form of idealistic nominalism akin to Fichte's. Not only is thought in the organic world, but it develops there. But as there cannot be a General without Instances embodying it, so there cannot be thought without Signs. (CP 4.551 [1906])

However, there is no conclusive evidence to the effect that Peirce considers such processes to be cases of semiosis.[10] Instead, we might ask whether all intelligible action is necessarily of the character of semiosis. Peirce does not give us a straightforward answer; but it could be suggested that there is mind-like behaviour that is not properly speaking semiotic. Automatic regulations and processes of interpretation are both triadic in the sense that they cannot be reduced to a mere series of dyadic actions, without thereby losing the characteristic goal-directedness of the events. The similarity of the activities is based on the fact that habits of various kinds are significantly involved; their difference is given by the fact that only semiosis proper is purposive. Non-purposive finious processes can be characterised as minimal triadic processes because of the inflexibility of the habits, i.e. the laws, involved.

This point of view would connect semiosis with living nature, while it is still possible to hold on to Peirce's suggestion that the universe is perfused with signs (cf. EP 2:394 [c. 1906]). Still, how well does this accord with Peirce's view of the sign user? In the familiar definition of semeiotic (CP 2.227 [c. 1897]), Peirce charac-

terises the sign-theoretical activity as one of abstraction, in which the semiotician is led to fallible statements as to what must be the character of all signs used by a "scientific" intelligence, by which he means an intelligence that is capable of learning from experience (cf. sect. 2.2.4). Again, we are left in uncertainty as to what intelligences should be considered capable of learning or "catching on" as Peirce also says; but he does assert that they are not necessarily persons, but some kinds of things or beings with the capacity of receiving a significant meaning, as distinguished from merely physical or psychical doses of energy (MS 318:18/182$_b$ [1907]). This may imply the very distinction that has been put forward here, along the lines suggested by Short; the psychical refers to the mind, but the fact that Peirce distinguishes the meaningful from the psychical would indicate that not all mind-like activity is semiosis. However, this is far from clear, and the matter is further complicated by the fact that Peirce does not explicate his conception of meaning. It is, perhaps, better to consider to what kind of minds we would attribute the capacity of learning from experience, and use that as a guide to the domain of semiosis.[11]

With regard to the problem of the scope of semiosis in nature, there appears to be two forces at play in Peirce's philosophy: on the one hand, the religiously inspired cosmologist, and on the other hand, the more careful pragmaticist and logician. However, the discussion concerning the domain of semiosis can also be pursued on a different level, in connection with man-made reasoning devices, such as computers. It has been argued that Peirce's conception of semiosis extends to various kinds of "intelligent" machines (see, e.g., Santaella Braga, 1999b; Wykoff, 1970). It would seem, indeed, that the processes of a computer programmed for artificial intelligence could be conceptualised as a kind of semiosis, in which an interpreter would not be involved. Is this not then evidence that semiosis does not require the contribution of interpreters? Peirce's own prime example along these lines is the Jacquard loom. Another pertinent example is that of the books of a bank, which act as signs of the state of the bank in question, without there having been interpretation. Both of these examples are relevant today; the working of a Jacquard loom bears more than

a passing resemblance to the computer, and the argument about the books of the bank can easily be extended to the databanks of today. Indeed, much effort is currently being put into the construction of different information retrieval and processing systems, which work automatically, compiling signs of various kinds without the presence of any interpreter in the proper sense of the word. However, the distinction between sign and semiosis serves to undermine this objection. If it is further argued that computers are capable of producing unique interpretants on their own, the answer is that that is an illusion. Computers are merely capable of producing data for interpretation, in other words signs or quasi-signs. Computing machines, at least as they are known today, are complex instances of automatic regulation, in which programs act in the role of goal-inducing habits. If a program is capable of evolving, it is because it has been so programmed. There is no originality or creativity in the process of the computer as such; its results are not meaningful before they are interpreted. As Peirce notes, this is as it should be; the whole point of the reasoning machine is that its functions are reliable and ultimately predictable (cf. W 6:70 [1887]).[12]

In sum, the proposed interpretation, which in the main follows Short's line of argument, limits the scope of semiosis to living nature, definitely excluding such phenomena as chain-reactions and automated computations, and also certain other types of finious processes, from its realm. It would also leave out such candidates for semiosis as cosmic evolution – at least if we avoid the realm of religious metaphysics (cf. Kruse, 1994). As we have seen, this does not entail that the processes in question could not enter into semiosis at some stage; nor does it render them completely un-semiotic in the sense of not involving signs.

5.2 Significative Effects

Semiosis is not limited to the determination of the sign; prescinded from the full sign relation, the object-sign connection is predominantly dyadic, rendering the abstracted representational or ref-

erential relation an instance of degenerate thirdness, at best.[13] Without an operative interpretant, the sign relation is lifeless and ineffective. Peirce emphasises that anything acting as a sign necessarily involves an interpretant (SS 111 [1909]); and if we accept Short's account of significance, then even a sign at rest will have an interpretant-correlate. This fact distinguishes semeiotic from several other approaches, in which semiosis is either exhausted by the referential "standing for"-relation (e.g., Sless, 1986), or meaning is considered to be contained in the systemic constellation of signs, as in structuralist theories of signs. While the object and the interpretant are treated separately in this study, it should be emphasised that they are not two acts performed in isolation from each other, as if we could attach a sign to an object without interpreting it in some way, or interpret a sufficiently complete sign without in any way attending to its professed reference. From the point of view of semeiotic, it would be a mistake to postulate interpretation or representation as completely self-subsistent areas of inquiry. In a semeiotic investigation, components, such as object and interpretant, and semiotic functions, such as representation and interpretation, can be isolated for special attention, but one must always remember that this is actually an abstraction from the full sign-relation, which in turn is abstracted from the complex processes of semiosis (cf. Keeler, 1990, p. 26).

In particular, one should note that indicative reference is meaningless without an interpretant; it would be just a mechanical "pointing out"-function, which paradoxically would turn out to be dysfunctional; it could not even refer to any *thing*, because that would already involve an element of interpretation in the form of a perceptual judgment. Of course, it may be objected that this function is precisely the office of the index, the sign that focuses our attention by compulsion. However, although the ground of the index's reference need not be dependent on the being of the interpretant, the ground is not in itself a sign; in fact, it does not even constitute significance in Short's sense.

In the following pages, I will first examine the key Peircean notion of interpretant and then turn my attention to the intricate question of meaning within the context of semeiotic. In some

respects, it is only through these discussions that the true qualities of Peirce's sign-theoretical approach begin to be discerned. As many students of his thought have noted, the later development of the concept of interpretant connects the theory of signs to Peirce's pragmatism – or, as it is more appropriate to say in this case, to his *pragmaticism*. This much is incontestable, but the precise nature and relevance of the relationship is still hotly debated in Peirce scholarship. Nor have commentators been able to reach an agreement concerning the status of the meaning of the sign; indeed, there are good reasons to enquire whether the "meaning of meaning" is a topic of genuine interest for semeiotic. I shall argue that it is, but only in a qualified sense, where different aspects of meaning are considered in light of the various types of interpretants that Peirce identifies. In this examination, we will in certain respects move beyond the direct textual evidence provided by Peirce's writings; but I believe the picture to be painted is compatible with the Peircean point of view.

5.2.1 The Second Correlate

In contrast to certain other influential semiotic concepts, such as that of "semiosis", which Peirce rarely uses, "interpretant" is a term that Peirce frequently employs and characterises in various ways. It is also an original notion; in some respects, it constitutes Peirce's most prominent contribution to the philosophical study of signs (cf. Liszka, 1990, p. 17). Of course, earlier philosophers had pointed out that a representation – one thing standing for another – must somehow enter into consciousness or cognition, if it is to be an object for understanding. However, Peirce is certainly the first to define the sign in such a manner that the interpretative element is an integral feature of the relation, and not merely a secondary add-on.[14]

The interpretant is an early innovation in the development of Peirce's thought. It is apparently introduced in 1865; it can in any case be discerned in "Logic of the Sciences". A representation is said to imply "a mind or rather abstracting from the personal

element, a representation (itself or other) to which it addresses itself"; this second representation is denoted the "subject" (an early candidate for "interpretant") (W 1:327 [1865]; see sect. 4.1.1). The incipient idea of the interpretant can perhaps be detected in the earlier Harvard lectures of 1865, but there it is not overtly identified as a distinct conception, but rather as an equivalent representation (W 1:274). The first explicit use of the term "interpretant" seems to occur the following year in "Logic Chapter I". In the same manuscript, Peirce also speaks of the "correspondent".

> …comparison is the determination of a representation by the medium of that which is present, in contradistinction to its determination simply by that which is present. For example, I put *A* into relation to *B*, when in contemplating *A*, I as it were see *B* through it. The representation determined by the medium of *A*, may be called its *correspondent*. (W 1:353)

Now, as these characterisations indicate, the young Peirce conceives of the interpretant as a further representation (that is, sign). Moreover, we should note that the occasion of the introduction of a reference to the interpretant is comparison. This, of course, points to Peirce's derivation of the categories from propositional judgment, which, as we have found occasion to observe several times already, is closely tied to his first reflections on the nature of signs. It is no surprise, then, that the most distinctive early definition of the interpretant is to be found in the "New List":

> ...every comparison requires, besides the related thing, the ground, and the correlate, also a mediating representation which represents the relate to be a representation of the same correlate which this mediating representation itself represents. 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. (W 2:53-54 [1867])

The derivation of the "New List" has already been discussed in some detail (see sect. 3.1.1). Here, it suffices to complement that account by a brief look at some of Peirce's examples of the interpretant-function. In one illustration, he suggests that we compare the letters p and b (see W 2:53 [1867]). In order to do so,

we may imagine one of the letters to be turned over, and then laid upon the other, so that it finally becomes transparent and the other can be seen through it.[15] In this manner, we obtain a new image that mediates between the images of the original letters, as it represents one of them to be an icon of the other; this mediating sign is the interpretant. Secondly, we can consider the case of a simple dictionary reference, for instance the French word "homme" standing opposite to "man". In being so placed, the word "man" represents "homme" as representing the same two-legged organism that it itself represents (W 2:53 [1867]). In other words, "man", in its placement, functions as an interpretant or translation of "homme". The relationship is of course reversible.

A few things should be noted concerning this early conception of the interpretant. Firstly, it is internal to a function of judgment, as our examination of Peirce's theory of categories has shown. Secondly, the interpretant is straightforwardly characterised as a representation; there is no indication that it could be anything else. Thirdly, the interpretant mediates between things with respect to some ground, the abstract quality that makes comparison possible. It may be relatively obvious, such as the iconic quality shared by p and b, or less evident, such as the symbolic ground of the comparison between "man" and "homme".[16] Finally, as such, this conception of the interpretant does not involve any reference to any continuous process of interpretation. Rather, it marks a kind of merger or closure in propositional understanding, as in the perceptual judgment "the fat cat is black", which according to the early account is only possible because of comparison with other black objects and fat objects. In contrast, the radical representationist position is clearly present in "Logic of the Sciences" (see W 1:326 [1865]), and the idea of chains of (cognitive) signs is given its first proper articulation in the *Journal of Speculative Philosophy* series (1868-9). The latter notion is "reduced" to encompass representation in general in writings from the early 1870s.

> …an idea which should exist only for one moment, which should never before that have had any existence in the mind in any preceding time

> however close before and which should never have any existence in any succeeding time no matter how close after would have no existence whatever; and therefore an idea apart from what it represents and suggests to the mind, apart from its calling up to the mind another idea, does not exist in the mind at all. It is therefore an essential property of an idea that it should address itself to the mind at another time. Thus an idea is in the strictest sense a representation and the statement that it is necessary that a representation should excite an idea in the mind different from its own idea is reduced to the statement that a representation is something which produces another representation of the same object and in this second or interpreting representation the 1st representation is represented as representing a certain object. This 2nd representation must itself have an interpreting representation and so on ad infinitum so that, the whole process of representation never reaches a completion. (W 3:63-64 [1873])

The second phase of the development of Peirce's theory of the interpretant is rather perplexing. Having defined and partially explicated his technical concept in the "New List", Peirce all but abandons the term in the years following upon its publication. The term is strangely enough missing even from the cognition articles, where it ought to have been put to use. In fact, it seems that the last appearance of the interpretant before a long hibernation is to be found in an early draft for the first essay of the series (see W 2:162 [1868]).

The disappearance of the interpretant can be seen as a first indication of Peirce's dwindling interest in semeiotic, which becomes an outright absence of an explicitly semiotic point of view in the 1870s. True, it is at first not so much a question of abandoning semeiotic, as it is of changing the vocabulary; Peirce may have dropped "interpretant" from his writings because of its technical awkwardness. In the cognition series and in the proto-pragmatistic writings of the early 1870s, the interpretant is replaced by thought or mind. Indeed, in "On the Nature of Signs" Peirce straightforwardly defines a sign as "an object which stands for another to some mind" (W 3:66 [1873]).[17] However, the group of manuscripts to which that fragmentary text belongs constitutes Peirce's last major sign-theoretical contribution within the framework of the early semeiotic.

This is not to say that the period from 1874 to 1884 would include no material of semeiotic interest; certainly, we may discern the influence of Peirce's early representationist position in the well-known pragmatistic articles of the late 1870s.[18] Yet, it remains a fact that the term "interpretant" disappears from Peirce's production, only to re-emerge in the 1890s.

Superficially, the later account of the interpretant seems to pick up where the earlier theory left off. However, upon taking up the subject anew, Peirce does not present any justification of the interpretant in the form of a derivation of the concept; instead, it is presented directly as a component of the general definition of the sign, not unlike its introduction in 1865 or the definitions of the early 1870s.

> A *sign* is a thing which serves to convey knowledge of some other thing, which it is said to *stand for* or *represent*. This thing is called the *object* of the sign; the idea in the mind that the sign excites, which is a mental sign of the same object, is called an *interpretant* of the sign. (EP 2:13 [1895])

This excerpt seems to encapsulate the position of the early 1870s in more explicit semeiotic terminology. It differs from the account of the "New List" in that there is no reference to a ground and the function of the sign is characterised as conveyance of knowledge. However, it is of interest to note that the conception of interpretant retains something of its original character, while at the same time introducing something new. Namely, in the 1860s, Peirce consistently held that the interpretant of a sign is another sign (including the special case of a sign that refers to itself). Still, he avoided using the label "mental", although the account of the "New list" leaves that possibility open. In any case, the emerging interpretant is more explicitly associated with interpreting thought than the earlier concept. Furthermore, the interpretant is now understood as a sign in the mind that in some sense can signify the object through the mediation of the sign, rather than as a unifier of impressions. That is, the role of mediator has been transferred from interpretant to sign (cf. CP 1.480 [c. 1896]).

In the hectic period of sign-theoretical development that follows upon the reawakening of semeiotic interest in the 1890s, the interpretant is characterised in a variety of ways, often leaving the reader unsure whether the divergences indicate noteworthy changes or merely inconsequential variations in expression. To simplify matters, we may group some characteristic descriptions together, so that we get four distinguishable – but not necessarily disconnected – ways of describing the second correlate of the sign-relation.

Firstly, the interpretant may be described as another sign or a sign authorised by the original sign (CP 2.228 [c. 1897]; CP 2.303 [1902]; MS 8:4$_v$ [c. 1903?]; MS 11:1 [c. 1903?]). "Any sign, *B*, which a sign, *A*, is fitted so to determine, without violation of its, *A*'s, purpose, that is, in accordance with the "Truth", even though it, *B*, denotes but a part of the objects of the sign, *A*, and signifies but a part of its, *A*'s, characters, I call an *interpretant* of *A*" (EP 2:304 [1904]). Such characterisations bear a close resemblance to Peirce's early conception of sign.

Secondly, the interpretant may be described as a *mental action*, *mental effect*, *idea*, or *thought* produced by the sign (NEM 4:309 [c. 1894?]; CP 1.564 [c. 1899]); "I term the idea or mental action that a Sign excites and which it causes the interpreter to attribute to the Object or Objects of it, its *Interpretant*" (MS 849:9 [1911]). This is reminiscent of the account of the early 1870s; moreover, it is closely connected to the first description, because thoughts and ideas are construed as signs in the Peircean approach.

Thirdly, the interpretant may be described as the *signification* or *meaning* of the sign (MS 318:11/156$_b$ [1907]; EP 2:496 [1909]). "By the *Interpretant* of a Sign is meant all that the Sign can signify, mean, or itself convey of new, in contradistinction to what it may stimulate the observer to find out otherwise, as, for example, by new experiences or by recollecting former experiences" (MS 640:9$_v$ [1909]). Again, this does not necessarily conflict with the characterisation of the interpretant as a sign; but it does indicate a more autonomous position for the second correlate.

Fourthly, the interpretant may be described as the product, creation, or the proper significative effect of the sign (CP 4.536

[1906]); EP 2:429 [1907]; EP 2:493 [1909]; MS 637:36$_v$ [1909]). "How shall we name the entire mental effect which a sign by itself is calculated, in its proper significative function, to produce? The word *signification* is somewhat too narrow, since […] this mental effect may be of the nature of an emotion or of that of an effort. No existing word is sufficiently appropriate. Permit me to call this total proper effect of the sign taken by itself the *interpretant* of the sign" (EP 2:429 [1907]). We see that this characterisation is not entirely incompatible with the first in that both involve a reference to a mental effect, but the observation that "signification" is too narrow can be taken as a criticism of the notion that the interpretant is equivalent to meaning. The second account, according to which the interpretant is a sign, would appear to clash with the claim that the interpretant may be an emotion or an effort. However, the characterisation of the interpretant as a significative effect is compatible with the communicative point of view outlined earlier in the study (see sect. 4.1.2).

In view of this list of varying descriptions, which is not exhaustive, the concept of interpretant has been up for grabs, so to speak. In Morris's (1964) behaviouristic framework, the interpretant is characterised as "the disposition to react in a certain kind of way" (p. 2), a much narrower – or alternatively, more clearly delimited – notion than the one advanced by Peirce. However, Peirce's characterisation of the interpretant as a second sign has caught the imagination of many later commentators. This suggestion makes semiosis an open-ended process, since as a sign the interpretant must have an interpretant of its own, and so on, indefinitely (see W 3:64 [1873]; NEM 4:310 [c. 1894?]; CP 2.203 [1902]; CP 2.92 [c. 1902]; MS 599:36-38 [c. 1902]; MS L107:25-26 [1904]). Semiosis does not necessarily stop when the sign has determined an interpretant. Furthermore, Peirce seems to claim that this chain of interpretants ought to be infinite, if the sign is to be a sign in the proper sense; "if the series of successive interpretants comes to an end, the sign is thereby rendered imperfect, at least" (CP 2.203 [1902]).

In addition to the apparently interminable series of interpretants, Peirce suggests that there may be a similar lack of an absolute end in the series of objects (NEM 4:309-310 [c. 1894?]; MS 599:37-38

[c. 1902]). Any object that is lifted up for contemplation becomes, therein and thereby, a sign, which ought to have an object of its own. This double openness has given rise to the idea of *unlimited semiosis*. It should be noted, however, that the term is not Peirce's; it has been instigated by Umberto Eco. For Eco (1977), "unlimited semiosis" is equivalent to the thesis that "semiosis explains itself by itself" (p. 71). That is, the sign process is autonomous; it does not have to rely on anything other than itself to be able to function as such. This idea of unlimited semiosis seems to receive some support from Peirce's third way of characterising the interpretant, as meaning.

Furthermore, Peirce occasionally indicates that interpretation is synonymous to translation (EP 2:388 [1906]). Roman Jakobson (1980), in particular, has found this point of view appealing; he calls it Peirce's "brilliant idea", and concludes that semeiotic meaning entails the translation of a sign into another system of signs (p. 35). Consequently, there would be no extra-systemic way to approach signs; meaning would always be internal to the sign-system in question. In other words, the idea of unlimited semiosis seems to form a point of contact between semeiotic and structuralist semiotics, in which the meaning of signs is principally a systemic matter.

The question whether Peirce's semeiotic really involves a thesis of unlimited semiosis is undoubtedly thorny. The issue has been frequently discussed in the literature, but no consensus has been reached. However, the structuralist reading has been largely rejected. Rather, the two competing interpretations can be summarised as the idealistic position, according to which Peirce affirms the infinity of semiosis, and the more restrained naturalistic or pragmatistic reading, according to which Peirce does in fact clearly delimit semiosis and identify certain significant breaks in the process. Predictably, we find Ransdell in the former camp and Short in the latter. Furthermore, the debate between these positions can be condensed into two questions: (1) is every interpretant properly speaking a sign or not, and (2) can there be meaning that is in some sense non-semiotic? These interrelated issues need to be considered in turn.

5.2.2 Varieties of Interpretant

The first of the questions posed above could be quickly answered by simply pointing out that Peirce does identify interpretants that are not signs. As we have already seen, he recognises interpretants that are emotions or actions. In a letter to Lady Welby, Peirce explicitly states that the interpretant is not necessarily cognitive in the proper sense of the term; "we may take a sign in so broad a sense that the interpretant of it is not a thought, but an action or experience, or we may even so enlarge the meaning of sign that its interpretant is a mere quality of feeling" (SS 31 [1904]). However, there are certain complications in the story that require us to examine the development of Peirce's theory of the interpretant in some more detail.

Up until the year 1903, Peirce seems to hold the view that the interpretant is a sign, although he does at times characterise it more narrowly as thought, idea, or mental effect. However, around the year 1904 Peirce begins to expand on his conception by identifying different varieties of interpretants, typically presented in groups of three.[19] This is not easily reconcilable with the characterisation of the interpretant as a mental sign; and indeed, approximately during the same period, Peirce considers the possibility that there might be representamens without mental interpretants (EP 2:273 [1903]). In addition, Peirce explicitly notes that the interpretant need not actually exist to guarantee the reality of the sign; a being *in futuro* suffices (CP 2.92 [c. 1902]; cf. EP 2:409 [1907]). This is a central principle of the earliest semeiotic, which appears to have been temporarily ignored in the propositional analysis of the "New list".

In Peirce scholarship, It has become customary to assert that Peirce presents two major divisions of interpretants in the final phases of his semeiotic. The first consists of *immediate*, *dynamical*, and *final* interpretant, while the second is constituted by the less prominent trichotomy of *emotional*, *energetic*, and *logical* interpretant. The proper relationship between these groups of interpretants has been one of the major sources of scholarly disagreement in studies of semeiotic, which is not surprising, since Peirce's characterisations of the interpretants hardly constitute a complete

and unified theory. They are mostly provisional sketches, full of changes of terminology and point of view.

The fluctuations in Peirce's vocabulary are particularly problematic in the case of the varieties of interpretant. Namely, in addition to the two trichotomies already mentioned the reader is met by a barrage of different interpretant-candidates, such as the *normal*, *rogate*, and *destinate* interpretant.[20] In some cases, it is relatively safe to say that the changes are just a manifestation of Peirce's unrelenting search for adequate expression, and do not as such signal the introduction of a new idea; but in others, it is difficult to be certain. Here, the view that the two best-known sets of interpretants are distinguishable will be accepted. However, we will also see that there is a third trichotomy – that of *intentional*, *effectual*, and *communicational* interpretant – which is not simply equivalent to the ones already mentioned.

Nonetheless, it should be acknowledged that Peirce gives hardly any indication that he intends to construct a theory containing more than three interpretants. In support of the contention that there is only one trichotomy one could point out that Peirce's more extensive classification of signs – the one allegedly giving us 66 different types – is based on the premise that there are two objects (immediate and dynamical) and three interpretants.[21] If further divisions of the interpretant were accepted, then the sign classification ought to be correspondingly expanded, or at least qualified in this regard. Furthermore, one could argue that the various interpretants are properly speaking only different aspects of the second correlate, and in that sense similar to the distinction between two objects. This is true, but as we shall see, there is more productive potential in Peirce's account of the interpretant than in his theory of the object.

Now, turning to Peirce's primary trichotomy, we should first observe that the immediate interpretant does not consist of any actual interpretation or other reaction to the sign; it is rather the potential or expected effect of the sign, "the immediate pertinent possible effect in its unanalyzed primitive entirety" (MS 339:288 [1906][22]). It is "implied in the fact that each Sign must have its peculiar interpretability before it gets any Interpreter" (SS 111

[1909]).[23] This agrees with Short's notion of significance, which may be distinguished from actual and ideal semiosis (cf. Short, 1981b, p. 214). Like the immediate object, the immediate interpretant is internal to the sign; indeed, Peirce characterises it as the interpretant represented, explicitly or implicitly, in the sign itself (MS 339:276 [1906]; NEM 3:886 [1908]; cf. MS 339:260 [1905]). Even if the sign has no actual interpreter, it may still be a sign, because the immediate interpretant prescribes how the sign would determine interpretation if there were one (cf. CP 2.92 [c. 1902]; EP 2:409 [1907]). It is a possible determination of consciousness, "a vague abstraction" (MS 339:287 [1906]). In "Prolegomena to an Apology for Pragmaticism", Peirce additionally suggests that the immediate interpretant incorporates what is ordinarily called the meaning of the sign (CP 4.536 [1906]; cf. sect. 5.2.3).

The dynamical interpretant is the factual effect caused or determined by the sign, or a collection of such experiences. These experiences are always in some sense separate from each other (SS 111 [1909]). Viewed from a slightly different point of view, the dynamical interpretant is the concrete effort or interpretation produced by the sign or that which the interpreter is able to draw from the sign (MS 339:276 [1906]; EP 2:499 [1909]). In other words, the dynamical interpretant is closely connected to the concrete sign user, situated in semiosis; it is "the actual effect produced upon a given interpreter on a given occasion in a given stage of his consideration of the sign" (MS 339:288 [1906]; cf. NEM 3:886 [1908]; SS 110 [1909]). However, it is important to note that the dynamical interpretant is the interpretant determined by the sign in the field of interpretation *exterior* to the sign (MS 339:260 [1905]). It shares this exteriority with the dynamical object.

The final interpretant is the ideal result of the sign or "the effect the Sign *would* produce upon any mind upon which circumstances should permit it to work out its full effect" (SS 110 [1909]; cf. NEM 3:886 [1908]). In other words, the final interpretant is what *would be* the permanent habitual result of interpretation, if the process were unlimited. In such a final phase, there would no longer be any relevant function for the sign. To use Peirce's metaphorical expression, the sign is "exhausted" in the production of the final

interpretant (MS 339:287 [1906]). As these characterisations show, there is a normative aspect to the final interpretant, something that is further emphasised by the fact that Peirce also refers to it as the *normal* or *rational* interpretant. The final interpretant embraces all that the sign could reveal concerning the object to a sufficiently penetrating mind, which is always more than an individual interpreter is able to attain (MS 339:276 [1906]). In terms of inquiry, the final state may be characterised as the true opinion, which would prevail if research and study could be pursued to its ideal experiential and communal limit (EP 2:496 [1909]; cf. Fitzgerald, 1966, p. 80; sect. 2.2.3). In sum, the final interpretant is the goal of inquiry.

It is not difficult to see that the immediate-dynamical-final trichotomy follows the categorial model of first, second, and third. The immediate interpretant is of the nature of firstness in the sense of being immediately present in the sign, apart from actual interpretation. The dynamical interpretant is second as a concrete interpretational effect, and the final interpretant partakes of the character of thirdness as a "would be". Furthermore, we may observe a definite parallel between the object and the interpretant; in a certain respect, the first and second interpretant correspond to the immediate and dynamical object. However, there is an obvious incongruity between the two poles, conceptualised as the final interpretant. This would lend support to the contention that the goal of semiosis is to be located on the interpretant-pole rather than on the object-pole (cf. sect. 5.1.1).[24] This is due to two important differences between object and interpretant. Firstly, the object is the antecedent correlate, while the interpretant is the consequent; the orientation toward the future is particularly marked in the final interpretant. Secondly, such teleology as a process of semiosis may possess is attributable to its final interpretant, which as we have seen is at least partly normative notion. This, in turn, suggests a connection to the purposes of sign production and interpretation. Broadly, this is compatible with the drift of Peirce's mature thought; only, we need to keep in mind that the ideal purposes are not necessarily to be identified with the aims of any individual.

Moving on to the second trichotomy, we may begin by noting that the emotional interpretant can be characterised in terms of recognition. According to Peirce, every "sign that functions as such must have an emotional interpretant; for under that heading comes the feeling of recognizing the sign as such; and it is plain that a sign not recognized is not a sign at all" (MS 318:44/79$_b$-45/80$_b$ [1907]). This is a somewhat careless formulation, for strictly speaking it would tie the being of a sign to concrete perceptions of it. Rather, we should say that the emotional interpretant is connected to the *recognisability* of the sign. However, Peirce also provides a slightly more concrete description of the emotional interpretant, as he identifies it with a feeling caused by the sign in the interpreter; it is felt as a sense of comprehending the meaning of the sign (EP 2:409 [1907]). Some signs may only produce an emotional interpretant, for example, a piece of music that brings forth certain feelings in the listener (EP 2:430 [1907]). However, not all feelings are necessarily emotional interpretants in Peirce's sense. The performance of a piece of concerted music may excite musical emotions without being a sign; but if the hearer discerns musical ideas or emotions in the notes, then the music functions as a mediator and becomes a sign (MS 318:44/80$_b$ [1907]). According to Peirce, such an understanding is a special case; usually, an emotional interpretant consists merely in a sense, more or less complex and possibly amounting to an image, of the meaning of the sign (MS 318:16/160$_b$ [1907]).

The energetic or existential interpretant is a singular effort caused by the sign (EP 2:409[1907]). Peirce claims that most signs, in their significative capacity, provoke efforts, whether these be active efforts in the outer or the inner world, or whether they be efforts of inhibation or self-restraint (MS 318:44/80$_b$ [1907]; cf. CP 5.475 [1907]). This does not mean that every effect caused by an event would be an energetic interpretant; bodily reflex responses are excluded, as are certain automatic efforts of the mind. However, if one becomes conscious, in the provoked effort of acting against a resistance or of resisting a force, of the resistance or the active force, then there is a sign with an energetic interpretant (MS 318:44/80$_b$-45/81$_b$ [1907]). This does not entail critical reflexion, but rather the

kind of double consciousness – secondness – characteristic of action and perception; in fact, Peirce suggests that there are signs that fulfil their function better the less thought is involved (MS 318:17/161_b [1907]). Peirce's favourite illustration of this type of sign situation is a response to a command, insofar as the reaction is not merely "physiological" (EP 2:430 [1907]). For instance, if an officer commands "Ground arms!", his or her attitude and the surrounding circumstances will show that the utterance is an expression of his or her will (MS 318:45/81_b [1907]). The object represented is the present volition. The emotional interpretant is the familiarity with the words felt by the soldiers, while the energetic interpretant is the effort of obeying the order.

The logical interpretant is of the character of thought (EP 2:409 [1907]). That is, it is the intellectual apprehension of the meaning of the sign, or of what is commonly called the meaning of the sign (EP 2:430 [1907]; MS 318:17/161_b [1907]). As such, it must be a conceptual sign itself (cf. CP 4.536 [1906]). However, according to the principles of semeiotic, such a sign ought to have an interpretant of its own, which is a sign that has an interpretant, and so in. Yet, intellectual interpretation does not continue forever; infinite semiosis is *practically* impossible. A sign process, which at some point involves a logical interpretant, might end with an emotional or energetic response. However, that would mean that the intellectual operation would simply be terminated in a way that would have no permanent consequences for sign activity or behaviour (with the exception of an emotion or an effort that would be in some way concretely beneficial for or damaging to the interpreter-organism). The *ultimate* logical interpretant, that is, the interpretant that ends intellectual interpretation, is a *habit* or a *habit-change* (EP 2:431 [1907]; CP 5.476 [1907]). In other words, an intellectual interpretant, if it is allowed to run its due course, will result in a modification of the habitual character of the interpreter, his or her dispositions to feel, act, or think. This does not mean that only full-scale habit-changes qualify as ultimate logical interpretants; the modification may be nothing but a strengthening or weakening of a previous habit (CP 5.477 [1907]). However, a

truly logical interpretant will lead to some alterations in the behavioural pattern of the interpreter, no matter how minuscule.

Thus, we see that Peirce recognises the reality of interpretants that are not signs in the proper sense. Albeit they are significative effects, emotions and efforts are not in themselves signs with interpretants of their own. On the other hand, it could be argued that such effects, as parts of semiosis, will inevitably call forth logical interpretants, if they are to be genuinely meaningful. This may be true, but it does not entail an assimilation of the emotional and energetic effects into the field of logical signification; they are something apart from signs, although they cannot be intellectually comprehended except as parts of more developed interpretation. Furthermore, there is the ultimate logical interpretant, which Peirce often identifies as the proper meaning of an intellectual sign; a habit is not a sign, albeit it shares certain features with a sign, for instance being directed toward the future.[25]

The adherents of the idealistic interpretation of Peirce find this hard to accept. Ransdell (1986b) accounts for the troubling fact of interpretants that are not signs as follows: "In passages in which Peirce speaks of the interpretational process as terminating in something that is not a sign, he is to be understood as using the word *sign* in its colloquial sense, not as denying that all interpretants are themselves signs in the technical sense, that is, representamens" (p. 676). This is not a very satisfactory explanation. Firstly, it makes use of the distinction between sign and representamen, which Peirce abandoned (cf. sect. 4.1.1). Secondly, there is no indication that Peirce would be describing the coarse, everyday uses of "sign" in his discussion of the emotional, energetic, and logical interpretant. In fact, he asserts that the logical interpretant, connected to the *common* conception of meaning, is of the nature of a sign, while the *ultimate* logical interpretant – definitely a technical concept – is not of such a character.

Like the immediate-dynamical-final trichotomy, the second trichotomy possesses a clearly discernable categorial character; the emotional interpretant is an instance of firstness, the energetic interpretant of secondness, and the logical interpretant of thirdness. Still, it is obvious that Peirce's descriptions of these sets of

interpretants are not simply equivalent. The emotional-energetic-logical trichotomy is evidently associated with semiotic effects on an interpreter in a particular process of interpretation. Consequently, it is easier to comprehend than the rather abstract division of immediate, dynamical, and final interpretant, in which the concrete interpreter is absent.

The problem referred to earlier concerns the relationship between these two trichotomies, which has been a topic of discussion in Peirce studies at least since Fitzgerald's (1966) study of semeiotic and pragmatism. Obviously, there are two easy ways out of the dilemma. The first solution is to attribute the divergences to carelessness or experimentation on Peirce's part. The second is to take the varying divisions at face value, and not bother with the rather scholastic pursuit of putting them into order. However, if we wish to understand Peirce's view of the interpretant neither of these alternatives will do. Here, it will be helpful to review briefly the main alternatives that have been proposed, before attempting to identify the most satisfactory approach.

In the first serious attempt to bring some order to this situation, Fitzgerald (1966, p. 76) suggests that the emotional-energetic-logical trichotomy is actually a subdivision of the dynamical interpretant.[26] The principal reason for this move is that the dynamical interpretant is a *concrete* effect, which can take the form of an emotional, an energetic, or a logical effect in the interpreter. Fitzgerald's explication possesses a degree of *prima facie* plausibility; but it does not hold up all that well upon scrutiny. Firstly, he takes Peirce's characterisation of the immediate interpretant as meaning to entail that it is something that is approached as the sign develops, in the end coinciding with the final interpretant (Fitzgerald, 1966, p. 82). This cannot be what Peirce intends when he refers to the immediate interpretant as meaning; rather, he characterises it is as the common conception of meaning, that is, a character of a sign or a possession of a system of signs. Secondly, Peirce characterises the dynamical interpretant as a single actual event (SS 111 [1909]). Consequently, it would seem unlikely that it could be specified as a logical interpretant, which as a sign must be a third.

J. Jay Zeman's approach diverges markedly from that of Fitzgerald. According to Zeman (1977a, p. 247), the two divisions are different kinds of classification of significative effects. Then, he notes that Peirce identifies different degrees of logical interpretants. The first logical interpretant is closely related to the instinctive ideas of animals, and takes the form of conjectures in human beings (CP 5.480 [1907]). As Zeman (1977a, p. 248) notes, this is reminiscent of the immediate interpretant. In the next stage, Peirce claims that the first logical interpretants stimulate us to perform various experiments in the inner world, imagining ourselves in certain situations and tracing out alternative lines of conduct (CP 5.481 [1907]). This is the second logical interpretant, which is related to the dynamical interpretant. The third logical interpretant is the ultimate logical interpretant, or as Peirce at one point says, the *final* logical interpretant (see CP 5.476 [1907]; EP 2:418 [1907]).[27] This last fact, in particular, seems to support Zeman's reading, according to which the logical interpretant is divisible into an immediate, a dynamical and a final variant. Zeman (1977a, p. 249) acknowledges that Peirce does not divide the energetic and emotional interpretant in the same manner, but he argues that the energetic interpretant would be divisible into immediate energetic and dynamical energetic interpretant, while the emotional effect could only be an immediate interpretant. Thus, Zeman identifies six distinct types of interpretant in Peirce's semeiotic.

Zeman's argument is unmistakably based on the theory of categories; indeed, he does follow a distinctly Peircean method of analysis in the identification of the variants of interpretant. Although Zeman does not clearly say so, his model is categorially constructed so that there are two degenerate logical interpretants and a genuine one (the final logical interpretant), while the energetic interpretant has a degenerate and a genuine form. The difficulty with Zeman's account is simply that it makes the more general immediate-dynamical-final trichotomy a subdivision of the more concrete logical interpretant. This does not fit well with Peirce's reflections on the matter;[28] nor does it agree with the outlook of other commentators. A more specific problem concerns the word "final"; while Peirce does speak of the final logical

interpretant, this seems to be more a case of careless use of terminology than a clear signal that "final" and "ultimate" are interchangeable. In fact, it seems appropriate to distinguish the two terms; by "final", Peirce usually refers to something ideal, like the "final opinion", but by "ultimate", he typically means something more concrete and absolute, like in the term "ultimate reality". True, his usage is not consistent, but this way of reading his statements may cast some light on their purport.

The third model for combining the two sets of interpretants has been explicated by Short (1981b), according to whom "the two trichotomies intersect, yielding nine distinct types of interpretants" (p. 213). [29] His argument runs, roughly, as follows: the interpretability of the sign (its immediate interpretant) can be divided into possible feeling, possible action, and possible thought. Similarly, the actually formed interpretant may be a feeling, an action, or a thought (or a word or a habit); while the final interpretant could be either the feeling, action, or thought that would be the ideally satisfactory interpretation. In a later article, Short (1996) clarifies his position by asserting that the two trichotomies are not just distinct, but so different that they are not divisions in the same sense. The immediate-dynamical-final trichotomy is *modal*; thus, its members could be renamed the possible interpretant, the actual interpretant, and the ideal interpretant (Short, 1996, p. 494). It expresses the structure of the later semeiotic. In contrast, the emotional-energetic-logical division is indicative of the breadth of Peirce's theory of signs, as it places thought in a naturalistic context.

The strongest support for Short's position is found in an entry in Peirce's Logic Notebook, where we do indeed find a statement to the effect that the immediate interpretant may be a quality of feeling, an idea of effort or experience, or the idea of a form or anything of a general type. Furthermore, in a similar fashion, Peirce contends that the dynamical interpretant may be a feeling, an action, or a habit (MS 339:288 [1906]).[30] There is no triadic division of the final interpretant to be found in the entry in question, however.

Before taking a closer look at some criticisms of Short's account, it may be useful to summarise schematically the three positions identified (fig. 10 below).

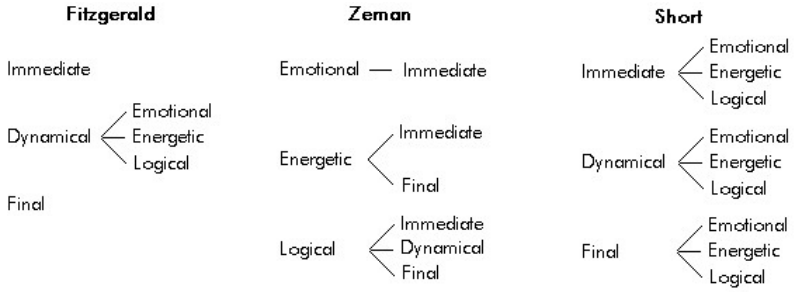


***Figure 10*. Three Different Reconstructions of Peirce's Theory of Interpretants.**

In his account of Peirce's theory of the interpretant, Liszka (1990, p. 21) argues that Short repeats Fitzgerald's mistake, only expanding it. Namely, both Fitzgerald and Short take the fact that a certain type of interpretant can be characterised as feeling, action, or thought to imply that that it is thereby divisible by the emotional-energetic-logical trichotomy. There is some truth to this; in particular, it seems odd that Peirce, who in his writings devotes so much time to classifications of various kinds, would have omitted the opportunity of explicating his notion of the interpretant in the manner proposed by Short – if that really was his mature point of view. Furthermore, Liszka (1990, p. 21) points out that the dynamical interpretant is a single, actual event (cf. SS 111 [1909]). As he notes, from the point of view of effect, a thought may be such an occurrence; but it is nonetheless not a logical interpretant, which is marked by the fact that it is not a singular event.

Liszka's contention could be contested. The term "habit-change", by which Peirce at least once characterises the ultimate

logical interpretant, would appear to refer to a singular event (cf. Short, 1996, p. 499). This description could be attributed to carelessness on Peirce's part. He explains that "habit-change" means "a modification of a person's tendencies toward action, resulting from previous experiences or from previous exertions of his will or acts, or from a complexus of both kinds of cause" (CP 5.476 [1907]). However, it is unclear whether the ultimate logical interpretant is the modification as an event, the modification as a process, or the modification as a new tendency to action. If the passage in question is compared with other variants of "Pragmatism" (MS 318), then the last alternative would seem to be most appropriate (see, e.g., EP 2:430-431 [1907]; cf. Lalor, 1997, p. 34). The term habit-change is perhaps most appositely understood as a reminder of the fact that developed meaning is properly speaking neither the content of the sign nor a definitional explication of the sign, but rather something *interactional*, that is, something that is generated as the sign acts out its significative potential in a field of interpretation.

In an argument reminiscent of Liszka's criticism, Brendan Lalor (1997, p. 34) notes that the notion that a logical concept – that is, one form of the logical interpretant – could be reducible to a singular event – a dynamical interpretant – would have been unacceptable to Peirce. In fact, it would be easy to find similar absurdities in all the specifications of any categorially simpler notion by a higher-valency concept.[31] In his reply, Short (1996, p. 499-500) asserts that an effect may be enduring; therefore, the dynamical interpretant can be a habit that has been formed and actually governs reactions. This entails the understanding that "actual" may refer either to being singular or to governing singular instances; according to Short (1996, p. 501), the dynamical interpretant is actual in both of these senses.

In this manner, Short may be able to salvage his theory, but not without certain costs. In particular, he must give up the notion that the dynamical interpretant is a strictly *singular* event, which would appear to be Peirce's position (SS 111 [1909]). In other words, Short's account of the varieties of interpretant may have independent merits, but it is unlikely that it fully represents Peirce's

position. However, this need not be a major worry for Short, as he is willing to admit that his account *may* be more of a correction or an expansion of semeiotic than a strict exegetical investigation (see Short, 1996, p. 493).

Are there other alternatives? Lalor thinks so, and outlines a less hierarchical interpretation of the interpretant-trichotomies:

> My thesis is that the emotional/energetic/logical classification is a special case of the immediate/dynamical/final one. More specifically, the 1906[32] trichotomy reflects the concrete human case, the human experience of semiosis, while the 1909 trichotomy is more abstract and lends itself to a characterization of semiosis generally. This relation is analogous (but only analogous) to the relation of the phenomenological to the metaphysical categories. [---] So, the relation of Peirce's references to *the* interpretant-trichotomy, and his references to other interpretant-trichotomy terminologies might be said to be that of genus to species. (Lalor, 1997, pp. 34-35)

Further, Lalor (1997, p. 35) notes that Peirce generalises the conclusions from the world of human sign use to encompass non-human semiosis. In other words, the emotional-energetic-logical trichotomy is distinctly anthropocentric, while Peirce's anthropomorphic point of view allows the expansion of the results to less familiar domains. This is no doubt a highly fallible hypothesis; but according to Peirce, human beings simply have no alternative. That is, in order to understand the world, we must draw on our own experience.

Now, we see that Lalor's point of view accords nicely with the communicative approach to semeiotic conceptions introduced earlier in this study (see sect. 4.1.2). Still, his model could be slightly modified. Instead of taking one of Peirce's actual trichotomies as basic, both may be seen as special cases of a phaneroscopic triad of *first*, *second*, and *third* interpretant. The basic categorial pattern is found in all developed forms of semiosis, but it takes on different shapes depending on the perspective of the investigation. Consequently, the immediate-dynamical-final division may be seen as a description of the macro-level of sign-action, while the emotional-energetic-logical division primarily characterises the concrete field of human interpretation. The first trichotomy offers a

way of explicating semiosis on a higher plane of abstraction, which involves meaningful social structures and co-operative processes of inquiry. It involves a strong normative element in the idea of the final interpretant, the ideal end of semiosis, which never can be fully perfected. The second trichotomy describes the effects on the individual interpreter in a particular sign process. It also involves a normative aspect, but as a habit or a habit-modification, the ultimate logical interpretant is relatively concrete. Such ends of semiosis are constantly being reached.

This reading has certain distinct advantages. As Short (1996, pp. 508-509) notes, there are substantial differences between the two trichotomies of interpretants, a fact that makes it difficult to see how one could simply be a special case of the other. In particular, the emotional-energetic-logical division seems to lack what Short identifies as the modal characteristics of the immediate-dynamical-final trichotomy; that is, while the distinction between immediate, dynamical, and final interpretant corresponds to the modalities of possibility, actuality, and tendentiality,[33] there is no equivalent dimension in the other trichotomy of interpretants. However, there is no denying that both involve a first, a second, and a third. Moreover, the proposed interpretation can accommodate the fact that there is considerable overlap between Peirce's characterisations of the two principal divisions of interpretants, and avoids the need to explain away a large portion of what he says about the variants.

In addition, it should be noted that it is not self-evident that the discussion of the variants of the interpretant should be restricted to the trichotomies examined thus far. In particular, a third trichotomy of intentional, effectual, and communicational interpretant is not in any obvious way equivalent with either of the others.

> There is the *Intentional* Interpretant, which is a determination of the mind of the utterer; the *Effectual* Interpretant, which is a determination of the mind of the interpreter; and the *Communicational* Interpretant, or say the *Cominterpretant*, which is a determination of that mind into which the mind of utterer and interpreter have to be fused in order that any communication should take place. This mind may be called the commens. It consists of all that is, and must be, well understood

> between utterer and interpreter at the outset, in order that the sign in question should fulfill its function. (SS 196-197 [1906])

Admittedly, this division of the interpretant occurs only once, in a draft of a letter. Consequently, it might be easily dismissed as just another failed attempt to articulate the basic trichotomy. However, a closer comparison shows that the intentional-effectual-communicational trichotomy differs from the others; its context and point of view is clearly that of communication between two parties, the utterer and interpreter.

Combining Lalor's line of argument with the communicative approach discussed earlier in the study, we might even consider the possibility that the intentional, effectual, and communicational interpretants are the significative effects we know best. We have seen that Peirce every now and then indicates that our philosophical reflections should set out from the ordinary communicative situation. True, in suggesting that the intentional-effectual-communicational trichotomy would be the most basic one in this particular regard, we do not find any solid support in the texts. In fact, in one of the few discussions of the interpretant that appear to bear any direct relation to the excerpt above, Peirce states that his account omits the *intended* interpretant; so far as the intention is betrayed in the sign, it belongs to the immediate interpretant, and so far as it is not betrayed, it may be the interpretant of *another* sign, but it is in no sense the interpretant of the first sign (MS 339:276 [1906]). On the other hand, it is not clear whether this "intended interpretant" should be seen as a synonym of the intentional interpretant.

Lalor and Short both declare that their accounts of the interpretant can accommodate the third trichotomy. Lalor does not explicate his position, but he can be taken to hold that the intentional-effectual-communicational division is another species of the immediate-dynamical-final trichotomy. Short (1996, p. 507), at least, states that he accepts Lalor's interpretation that the former is a special case of the latter. However, he adds a proviso; "no matter how much Peirce's various formulations of aspects of his semiotic owe to the human paradigm, his mature semeiotic reaches out to a

much broader class of phenomena" (Short, 1996, p. 507). This is true; Short's remark serves as a qualification to the interpretation that has been advanced here.

The suggestion put forth, then, is that the various trichotomies of interpretant can be understood as results of the varying perspectives of inquiry involved. The immediate-dynamical-final division is the broadest substantial notion of the interpretant; it applies primarily to a structural and normative level of semiosis. Thus, it is eminently applicable to social sign uses, operating in a field of signification distinct from individual interpretations. For instance, a word possesses a certain interpretability apart from the fact that it is recognisable for any human being. One of the dynamical effects of a certain phrase – for instance, "liberté, fraternité, égalité" – may be the beheading of a nobleman.[34] The final interpretant refers to the ideal ends of inquiry and communication – that toward which our ideas and interpretations ought to tend. In contrast, the emotional-energetic-logical division concerns the effect of signs on a human being, as we have already noted. It is how the interpretant is analysed on the individual level of sign use. Finally, the intentional-effectual-communicational trichotomy may be viewed as the application of the triadic conception of the interpretant to the communicative field of signification.

Phaneroscopic Level / Perspective of Inquiry	1st	2nd	3rd
Structural-Normative	Immediate	Dynamical	Final
Individual	Emotional	Energetic	Logical
Communicative	Intentional	Effectual	Communicational

***Table 2*. Three Divisions of Interpretant.**

The obvious objection to this conception of the interpretant and its divisions is that it is *too* accommodating; what, for instance, would stop us from postulating new sets of interpretants for a myriad of conceivable fields of signification? There is perhaps no good answer to this, except that the purposes of inquiry will guide the selection. One can of course politely doubt that all domains of signs will fall neatly into the one-two-three model; but the approach can be justified (rather weakly, admittedly) by the contention that all our understanding of sign processes is founded on the ones most familiar to us. To the retort that this leaves the door open for a kind of individualism entirely foreign to Peirce's philosophy we may answer that this does not follow, if we accept that the communicative trichotomy is at least as familiar to us as the one resulting from adopting an individual point of view.

5.2.3 Clearness and the Complexity of Meaning

As the previous discussion hinted, the concepts of interpretant and meaning are closely related in semeiotic. On the other hand, ascertaining their proper connection is not an easy task. With a

distinct sense of *déjà vu*, the student of Peirce's writings finds that the question of meaning in semeiotic is problematic because of the sheer quantity of his output and the multitude of contexts in which questions pertaining to the nature of meaning are discussed. However, in contrast to many other issues, the difficulties are rarely caused by terminological experiments. In fact, the opposite applies; Peirce uses "meaning" rather liberally, often without giving any definition of the term, and he does not provide clear technical alternatives.

According to Short (1982, p. 308), "meaning" is not a rigidly defined technical term of semeiotic; the proper context for the Peircean analysis of meaning is his pragmatism. Furthermore, Short (1985, p. 109) claims that the word "meaning" does not even play any important role in semeiotic until 1907, when Peirce explicitly connects his theory of signs to his pragmatistic analysis of meaning. There is some truth to this claim, but it is not quite accurate. As we shall see, Peirce discusses meaning in a definitely semeiotic setting about seven years earlier, in connection with his review of Royce's *The World and the Individual*.[35] Moreover, the issue is closely connected to the pragmatistic method of conceptual clarification. Mostly, however, Peirce's references to meaning are casual and apt to cause confusion. Therefore, it is appropriate to acknowledge some troublesome anomalies before taking a closer look at his more substantial discussions of the matter.

The most obvious difficulty is caused by the fact that Peirce at times indicates that the meaning of a sign is to be equated with its object. For instance, in a fragmentary variant of "On the Foundations of Mathematics", Peirce states that a "sign is supposed to have an *object*, or *meaning*, and also to determine an *interpretant* sign of the same object" (MS 11:1 [c. 1903?]). This seems to accord with the idealistic interpretation of Peirce referred to earlier; the interpretant is construed as a more or less inadequate attempt at understanding, while the object is the ideal end of the process, its "veritable meaning".

However, in spite of Peirce's undeniable assertion to the contrary, the object of a sign cannot be its meaning. In particular, the concept of external object is particularly ill fitted to perform this

function. As we have discovered in our discussions of the object and of perception, the dynamical object is not properly speaking anything known but rather a constraint on interpretation, which can be experienced through collateral experience. It is true that Peirce often says that the function of the sign is to represent the dynamical object, but this should not be understood as a meaningful content. Rather, it is better to use Short's terminology and speak of the relation between object and sign as the ground of the significance of the sign. Moreover, we should recall Peirce's claim that to "try to strip off the signs and get down to the very meaning itself is like trying to peel an onion and get down to the very onion itself" (MS 1334:44 [1905]). Although this metaphor leaves considerable interpretative leeway, there is no doubt that it disqualifies the dynamical object – and the singular percept – as a candidate for meaning.

The next logical step would be to inquire whether meaning could be identified with the immediate object, that is, the object as it is represented in the sign. In another variant of "On the Foundations of Mathematics", Peirce asserts that every "sign has its representative quality, which is the reason it is just the sign that it is, or say its meaning" (MS 8:4 [c. 1903?]). However, it is not clear whether this should be understood as a reference to the grounded sign-object relation, or to the characteristics of the sign as such. In an even more puzzling statement, Peirce associates the meaning of the sign with its imputed flavour, or its firstness (MS L75d:237 [1902]).

Reflection on these isolated remarks will not carry us far. Instead, we should note that Peirce mostly distinguishes object and meaning, as the following excerpts makes clear:

> The object of a sign is one thing; its meaning is another. Its object is the thing or occasion, however indefinite, to which it is to be applied. Its meaning is the idea which it attaches to that object, whether by way of mere supposition, or as a command, or as an assertion. (CP 5.6 [1905])

> The object is the idea or thing that the sign finds, the meaning what it leaves (MS 318:26/110_b [1907])

These passages may be taken to suggest that the meaning of a sign is associated with the interpretant; however, the rather vague reference to an "idea" in the first excerpt leaves the door open for other options. It could be construed as the immediate object, or perhaps even as something distinct from the sign. Namely, to add to the confusion, there are texts in which Peirce suggests that the meaning is something that is conveyed from the object to the interpretant through the mediation of the sign. For instance, in one manuscript Peirce offers the following characterisation of the elements of a sign relation: "That for which it stands is called its *Object*; that which it conveys, its *Meaning*; and the idea to which it gives rise, its *Interpretant*" (NEM 4:309-310 [c. 1894?]). This characterisation has the distinct drawback of making the sign a vehicle that transfers the meaning from point *A* to point *B*. Granted, the meaning could be specified as *information*, which is spread rather than moved; but the fact remains that the Peircean sign cannot be a mere channel of transmission (cf. sect. 5.3.1). At least, such a mediator would not be genuinely triadic, and the relation might therefore be better characterised as a quasi-sign.

In addition to the more or less technical characterisations mentioned above, Peirce also gives conflicting evidence as to what he considers the *ordinary* conception of meaning to be. We have already encountered two such candidates, namely the immediate interpretant and the logical interpretant (excluding the ultimate logical interpretant, however; see sect. 5.2.2). If one adheres to Short's model, these characterisations could perhaps be joined, so that the ordinary conception of meaning would, in the technical terminology of semeiotic, be expressible as the logical immediate interpretant. However, Peirce does not explicitly combine them in such a manner; nor does this specification of the immediate interpretant seem to be a very plausible candidate for "meaning" as it is commonly used. Instead of adding to the confusion by multiplying instances, we should now turn to the more systematic discussions of semiotic meaning in Peirce's writings. The first of these occurs in the Royce review mentioned above, the second is to be found in "Pragmatism" (MS 318).

In *The World and the Individual*, Royce presents a two-dimensional account of the meaning of ideas. "Idea" is a technical term in this context; it refers to "any state of consciousness, whether simple or complex, which, when present, is then and there viewed as at least the partial expression or embodiment of a single conscious purpose" (Royce, 1901, pp. 22-23). Royce then argues that it is possible to consider the purpose in abstraction from the idea, as something not yet fulfilled. When the purpose is embodied in an idea it is, relatively speaking, consummated (Royce, 1901, p. 25). Royce calls this fulfilment of the purpose through expression in an idea the *internal meaning* of the sign. It is, to some degree at least, ideal in the sense of being purposive. However, Royce also acknowledges a different kind of meaning, namely *external meaning*, which can be simply described as the outer reference of the idea, given in the fact that certain ideas frequently indicate something other than themselves. According to Royce (1901), "ideas often seem to have a meaning, yes, as one must add, finite ideas always undertake or appear to have a meaning, that is not exhausted by this conscious internal meaning presented and relatively fulfilled at the moment when the idea is there for our finite view" (p. 26). Thus, external meaning is something that an idea has because it does not live up to the ideal of the internal meaning.

To a certain extent, Peirce sympathises with Royce's idealistic position; in particular, he approves of the *pragmatistic* flavour of Royce's characterisation of ideas in terms of purpose (CP 8.119 [c. 1902]). For Peirce, the principal merit of Royce's position is that it shows that there is a connection between the *meaning* of a sign and what one *means* to do (CP 1.343 [1903]). Moreover, Peirce sees a definite affinity between Royce's analysis and the traditional logical distinction between denoted breadth and connoted depth. [36] Depth has typically been construed as intrinsic, while breadth has been taken to be extrinsic.

Peirce offers an analysis of this distinction in his article "Upon Logical Comprehension and Extension" (W 2:70-86 [1867]). In this early essay, his discussion pertains to symbols – or, to be more precise, primarily to symbolic terms. Without going into the details of Peirce's examination, we may note that he distinguishes three

references of a symbol in relation to its object: its direct reference to its object, its reference to its ground through the object, and its reference to its interpretant through its object (W 2:82 [1867]). These references are named *informed breadth*, *informed depth*, and *information*, respectively (W 2:83 [1867]). Peirce also identifies other conceptions of breadth and depth, designated *essential* and *substantial* breadth and depth. These concepts refer to two opposed states of information; they are actually imaginary extremes, the essential state being characterised as one in which only the meaning of terms but no fact is known, while the substantial state is one of absolute intuition of the very substances themselves (W 2:79 [1867]). However, as Peirce indicates, insofar as the breadth and depth of depth of a symbol are not essential, which they never in fact are, they measure the information of the symbol – that is, the "synthetical propositions of which it is subject or predicate" (W 2:83 [1867]). The upshot of Peirce's analysis is that the depth and breadth of a symbol (understood here primarily as a term in the logical sense) are always relative to a certain state of information[37] – or, to express the point differently, to the propositional constellation in which the symbols occur. Peirce expresses this informational relativity with the formula Breadth x Depth = Information. To the notion that an increase in breadth entails a decrease in depth, and *vice versa*, Peirce thus adds the qualification "as long as the information is constant". In other words, he paves the way for a perspective that makes interpretation (or, more properly, the interpretant) an essential part of the constitution of the meaning of terms; the growth of conceptual knowledge can consequently be explicated as a result of interpretative activity. On the other hand, this early analysis clearly equates meaning with depth, which is defined in terms of the ground or the common character of objects (W 2:82 [1867]). Thus, meaning would be the basis for comparison, which is encapsulated within propositional understanding. This, in turn, would entail that the meaning-ground is to be understood as a common character or quality, such as "blackness". It remains unclear to what extent this kind of meaning can be said to be mind-dependent; it would appear to be a pure abstraction, expressible as a predicate. What is clear, however, is

that the ground can only be comprehended within a propositional matrix (see sect. 3.1.1).

In his later criticism of Royce, Peirce asserts that it would be better to precede the attempt to grasp the meaning of an idea by an investigation of the nature of a sign in general, for a meaningful idea *is* of the nature of a sign. However, in contrast to the 1867 account of the breadth-depth distinction, Peirce pursues this analysis by employing his full trichotomy of icon, index, and symbol. According to Peirce, the resemblance that characterises the relation of an iconic sign to its object constitutes its internal meaning. Such a sign does not have external meaning, "since it does not profess to represent anything; for if it did, that would be a manner of signifying its object, not consisting in merely resembling it" (CP 8.119 [c. 1902]).[38] Indices, on the contrary, possess external meaning by virtue of being existentially connected to their objects. However, in addition to these two forms of meaning, Peirce recognises a third variant that consists in the interpretant signs that the signs determine. This is the meaning characteristic of symbols.

As Fitzgerald (1966, p. 87) observes, Peirce introduces certain significant modifications to Royce's arrangement. Firstly, Peirce uses "internal meaning" to denote iconic meaning, rather than purposive meaning. Secondly, he notes that Royce's "idea" is actually a symbol. Finally, Peirce associates purpose with the third, unnamed kind of meaning, in a manner that is clearly connected to the pragmatistic point of view.

> Now a purposive state of mind is one that signifies something by virtue of intending to be interpreted in a deed. Therefore, although an idea certainly has its internal and its external meaning, yet its principal meaning is of a different kind from either of those. (CP 8.119 [c. 1902])

Thus, we find that Peirce has outlined a theory of three types of meaning – internal, external, and purposive – roughly corresponding to the icon-index-symbol trichotomy, but not reducible to it. It is a characteristically Peircean position in structure and purport, differing from the account of "Upon Logical Comprehension and Extension" in expanding the scope of the meaningful to encompass all kinds of signs, but also in bringing in a more concrete

reference to conceivable practice – or "signification by virtue of intending to be interpreted in a deed" – in the third type of meaning.

Does this triadic model then constitute Peirce's developed theory of meaning? Fitzgerald seems to think so. However, the approach is inadequate in certain respects. In particular, the association of the three types of meaning with icon, index, and symbol is limiting; it connects meaning to the sign-object relation – or the ground, if we wish to use that term. What is thus expressed could be characterised as an account of the *significance* of the sign, or perhaps the theory of significance-meaning; the interpretant plays no *actual* role in the determination of the meaning. At the same time, Peirce is unmistakably drawn to the idea that meaning is always future-oriented – that is, that it always involves a reference to an interpretant – as the following passage from the same period as the Royce review shows:

> Meaning is the character of a sign; and therefore in order to find what meaning is we must consider what a sign is. Before entering on that inquiry, however, let us note that meaning is something allied in its nature to value. I do not know whether we ought to say that meaning is the value of the word, – a phrase often used, – or whether we ought to say that the value of anything to us is what it means for us, – which we also sometimes hear said. Suffice it to say that the two things are near together. Now value is the measure of desirability; and desire always refers to the future. That leads us to inquire whether meaning does not always refer to the future. (MS 599:26 [c. 1902])

It is not surprising, then, that Peirce quietly abandons the 1902 account of meaning after the new developments in his theory of interpretant that begin to take place after 1903. This is not to say that the approach of the Royce review would be altogether discarded; the pragmatistic point of view, and its connection to purpose, continues to be a central tenet of the Peircean theory of semiotic meaning. It is perhaps better to say that the 1902 account develops into the more sustained perspective of "Pragmatism".

In the later writings, meaning is often straightforwardly associated with the interpretant (see, e.g., PPM 86 [1903]; MS 318:19/163$_b$ [1907]). However, within this complex text, Peirce also

discusses various nuances of meaning. In particular, he frequently mentions three kinds, identified as *emotional meanings*, which are primarily feelings, *existential meanings*, which are actual things or events (whether physical or psychical) resulting from the significance of signs, and *conceptual* or *logical meanings* (MS 318:15/170$_b$ [1907]). Obviously, these meanings are nearly, if not perfectly, equivalent to the emotional, energetic, and logical interpretants.[39] However, it is not without interest to note that Peirce does not restrict "meaning" strictly to conceptual signs as is sometimes claimed. Moreover, these senses of meaning clearly pertain to the relationship between sign and interpretant, while the earlier analysis of the Royce review gave us three aspects of meaning focused on the object-sign relation. However, it is interesting to note that while the internal meaning has no evident association with emotional meaning, and the external is clearly separate from the existential, there is a relevant connection between purposive meaning and logical meaning, in that both involve a reference to purpose. Thus, these different meanings can then be provisionally arranged as in table 3.

	Semiotic Meaning Analysed from the Point of View of	
	the Sign-Object Relation	the Sign-Interpretant Relation
1st	Internal	Emotional
2nd	External	Existential
3rd	Purposive	Logical

***Table 3*. Two Divisions of Semiotic Meaning.**

All this must be qualified by the fact that Peirce's principal endeavour in "Pragmatism" is to find the most adequate notion of

the meaning of intellectual concepts. The result of this analysis is the account of the ultimate logical interpretant – the genuine meaning of the concept – as a habit, which many Peirce scholars not unreasonably take to be *the* Peircean analysis of meaning (see, e.g., Almeder, 1983; Short, 1982). In other words, genuine meaning is identified with an interpretant that manages to end a particular process of interpretation or a process of sign-translation from one sign or set of signs into another. This demand can be further specified. The only kind of habit that is truly capable of terminating a certain intellectual process is one that has gone through an appropriate test of criticism; the "deliberately formed, self-analyzing habit – self-analyzing because formed by the aid of analysis of the exercises that nourished it – is the living definition, the veritable and final logical interpretant" (EP 2:418 [1907]). Peirce adds that the only adequate account of the habitual meaning of the sign is a description of the kind of action to which it gives rise, accompanied by speacifications of conditions and motive.

Now, there seems to be two ways to deal with Peirce's later conception of semiotic meaning. Either we take the logical interpretant – or even the ultimate logical interpretant – to be the only relevant sense of meaning within a pragmatistic framework, or else we accept Peirce's suggestion that there are meanings that are neither signs nor habits. Both approaches could be motivated by textual evidence. Regarding logical or pragmatistic meaning as the only true meaning would accord with some of Peirce's statements and his occasional refusal to call emotional and energetic interpretants "meanings", while the other alternative would be supported by his more liberal association of meaning with certain significative effects.

> ...what is called [...] "Meaning" is that which a sign communicates.[40] This may be nothing but a feeling or emotion, which is all that a performance of instrumental music, for example, commonly expresses. Or the Sign being a command, such as the order "Ground Arms", its Meaning may be the impulse to obey, which the sign excites. A question is a sort of command. Or the Sign may be an appeal to reason by an argument consisting of known premisses, the synthesis of which, which Synthesis will be its meaning, may be a new thought. Or the Sign

> may be an assertion, or "Proposition", to use the logical term, when the Meaning is the substance of an assent to it. Or it may be a mere suggestion to imagination or memory, such as [a] single word may convey. Many "Utterances", as all acts of using Signs will here be called, are purposeless. But a serious Utterance is usually intended to influence either a single act or the reasoned conduct of the Interpreter or Interpreters, and its meaning is that general kind of Conduct that it virtually recommends. Such Signs are mostly Arguments; and the Conclusion of an Argument, considered as matter for belief, is its Meaning; while a secret purpose of an Utterance is the Meaning of some thinking, or "saying to himself", on the part of the Utterer. (MS $637{:}33_{v}$-34_{v} [1909])

Analysing this abundant quotation, we may discern the following variants of semiotic meaning: feeling or emotion, impulse to act, appeal to reason, the substance of an assent to an assertion, the suggestion called forth by a single sign, and the general kind of conduct virtually recommended by an utterance (whether public or private). A rather motley collection of things, to say the least; and there is still no guarantee that this list would exhaust Peirce's notion of significative meaning. Indeed, it may be impossible to find a final account of meaning within the Peircean context; at least, if the analysis of the interpretant proposed earlier is accepted, it would appear to be impossible to give an exhaustive inventory of types of meaning. We might attempt to limit the list by not giving all interpretants the status of meaning; but as long as we do not have a fixed set of fields of signification, it will be impossible to find a comprehensive set. Intercommunication will involve certain meanings – for instance, intended meaning – not necessarily discernable in individual interpretation of natural phenomena, and we may even speak of ideal meanings that are never actually instantiated in any particular process of semiosis. The ultimate meaning of a certain intellectual concept is not necessarily its final meaning.

Here, it could be argued that we might as well dispose of the problematic term "meaning" and simply use "interpretant" instead. Indeed, as we have seen, Peirce often equates the two concepts. However, there are certain reasons to resist this move. Firstly,

Peirce *does* use the word meaning, and attempts to explicate the concept in terms of the interpretant. Perhaps he has no other motivation than trying to hold on to something of the common notion of meaning, but if this is the case, it does not yet constitute an adequate reason to dismiss his terminological choice. Secondly, there is the 1902 analysis of meaning that does not produce a set of interpretants. True, Peirce appears to abandon it quite quickly; but it might nonetheless be useful for certain purposes. Thirdly, Peirce hesitates to equate "meaning" and "interpretant", indicating that the meaning is the entire significative purport of the sign; in other words, the meaning of a sign is not comprehended, until not only its interpretant, but also its object, is recognised (EP 2:429 [1907]; MS 318:37/227$_b$ [1907]). Thus, the difference between the interpretant and the meaning would be that it is possible to examine the former as such, apart from a consideration of the object, while the latter will always include a reference to the recognition of the object. For instance, while the emotional interpretant of a song would be the feeling produced by it, the emotional meaning would involves something more, namely the identification of something behind the personal feeling, even if this recognition is nothing more than a sense that the interpretant-feeling corresponds to the quality of the music. Thus, meaning and interpretant would always occur together; the interpretant is distinguished from meaning by prescissive abstraction.

Does all this entail that semeiotic succumbs to a kind of pliable pluralism concerning meaning, where everything is dependent on point of view? To some extent, it does. However, Peirce is not by temperament a pluralist – or at least not a relativist.[41] The fact that varying perspectives on meaning may be adopted does not imply that anything goes, or that all analyses would be of equal value. We can obtain a somewhat more robust grasp of the issue at hand by considering Peirce's most developed analysis of meaning, that is, the the three-stage method for the clarification of "ideas" originally presented in Peirce's early pragmatistic articles (see W 3:258-266 [1878]).

The first grade of clearness is recognisability; a "clear idea is defined as one which is so apprehended that it will be recognized

wherever it is met with, and so that no other will be mistaken for it" (W 3:258 [1878]). The second grade is characterised as distinctness; "an idea is *distinctly* apprehended […] when we can give a precise definition of it, in abstract terms" (W 3:258 [1878]). The third, or pragmatistic, grade of clarity associates meaning with conceivable consequences for conduct.

> Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. (W 3:266 [1878])

The following passages from the manuscript "On Definition and Classification" and a letter to James further describe the three grades of clearness, and indicate how they are connected to semeiotic:

> ...there are three grades of attainment toward clearness of thought that are rendered distinct from one another by qualitative differences; the first and lowest imparting what may be more specifically called "Clearness", i.e. readiness in employing and in interpretatively applying the notion, idea, or other Sign to which it relates; the second imparting Distinctness, or analytic understanding of just what constitutes the essence of that meaning which the first grade has rendered Clear; and the third, or Pragmatistic, grade imparting what perhaps I might be allowed to call Pragmatistic "Adequacy", that is, not what has been, but what ought to be the substance, or Meaning, of the concept or other Symbol in question, in order that its true usefulness may be fulfilled.
>
> ...Pragmatistic Adequacy no more supersedes the need of Analytic Distinctness and of adherence to precise Definitions, than this latter or Second Grade of clearness supersedes the need of intuitive or unintellectual Clearness in the specific sense just defined. It is evident that no abstract definition can possibly render needless the power of directly recognizing whether a given concept does or does not apply to a given image; and […] no recognition of the utility of a concept, however just, could in the least affect the need of precisely defining it. (Please observe, by the way, that I speak of three distinct Grades of clearness, which I also call Kinds, but never Stages, as if one were done with [one] before the next began; for the contrary will be found markedly [to be] their relation.) (MS 649:1-3 [1910])

> In the Second Part of my Essay[42] on Pragmatism, in the *Popular Science* of November 1877 and January 1878, I made three grades of Clearness of Interpretation. The first was such Familiarity as gave a person familiarity with a sign and readiness in using it or interpreting it. In his consciousness he seemed to himself to be quite *at home* with the sign. In short, it is Interpretation *in Feeling*. The second was Logical Analysis = Lady Welby's *Sense*. The third was Pragmaticistic Analysis [and] would seem to be a Dynamical Analysis, but [is] identified with the Final Interpretant. (EP 2:496-497 [1909])

Again, we find a hint that it is Lady Welby's work on meaning that inspires Peirce to pursue his analyses of interpretation and meaning. In the Lowell lectures, Peirce summarises her theory as follows:

> A word has meaning for us in so far as we are able to make use of it in communicating our knowledge to others and in getting at the knowledge that these others seek to communicate to us. That is the lowest grade of meaning. The *meaning* of a word is more fully the sum total of all the conditional predictions which the person who uses it *intends* to make himself responsible for or intends to deny. That conscious or quasi-conscious *intention* in using the word is the second grade of meaning. But besides the consequences to which the person who accepts a word knowingly commits himself to, there is a vast ocean of unforeseen consequences which the acceptance of the word is destined to bring about, not merely consequences of knowing but perhaps revolutions of society. One cannot tell what power there may be in a word or a phrase to change the face of the world; and the sum of these consequences makes up the third grade of meaning. (EP 2:256 [1903]; cf. SS 159 [1903])

Peirce's primary objection to Lady Welby's theory is the association of the second type of meaning (identified as "meaning" in distinction from "sense" and "signification") with the intentions of the utterer (SS 111 [1909]). Many signs, such as indications of the weather and symptoms, do not have an utterer in any ordinary sense, and Peirce wisely leaves the intentions of the Almighty out of this picture. Consequently, we may conclude that Peirce holds that such signs are meaningful in some respect, which does not imply that they would be the kind of signs that may be said to have a final meaning.

Peirce's three grades of interpretation are clearly meant to apply to concepts, or, as he says, "intellectual concepts" – that is, to such real characters as "hardness", which can be explicated in terms of their conceivable consequences. Furthermore, the quotations above indicate that the two lower kinds of clearness should not be understood as separate meaningful stages; rather, they can only be grasped within pragmatistic adequacy. Does this invalidate the proposition, put forth earlier, that there are emotional and energetic meanings that are not dependent on logical meaning, but are in some sense more directly apprehended, as when a piece of instrumental music is felt to be meaningful? Not necessarily, because Peirce's analysis here is explicitly concerned with symbolic concepts. Thus, it is possible to say that a proper symbol involves firstness-meaning (familiarity) and secondness-meaning (analytic meaning) as well as thirdness-meaning (pragmatistic adequacy), without thereby denying that icons and indices can be said to possess merely meanings that are not encased in conceptual understanding. If a piece of music, as an icon, affects the hearer directly, so as to bring on an emotional interpretant in the form of a feeling, it may be taken to be meaningful without thereby demanding that the meaning be intellectually processed (the concrete activities of the brain and other physical organs are naturally irrelevant for this analysis). [43] The fact that neither emotional nor energetic meanings can be adequately described without conceptual signs does not render them mere epiphenomena. It may be a matter of taste whether we call such significative effects meaning or not, but it should at least be acknowledged that the Peircean account leaves room for this option.

Another difficulty that arises from the juxtaposition of Peirce's account of clearness with his analysis of logical interpretants is the status of pragmatistic (or pragmaticistic) meaning. In his analysis of conceptual clarity, Peirce indicates that the highest grade of clarity would be equivalent to the final interpretant. However, as we have seen, this is a highly normative notion; at any rate, final interpretation seems to be on a rather different level than the relatively concrete conception of an ultimate habit of action. One of

the attractions of the account of the logical interpretant found in "Pragmatism" is that it can be construed as a more modest account of semiosis, in which certain meaningful breaks within the continuum of interpretation are recognised. Moreover, it seems useful to reserve the term "final interpretant" as a reminder of the fact that an interpretation is always correctible; this is the sound insight of the idealistic reading of Peirce (cf. Ransdell, 1986b, p. 676).

The suggestion would then be that the pragmatistic clarification could be applicable to different fields of developed signification. That is, we might apply it equally well to semiosis in the abstract, the social evolution of signs, a particular line of interpretation, or a dialogical situation, thereby obtaining parallel but not identical results. In all these cases, the highest grade of meaning would be future-oriented and purposive, and would involve a reference to conceivable practical consequences. However, we would not be forced to accept the final opinion – a hope, at best – as the only genuine meaning. Instead, we could recognise such ends of semiosis as habits of action and reasoning that function well for all practical purposes, and the shared understanding that is the ideal aim of a concrete dialogical exchange. This is not to deny the function of the final interpretant as the highest aim in Peirce's philosophy; but it entails a recognition that the high and lofty ideal is often too distant to be of use in philosophical analyses of meaningful relations.

If one considers semiosis only in terms of potential relational connections, it is infinitely continuous in both temporal directions.[44] As we have seen, a semiotic process is never entirely referable to a first cause, that is, to some experience that would serve as the foundation of the sign action (cf. sect. 4.3.3). Nor can we find any absolute end of interpretation. Signs have a tendency to grow, to become involved in new relations; their meaning is never static.[45] In fact, because of the future-oriented character of purposive relations, talking about the meaning of a sign as it stands here and now is always an abstraction from a broader process. Moreover, appealing to the sign system as the ultimate meaning-determinant is not an option for semeiotic, in which experience constantly interrupts the

illusory stability and leads to transformations of the structure. Semiosis never comes to a full stop.

However, it is possible to single out certain beginnings and ends of semioses if we limit the scope of our examination. Such a prescissive abstraction is necessary if we want to grasp a meaningful sign relation. In fact, it is an everyday function, performed by all human beings engaged in symbolic activity. One may wonder how an adequate delimitation of the sign-process is to be made in view of the continuity of semiosis. Obviously, it can be achieved in many different ways; but from the perspective of semeiotic, any theoretical account that does not take the triadic character of the sign into consideration will inevitably fail. In particular, propositional signs that claim to refer to facts must have some relation to experience in order to possess meaning (EP 2:1 [1893]). A reduction of the sign relation into compounds of dyadic relations, such as structural differences or analytical definitions, can never give a full picture of sign activity. Consequently, the proper way to fix a sign relation is one in which the purposes of the semiotic process are taken into account.[46] Of course, such a perspective can never be absolutely stable and certain; the process goes on in spite of the analysis. The standpoint of even the most thorough analyst is always fallible, based on common sense knowledge and prejudices.

5.3 Universes of Discourse

If the argument of chapter 4 and the above analysis of interpretants and meaning is correct, then communication will play a kind of double role in semeiotic. On the one hand, the basic semeiotic components are purportedly obtained by an analysis of an ordinary communicative sign situation, the object and interpretant fulfilling the semiotic roles of utterer and interpreter. On the other hand, as a general theory of signs, semeiotic should also be applicable to an analysis of the field of communicative signification. Indeed, if semeiotic is not capable of handling this task, then it cannot be an adequate semiotic theory.

With certain notable exceptions, communication remains something of a neglected topic in Peirce scholarship, even in studies of his semeiotic.[47] This is somewhat surprising in view of the central role of sign theory in Peirce's philosophical project. While his papers are not exactly packed full of references to "communication", the idea is nevertheless almost constantly present in semeiotic in the form of an affirmation of the dialogical character of thought. The relative neglect of this aspect of semeiotic can be partly attributed to the poor availability of Peirce's writings, and possibly to a lack of appreciation of the centrality of the dialogical perspective in some of his most important semeiotic writings. Only recently have certain key texts, in which Peirce explicitly deals with the communicative definition of the sign, been published; and a large amount of relevant material remains unpublished.

On the other hand, it should be acknowledged that many of Peirce's most important observations on the nature of communicative interaction do not occur in the context of a developed theory of communication, but rather in his account of indeterminacy, which occupies a somewhat peculiar position in his thought. It is not quite clear where in the scientific hierarchy it should be placed, except that it must be a part of semeiotic. I would suggest that it is best seen as a part of rhetoric, which is also where Peirce's pragmaticism is located. Rhetoric is, at any rate, the most natural home for a Peircean study of communication.

In what follows, I will first reconsider Peirce's communicative definition of the sign relation, and discuss certain criticisms of its potential implications. Then, I will take a fresh look at the idea of collateral experience, this time considering the notion in its more concrete discursive function, followed by the concluding examination of Peirce's "logic of vagueness".

5.3.1 Form and Transparency

As has already been noted, Peirce introduces a new perspective in his sign definitions around the year 1906, in that he characterises

the sign as a *medium of communication*. In this study, it has been shown that he strictly speaking construes the sign as a species of medium of communication (see sect. 4.1.2). However, we have not examined this conception – or rather all of the features of the communicative definition – in detail. This will be undertaken in this section.

To frame our discussion, it is helpful to look at Richard Parmentier's (1985) criticism of the communicative definition. He claims that we can distinguish two basic "vectors" in the general sign relation: the *vector of representation*, which points from the sign and the interpretant toward the object, and the *vector of determination*, which points from the object toward the sign and the interpretant. According to Parmentier (1985), determination "is the causal process in which qualities of one element are specified, transferred, or predicated by the action of another element" (p. 27). Semiotic determination is a process, in which the object acts upon the sign, which in turn acts upon the interpretant. In this way, the sign brings about a mediated determination of the interpretant by the object. Representation works in the opposite direction. It is characterised as "the act or relation in which one thing stands for something else to the degree that it is taken to be, for certain purposes, that second thing by some subject or interpreting mind" (Parmentier, 1985, p. 27). In both of these vectors, the sign, or representamen, occupies a mediating position between object and interpretant, and the object functions as a constraining factor of semiosis; yet, the types of semiotic action involved are different. In the case of determination, the action of the object must pass through the sign in order to reach the interpretant and determine some effect, such as cognition. In the second vector, the representation formed by the interpretant is limited by the fact that there must be some kind of prior "standing for" relation between sign and object, in order for representative semiosis to be possible at all (Parmentier, 1985, pp. 28-29).

Further, Parmentier claims that the vectors of representation and determination interlock in a manner that accounts for the characteristic processuality of semiosis. He notes that there are two infinite series involved in semiosis – back toward the object and

forward toward the interpretant – and thus affirms the idea of "unlimited semiosis". However, Parmentier's (1985) crucial claim is that the two semiotic vectors operate on different *levels* of semiosis, and are thus not symmetric (p. 29). This asymmetry is due to the fact that the sign can stand for the object in three different ways. As we have seen, the *iconic* connection is based on some quality shared by sign and object, while the *indexical* relation is existential; but the third, *symbolic* mode of representation accounts for the asymmetry. According to Parmentier, determination operates at the same level of semiosis in all of its phases. Hence, it could be characterised as *linear* influence. In representation, however, a *metasemiotic* level is introduced, as the interpretant of the symbol represents its object by forming a conception of the prior relation between sign and object. That is, we move to this second order of semiosis when the symbol's interpretant-sign represents the relation between sign and object as a new semiotic entity. Parmentier (1985, p. 30) calls it $object_2$, and claims that it is identical to Peirce's ground. Perhaps we can say that this semiotic accomplishment is due to peculiar semiotic character of the symbol; it represents itself to be represented (EP 2:323 [1904]).

Although Parmentier does not explicate the nature and relevance of the metasemiotic level in detail, it is obviously of utmost significance for both his critical interpretation of Peirce and his own conception of semiotic inquiry. Namely, it is implied that the process of symbolic representation, in which habits and conventions are involved, accounts for both the growth of meaning and the essential interconnectedness of signs. To the extent that it is symbolic, semiosis tends to produce more and more extensive objects or grounds, which not only serve to explicate the original object in a series of representations, but also form complex semiotic webs of signs and objects that would otherwise not be so connected (cf. Parmentier, 1985, p. 31). In this manner, representations of *second intention*, in which the objects are semiotic entities, are formed (Parmentier, 1985, p. 30).

Parmentier's approach seems plausible; it would certainly help explain Peirce's often cryptic remarks to the effect that the object is also a sign (see, e.g., CP 1.538 [1903]; EP 2:328 [1904]; EP 2:380

[c. 1906]). The first object can be construed as an ideal limit, which can be comprehended only within a representational process; it is never given as such, free from all representation. Moreover, the postulation of a metasemiotic level serves to highlight the creative role of the interpretant as a synthesising force, thus making it clear that semiosis is not mere determination; it involves a complication in the shape of interpretation, which in fact is a necessary requirement for true semiotic development. The process of symbolic representation could be viewed as a highly abstract account of the basic dynamics of understanding and culture. Hence, the vectorial analysis of semiosis, coupled with an acknowledgement of the importance of representation as a creative force, implies the applicability of semeiotic to a wide range of phenomena and inquiries.

To recapitulate: Parmentier recognises two principal processes involved in the more inclusive process of semiosis, the causal process of determination and the synthesising process of representation. In general, Parmentier finds this to be the acceptable upshot of Peirce's analyses; but Parmentier also wants to argue that Peirce's mature account of semiosis shows an unfortunate tendency to prioritise the determinative aspect. To be more specific, Parmentier (1985, p. 32) feels that Peirce unwisely shifts his emphasis from representation to determination when the sign is defined as a medium of communication. In particular, Parmentier finds the following passage to be problematic:

> …a Sign may be defined as a Medium for the communication of a Form. It is not logically necessary that anything possessing consciousness, that is, feeling of the peculiar common quality of all our feeling should be concerned. But it is necessary that there should be two, if not three, quasi-minds, meaning things capable of varied determination as to the forms communicated. As a medium, the Sign is essentially in a triadic relation, to its Object which determines it, and to its Interpretant which it determines [...] That which is communicated from the Object through the Sign to the Interpretant is a Form; that is to say, it is nothing like an existent, but is a power, is the fact that something would happen under certain conditions. This Form is really embodied in the object, meaning that the conditional relation which

> constitutes the form is true of the form as it is in the Object. In the Sign it is embodied only in a representative sense, meaning that whether by virtue of some real modification of the Sign, or otherwise, the Sign becomes endowed with the power of communicating it to an interpretant. (EP 2:544 [c. 1906]; cf. SS 197 [1906])

Parmentier claims that Peirce's later semeiotic is marked by a tendency to see communication as an essential feature of all sign action. However, in this context, communication does not necessarily refer to communication as it is ordinarily understood; according to Parmentier (1985, p. 42), Peirce associates communication with the *transfer* of truth in an object-interpretant continuum, which is endless in both directions. Furthermore, Parmentier states that truth and communication are perfectly isomorphic for Peirce, because communication is not construed in terms of social sharing of knowledge, but rather as an argumentative dialogue between moments of one mind that realises the unity of semiosis (cf. NEM 3:886 [1908]). Yet, this does not mean that Peirce would reduce his analysis of semiosis into a classical epistemological concern involving only the knowing subject and known object; that would certainly not be a viable option for an anti-Cartesian, who explicitly rejects such dualistic accounts of inference and cognition (see, e.g., SS 69 [1908]). Obviously, Peirce continues to affirm the need for mediation in his communicative definitions, as the sign is characterised precisely as a medium; but this perspective may nevertheless entail certain reductive consequences because of its causal linearity.

In Parmentier's interpretation, semiosis as communication is primarily a specification of semiosis as determination. At least, Peirce seems be concerned with the same vector of semiosis when he speaks of communication and determination in his definitions. The sign, which is determined by the object, determines the interpretant, so that a *form* is communicated from object to interpretant. This transfer would take place on the same causal level of semiosis; no metasemiotic level of second intentions appears to be involved. Still, Peirce acknowledges the need for concrete expression; the form must be embodied in some manner, if it is to be conveyed from object to interpretant. In other words,

some kind of vehicle of expression, which embodies the form representatively in the process, is required. This conveyance is the role assigned to the sign; its mediating character is that of a carrier capable of determination. The form, which in Parmentier's reading is more or less equivalent to cognitive truth, cannot exist as such; if a thought is to have any active mode of being, it must be embodied in a sign (SS 195 [1906]; cf. NEM 3:406 [1903]; CP 4.7 [c. 1906]).

At the same time, Peirce appears to expound an ideal of semiotic *transparency* (Parmentier, 1985, pp. 43-44). As anyone familiar with Peirce's logic knows, he distinguishes the proposition from its accidental expression. That is, the proposition is not supposed to be affected by the material shape it is given for the purposes of outward or inward communication, but remains the same proposition whether it is asserted or denied, stated in English or Finnish, etc. (see, e.g., EP 2:312 [1904]; CP 8.313 [1905]; CP 4.6 [1906]). Such a perspective implies that there is a meaningful core to any thought that can be communicated, in spite of the variety of ways that can be used to express it. This, in turn, would seem to accord with Peirce's view that the embodiment of the form in the sign is "merely" representative. According to Parmentier (1985, p. 43), the expressive vehicle that is required for communicative transmission does not contribute to the significant determination of the interpretant. That is, the function of the sign is to convey the form without affecting it (cf. EP 2:391 [1906]). However, we all know that the vehicles we use tend to influence semiosis; for instance, different languages offer different means of expression, enabling certain modes of communication while limiting our capacities in other regards. Peirce is certainly aware of these restrictions on our semiotic capacities, and of the power of sign systems (see, e.g., W 1:494 [1866]; EP 2:10 [c. 1894]). Still, he never ceases to look for an adequate logical notation, in which the deficiencies of ordinary language could be overcome – that is, a mode of expression that would allow us to focus on the significant relations of communicated thought without being distracted or muddled by inessential extras. Parmentier (1985, p. 43-44) argues that it is precisely for this purpose that Peirce creates his "iconic" system of existential graphs.

We are now in a position to see why Parmentier claims that Peirce's communicative definition of the sign limits the scope of semiosis and semiotic inquiry. By combining the requirement of expression with the ideal of transparency, Peirce ends up giving us a picture of semiosis as mere delivery of form. Contrary to the earlier account of symbolic representation, the sign is reduced to a kind of necessary evil, needed as a temporary vehicle, but of no relevance for the constitution of meaning. At the same time, the focus of semeiotic has changed; its primary concern is now to conceive of a mode of expression that would be as transparent as possible. The representative function of the human mind is all but eliminated from the process, as the optimal sign is similar to a perfect translating machine (Parmentier, 1985, p. 45). In other words, there is no growth of meaning by symbolic representation. Hence, Parmentier (1985) concludes that "Peirce in the end reduced the role of signs to being blind vehicles for communication meanings that they do not influence" (p. 45); but it would perhaps be more illuminating to say that the sign only influences the process in a *detrimental* way, as its expressive limitations make perfect transparency impossible. Semiosis is a process of transmission, in which the form transmitted ought not to be affected by the medium, but some disturbance is inevitable due to the necessity of embodiment.

If Parmentier is right, then Peirce's conception of the sign as a medium of communication is both limited and limiting. As a strict logical ideal, the communicative definition of the sign relation reduces semeiotic's scope to truth-functional epistemology and logic (cf. Parmentier 1985, pp. 25, 44). Consequently, it is inferior to the earlier idea of mediate representation, and almost of no use for attempts to investigate various modes of communication semiotically.

Reconstructed and slightly modified, the problems noted or implied by Parmentier can be summarised as follows:

1. The communicative definition places the emphasis on causal determination rather than mediate representation.

Therefore, Peirce's later account of semiosis lacks a metasemiotic level, which could account for semiotic growth.

2. In communicative determination, the sign is reduced to a vehicle carrying form or truth from the object to the interpretant. It still has a vital function as a mediator; but it does not contribute anything positive to the process. The sign is simply a means to an end (cf. EP 2:5 [c. 1894]).

3. By simultaneously affirming the necessity of expression and the ideal of transparency, Peirce restricts his semiotic interests to logic and the effective expression of thought; other modes of semiosis are ignored or devalued as scientifically deficient. Consequently, Peirce ends up limiting the scope of semeiotic in a way that makes it an inappropriate starting-point for more comprehensive studies of communicative and cultural phenomena.

Parts of Parmentier's criticism can be quickly dismissed with reference to our previous findings. The worry that the sign would be construed as a vehicle does not need to be addressed anew; we have already seen that Peirce expressly denies it, perhaps most vehemently in the context of one of his most extensive discussions of the communicative definition of the sign (see EP 2:391 [c. 1906]; sect. 4.1.2). Furthermore, while Parmentier is right in claiming that there is a causal element in many of Peirce's characterisations, it has been shown that this does not necessarily entail the kind of straightforward determination Parmentier dreads (see, in particular, sect. 5.1.1). As to the lack of a metasemiotic level, Parmentier may have a point; but then it may be argued that Peirce is trying to put forward a conception of sign that could incorporate semiotic phenomena that are not representational in the full sense of the word, that is, incomplete signs. As we saw in the context of the communicative derivation of the correlates of the sign, the sign can be construed as something that *enables* representation (see sect. 4.1.2). In other words, the sign is primarily a mediator, but in

human sign use, it tends to act symbolically. It is part of the growth of signs (cf. EP 2:10 [c. 1894]).

Still, Parmentier's critical rejection of the communicative definition of the sign raises a number of questions concerning the adequacy of Peirce's later semeiotic. There is no denying that Parmentier makes many accurate observations concerning the focus and possible limitations of Peirce's conception. In particular, the ideal of transparent media seems to transform the sign into a viaduct for transmitting information.

The key to the question would appear to be the "form" that is supposedly conveyed or transmitted through the medium of communication.[48] For Parmentier, form seems to be more or less equivalent to truth or a truthful idea, although he does not discuss this interpretation at great length. However, he suggests that the triad of mediation should not really be construed as consisting of sign, object, and interpretant, but rather of object, interpretant, and *meaning* (Parmentier, 1985, p. 37). While it is not possible to examine this problematic claim in detail here, it leads us toward a possibility that Parmentier appears to ignore – that is, that the concept of form may be approached from the perspective of meaning rather than truth. This opens up the doors for a more substantial reading of the semiotic "form", as it can be interpreted along the lines set forth in the preceding section.

As Parmentier observes, Peirce's communicative definition of semiosis is a feature of his later semeiotic; its appearance can be dated to the middle of the first decade of the 20th century. What Parmentier does not consider, however, is that this shift in perspective occurs during approximately the same period that Peirce establishes the connection between his pragmaticism and his extended theory of signs, which includes a growing interest in the interpretant and its various aspects. Now, in order to grasp the import of this turn we must first note how Peirce characterises the communicated form; it is not a singular thing, but possesses the being of a predicate (EP 2:544 [c. 1906]). It can be formulated as a conditional proposition that states that certain things would happen under certain circumstances. In other words, it is a *power*, which can be understood as a kind of disposition or real potential

(cf. EP 2:388 [c. 1906]). Yet another Peircean term for the form so interpreted would be *habit* (cf. Colapietro, 1997, p. 276); and here we find the vital connection to the pragmaticistic analysis of the meaning of signs. As we have seen, the ultimate logical interpretant, which is the proper meaning of an "intellectual sign", can be described as a habit.

Furthermore, this viewpoint agrees with Peirce's notion of what happens when an idea is communicated – for instance, when A communicates the idea that B is given to C, and C comprehends A's idea that B is given to C, and C comprehends the situation correctly. According to Peirce, A compels the idea of giving to arise in C, the idea remaining there indefinitely (MS 1135:6 [c. 1897]). This does not mean that C would need to think incessantly about it, but the idea remains in his or her mind in the sense that whenever the question is in any way suggested to C, something *occult* – that is, something not in view of consciousness – makes the idea occur. In other words, a habit has been produced.

Interpreting the communicated form in terms of habit moves our analysis toward a more concrete and practical level, as it establishes an association between the enigmatic form and the "would-acts" and "would-dos" of habitual behaviour, that is, the general habits of action of conscious beings or inanimate objects (CP 5.467 [1907]). Yet, it is reasonable to ask why, if this indeed is the case, Peirce still chooses to employ the term "form" instead of "habit" – a concept that he is certainly not afraid of using even in surprising contexts. This problem may be stated in terms of Peirce's categories; form, as it is often characterised by Peirce (see, e.g., NEM 4:293-295 [c. 1903]), is primarily a matter of firstness, while habit may be associated with thirdness. [49] The proposed interpretation would then appear to lead to an unfortunate clash on the categorial level. However, the difficulty may be surmountable. Peirce's approach to the categories permits us to apply categories to categories. Consequently, we might tentatively suggest that the communicated form can be characterised as a *first of a third*.[50]

Obviously, in order to be taken as an adequate interpretation of Peirce's position, this hypothesis would need some textual corroboration. Unfortunately, there seems to be none. Instead,

Peirce claims that the form may be in the interpretant in three ways: *directly*, as in the object, *dynamically*, as behaviour, and *representatively*, as in the sign (MS 793:3-4 [c. 1906]). All this suggests that "form" can indeed be interpreted as meaning – distinguishable as emotional, existential, and logical meaning in its "embodiment" in the interpretant – albeit Peirce's use of the term is still not free from mist. The notion that the form would first reside in the object, and then be moved or extended to the interpretant is less than satisfactory. At least, it seems to entail the problematic conception of the object as a repository, which fits poorly with Peirce's view of the dynamical object and with his theory of perception. It is possible that Peirce, in his move toward the communicative derivation of the components of the sign, is still struggling to find the best expression for his conception – that is, one that would incorporate the crucial ingredients of utterer and interpreter without thereby sacrificing the generality of the definition. The semiotic form may be simply an abstract analogue of the meaning shared in an ordinary communicative situation. At any rate, it does not seem to have been a truly necessary part of the sign relation in Peirce's opinion; it all but disappears after 1906.[51]

This much said, one might add that Peirce's communicative definitions may be useful for certain purposes, in particular in considerations of signs operating in the field of communication ("communication" being here understood in a more concrete sense than in the communicative definition). In fact, in a draft of a letter to Lady Welby, where Peirce initially characterises the sign as "any medium for the communication or extension of a Form (or feature)", he also outlines the intentional-effectual-communicational trichotomy of the interpretant (SS 196-197 [1906]; cited in sect. 5.2.2). Furthermore, in the same passage Peirce introduces the peculiar (and rare) concept of *commens*, which may be characterised as the common ground requisite in order that any communication can take place. It seems to be a different way of saying that the sign interpretation requires collateral experience, the stress being laid on a *common* or *shared* acquaintance with the object.

These collateral requirements of communication will be examined in more detail in the next section; before that, we should consider one of Parmentier's central arguments, namely the claim that the communicative definition involves a problematic ideal of transparency. At least in this regard, his criticism seems to be accurate, for we find that Peirce characterises the ideal function of the sign in such terms.

> A sign […], just in so far as it fulfills the function of a sign, and none other, perfectly conforms to the definition of a medium of communication. It is determined by the object, but in no other respect than goes to enable it to act upon the interpreting quasi-mind; and the more perfectly it fulfills its function as a sign, the less effect it has upon that quasi-mind other than that of determining it as if the object itself had acted upon it. Thus, after an ordinary conversation, a wonderfully perfect kind of sign-functioning, one knows what information or suggestion has been conveyed, but will be utterly unable to say in what words it was conveyed, and often will think it was conveyed in words, when in fact it was only conveyed in tones or in facial expressions. (EP 2:391 [c. 1906])

Why is this standpoint problematic? It would appear to be a rather plausible account of the *ideal* functioning of a sign as a channel that does not disturb the transmission of information by noise (cf. Shannon & Weaver, 1949). There seems to be two problems in this outlook. Firstly, the sign is again characterised in a way that may lead to the erroneous conception that it is a mere vehicle or perhaps a kind of conduit for information transfer. Secondly, while it is true that we often wish that our signs would function as transparently or noiselessly as possible, Peirce also indicates that an awareness of the sign *as* a sign is a prerequisite of semiotic development. In particular, self-control and self-criticism require that we become aware of our habits – for instance, habits of thought or habits of communication – so that they can be reflected upon, and possibly transformed in view of certain purposes and ideals. This is of course not possible is the signs are perfectly translucent.

Instead of simply stating that the more transparent a sign is, the better it functions, Peirce ought to have said that signs – or rather

semiotic habits – have a tendency toward transparency. In many cases, this is beneficial and unavoidable – it would certainly be difficult to live in constant controlled awareness of the signs one uses in interpretation and communication; but in other cases, transparency may be associated with ingrained habits, which ought to be criticised. Paradoxically, the invisibility of signs can be an obstruction to the development of thought. Indeed, any critical use of mind must involve awareness of the signs employed and the grounds upon which they profess to represent their objects (cf. Keeler, 1990).

Furthermore, communication cannot be construed as a mere transfer of ideas. Firstly, semiosis is not mere sign translation; "signs which would be merely parts of an endless viaduct for the transmission of idea-potentiality, without any conveyance of it into anything but symbols, namely, into action or habit of action, would not be signs at all, since they would not, little or much, fulfill the function of signs" (EP 2:388 [c. 1906]). Without embodiment in something else than symbols, there cannot be "the least growth in idea-potentiality" (EP 2:388 [c. 1906]). Secondly, Peirce claims that a proposition that has no connection to experience, actual or potential, is devoid of meaning (EP 2:1 [1893]). No communication is possible without some kind of indices that establish an experiential reference or contact, and iconic signs are needed to present objects and relations in their qualitative aspect. However, icons and indices assert nothing as such (EP 2:7 [c. 1894]; EP 2:16 [1895]). It is only when such signs are involved in symbolic representation that they can be said to be able to communicate some meaning; in any language, an assertion requires icons, indices, and symbols (MS 16:13$_v$ [c. 1895]).[52] Thus, these three kinds of signs cooperate in communication; without such collaboration, there can be no communicative determination. True, in some modes of communication one of the mentioned sign types dominates the proceedings, as in the case of the existential graphs, which are predominantly iconic. Their "transparency" is due to the fact that they can present or represent the relevant qualities of the object directly (or at least relatively directly); but as the graphs are interpreted and understood, some indices and symbols are bound

to become involved, and the graphs fall short of perfect transparency. Furthermore, their power of representation and communication is limited; they are applicable to diagrammatic reasoning with propositions and arguments (cf. SS 197 [1906]). The graphs have a certain capacity reminiscent of assertion, but do not appeal to the emotions, ask questions, shout out warnings, etc. In other words, the existential graphs cannot be used to represent the communicative process in full; but then again, there is no evidence that that would have been Peirce's intention.

5.3.2 Collateral Contexts and Common Knowledge

In the above discussion of Peirce's communicative definition, we encountered anew the idea of collateral experience, partly explored earlier in the study (see sect. 4.2.2). This concept, which at first blush may appear to be nothing but a casual nod in the direction of a rather inadequate empiricism, is in fact a central feature of the Peircean conception of communicative semiosis. As we have seen, the idea of collateral experience is connected to the object, or more precisely to the acquaintance with the dynamical aspect of the object. Roughly, the issue we are concerned with here is that of *identification* and *reference*, that is, the recognition of what a certain sign or constellation of signs is about.

The representationist point of view, coupled with Peirce's early epistemological stance, would seem to render reference to objects internal to the semiotic process (see sects. 3.1.1, 4.3.1). However, one can detect a certain ambiguity with regard to questions pertaining to the status of signs and objects even in the first phase of semeiotic. As Peirce's philosophy develops, a number of problems begin to crop up. In particular, he has difficulties to account for reference. The solution suggested by the early approach is to explain reference in terms of relations between thought-signs (cf. Hookway 2000, p. 117). This entails that the identification of individual objects must be performed by descriptions. Yet, at the same time, Peirce recognises that certain signs have a "pure demonstrative application", that is, that their semiotic power is

based on a real existential relation between sign and object, as in the case of a weathercock that serves as a sign of the wind. Such signs would appear to bring us into contact with an extra-semiotic reality – the actual wind, in this case. However, this conclusion does not fit into the framework of Peirce's early semeiotic; and on closer inspection we will find that the demonstrative function does not really cause a breach in the semiotic stronghold. As Hookway (2000, p. 130) notes, Peirce's demonstrative application of a thought-sign is always to *another* thought-sign of the same object; the existential relations utilised in cognition are in fact relations between judgments.

All this is dramatically changed in the mid-1880s, when Peirce returns to semiotic issues after the longish break. It is not perfectly clear what causes this particular alteration in Peirce's outlook, but it seems reasonably clear that the move is connected to his work on logical quantifiers, and his view of their crucial *indexical* function. The change of mind is also linked to Peirce's rejection of absolute idealism, as it is presented by Royce in *The Religious Aspect of Philosophy* (1885/1958). In the same context, Peirce criticises Hegel (and Hegelian philosophers) for ignoring the "outward clash", which is a "direct consciousness of hitting and getting hit" that "enters into all cognition and serves to make it mean something real" (EP 1:233 [1885]). This indicates a realisation on Peirce's part: a philosophical theory cannot leave *brute fact* out of account; it is how we come to be aware of the other – an undeniable force. Peirce gives an example of a man walking down Wall Street pursuing an internal dialogue on the existence of the external world (CP 1.431 [c. 1896]). If the man, lost in his world of sceptical thought-signs, bumps into another man who knocks him down, little real doubt about the existence of something beyond signs will be left in the his mind.

Peirce's firmer acknowledgement of the "brute" aspect of reality, which is affiliated with the category of secondness and the concept of percept, has discernible consequences for his semeiotic. It is marked by the fact that Peirce pays more attention to the semiotic role of the object, and simultaneously re-considers the semi-

otic status of the demonstrative application – now closely connected with the index.

Here, it is important to recall that Peirce makes a distinction between the immediate and dynamical object. In the examination of the semiotic object, we found that the dynamical object cannot be expressed by the sign; it can only be indicated, so that the interpreter can find it out by collateral experience (EP 2:498 [1909]). Mere signs will be inefficient, if the required experiential background or proficiency is missing.

> …I point my finger to what I mean, but I can't make my companion know what I mean, if he can't see it, or if seeing it, it does not, to his mind, separate itself from the surrounding objects in the field of vision. It is useless to attempt to discuss the genuineness and possession of a personality beneath the histrionic presentation of Theodore Roosevelt with a person who recently has come from Mars and never heard of Theodore before. (EP 2:498 [1909])

The determination of the sign by the dynamical object places limitations on how the sign can be grasped. A person has an idea of George W. Bush, which constitutes his or her immediate object of the president. It is a kind of composite picture or generalised percipuum, formed by numerous news broadcasts, articles, discussions, etc. It is obviously full of interpretative elements, produced by the attempts to obtain a coherent picture of the man in question. The representation is bound to be at least partly erroneous. The person has probably never met George Bush, nor seen him in real life. Yet, there is a sense in which the sign "George Bush" is determined by the real man. This delimitation is indicated by the fact that the interpreter is not at liberty to interpret the sign in just any way. For instance, he or she cannot *genuinely* take "George Bush" to stand for "person who recently has come from Mars", although it might prove to be an entertaining thought experiment. The interpreter will also modify his or her views of the president, if experience so dictates. Of course, this does not mean that our signs would be in a constant flux on all levels; in fact, there is naturally considerable inertia in our habitual uses of signs.

Peirce claims that the basis of the object's dynamical, determinative power lies in the fact that the interpreter must have had his or her mind determined by collateral experience of the object, apart from his or her encounter with signs that represent, or claim to represent, the object in question. This would indicate that the earlier primacy of the semiotic sphere has been replaced by a more basic layer of raw experience. This impression is strengthened by the fact that Peirce emphasises that collateral experience does *not* mean knowledge of signs.

> I do not mean by "collateral observation" acquaintance with the system of signs. What is so gathered is *not* COLLATERAL. It is on the contrary the prerequisite for getting any idea signified by the sign. But by collateral observation, I mean previous acquaintance with what the sign denotes. Thus if the Sign be the sentence "Hamlet was mad", to understand what this means one must know that men are sometimes in that strange state; one must have seen madmen or read about them; and it will be all the better if one specifically knows (and need not be driven to *presume*) what Shakespeare's notion of insanity was. All that is collateral observation and is no part of the Interpretant. (EP 2:494 [1909])

Consequently, there seems to be two distinct preconditions for interpretation. One must be acquainted with the system of signs in question (for instance know the language used) *and* have some collateral experience of the objects involved. The first condition is probably relatively uncontroversial. The second, on the contrary, calls for further explication. It is easiest to grasp in a communicative framework, which by now should come as no surprise; the requirement of collateral experience is intimately tied to the communicative approach to the sign relation. The basic situation, in which the need for experiential acquaintance can be best discerned, is that of an ordinary dialogue, in which one person attempts to convey something to another.

One of the arguments on which Peirce bases his requirement for collateral experience is that no *description*, in itself, suffices to indicate the object of a communicative exchange. If person *A* says "George Bush is a liar" to person *B*, the sentence will be close to senseless unless *B* has some previous experience of the objects

involved. That is, if *B* does not know who George Bush is, or has blissfully escaped contact with lies and liars, the objects of the sentence will not be sufficiently fixed to function determinatively in the semiotic process.[53] If *B* asks "Who?", *A* can try to specify the reference by offering a description along the lines of "The acting president of the United States"; but then again, the understanding of that phrase depends on experience of such objects as presidents and the United States. The explications can be made more and more elaborate, but unless *A* somehow manages to refer to an object of *B*'s experience, no communication can take place. According to Peirce, such a reference cannot be achieved with pure descriptions. Any assertion requires indices as well as icons and symbols.

> ...looking at the matter from the rhetorical point of view, every assertion must be an assertion about something, and there must be something to indicate what it is about. This subject must be something which speaker and listener both know by experience; or else, the assertion must show the hearer by what process he can gain experience of the subject of the assertion. No description whatever can suffice to show what the subject is, unless the assertion is absolutely empty. For example, the assertion "all red cows are red", if it be intended to say something about *real* cows is perfectly empty and means nothing. An uncultivated person, who only understands assertions as referring to real things, will call it nonsense. It only gains a meaning when it is understood as meaning that the *term*, or *Begriff*, "red cows" involves their being red. The subject of the assertion is in that case the logical world of terms or concepts; and this world cannot be differentiated from every world of fact and of fiction by any general description. [---] There ought [...] to be three parts in every assertion, namely, a sign of the occasion of the compulsion, a sign of the compelled idea, and a sign which shall be evidence to the listener of the compulsion affecting the speaker in so far as he identifies himself with the scientific intelligence generally. (MS 805:19-20; cf. MS 804:22)

Indices play a particularly important role as contextualisers of communication, since they are signs that in some sense indicate or call the attention to their objects, without thereby giving any substantial information about them. Peirce emphasises the function of indices in situations where the reference of communication – that is, the identity of the object – needs to be established.[54] What, then,

are these indices? They are primarily of two kinds: *designations*, which force the attention of the interpreter to certain existents, and *reagents*, which are purer indications.

> An *index* represents an object by virtue of its connection with it. It makes no difference whether the connection is natural, or artificial, or merely mental. There is, however, an important distinction between two classes of indices. Namely, some merely stand for things or individual quasi-things with which the interpreting mind is already acquainted, while others may be used to ascertain facts. Of the former class, which may be termed *designations*, personal, demonstrative, and relative pronouns, proper names, the letters attached to a geometrical figure, and the ordinary letters of algebra are examples. They act to force the attention to the thing intended. Designations are absolutely indispensable both to communication and to thought. No assertion has any meaning unless there is some designation to show whether the universe of reality or what universe of fiction is referred to. The other class of indices may be called *reagents*. Thus water placed in a vessel with a shaving of camphor thrown upon it will show whether the vessel is clean or not. If I say that I live two and a half miles from Milford, I mean that a rigid bar that would just reach from one line to another upon a certain bar in Westminster, might be successively laid down on the road from my house to Milford, 13200 times, and so laid down on my reader's road would give him a knowledge of the distance between my house and Milford. Thus, the expression "two miles and a half" is, not exactly a reagent, but a description of a reagent. A scream for help is not only intended to force upon the mind the knowledge that help is wanted, but also to force the will to accord it. It is, therefore, a reagent used rhetorically. Just as a designation can denote nothing unless the interpreting mind is already acquainted with the thing it denotes, so a reagent can indicate nothing unless the mind is already acquainted with its connection with the phenomenon it indicates. (CP 8.368 n. 23; cf. MS 1135:7-8 [c. 1897])

Reagents are proper indices, and as such outside of the domain of symbols, although, as Peirce notes, they may be described using symbolic signs. Designations are characteristically indexical signs, but not pure indices.[55] In the 1903 Syllabus, Peirce states that every subject of a proposition is one of three kinds (EP 2:286), namely

1. an *index*, such as the environment of the interlocutors, or something attracting attention in that environment, for instance a pointing finger;
2. a *subindex*, such as a proper name[56] or a pronoun; or
3. a *precept*, a symbolic legisign that describes to the interpreter what is to be done (by the interpreter of somebody else) in order to obtain an index of the individual (whether a unit or a single set of units) and that assigns a designation to that individual.

Subindices or designations do not constitute collateral acquainttance, but they force the attention to the relevant experience. In contrast, indices or reagents are closely connected to the situation and context of occurrence, and cannot be properly expressed by words. In the communicative situation, they are whatever in the circumstances of the communication, apart from the verbal utterance itself, enables the identification of the object. An example adopted from Peirce (cf. CP 2.357 [1902]) may help to clarify this point. Suppose, for instance, that someone comes into a room where we are sitting and shouts "Fire!" In itself, the word in question is hardly informative; we might look up "fire" in a dictionary, but that would merely give us a description of how it might be applied (cf. MS 452:12 [1903]). If that were all we had to go on, we might calmly ask for more information. However, if we note that the utterer's tone is panicky, and that his or her expression is worried, we will probably start to look for a way out. Add a smell of smoke to the environment, and there should be no doubt about the object of the sign – although we actually know very little about the object, and the whole thing *might* be a rather puerile prank. There are many indices at play in such a situation: the tone and the expression, for instance, but also less obvious contextual elements, such as the environment in which we are located. Furthermore, some wild interpretations, which the signs alone would render possible, are excluded by common sense, and the fact that the indicative word is not a pure index, but a sign also signifying an intended relation.

> …if the utterer says "Fine day!" he does not dream of any possibility of the interpreter's thinking of any mere *desire* for a fine day that a Finn of the North Cape might have entertained on April 19, 1776. He means, of course, to refer to the actual weather, then and there, where he and the interpreter are alike influenced by the fine weather, and have it near the surface of their common consciousness. (EP 2:407 [1907]; cf. MS 452:12-13 [1903])

> …if somebody rushes into the room and says, "There is a great fire!" we know he is talking about the neighbourhood and not about the world of the *Arabian Nights' Entertainments*. It is the circumstances under which the proposition is uttered or written which indicate that environment as that which is referred to. But they do so not simply as index of the environment, but as evidence of an intentional relation of the speech to its object, which relation it could not have if it were not intended for a sign. (CP 2.357 [1902])

An exclamation, such as "Fire!", is not a proper assertion. As such, it is a partial sign that needs to be complemented by additional experience, in order to be able to determine interpretants. As a determinant of action, its existential meaning is predominant, but the sign also has emotional meaning in that the word can be said to give rise to certain feelings, for instance of fear. However, it is not quite clear whether we should say that the exclamation has logical meaning or not. Of course, "fire" is an intellectual concept, but the principal meaning of the word in the situation described above is not to be found in a dictionary; nor does it seem plausible to say that the ultimate logical meaning, that is, the habits of action associated with the concept, would simply encompass the warning. There is an element of "here and now" in the exclamation that no intellectual conception can adequately capture.

Now, a critic of the Peircean point of view may concede that collateral experience is indeed a requirement in semiotic situations involving such incomplete signs as a one-word exclamation. Still, he or she might opine that it does not apply to a proper assertion. Peirce would deny this; one element of assertion, at least, consists in the application of a description to something well known and well understood between the asserter and the auditor (MS 452:13 [1903]). That which is thus described cannot be known merely

through the description, but must be something with which the parties are familiar by other means. Furthermore, the *character of assertion* – the "assertivity", to coin a new term – is not given in the form of the signs. Again, using an example from Peirce, consider a statement such as "Thomas Studley is energetic", found written or printed on a piece of paper. If the interpreter is not familiar with Mr. Studley, no knowledge is conveyed, apart from the rather useless piece of information that somebody, presumably a man named Thomas Studley, is energetic. He might be real; but he might also be the product of a literary imagination, or even a random fabrication produced by a computer programmed to construct grammatically correct sentences of English. However, if the note states that "George W. Bush is energetic",[57] then the proposition will probably have proper meaning for us; it is at any rate a proposition to which we may consent or dissent. Yet, this does not make it an assertion; it is possible that the person who wrote it was just practicing his or her handwriting, without intending to be held responsible for what the words could be taken to affirm (MS 452:14 [1903]); or it might be another output of the machine. Some collateral experience is required to make the words into an assertion for us. True, there may be signs that indicate that a certain statement is to be taken as an assertion – for instance, a signature under a declaration – but the point is that no *descriptive* signs will ever suffice to signal assertivity, if they are completely severed from collateral factors.

This contention could be supported by a line of reasoning from a different philosophical setting. Arguing against the view that there are conventions governing assertion, Davidson uses an example that by now will appear surprisingly familiar.

> Imagine this: the actor is acting out a scene in which there is supposed to be a fire. (Albee's *Tiny Alice*, for example.) It is his role to imitate as persuasively as he can a man who is trying to warn others of the fire. "Fire!" he screams. And perhaps he adds, at the behest of the author, "I mean it! Look at the smoke!" etc. And now a real fire breaks out, and the actor tries vainly to warn the real audience. "Fire!" he screams, "I mean it! Look at the smoke!" etc. If only he had Frege's assertion sign.[58]

> It should be obvious that the assertion sign would do no good, for the actor would have used it in the first place, when he was only acting. Similar reasoning should convince us that it is no help to say that the stage, or the proscenium arch, creates a conventional setting which negates the convention of assertion. For if that were so, the acting convention could be put into symbols also; and of course no actor or director would use it. The plight of the actor is always with us. (Davidson, 2001, pp. 269-270)

Albeit approaching the matter from a different angle, Peirce could agree with Davidson; the *thrust* of assertion cannot be expressed in symbols.[59] However, Peirce would add that other signs are involved in indicating that the assertion is the kind of semiotic act it is, most prominently relatively genuine indices pertaining to circumstances of utterance, tones, expressions, etc. – all factors requiring collateral experience. As Peirce notes, languages do not seem to have a sign to show that the real world is spoken of, but "that is not necessary, since tones and looks are amply sufficient to show when the speaker is in earnest" (MS 804:22). In view of Davidson's example, we should probably say that they are *usually* adequate; the actor might be very talented.

Instead of shared conventions, Davidson attributes the success of communication primarily to personal intentions made public. This would be included in the Peircean approach, but the state of affairs could be specified in terms of signs with a certain indicative power. While the Peircean point of view concurs with Davidson's contention that the plight of the actor is always with us, Peirce would nonetheless not abandon the idea that communication requires a kind of common ground; indeed, Peirce maintains that no human being can communicate the smallest item of information to another human being unless they have a fund of common familiar knowledge, "where the word 'familiar' refers less to how well the object is known than to the manner of the knowing" (MS 614:1 [1908]). There must be some specified or unspecified understanding of things shared by the parties involved; perhaps more accurately called experience than knowledge.[60]

> …two men cannot converse without some common ground of experiences undergone by both concerning which they speak. Since one

> man is to inform another what he shall experience if he seeks his experience in a certain way, there must be certain familiar reservoirs of the same experiences upon which both can draw. This requires certain words descriptive of individual things. For example, I say "A thousand kilometres up the Congo will be found pygmies". I convey no idea unless my interlocutor knows what the Congo is. He must know where to find it before it describes a possible experience for him. If he asks what a kilometre is, I cannot tell him so that he can use the idea unless he knows where the Pavillon de Breteuil is.[61] If he goes there he will find a bar which, laid down a thousand times over, will measure off a kilometre. (MS 1135:7 [c. 1897])

In the semeiotic framework, Peirce speaks of the *commens*, or the common mind into which utterer and interpreter have to be fused in order that any communication should take place. He explains that this curious concept of commens entails "all that is, and must be, well understood between utterer and interpreter, at the outset, in order that the sign in question should fulfill its function" (SS 197 [1906]; see sect. 5.2.2 for the full quote). The communicational interpretant, which can be seen as the ideal goal of communicative interaction, is a determination of this shared mind – distinct both from the intentional interpretant (a determination of the mind of the utterer) and the effectual interpretant (a determination of the mind of the interpreter).

Furthermore, Peirce claims that no object can be denoted unless it is put into relation to the object of the commens (SS 197 [1906]). That is, to specify a certain object in communication, the utterer must in some manner refer it to the shared experience of utterer and interpreter. This is typically performed by the use of subindices, precepts, and descriptions of indices. However, the need for a common ground does not entail that the participants would not differ in their experiential background; in fact, such differences are a prerequisite of communicative development.

> I have defined an index or indication as a sign by virtue of physical connection. Experiential connection would be more explicit; for I mean by physical connection that the sign occurs in our experience in relation to the when and where of the object it represents. The phrase "our experience" is significant. Experience is the course of life, so far as we

> attend to it. "Our experience", I say, because unless two persons had some experience in common, they could not communicate, at all. If their experience were identical, they could furnish one another no information. But to the experience both have in common, the several experiences of the two connect other occurrences; and so we have shares in a collective experience. An index connects a new experience with former experience. (MS 797:10)

Now, Peirce is not claiming that the common ground would be a self-evident fact that would need no specification. In fact, the shared fund of experience is mostly so vast and heterogeneous that it needs to be delimited in view of the purposes of the transaction. Again, indices are required to specify in what universe of discourse communication takes place. That is, they indicate in what domain the objects referred to are to be found; or, to express the point differently, what kind of experience is required for the proper grasping of the objects. In an entry in *The Dictionary of Philosophy and Psychology* Peirce and Ladd-Franklin state the matter as follows:

> In every proposition the circumstances of its enunciation show that it refers to some collection of individuals or of possibilities, which cannot be adequately described, but can only be indicated as something familiar to both speaker and auditor. At one time it may be the physical universe, at another it may be the imaginary "world" of some play or novel, at another a range of possibilities. (CP 2.536 [1902]; cf. CP 2.357 [1902])[62]

In other words, there is no semiotic *property* that would distinguish the various universes from each other; not even the basic distinction between fact and fiction is given in the signs (see CP 2.337 [c. 1895]). Instead, a variety of means are used to indicate what universe is indicated; "often, it is the tone of the discourse which gives us to understand whether what is said is to be taken as history, physical possibility, or fiction" (NEM 4:367). In other cases, certain phrases, such as "the fact is" or "once upon a time", afford a clue. Of course, such phrases partake of the nature of conventional signs; but insofar as they refer us to some living experience or to something with which we are familiar by action and reaction, they signify their object predominantly in an indexical way, or by existential connection (NEM 4:367).

In other words, a universe of discourse consists in the partial narrowing of the scope of semiosis. It forms the semiotic space, in which actual utterance, interpretation, and communication can take place; as Colapietro (1989) observes, the "specification of the object of any sort of semiosis must […] always be determined in reference to the context in which the process of semiosis is occurring" (p. 11). The rules of interpretation will be different for different universes of discourse.

Yet, does this not again threaten us with relativism? It seems odd that the arch-realist Peirce would be found affirming a position that makes reality and fiction stand on seemingly equal footing. Obviously, that is not his point; but he clearly acknowledges that mere signs can never function as the guarantee for reality, even if "the highest grade of reality is only reached by signs" (SS 23 [1904]). Moreover, as we noted in our examination of perception, there is no perceptual foundation of reality, in spite of the directness of the percept (see sect. 4.3.3).

In semeiotic, the distinction between reality and fiction should not be understood as a sharp ontological division of being into two domains, that of essential facts and that of superfluous figments of the imagination. According to Peirce's definition, the real is that which is independent of how any human being, or any definite number of human beings, think it to be; but it is not necessarily independent of human thought in general (MS 681 [1913]; cf. EP 2:456-457 [1911]). That is, the real object is not a mere idea. It is something that opposes or limits us in some manner; it cannot be modified by a simple act of the will. In other words, a real thing displays a strong aspect of secondness;[63] it is a persistent experience that "jabs you perpetually in the ribs" (CP 6.95 [1903]). However, not only the physical and natural worlds display this character of reality. In our social interaction, we constantly bump into opinions, ideas, and discourses that do not conform to our own perception of the state of the world – discursive elements that persist in spite of our will. In fact, dialogic exchange is to a certain extent based on such conflict, which does not originate in the subjective consciousness, but is suffered as a brute fact. Ultimately, we must draw on some collateral experience and observation, in order to

decide if a sign refers to reality or not. The decision is never certain; in fact, it is more conclusive to test for unreality, rather than the other way around.

> We have just three means at our command for detecting any unreality, that is, lack of insistency, in a notion. First, many ideas yield at once to a direct effort of the will. We call them *fancies*. Secondly, we can call in other witnesses, including ourselves under new conditions. Sometimes dialectic disputation will dispel an error. At any rate, it may be voted down so overwhelmingly as to convince even the person whom it affects. Thirdly, the last resort is prediction and experimentation. (EP 2:65 [1901]; cf. EP 2:510 [1909])

A few more observations concerning collateral experience and universes of discourse are called for. Firstly, we should recall that Peirce's use of the concept of "experience" is somewhat ambiguous (see sect. 2.2.4). On the one hand, "experience" in the narrow sense, or singular experience, is something closely connected to brute fact. On the other hand, Peirce also uses "experience" to denote a more substantial cognitive content in the life of human beings. Both these aspects seem to be present in the notion of collateral experience; it is both something that determines semiosis as a dynamical object and something more substantial in its role as common ground.

Another thing that should be noted is that the object of the common ground need not be wholly determinate. In fact, one of the implications of the idea of universes of experience is that the identification of objects occurs within a certain space relative to certain purposes. Although communication requires *some* common ground, the experiences of the utterer and interpreter need not be identical; in fact, the growth of understanding requires some divergences between the experiential arsenals of the parties involved (see MS 797:10, quoted above). Moreover, for many communicative purposes, it would be utterly detrimental to try to identify the object in minute detail. This question is considered in Peirce's theory of semiotic indeterminacy.

5.3.3 Indeterminacy and Common Sense

Two communicative requirements seem to arise from our discussion of collateral experience. Firstly, two minds – or, as it its better to say in the Peircean framework, *quasi-minds* – must stand on some common ground, if they are to communicate. This can be construed as a need for experiential capacity and "knowledge". Secondly, there is the related call for appropriate delimitation of the communicative universe. Indexical signs are typically employed to compel attention to the objects in question; or, to avoid the impression that the indication would necessarily be a conscious act, we might say that the delimitation is achieved with the aid of indices, subindices, and precepts, many of which are more directly available to the interpreter than to the utterer.

However, as suggested above, the determination of the communicative minds is rarely, if ever, absolute. Signs characteristically leave a certain leeway of interpretation – not only in the development of interpretant-effects, but also with regard to referential delimitation. Indeed, signs typically designate a more or less specific universe, within which objects might be experienced, rather than explicitly pointing out the object of the sign. On their own, signs are not capable of properly fixing the reference of discourse purporting to relate information concerning the world. [64] Nor can collateral observation ever bring forth a perfectly singular positive object, determinate in every conceivable respect. In other words, there will always be a certain degree of indeterminacy in semiosis, because human beings cannot escape the use of signs to some kind of "hard core" of pure perception.

The inescapability of semiotic indeterminacy could be taken as a justification for adopting a scepticist or even a relativist stance. This is not Peirce's conclusion; short of an ideal state of perfect determination, indeterminacy is accepted as a fact of the use of signs. However, this is easily interpreted as a call for the elimination of indeterminacy through scientific inquiry, a project related to the search for transparent signs (cf. Williamson, 1994, p. 46; sect. 5.3.1). To see whether such a reading of Peirce is justified, we must

take a closer look at his reflections on the varieties of indeterminacy.

In a well-known passage, Peirce claims to have "worked out the logic of vagueness with something like completeness" (CP 5.506 [c. 1905]). This almost casual remark has both puzzled and fascinated students of his philosophy. Several scholars have tried to find an exhaustive account of the so-called "logic of vagueness" in Peirce's writings, but these aspirations have not been successful.[65] His observations on vagueness and other modes of indeterminacy are – like so many elements of his thought – scattered throughout his vast philosophical corpus.[66]

The problem of vagueness and other modes of indeterminacy is a central concern in Peirce's later writings. Yet, his interest in these topics can be traced to the very beginning of his work as a philosopher. His earliest discussions of such matters tend to focus on the problem of individuals, or more accurately, on the problem of the reference to individuals by naming. In this context, Peirce denies that there is such a thing as an absolute individual, which could be unambiguously identified apart from a context provided by a universe of discourse. Even proper names, such as "Philip of Macedonia" or "George Bush", are indeterminate in the sense that they do not pinpoint the object of the sign with absolute precision; to use Peirce's example, the sign "Philip of Macedonia", which in a sense unambiguously singles out an individual for persons familiar with a certain discourse of history, is nevertheless indeterminate in that it does not make clear whether it is "Philip sober" or "Philip drunk" that is meant, or which temporal Philip we are talking about, etc. (see W 2:390 [1870]; cf. MS 9:2 [c. 1903?]). According to Peirce, the attempt to find the atomic, absolute individual would involve an endless process of determination; we would never reach the core of the onion. Complete determinacy of reference cannot be had, except perhaps in the ideal state of final knowledge, which is never fully actualised.

This conception of the indeterminacy of individuals is related to Peirce's early philosophical approach, in which the denotative function of indices is explicated through the operation of thought-signs, and which includes a description theory of the function of

proper names.[67] Moreover, this first phase of semeiotic contains no conception of collateral experience. As noted, some of the underlying assumptions of the early idealistic position are in fact modified or even discarded later, when Peirce moves toward a more robust realistic point of view, adopting a kind of direct reference theory based on his revised notion of the indexical sign. Still, Peirce never completely abandons certain central ideas of the early account of indeterminacy; in particular, he continues to deny the possibility of absolute determinacy, albeit with somewhat different implications. As we shall see, this causes some tensions between a scientific and a commonsensical point of view in Peirce's thought.

According to the received view, the function of Peirce's mature logic of vagueness is "to characterize all the varieties of indeterminacy and determinacy that affect either the breadth (reference, denotation, extension) or depth (sense, connotation, intension) of symbols" (Brock, 1979, p. 41; cf. Brock, 1981, p. 133; Tiercelin, 1992, p. 66). Thus, indeterminacy is supposed to affect terms, propositions, and arguments, but not icons or indices (see Tiercelin, 1991, p. 1).[68] Furthermore, indeterminacy is allegedly connected to the traditional distinction between breadth and depth, which Peirce examines in various contexts (see sect. 5.2.3). However, although this received view is not false in that it can be defended by firm textual evidence, it may be somewhat limiting, unless we consider the broader framework within which it supposedly operates. In particular, it is important to note that Peirce tends to view the distinction between breath and depth as derivative from the full sign relation in his later philosophy.

> …the dyadic relations of logical *breadth* and *depth*, often called denotation and connotation, have played a great part in logical discussions, but these take their origin in the triadic relation between a sign, its object, and its interpretant sign; and furthermore, the distinction appears as a dichotomy owing to the limitation of the field of thought, which forgets that concepts grow, and that there is thus a third respect in which they may differ, depending on the state of knowledge, or amount of information. (CP 2.608 [c. 1903])

This is not just a casual remark to the effect that breadth and depth pertain to signs; rather it has considerable implications for the Peircean conception of how indeterminacy should be approached. Namely, the growth of signs can be taken as a reference to the communicative dynamics of semiotic development. As such, this suggestion may seem somewhat trite – perhaps even to be an obscure notion that merely impedes a clearer understanding of the issues at hand. However, Peirce considers semiotic indeterminacy precisely as something pertaining to the interaction between an utterer and interpreter. Without due consideration of this fact, his logic of vagueness will remain an isolated curio in his philosophy.

Before moving on to a closer consideration of the communicative setting of indeterminacy, we should consider some of the central concepts involved. Again, we will find an attempt to construct an appropriate terminological apparatus; but the terms involved tend to be less peculiar than the guises carried by most of the semeiotic ideas we have encountered so far. This may come as a relief, but it can also cause some confusion. Namely, while the topic of vagueness has been discussed with fervour after Peirce's death, it is by no means self-evident that Peirce's references to the "logic of vagueness" would be primarily concerned with the variety known as "fuzziness" (cf. Short, 1998, p. 296). On the other hand, Peirce has played a role in the development of the contemporary discussion, albeit a relatively insignificant one. Max Black, whose 1937 paper can be seen as the starting-point for the current debates, noted Peirce's interest in the topic. Furthermore, Peirce may have influenced the later conceptions through a dictionary definition. One important milestone in Peirce's thought about indeterminacy is his entry "vague (in logic)", in which he first characterises "vague" as "indeterminate in intention" and then elaborates the conception as follows:

> A proposition is vague when there are possible states of things concerning which it is intrinsically uncertain whether, had they been contemplated by the speaker, he would have regarded them as excluded or allowed by the proposition. By intrinsically uncertain we mean not uncertain in consequence of any ignorance of the interpreter, but because the speaker's habits of language were indeterminate; so

> that one day he would regard the proposition as excluding, another as admitting, those states of things. Yet this must be understood to have reference to what might be *deduced* from a perfect knowledge of his state of mind; for it is precisely because these questions never did, or did not frequently, present themselves that his habit remained indeterminate. (*Dictionary of Philosophy and Psychology*, 1902, p. 748)

According to Timothy Williamson (1994, p. 47), this characterisation is almost equivalent to the standard use of "vague" in contemporary philosophy. To illustrate: the predicate "tall" is vague according to Peirce's definition, if there are borderline cases, such that the speaker cannot not say whether *A* is tall or not. Peirce associates this kind of vagueness with the speaker's linguistic habits, implying that predicate-indeterminacy (or indeterminacy of depth) is due to indeterminacy of use (Williamson, 1994, p. 48). In other words, vagueness is not due to ignorance on the part of the interpreter. In "Reason's Rules", Peirce offers a different illustration of this kind of use-related indeterminacy:

> …to the question whether a certain newly found skeleton was the skeleton a man rather than of an anthropoid ape, the reply "Yes and no" might, in a certain sense, be justifiable, Namely, owing to our conception of what a man is having been formed without thinking of the possibility of such a creature as to that to which this skeleton belongs, the question really has no definite meaning. (MS 596:17 [c. 1902-3])

Consequently, such concepts as "man" and "ape" are vague if their application to certain objects (or subjects) is a matter of unsettled semiotic uses. However, Peirce's dictionary definition also indicates that the habits are indeterminate because the relevant questions have rarely - if ever – been considered, leaving the door open for the possibility that they could be rendered determinate, given sufficient inquiry.

Still, this conception of vagueness as indeterminacy of use is not the final word on the topic in Peirce's writings; in fact, his writings contain many enlarged discussions of vagueness, in which indeterminacy is treated rather differently than in the entry cited above. For instance, in his later analysis of propositions, Peirce

states that a subject (of a proposition) is "*determinate* in respect to any character which inheres in it or is (universally and affirmatively) predicated of it, as well as in respect to the negative of such character, these being the very same respect" (EP 2:350 [1905]). If the subject is not determinate, then it is indeterminate. This brief characterisation seems to have the following implications:

1. determinacy and indeterminacy affect propositions;
2. "determinate" and "indeterminate" describe the propositional subject with reference to the characters it possesses or which are predicated of it; and
3. a propositional subject is either determinate or indeterminate.

This analysis would seem to limit Peirce's theory of indeterminacy to a relatively clear-cut set of signs, namely to propositional subjects, such as the term "the president" in the proposition "the president is a liar". In fact, Peirce mostly discusses this kind of signs in his writings on various kinds of indeterminacy. The central question here concerns the reference of the proposition, or its *objects*. Robert Lane (1997; 1998) has therefore dubbed this kind of referential indeterminacy "object-indeterminacy".

Still, Peirce maintains that not only the subject of a proposition may be permeated by indeterminacy; the predicate may be similarly affected (EP 2:394 [c. 1906]; cf. Lane, 1997, p. 692). In part, this is a reflection of Peirce's view that the limit between subject and predicate can be drawn in different ways. The scope of indeterminacy will thus include both indeterminacy of the subject (or breadth) and indeterminacy of the predicate (or depth). Alternatively, one could perhaps say that indeterminacy is something that affects the *information* of a proposition as a whole, "information" being here understood as the propositional synthesis of subject(s) and predicate.

In the majority of his writings, Peirce distinguishes between two principal forms of indeterminacy, namely *vagueness* and *generality*.[69] In an attempt at a "scientific" definition, he suggests that "anything is *general* in so far as the principle of excluded

middle does not apply to it and is *vague* in so far as the principle of contradiction does not apply to it" (EP 2:351 [1905]; cf. SS 81 [1908]). There is an ongoing discussion concerning how Peirce actually understood these basic logical principles (see, e.g., Brock, 1969; Lane, 1997; 1998; 1999; Williamson, 1994), but we need not go into the details of this somewhat intricate matter here. Here, it is sufficient to follow Lane (1997; 1998; 1999) and note that Peirce does not say that these principles are *false* of the indeterminate object or sign, but rather that they do not *apply* to such cases.

However, we should observe that this attempt to construct an adequate account of indeterminacy is related to Peirce's theory of the quantifiers; Peirce associates vagueness with existential quantification and generality with universal quantification.[70] In other words, an existential statement, such as "some man is a president", involves indefiniteness; the principle of contradiction does not apply in such a case. A distributively[71] universal statement, such as "any man is mortal", involves generality; in this kind of proposition, the principle of excluded middle does not fully apply.

These claims may seem peculiar, if not positively erroneous. Does Peirce *really* mean to say that the proposition "man is mortal" may be neither true nor false, and that the proposition "some man is a president" is both true and false? As Lane (1997; 1998) has emphasised, the viability of Peirce's position depends on a non-standard employment of the principle of contradiction and the principle of excluded middle. According to Lane, Peirce's use of these logical principles involves *internal* rather than *external* negation. That is, the law of non-contradiction is interpreted as "any instance of 'S is P and S is not P' is false" and not as "any instance of 'S is P and it is not the case that S is P' is false"; and the law of excluded middle is interpreted as "any instance of 'S is P or S is not P' is true" and not as "any instance of 'either S is P or it is not the case that S is P' is true" (Lane, 1998, p. 32). Accepting this, it is possible to see how Peirce can claim that the principle of excluded middle does not apply to such a proposition as "any S is P", while the principle of contradiction purportedly does not apply to the proposition "some S is P". Peirce's principle of excluded middle is a

thesis about *individual* (*non-general*) subjects; more specifically, it gives us a necessary condition of individuality, expressed in the material mode as "if S is an individual, then, for any property P, either S is P or S is not-P" (Lane, 1998, p. 36). In a similar fashion, Peirce's principle of contradiction can be construed as a thesis about *definite* (*non-vague*) subjects; it gives us a necessary condition of definiteness, expressed in the material mode as "if S is definite, then for any property P, S is not both P and not-P" (Lane, 1998, p. 38). This does *not* constitute an invalidation of the logical principles; rather, the Peircean position entails that they are strictly speaking inapplicable to propositions whose identities have not been suitably determined (EP 2:351 [1905]). That is, the claim is not that general propositions are neither true nor false; nor is Peirce committed to holding that a vague proposition is both true and false (Lane, 1998, p. 33). All that his "scientific" definition necessitates is the acknowledgement that propositions, whose identities remain undetermined in certain respects, fall outside of the applicability range of the principles.

This point of view is relatively easily accepted in the case of existential quantification; in "some man is a president", "some man" is indefinite, leaving it to the utterer to specify to what man he or she referred. The indeterminacy could be alleviated by replacing "some man" with "George W. Bush", which is sufficient for most purposes, albeit it does not guarantee full communicative determination of the proposition (see the discussion of objective and communicative determination below). In other words, Peirce does not say that the principle of contradiction is false of "some man"; rather, he contends that the principle applies to propositions of the type "*that* man is a president", where the indexical sign "that" is taken to perform its function adequately, and point out a certain man rather than any other in a particular universe of discourse (cf. MS 641:24[2/3]-24[3/4] [1909]). However, does not the principle of excluded middle apply to a general statement such as "all men are mortal"? Peirce would not need to deny this, if "all men" is understood as a collective individual; but if the subject is taken to mean "any man (you choose)", then the statement leaves a certain indeterminacy of the generality type. However, why would

this leeway affect the *applicability* of the principle of excluded middle to the *proposition*? It would appear that Peirce is committed to holding that the interpretation (or, more adequately, interpretant) of such a general proposition is an *intrinsic* logical feature of it. Thus, before the proposition is placed in a proper communicative context, it will be object-indeterminate. On the other hand, this would render the applicability of the logical principles dependent on communicative – or, more broadly, semiotic – purposes. Admittedly, this conclusion seems to clash with Peirce's avowed anti-psychologism; but we must beware of taking "communicative" and "purpose" *too* concretely in this case; rather, we can interpret this as an affirmation of the dialogical dynamics of semiotic understanding. True, such a reconstruction may be criticised for being nebulous, but as the following discussion will show, there are good reasons to hold that Peirce conceived of the matter roughly in this way, and we will see that the indefiniteness and generality of an assertion does not necessarily render it invalid in the eyes of Peircean logic. In any case, we may follow Lane's reading and hold that the logical principles can only be false of propositions to which they apply; in this way, the potentially absurd consequences of Peirce's "scientific" definition are avoided.[72]

The quantification-theoretical turn in Peirce's account has led some scholars to conclude that his "logic of vagueness" is just a peculiar conceptualisation of quantification theory, rather than a *bona fide* precursor of the contemporary discussions of vagueness and fuzziness (see, e.g., Haack, 1996, p. 109). There is some truth in this; in particular, it would appear that Peirce does not mean by "vagueness" what is nowadays known as "fuzziness", or the property of having cases of indeterminate application (Lane, 1999, p. 287). Yet, as Risto Hilpinen (1983, p. 269) has pointed out, the fact that Peirce extends indeterminacy to the predicate means that his account may be of relevance to the contemporary discussion of vagueness, which typically focuses on indeterminate properties and such paradoxes as the well-known *sorites*.[73]

The most common criticism of Peirce's logic of vagueness – or logic of indeterminacy, as it would be more accurately called – is that it is too broad; it does not properly distinguish between *vague-*

ness as fuzziness and *vagueness as lack of specification* (cf. Short, 1998, pp. 296-297). For instance, Williamson (1994, p. 52) argues that the kind of indeterminacy involved in the proposition "the number of bald men is even" is significantly different from the kind involved in the statement "some woman wrote Middlemarch", and that there is little to be gained by assimilating the two cases. Only the former is properly speaking vague because of the blurred boundaries of its predicate; in the latter instance, the subject is merely unspecified. The methods of rendering these statements more definite differ markedly. In the second instance, the process typically involves replacing "some woman" with an appropriate indexical sign; it is quite natural to concede that one such sign should render the statement sufficiently determinate. However, in the case of the indefinite predicate the situation is different; as Williamson (1994) notes, "if rational inquiry falsifies a determination of 'The number of bald men is even' with one stipulated cut-off point for 'bald', there is no point in testing it again with another; one stipulation is enough" (p. 52).

Williamson's criticism is partly justified, but we should observe that Peirce does in fact make some finer distinctions within indeterminacy and indefiniteness, albeit on fragmentary variant pages of "The Basis of Pragmaticism":[74]

> The first mode of indeterminacy that shall be noticed is *indefiniteness*, which consists in the sign's leaving it doubtful just what its intended interpretation was, not between two or more separate interpretations, which would be *ambiguity*, but would not be *indefiniteness*, in the acceptation in which this term will here be taken, but as to a great multitude or even a continuum of possible interpretations, no two of which differ without the doubt extending to intermediate interpretations, especially, such uncertainties as can be formulated as questions of more or less, if indeed this cannot be done in all cases. The old question of the "sorites", How many grains of sand are required to make a "heap", or "whole lot", is an instance in point. If a term should be needed to include both ambiguity and indefiniteness, and nothing else, the words "equivocation" or, better, "equivocality", and "equivocal" may be employed.[75] We may use the term *indefiniteness in depth*, or *vagueness*, to denote any indefiniteness which primarily affects the essential depth of a sign, that is, the predicates or other consequences

> which its affirmation may by logical necessity carry with it, and which will, at least usually, thereby affect its logical breadth, or the total of subjects of which it can be affirmed in a given state of information. We may use the term *indefiniteness in breadth* to denote any indefiniteness which affects the logical breadth of a sign otherwise than by affecting its depth. Such, for example is the effect upon a common noun in the singular number of the selectives "a" and "some" (meaning some *one* that there is or would be, or is or would be available). These two seem to be the only kinds of indefiniteness, although there are kinds of *ambiguity*. Thus, the sentence "You will tell the truth" may be intended for an assertion, for a command, for an inquiry, for a biting sarcasm, or what not, without any uncertainty as to its breadth or depth. (MS $283{:}137_{vd}$-140_{vd} [c. 1906])

We see that Peirce actually distinguishes *three* principal kinds of indeterminacy: *ambiguity*, *indefiniteness*, and *generality*. Furthermore, he identifies two types of indefiniteness: *indefiniteness in depth*, or vagueness, and *indefiniteness in breadth*, for which he proposes the name "indesignance".[76] Here, at least, Peirce seems to be putting forward the kind of narrower conception of vagueness Williamson requires. While indefiniteness in breadth is equivalent to the quantificational indeterminacy described above, indefiniteness in depth corresponds, at least roughly, to boundary vagueness. The two kinds of indefiniteness are alike in affecting the breadth of signs, but vagueness is distinguished from indefiniteness in breadth by the fact that it primarily concerns depth. For the operation of removing indefiniteness in depth, Peirce proposes the name "explication", and for the removal of indefiniteness in breadth "designation".

The relations between the different kinds of indeterminacy can be presented diagrammatically, as in the figure below.

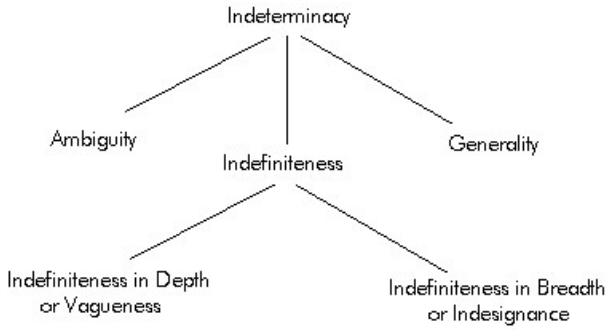


***Figure 11*. The Finer Distinctions of Indeterminacy.**

"Vagueness" may be reserved for indefiniteness in depth; this would at least accord better with contemporary usage and with Peirce's dictionary definition. However, of greater interest here is the rationale behind his distinction between indefiniteness and generality. Namely, it may be that the most valuable insight of Peirce's logic of vagueness is not to be located in his more "scientific" analyses, and their concern with the application of logical principles, but rather in Peirce's communicative approach to semiotic determination.[77]

Peirce does indeed make something of a "pragmatic" turn, as he chooses to characterise indefiniteness and generality in terms of two familiar communicative agents: the *utterer*, who puts forth the sign, and the *interpreter*, who tries to understand the communicated proposition. The main conceptual components involved in the communicative conception of indeterminacy are nicely summed up in the following excerpt from one of Peirce's unpublished manuscripts:

> If a sign is apt to represent many things, the option as to what single thing it shall be taken to represent may be reserved by the utterer of it, to whom it naturally belongs; in which case it may be said to be used *vaguely*, or *not definitely*. The utterer may, however, transfer this option to the interpreter; in which case the sign may be said to be used *generally*, or *not individually*. Obviously, the option cannot, in the same

> respect, at once lie with both parties. Hence, a sign cannot be at once vague and general in the same respect. It may, however, be both definite and individual; and in that case may be said to be used *singularly*. (MS 9:2-3 [c. 1903?])

Thus, an indefinite [78] sign confers the right of further determination on the utterer. Peirce often calls this "right" of determination *latitude of choice* or *latitude of interpretation* (see, e.g., MS 151:2). The latitude that is left to the utterer in the indefinite instance is the choice of his or her own meaning,[79] the applicability of which he or she may defend in various ways (MS 10:1 [c. 1903?]). In other words, an indefinite statement leaves the possibility of rendering the assertion more precise by producing additional signs to the utterer, or, as Peirce says, a "sign that is objectively indeterminate in any respect is objectively *vague* in so far as it reserves further determination to be made in some other conceivable sign, or at least does not appoint the interpreter as its deputy in this office" (EP 2:351 [1905]). An example of such an indefinite utterance is "a person I could name is a liar"; it suggests that the utterer knows the person in question and that he or she could specify the identity of this individual (with the aid of additional signs). A sign that is not indefinite is said to be *definite* or *precise* (EP 2:351 [1905]).

The general (or *comprehensive*) sign, on the other hand, leaves the privilege of further determination to the interpreter; or, as Peirce says, a "sign is objectively general, in so far as, leaving its effective interpretation indeterminate, it surrenders to the interpreter the right of completing the determination for himself" (CP 5.505 [c.1905]). In other words, the general sign extends a certain latitude of interpretation to the interpreter of the proposition (MS 151:2). An example of a general utterance is "human beings are liars"; it suggests that the interpreter is at liberty to choose any human being, and apply the predicate "is a liar" to that person. Peirce calls a sign that is not general an *individual* sign.

Indefiniteness and generality, although both modes of indeterminacy, are in a sense antithetical; if a proposition is in any respect indefinite, it cannot be in the same respect and at the same

time general, and *vice versa*. If the right to determine the sign belongs to the utterer, the interpreter is thereby denied that liberty (MS 530:16$_v$ [c. 1903]). However, although a sign cannot be simultaneously both indefinite and general in the manner described, it can be both definite and individual; in that case it is perfectly determinate, or, as Peirce usually says, *singular*. A singular sign leaves no latitude of interpretation to the parties involved.

	Indeterminate	**Determinate**
Utterer	Indefinite	Definite
Interpreter	General	Individual

***Table 4*. The Communicative Field of Determinacy and Indeterminacy.**

Consequently, the propositional field Peirce is discussing here is divided into the mutually exclusive compartments of the indefinite, the general, and the singular. This can perhaps be characterised in terms of the Peircean categories; indefiniteness is firstness, generality thirdness, and singularity secondness (cf. Zeman, 1988, p. 48). The exclusivity does not entail, however, that a sign *as such* could be pinned down as being either indefinite or general. The kind of indeterminacy involved is dependent on the discursive situation. In one of Peirce's examples, the utterer *A* says "a man is a sinner" to the interpreter *B*, to which *B* replies with the question "what man?" (MS 151:2). If the utterer says "any man you like", the sign "man" is general; but if the utterer avoids the question by answering "I prefer not to name the man", the sign "man" is indefinite.

So far, we have roughly outlined the conceptual frame within which Peirce principally discusses indeterminacy. The field in question is structured by the conceptions of indefiniteness, generality, and singularity; and it is typically viewed through the lens provided by the analysis of propositions and quantification. Still, as has also become clear, Peirce frequently approaches these questions from a somewhat unusual perspective; he explicates or illustrates his abstract conceptions with the help of the dynamics of dialogical interaction. This discussion of indeterminacy tends to focus on asserted propositions. Now, the proposition is just one type of sign in Peirce's semeiotic; it is concisely defined as a sign that separately indicates its object (CP 2.357 [1902]). In his most developed published account of indeterminacy (located in the 1905 article "Issues of Pragmaticism"), Peirce is quite satisfied with limiting his analysis to propositions, and proposes the "scientific" definitions of vagueness and generality mentioned earlier – that is, the definitions of vagueness and generality in terms of the principles of contradiction and excluded middle. However, commenting on his own theory about a year later, Peirce expresses some dissatisfaction with the formal definition, and suggests that a characterisation in terms of latitude of interpretation would be more satisfactory, after all (EP 2:392 [c. 1906]). The reasons he gives for this shift in position are worth noting.

Peirce states that the latitudinal definition has the advantage of not restricting determination to assertive propositions; it is applicable to anything capable of indeterminacy, such as commands and purposes. Although Peirce does not explicitly say so, this can be taken as an indication that he did not mean to restrict the phenomena of indeterminacy to propositions in a strict sense. This conclusion finds corroboration in several passages, in which Peirce speaks of indeterminate *signs*, rather than just of propositions (see, e.g., MS 515:20; MS 530:15$_v$ [c. 1903]). It may be argued, of course, that Peirce actually means propositional signs; but given that the signs involved in the proposition (its icons, indices, and symbols) may in some cases be considered vague or general, it is perhaps safe to state that indeterminacy is not limited to propositions in a strict sense. The fact is, of course, that any sign

that we analyse in terms of indefiniteness and generality has entered into a propositional context or web; but that does not mean that the indeterminacy of the signs would be strictly bound to their appearance in propositions. Often, the opposite is the case; the role of propositions in relation to indeterminate signs is to provide a context, within which the inherent indefiniteness of signs is in various ways reduced.

This suggests that indeterminacy cannot be explained away as mere subjective ignorance, which would be caused by the fact that people lack sufficient information or experience concerning the sign in question. It is, in fact, clear from Peirce's writings that he considers semiotic indeterminacy to be objective as well as subjective.[80] An objectively indeterminate sign is one whose object is underdetermined by the sign (EP 2:350 [1905]); in other words, it is a sign which leaves a latitude of interpretation – not because of lack of semiotic competence on the part of the people using it, but because its very nature is such that it needs to be completed or determined to a sufficient degree.

Here we encounter something of a dilemma; on the one hand, Peirce frequently defines the sign relation in such a manner that the object determines the sign, which in turn determines the interpretant (see, e.g., CP 4.531 [1906]). Thus, the interpretant is indirectly determined by the object, which according to the definition is not determined at all. On the other hand, in his discussions of indeterminacy and communicative determination, Peirce often speaks as if the agents of communication would in fact determine the identity of the object, presumably by presenting adequate interpretants. In other words, there seems to be an inconsistency in Peirce's account of semiotic determination.

This is a rather thorny problem. However, we should recall that the determination of the sign by the object is not straightforwardly causal (see sects. 4.2.2; 5.1.1). Rather, this object-to-sign determination should be seen as a constraining process, which restricts the scope of interpretation, but does not definitely pin it down. If the object were capable of *absolutely* determining the sign, there would really be no latitude of interpretation, and hence no need for interpretative activity and interpretants. On the other

hand, the requirement that a sign has an object implies that there is no such thing as a *totally* indeterminate sign – apart perhaps from pure icons, signs that are mere possibilities.

In its turn, the sign-to-object determination could be construed as the appropriate designation of the *immediate* object of the sign. This interpretation is in fact supported by Peirce's classification of signs. Namely, based on the nature of the immediate object, he divides signs into (1) *indefinite* (MS 806) or *vague* (MS 339; MS 499s) signs, (2) *singular* (MS 339; MS 806) or *designative* (MS 795) signs, and (3) *general* (MS 339; MS 806) or *distributive* signs (MS 339; MS 499s). These terms are mostly just given without further explanation, but in the Logic Notebook, Peirce states that by an indefinite sign is meant a sign, the immediate object of which is only a "possible presentiment" of a dynamical object; the rest is being held in reserve, so that there is nothing in the immediate object to prevent the predication of contradictory attributes of it (MS 339:256 [1905]). Consequently, "a certain man" may turn out to be rich or poor. A singular sign is defined as a sign, the immediate object of which holds nothing in reserve; it leaves no freedom of interpretation. In other words, the immediate object of such a sign denotes precisely the dynamical object. However, Peirce rather obscurely adds that a certain latitude in use must be allowed, or else the singular sign will have no occasion on which it can be applied. Finally, the distributive sign is characterised as a sign, the immediate object of which is represented as exchangeable for any existent within specified or understood limits.

Admittedly, these characterisations are sketchy, but they indicate a relevant connection between Peirce's theory of signs and his theory of indeterminacy that has mostly been ignored. Namely, the classification of signs into indefinite, singular, and general is dependent on the nature of the immediate object, that is, the object as it is represented in the sign. Strictly speaking, it is not the dynamical object that is specified in sign-to-object determination, but rather the immediate object.

The determination of the object is basically a process in which the references of a sign are made sufficiently clear for communicative purposes. That is, this type of determination

consists primarily in specifying the immediate object in various ways, so that it can act as a basis for semiotic interaction. In other words, in the case of communicative indeterminacy, the referential objects need to be made suitably determinate, so that the object can function as a determinant of semiosis. We could, therefore, move beyond Peirce and distinguish two modes of determination: *communicative determination*, in which signs or other means are used to decrease the indeterminacy of a communicative situation, and *objective determination*, in which the object acts as a delimiter of interpretation.[81]

Although this distinction between two kinds of determination cannot be found as such in Peirce's writings, it seems to be compatible with his semeiotic and his theory of indeterminacy. A few words of caution are in order, however. The fact that deliberate communicative determination is often needed for *efficient* objective determination should not be taken as an implication that the latter is straightforwardly caused by the former. In fact, from a Peircean point of view it would be more appropriate to say that the determinative power of the object (i.e., its potential to guide semiosis in certain directions) is what makes communicative determination possible at all. As noted, one of Peirce's central points is that communicative exchange is only possible if the object is already at least to some extent known by both utterer and interpreter; at the very minimum, *some* common ground or *commens* is required, in order for developed semiosis to be possible.[82] The basic acquaintance with the object cannot be had by mere descriptions or other purely intra-semiotic means; according to Peirce, it requires some collateral experience of the object.

Yet, this is not sufficient for the actual communicative determination of an indeterminate sign. In fact, the determination of the object is relative to the purposes involved in the communicational semiosis in question; or, to express the point differently, the object of a certain semiosis cannot be adequately identified without a purposive context or setting, which limits the scope of the sign; the sign must be understood as functioning within a certain universe of discourse.

The operation of communicative determination can be clarified with the help of another illustration, adopted from Peirce (EP 2:393 [1906]). In Peirce's example, two Englishmen meet in a railway carriage and engage in conversation. One of the men mentions Charles the Second, and the other has no problem in identifying what subject (i.e., object) is meant, as he is in possession of the required collateral experience. The immediate object, which is grasped almost automatically and without reflection, is the *English* Charles the Second. When this preliminary communicative identification is made, the object becomes an actual determinant of the ensuing conversational exchange. Yet, the success of this determination does not mean that the object of the discussion has been rendered perfectly determinate in every respect. For instance, the Englishmen have not specified what precise temporal Charles is meant; one could argue that Charles was a different man on different days (cf. the "Philip" example mentioned above). However, according to Peirce, the Englishmen have no interest in such details. What renders the determination of the subject a success, in spite of the countless specifications that could be added, is the purposive context provided by the discussion; or as Peirce puts it, "the two Englishmen have no purpose of splitting hairs in their talk; the latitude of interpretation which constitutes the indeterminacy of a sign must be understood as a latitude which might affect the achievement of a purpose" (EP 2:393 [c. 1906]). Obviously, the situation would have been different if one of the travellers would have lacked the needed collateral experience. In that case, the utterer of the sign would have been forced to try to find suitable signs, with which to specify the object meant, using the shared experience available as a starting-point. If no experience of such a nature can be found, then the undertaking would be hopeless, rather like trying "to discuss the genuineness and possession of a personality beneath the histrionic presentation of Theodore Roosevelt with a person who recently has come from Mars and never heard of Theodore before" (EP 2:498 [1909]).

Putting all this together, we may note that a sign, which in certain contexts might be highly indeterminate and almost incomprehensible, can under other circumstances function as a

singular sign, and leave no uncertainty as to its object. Considered in isolation, the sign "the president" in the proposition "the president is a liar" is a highly indefinite sign. However, collateral factors typically render the sign less indefinite, or determinate enough to be considered as decidedly identifying an object in a certain universe of discourse and relative to a certain semiotic purpose. In fact, the indeterminacy or determinacy of a sign can be meaningfully discussed only relative to such contexts.

Here, one may wonder whether this communicative approach is applicable to vagueness as well as to indesignance and generality. Would it not be more natural to say that the indefiniteness of the sign "bald" in such a proposition as "the number of bald men is even" is due to certain linguistic features of the sign rather than attributable to communicative interaction? Yes, but again we should beware of taking the references to utterer and interpreter in Peirce's account of indeterminacy *too* literally; the communicative parties can be construed as quasi-minds (cf. sect. 4.1.2). Utterance, in particular, is best understood as *quasi-utterance* – that is, not necessarily as the concrete assertion of a flesh-and-blood human being, but rather as a significative occurrence similar to that of ordinary utterance. Thus, even a perceptual judgment is a kind of utterance, which can be understood dialogically as an assertion of an earlier to a later self. Extending this idea in a different direction, we could say that the proposition "the number of bald men is even" includes the system of signs as a quasi-utterer. Admittedly, this solution is somewhat awkward; but it is perhaps rendered less peculiar by the consideration that the concept of "baldness" *is* left vague by the English language. It is of course rather contrived to contend that the language would somehow have reserved the right of specification for itself; but it is conceivable that a group of frustrated philosophers would one fine day in the future form a committee and, by some extraordinary lack of common sense or sheer neglect on the part of the rest of the English-speaking world, would be allowed to reform the language by a stipulation of the exact number of hairs to constitute the limit between "bald" and "not bald". (For the sake of the argument, we may ignore the possibility that this specification would give rise to other problems,

such as what is to constitute a hair, whether split ends count as several hairs, etc.) The important point is that it is not up to the interpreter of the proposition to decide what baldness entails; in fact, there may be good reasons (related to the nature of communication) why English is indefinite in this respect.

At any rate, it is clear that Peirce's concepts of indeterminacy and determinacy are from the very beginning defined relative to a certain universe of discourse and a certain state of information. Brock explains:

> It is important to note that Peirce's concepts of indeterminacy and determinacy were initially defined and interpreted relative to a given universe of discourse (in the sense of De Morgan) and a given state of information. This relativity is presupposed by the later pragmatic analysis of indeterminacy and determinacy. According to this analysis, a term is indeterminate if it allows a *latitude of interpretation* or *further determination* relative to the purpose(s) of a given discourse or inquiry and is determinate if it does not. Thus a term may be said to be relatively determinate or relatively indeterminate or absolutely so. A term is absolutely determinate or indeterminate if it has the requisite properties relative to all universes of discourse, all states of information, and all purposes of discourse or inquiry. (Brock, 1981, pp. 133-134)

In sum, communicative determination entails the sufficient referential specification of objects within some experiential and purposive context. If the aim of the particular semiosis in which we are involved is to communicate some piece of knowledge about some object, for example to tell a foreigner that the acting president of Finland is a woman, then it is clear that a certain amount of precision is needed. If somebody simply states "the president is a woman", without further designation, the attempted communication can be an abject failure.

However, we may then ask whether such an elimination of indeterminacy is always a laudable goal, and to what degree it can be achieved. If we consider the first question from a Peircean point of view, then we will have to answer in the negative; Peirce often claims that *generalisation* is the principal aim of our intellectual activities. In other words, certain semiotic activities – science in

particular – aim at producing, or perhaps more accurately discovering, general signs; that is, signs that are indeterminate in a special sense. The explanation for this somewhat strange conclusion is to be found in Peirce's scholastic realism; general signs are needed to represent adequately the general and real laws of the world (cf. Tiercelin, 1992). This is, in part at least, what Peirce seems to mean by his famous but cryptic statement that the "universe is perfused with signs" (EP 2:394 [c. 1906]).

Generality, then, is not to be construed as a defect in a sign, although it may be so viewed in some specific situation; overtly general signs are often useless, and generalisations can be exploited. However, is not the case of indefiniteness different? It would seem that this mode of indeterminacy is simply a semiotic imperfection, which ought to be eliminated as far as possible.

To a certain degree, this negative evaluation of the role of indefiniteness is correct; vagueness and lack of designation is often a hindrance to communication and other forms of semiosis. In one manuscript, at least, Peirce explicitly states that insofar a proposition is indefinite, the information it conveys is flawed (MS 530:14$_v$ [c. 1903]; cf. NEM 4.262). However, he also argues that the idea that indefiniteness could be completely eradicated is simply not feasible; no cognition and no sign is ever absolutely precise, not even a percept (CP 4.543 [1906]; cf. CP 5.506 [c. 1905]; CP 8.208 [c. 1905]). In part, at least, this is a consequence of the dialogical conception of semiosis; in any case, any higher sign-process is communicative, and therefore subject to similar limitations and difficulties as ordinary communicative interaction.

> No communication of one person to another can be entirely definite, i.e., non-vague. We may reasonably hope that physiologists will some day find some means of comparing the qualities of one person's feelings with those of another, so that it would not be fair to insist upon their present incomparability as an inevitable source of misunderstanding. Besides, it does not affect the intellectual purport of communications. But wherever degree or any other possibility of continuous variation subsists, absolute precision is impossible. Much else must be vague, because no man's interpretation of words is based on exactly the same experience as any other man's. Even in our most intellectual con-

> ceptions, the more we strive to be precise, the more unattainable precision seems. It should never be forgotten that our own thinking is carried on as a dialogue, and though mostly in a lesser degree, is subject to almost every imperfection of language. (CP 5.506 [c. 1905])

This passage gives some clues as to why Peirce considers indeterminacy inescapable; it is in part because there is always a possibility of continuous variation, an idea that accords with Peirce's metaphysical doctrine of *synechism*. [83] Furthermore, variations in feeling may reasonably be taken to be an inescapable source of misunderstanding. Still, the third reason for the omnipresence of indeterminacy Peirce mentions is more significant for the question under consideration here; the complete elimination of indefiniteness must always fail, because the experiential backgrounds of our semiotic habits differ. The experiences of utterer and interpreter are never *perfectly* identical. This is true even in the case of thought or internal dialogue; according to Peirce, such a semiosis involves different temporal selves, whose experiences also differ from each other, although the differences are mostly almost infinitesimal.

Does not the pervasiveness of indefiniteness lead to communicative scepticism? After all, granted that all signs are to some degree indefinite, does it not then follow that the shared identification of objects is uncertain at best? This would in fact be the consequence, if absolute precision were required of communicative semiosis. Peirce sometimes speaks in such a manner, as when he says that the object referred to must be singular, but on closer inspection it becomes clear that he must mean that the object must only be sufficiently determinate to be considered singular in view of certain purposes.[84]

Moreover, Peirce suggests that a perfectly determinate sign is not only a practical impossibility, but of no use for reasoning and semiotic development. Such a sign would be totally isolated, a Leibnitzian monad (CP 4.583 [1906]; cf. CP 4.551 [1906]); therefore, it could not connect with the wider semiotic webs, through which it could be meaningful and effective. It would be a kind of thing-in-itself.

Is indefiniteness then simply a necessary evil, of which we never can rid ourselves, but which must be combated on all fronts with improvements of our semiotic practices? Phyllis Chiasson (2001) has claimed that this is precisely the point of Peirce's logic of vagueness. This seems to be partly right; Peirce certainly advocates critical self-control in certain areas of life. However, he also suggests that vagueness may play a more positive role in semiosis; it is a kind of initial state, from which new developments may be born (cf. CP 6.348 [c. 1909]). Brock sees similar implications in the Peircean account of indefiniteness. According to Brock, we should not complain about the fact that our symbols are never completely determined, because if they were, there would be no semiotic growth and change; "vagueness is the mother of invention" (Brock, 1981, p. 136).

Furthermore, if we take a closer look on Peirce's view of the role of indefiniteness in life, we will see that indefiniteness is a key feature in the so-called common-sense beliefs. The most distinctive character of the so-called critical common-sensist lies in the insistence that those beliefs, which we cannot doubt nor criticise, are invariably indefinite (EP 2:350 [1905]; CP 5.505 [c. 1905]). According to Peirce, an attempt to wipe our set of ideas *completely* clean from such beliefs would inevitably fail, and the effort might even be damaging. As he notes, a suitable line of deliberation, aided by imagination, will always lead to the doubt of any given broad proposition, if it is defined with precision (CP 5.507 [c. 1905]). However, such an endeavour can leave a certain indefinite remainder, which survives the criticism. It is only natural, then, to ask whether this residue could not also be eliminated; but the question is reasonable only if one stands aloof from the actual situation, viewing it in a detached manner, as one might observe a painting by Monet (CP 5.508 [c.1905]). In the end, one will be forced to admit that it is not because the attempt to render the indefinite proposition precise has not been rigorous enough that the indefiniteness persists; it is because the common-sense belief is intrinsically indefinite and *valuable as such*. Peirce gives a clarifying example of such an indefinite belief: our belief in the order of nature. On a common sense level, most of us, if not all, believe that

there is at least some order in nature, although we may be incapable of specifying what exactly constitutes the order or how it is built up. In fact, if we try to define precisely what we mean by the belief, doubts are almost certainly encountered. This has been the fate of many philosophers, who have considered the question of natural order. Yet, even if such analyses cause us to doubt the precisely defined belief, the indefinite core of the common-sense belief will remain - who could genuinely believe that there is *no* order at all in nature (CP 5.508 [c. 1905])?

Peirce's point is that there are certain signs, for instance vernacular words, which cannot be rendered absolutely precise without losing something significant in the process. If a logician attempts to achieve conceptual clarity by substituting such words with definite definitions, the results are almost certain to be disappointing; the originals alone answer the principal purposes (CP 6.494 [c. 1906]). Criticism and precision have their limits; "Men who are given to defining too much inevitably run themselves into confusion in dealing with the vague concepts of common sense" (CP 6.496 [c. 1906]).

Consequently, it is clear that Peirce does not hold that we should always try to eliminate indefiniteness from our semiotic environment; on the contrary, he is highly sensitive to the fact that the quest for precision has its limits. On the other hand, this does not mean that Peirce would advocate scepticism regarding the possibilities of intelligent criticism of indefinite semiotic practices. There certainly are situations where vagueness is a defect, for instance in many ordinary acts of assertion, such as the public statements of many politicians. In addition, although Peirce holds that vagueness cannot be eliminated by definition (MS 151:3), he thinks that technical terms should be defined with as much precision as possible. The wise Peircean caveat concerns simply the intellectualistic illusion that indefiniteness is *merely* a hindrance, which could somehow be eradicated by logical analysis. According to Peirce, "vagueness […] is no more to be done away with in the world of logic than friction in mechanics" (CP 5.512 [c. 1905]). Indefiniteness appears to have double role to play in semiosis; on the one hand, it is a central feature of certain beliefs of common

sense, without which life would be practically impossible; on the other hand, it acts as a potential source of semiotic development and change. In both cases, it is vitally relevant.

Notes to Chapter 5

[1] Peirce's conception of cause and causation has recently been thoroughly investigated by Menno Hulswit (2002). See also Hookway, 1992; Pape, 1993; Santaella Braga, 1999b; Short, 1981a.

[2] The use of "process" as a characterisation of semiosis may require some explication. According to Ransdell (1992), "the term 'semiosis' refers primarily to the action of a sign in producing an interpretant of itself; but since the interpretant of a sign is itself a sign having the same sort of productive power, one can speak of semiosis processes as well" (§1). The claim that the interpretant must always be a sign will be qualified later (see sect. 5.2), but for now Ransdell's contention may be accepted; as long as there is active semiosis, there will be interpretants that are signs. In this sense, semiosis is a continuous process, rather than a detached act of interpretant production.

[3] In this characterisation, the description of final causes as general *physical* possibilities is problematic. As Hulswit (2002, pp. 93-94) himself notes, there may be mental causes as well as physical ones.

[4] See Skagestad, 1998, 1999, for discussions of Peirce's conception of virtuality.

[5] Peirce states that the less satisfactory sense of "virtual" stems from the German "virtuel", which he claims to be nearly equivalent to "möglich" (MS 620:24 [1909]). He is probably simply mixing his languages here; "virtuel" is French, and the relevant synonym is "potentiel".

[6] Here, the term "significance" will be employed in Short's sense. Peirce occasionally characterises the interpretant as "significance" (see EP 2:494 [1909]); but the word is apparently used colloquially, and not as a technical term.

[7] This view differs markedly from Morris's (1938) position, according to which "something is a sign only because it is interpreted as a sign of something by some interpreter" (p. 4).

[8] To support his criticism, Hulswit cites Short's (1981b) assertion that "Peirce's theory of signs […] exhibits the continuity of the human mind with the rest of nature" (p. 220). However, the context clearly shows that

by "nature" Short means "living nature". Still, Hulswit further observes that in "Peirce's Concept of Final Causation" Short appears to attribute teleology to *all* processes that tend toward an end state. In this case, Short (1981a) chooses to ignore an important Peircean distinction between *finious* and *teleological* processes (p. 171). However, in "What's the Use?", Short (1998b, pp. 46-51) uses this division in his argument against the view that would expand semiosis to the physical world, and against the opposite position according to which signs are inherently connected with human consciousness.

[9] This emphasis on language has given rise to a number of interpretations of Peirce as a linguistic, structuralist, or even poststructuralist philosopher. All three contentions are mistaken; instead of making a linguistic turn, Peirce's later writings show that the "semiotic turn" does not involve a methodological or epistemological bias for language as the only framework for understanding. Nor does his statement that "my language is the sum total of myself" entail the kind of dissolution of the self some structuralists and poststructuralists advocate, in spite of its anti-Cartesian flavour.

[10] In "Pragmatism", Peirce notes that there seems to be some inanimate action that involves more than pairs, contrary to the standard notions of dynamics, and mentions the elastic properties of crystals as one example (MS 318:30/66$_b$-31/67$_b$ [1907]). However, he immediately adds that his conception of the matter is still obscure. Moreover, triadic action is not *necessarily* equivalent with semiosis.

[11] Compare this with Peirce's contention that the sign is anything "that plays an essential part in the spread of intelligence" (MS 602:7-8 [late]).

[12] Peirce is clearly fascinated by the notion of reasoning machines; in fact, he was probably involved in the design of an early electrical "computer" (see Ketner, 1984). However, for Peirce the main interest of such a contraption is that it affords an opportunity to ponder the nature and delimitation of mind. While Peirce tends to expand the notion of reasoning and inference so as to encompass reasoning machines (which according to him includes mechanical devices such as steam-engines), he is reluctant to call them intelligent because of their lack of creativity and true self-control (For an informative account of Peirce's notion of reasoning machines, see Tiercelin, 1984; see also Fetzer, 1990; 2001; Skagestad, 1993; Tiercelin, 1995; Whobrey, 2001.)

[13] This claim should always be qualified by the reminder that Peirce often speaks of the whole sign relation as "representation".

[14] *Prima facie*, this may appear to conflict with the notion of significance introduced in sect. 5.1.1. However, as we noted, significance involves an interpretant, although it is not necessarily actively interpreted. This distinction will be further elucidated below.

[15] Obviously, a perfect match requires that the letters be printed in an appropriate font. However, the fact that the imagination is capable of seeing the letters to be alike in this respect in spite of their not being completely identical in shape can be taken as an indication of the creative, interpretative aspect of the interpretant.

[16] Of course, in this phase of his thought Peirce does not express the matter in terms of iconicity, indexicality, and symbolicity. The ground is monadic; we might say it is of the nature of an idea. (See, however, W 1:327-328 [1865] for an interesting early attempt to formulate the role of the ground in relation to the various components of the sign relation and the basic trichotomy of icon-index-symbol.)

[17] The manuscript in question seems to mark a change in Peirce's vocabulary; "representation" is replaced by "sign", which in the earliest semeiotic typically refers to what is later known as "index".

[18] It is worth noting, however, that the 1877-8 pragmatistic articles were based on a paper presented at the Metaphysical Club in the early 1870s.

[19] The expansion of Peirce's conception of interpretant is connected to his correspondence with Lady Welby; many of his most incisive discussions of the varying kinds of interpretants are to be found in letters addressed to her. Peirce greatly appreciated Lady Welby's *What Is Meaning?*, which he reviewed soon after its publication in 1903. In the book, Lady Welby proposes a distinction between three kinds of significant entities or effects – sense, meaning, and signification – that Peirce, with his penchant for triadic distinctions, no doubt found exciting. Although the evidence is scant, we might be bold enough to surmise that Lady Welby's trichotomy opened Peirce's eyes for the possibility of a new development in his theory of signs. Liszka (1996, p. 122) suggests that the first indications of the coming transformation can be discerned in 1902; but as the *Essential Peirce* shows, Peirce mentions Lady Welby's book in the Lowell lectures of 1903, which in turn is accompanied by the *Syllabus*, where the occurrence Liszka has in mind is to be found (see EP 2:255-256; EP 2:275).

[20] See Liszka, 1990, p. 25, and 1996, pp. 25 & 122-123, for a useful chronological summary of the different interpretants found in Peirce's writings.

[21] In contrast, the less extensive but more robust classification of ten types is based on the assumption that there is only one object and one interpretant.

[22] The dates in Peirce's Logic Notebook are very unclear; the entry in question might be from 1908. Johansen (1993a, p.166) and Liszka (1996, p. 122) give the year 1906.

[23] As Fitzgerald (1966, p. 76-77) points out, one could take this characterisation as an indication that the immediate interpretant deserves to be called an interpretant only by an extension of the term, since it is not really an effect. Fitzgerald further asserts that it is worthy of the name "interpretant" because of its role as a kind of "ground" for the interpretant. This is not altogether satisfactory; rather, it seems more appropriate to say that the immediate interpretant is the aspect of the interpretant expressed by the sign, analogously to the way the immediate object is the object as represented in the sign.

[24] Peirce explicitly points out this incongruity in "Pragmatism" (MS 318) (see EP 2:410 [1907]). However, he does so with reference to the logical rather than the final interpretant, which in its turn would support the hypothesis that he did not intend to present two trichotomies.

[25] This fact was first emphasised by George Gentry (1952).

[26] Savan (1987-8, p. 55) would accept this reconstruction of the matter.

[27] In fact, Peirce's division of the logical interpretant is a much more complex affair than the straightforward progression described here. In one fragment of "Pragmatism", Peirce states that the second logical interpretants constitute the ultimate normal and proper mental effect of the sign taken by itself – not removed from its context, but considered apart from the effects of its context and the circumstances of utterance (MS 318:46/236_b [1907]). Peirce specifies these interpretants as habits of internal or imaginary action, and claims that they are the proper meaning of conceptual signs. However, Peirce then acknowledges a third logical interpretant, which is called into being when fatigue, or some other cause, turns the activity from the internal world to that of external experience. Furthermore, he claims that these third logical interpretants are divisible by a trichotomy. The fragment ends before providing any substantial information about this division; but Peirce does indicate that the truly ultimate interpretant would involve both self-control and experimentation (MS 318:47/237_b [1907]). In other variants of the same manuscript, Peirce also distinguishes between lower and higher logical interpretants (see

Johansen, 1993a, p. 164, for an account of this take on the logical interpretant).

[28] In a fragmentary manuscript Peirce outlines a division of the interpretant that accords with the form of Zeman's reconstruction, but which differs from the latter in dividing a set of interpretants roughly equivalent to the immediate-dynamical-final trichotomy: "It is very easy to distinguish the interpretant as actually acted upon [*the dynamical interpretant – MB*] from the interpretant as announced in the sign [*the immediate interpretant -MB*] or as representing the sign to be a sign [*possibly the final interpretant - MB*]; but it is not so easy sharply to distinguish these two from each other. [The] actual interpretant has to be divided into the actual interpretant in those features in which it is a determination of the field of representation & the actual interpretant in those features in which it is acted on by the sign. The representative interpretant is either the interpretant as the sign desires it to represent the sign to be related to its object, the interpretant as it actually does represent the sign to be related to the object, [or] the interpretant as it ought to represent the sign to be related to its object" (MS 145s). The import of this passage is not clear; while the dyadic division of the actual interpretant is relatively easy to grasp, as it leads to a distinction between the interpretant as acted upon and interpretant as agent, the discussion of the representative interpretant involves a problematic reference to the object. It is possible that this point of view could be developed, but as it stands, it is too obscure to be of much use. In particular, it is not at all clear that the representative interpretant would be equivalent with the final interpretant, in spite of the strong normative overtones of the third representative interpretant. At any rate, the sub-interpretants do not correspond in any obvious way to the members of the emotional-energetic-logical trichotomy.

[29] Johansen's (1993a, p. 166) position agrees with Short's treatment of these trichotomies.

[30] Short identifies other passages that supposedly back up his reading. They are not as supportive as he thinks. In particular, the claim that Peirce's classification of signs in relation to the immediate interpretant, into those that are interpretable in signs, those that are interpretable in actions, and those that are interpretable in qualities of feelings or appearances, would confirm the triadic division of the immediate interpretant is misplaced. The division in question concerns signs, *not* interpretants.

[31] There does not seem to be anything in the theory of the interpretant equivalent to the distinction between a pure icon and an iconic sign, which

explains how the simple sign may be divisible into three sub-classes (see sect. 4.2.3).

[32] This refers to the emotional-energetic-logical trichotomy presented in "Pragmatism" (MS 318). According to the latest findings, the correct year is 1907.

[33] These modalities can also be expressed as *may-be*, *is*, and *would-be*.

[34] No doubt, the action would have many other semiotic and non-semiotic causes and determinants, such as orders, thoughts about injustice, the falling of the blade, brain waves, the movements of atomic particles, etc. This does in no way change that the decapitation would be a dynamical effect of the sign in question, if the former has in any way influenced or caused the latter.

[35] Anne Freadman pointed out the importance of this review to me in correspondence. Afterwards, I discovered that Fitzgerald (1966) had also analysed the relevant passage in detail.

[36] Since we are discussing semiotic matters, it may be appropriate to point out that this logical use of "denotation" and "connotation" should not be confused with the semiological tendency to employ "denotation" as a name for "pure" first-order meaning and "connotation" as a name for culturally conditioned second-order meaning.

[37] Peirce has very little to say about how this "state of information" should be understood. One way to interpret his assertion is to hold that the term refers to the information of the human being that uses the symbol in question. However, in view of Peirce's tendency to emphasise the social character of inquiry and knowledge, it seems more plausible to hold that "state of information" refers to a state of the community of inquirers or interpreters.

[38] In this context, we can ignore the difficulties associated with resemblance and the relation of icons to their objects.

[39] Sandra B. Rosenthal (1983, p. 313) suggests that Peirce actually realised that conceptual meaning must include within itself the emotional, energetic, and logical interpretants. If this means that the emotional and energetic meanings are nothing apart from conceptual meaning, then I think Rosenthal is mistaken. However, if her contention is rather that conceptual meaning always involves emotional and energetic aspects, then it can be defended.

[40] Here, "communication" can be taken as a synonym for the production or determination of interpretants. In this significative respect, the semiotic meaning is something called forth by the sign.

[41] In a letter to James, Peirce asserts that pluralism satisfies neither his head nor his heart (CP 8.262 [1905]). However, it is not quite clear how the declaration should be taken. The statement occurs in the context of criticism of F. C. S. Schiller's variant of pragmatism ("humanism"); it is followed by the remark that pluralism is connected to such logical "doctrines" as Achilles and the tortoise. Rosenthal (1994, p. ix) sees this as an attack on nominalistic pluralism, rather than on all forms of pluralism. Indeed, in her view, Peirce is a kind of pluralist, in that he affirms the irreducibility of continuity and development.

[42] As an aside, it is of interest to note that Peirce here characterises the two articles "The Fixation of Belief" and "How to Make Our Ideas Clear" as one essay in two parts. This is evidently how they were originally conceived and how they should be read.

[43] Here, it may be appropriate to stress that the piece of music may be highly structurally complex – a symphony even – yet produce a seemingly "simple" effect. If we accept Langer's (1957) theory of presentational forms, then it is feasible to say that the emotional effect may be brought on by a certain isomorphism between the forms of the sign and the feelings as significative effects. However, here we encounter a familiar problem: what is the object of such a relation? Again, the piece of music understood as a sign is a kind of limiting case; as it functions in a relation of emotional meaning, it is a qualisign with an iconic relationship to its object and an emotional relationship to its interpretant. What makes the piece of music exceptional is that the object and the interpretant may be virtually identical as the sign functions significatively. Of course, this does not constitute any kind of comprehensive analysis of the semiotic function of music. Obviously, a large part of the appreciation of music is of a highly intellectual kind.

[44] This statement might be qualified by two rather useless speculative exceptions, namely the birth of symbolic activity and the decisive destruction of the universe.

[45] In "The Basis of Pragmaticism" (MS 283), Peirce defines a *perfect sign* as the aggregate formed by a sign and all the signs that its occurrence carries with it (EP 2:545 [c. 1906]). It is perfect in the sense that it involves the *present* existence of no sign that is not an ingredient of itself. However, Peirce adds that such a sign is never in a static condition; rather, it grows as it is acted upon by its object, which gives the sign "fresh doses of energy" (EP 2:545 [c. 1906]). According to Peirce, the only signs that are tolerably fixed are non-existent abstractions. Although Peirce does not develop this

account further, it can be reasonably reconstructed along the following lines: the perfect sign is a *system* of signs (however extensive and relevant or narrow and insignificant), and its object is experience. The meaning of the perfect sign is always partly directed toward the future; it is never simply given in a static snapshot of the structure of the system. Experience keeps the system alive through the activity of interpreters.

[46] Once again, the example of a piece of music functioning as a sign may call for certain qualifications. Given that listening to the piece gives rise to certain feelings, possibly without intellectual processing, it may be argued that no purpose needs to be involved in such a sign relation. Appeal to the intentions of the composer is of no help; perhaps the composer did not intend to cause any feeling of the kind had by the listener, or perhaps the piece was produced by a computer by random generation – or why not take a more prosaic example, and talk about the feeling brought on by the humming of an old refrigerator. Should we then say that the sound in question does not act as a sign? Perchance it does not; if there is no kind of recognition of the feeling *through* the humming, we are dealing with a dyadic effect. Admittedly, the emotional recognition of the feeling through the sound of the refrigerator is purposive only in a secondary sense; however, it can still be considered to constitute a sign relation – or perhaps an incomplete sign (see sect. 4.2.1) – by being part of a broader semiotic context. Such an instance as the sound of the refrigerator, singled out in this manner, could be said to be on the semiotic threshold.

[47] The notable exceptions include Colapietro, 1995; Habermas, 1995; Johansen 1993a; Liszka, 1996; see also Johansen, 1993b; Rescher, 1998.

[48] Peirce talks about "form" in a confusing number of different contexts. As his definition in Baldwin's *Dictionary of Philosophy and Psychology* shows, he identifies many different uses of "form" (see CP 6.360-363 [1902]); unfortunately, he does not always specify in what sense he employs the concept in his own writings. Here, only the clues given in the communicative definitions will be pursued.

[49] To be more precise, it is *habit-taking* that is a prime example of Thirdness (see, e.g., CP 1.409 [c. 1890]). As an established fact, a habit can be said to belong to the second category; however, as a living, law-like, and future-oriented conception, habit is a third.

[50] Peirce actually speaks of the firstness of thirdness, "the peculiar flavor or color of mediation", and characterises it as "mentality" (CP 1.533 [1903]). The "first of a third" introduced here could be said to operate on a lower level of generality, as it refers to a certain type of firstness (form) that is

typical for a certain manifestation of thirdness (habitual conduct) (but see Liszka 1996, p.91, for an interpretation of the communicated form in terms of "ground").

[51] In my previously published reflections on this matter, I failed to note this properly (see Bergman, 2000).

[52] The obvious counter-argument to this would be a purely analytical definition. However, Peirce states that such an explication is not an assertion, except in form, in which case no definition is truly needed (MS 16:14$_v$ [c. 1895]).

[53] Of course, *B* can misunderstand the sentence in various ways, in spite of possessing sufficient experiential background. There are presumably many men named George Bush in the world; if the reporters and cameras do not lie, there are at least two. As such, the sentence does not specify which one of the men is indicated. *A* may intend to refer to George W. Bush, acting president of the USA, and B may possess the required collateral experience of the object in question. Nonetheless, *B* may for some reason first think of the president's father.

[54] In an account of linguistic communication inspired by Peirce, Nicholas Rescher (1998) claims that the "communicative role of context is simply a principle of efficiency" (p. 10). This "economical" perspective on the function of collateral factors in communication is too rationalistic to be genuinely Peircean; rather, Peirce's point is that there can be no communication (whether this is construed as social interaction in the ordinary sense or more vaguely as higher-order semiosis) without a context that delimits the field of reference, with the possible exception of certain empty statements such as "all red cows are red" (cf. MS 805:19, cited above)

[55] Here, the earlier qualifications concerning "pure" signs should be kept in mind (see sect. 4.2.3).

[56] Saying that a proper name is a subindex is a simplification; upon first acquaintance, the proper name may act as a genuine index (see DiLeo, 1997, for a useful discussion of these various aspects of the proper name).

[57] In Peirce's example, the energetic president is Theodore Roosevelt.

[58] Frege tried to rectify the deficiency of our linguistic apparatus by introducing en explicit assertion sign, the turnstile "⊢". As Davidson (1991) wryly notes, Frege may have been operating according to a sound principle – if there is a conventional feature of language, it can be made manifest with a symbol – but "before Frege invented the assertion sign he ought to have asked himself why no such sign existed before" (p. 269).

[59] This is not to say that Davidson's "symbol" would be equivalent to Peirce's "symbol".

[60] In "Common Ground", Peirce suggests that shared knowledge entails that "each knower knows that every other familiarly knows it, and familiarly knows that every other one of the knowers has a familiar knowledge of all this" (MS 614:1 [1908]). Thus, there would be two endless series of knowing involved; however, knowing is not an action, but a habit, which may remain passive for an indefinite time. This account possesses a certain appeal, but might be faulted for insinuating that the common knowledge is something of which human beings need to be distinctly aware. Granted, Peirce's obscure remarks leave a lot of latitude of interpretation; but it might nevertheless be better to speak of the common ground as experiential to avoid the problematic associations of "knowledge".

[61] This is obviously not true. Peirce could describe the concept of kilometre by relating it to other systems of measuring length; no reference to the Pavillon de Breteuil is required. However, Peirce's basic point is sound; although we could describe the kilometre using miles, light years, or steps, at some point we need to simply display a metre (or other unit in the same system), if the person we are discoursing with has no experience of the lengths to which we try to refer.

[62] Peirce adopted the term "universe of discourse" from Augustus De Morgan, who was also a pioneer of the logic of relations. In Peirce's writings, "universe of discourse" is a technical term that occurs mostly in connection with the system of existential graphs. However, it is more broadly applicable to semeiotic as well.

[63] This stress on the secondness of a real thing in no way invalidates Peirce's contention that there are real thirds – that is, laws, habits, signs, etc. – in the world. The thirdness of a real is manifested in its being capable of govern existents.

[64] Here, the "world" should be understood broadly, that is, as encompassing anything – whether "fictive" or "real"– that requires some experiential connection, however indirect or distant. Arguably, if this line of thought is pursued to the end, we will be left with nothing but certain mathematical universes that might be excluded from this "world". I say "might", because in actually working with such mathematical domains, finite minds will no doubt employ at least some signs of experiential purport, albeit the connection of such semiotic units to experience may be very remote and wholly irrelevant for the pursuits of the mathematician.

Furthermore, there is an attenuated sense in which even the most abstract mathematics can be said to include a kind of experience in the form of resistance. Once the mathematical world is created, it will not allow of just any kind of transformations – or, more specifically, the operations will have consequences of a certain kind rather than of another.

[65] The most complete attempt to reconstruct Peirce's project is Brock's (1969) unpublished dissertation. It is not possible to examine this important study in detail here; but in general, it suffers from a somewhat restricted view of semeiotic. This is perhaps a reflection of the relative ignorance of semeiotic in Peirce studies prior to the 1970s; Brock's investigation would certainly have benefited from having a clearer sign-theoretical framework, within which to examine questions pertaining to indeterminacy. Brock's later studies (1979; 1981) are easier to approach, but contain some of the same problems. That said, Brock's inquiries remain a notable achievement in Peirce scholarship; here, I can only take up a fraction of the issues he discusses.

[66] The fragmentary nature of Peirce's theory of vagueness has caused some noticeable frustration among the commentators. Charles Hartshorne and Paul Weiss, the editors of the *Collected Papers*, replied to Peirce's confident claim with a terse footnote, which consisted of just one word: "Where?" Others have been less blunt; over the years, a number of important attempts to reconstruct and develop Peirce's logic of vagueness from various angles have been presented (e.g., Brock, 1969; 1979; 1981; Nadin, 1983; Zeman, 1988; Tiercelin 1991; 1992; Margolis, 1993; Chiasson, 2000; see also Lane 1997; 1998; 1999). These projects suggest that Peirce's claim of completeness may have been an exaggeration, but also that it is not just an empty boast; his theory of indeterminacy is both substantial and relevant for a fuller understanding of various aspects of his philosophy, including his theory of signs. However, a third approach to Peirce's bold statement ought to be noted here, albeit in passing. Namely, Mihai Nadin (1983, p. 158) has argued that Peirce did in fact work out his account of vagueness and its consequences. According to this view, Peirce's semeiotic (as a whole) *is* the completed logic of vagueness. Nadin's interpretation is based on Peirce's claim of having "done his best to work out the Stechiology (or Stoicheiology), Critic, and Methodeutic of the subject [of vagueness]" (EP 2:350 [1905]). However, Nadin's reading is questionable in view of Peirce's other writings on vagueness. It seems more appropriate to approach the logic of vagueness as an important part of Peirce's semeiotic project (cf. Brock, 1969, p. 4).

[67] This descriptive theory of proper names can be summarised as "the view that proper names are general terms denoting classes and accordingly have intensions as well as extensions" (Brock, 1997, p. 562). As Brock (1997, pp. 560-562) notes, Peirce actually presents both an indexical and a descriptive theory of proper names in his earliest writings, but the descriptive view clearly dominates until 1885. (See also DiLeo, 1997.)

[68] The trichotomy of term-proposition argument – or, more precisely, rhema-dicisign-argument – is a division of signs based on the nature of the relationship between sign and interpretant. This classification has been mostly neglected in this study – partly because it is only of minor interest for the topics discussed here, but also because Peirce's mature theory of interpretants casts some serious doubts on its semiotic status. This is not to say that the trichotomy is of little importance in Peirce's philosophy. On the contrary, he has much of interest to say about the nature of rhemas, dicisigns, and arguments.

[69] According to Zeman (1988, p. 39), this distinction appears around the year 1904 in Peirce's writings; before that, there is a tendency for generality and vagueness to flow into each other. However, the manuscripts named "On the Foundations of Mathematics" (MS 7 - MS 11), in which the distinction is definitely made, might be earlier than 1904. Robin gives their date as "c. 1903?".

[70] Peirce also indicates that the modalities of *possibility*, *actuality*, and *necessity* could be expressed in terms of the applicability of the logical principles of contradiction and excluded third (see, e.g., MS 642 [1909]; MS 678 [1910]). This suggestion will not be investigated in this study.

[71] According to Peirce, "the collectively universal, the universal expressed by 'all' and 'every', is not *ipso facto* indeterminate" (MS 283:135$_{vd}$ [c. 1906]).

[72] There is a twist to the story, which should be noted. In his final years, Peirce made certain excursions into "triadic" logic. This is another contested area of Peirce studies, into which we cannot go in detail (but see, e.g., Fisch & Turquette, 1966; Lane, 1999). It is, however, of interest to note that Peirce asserts that while the principle of excluded middle is not plainly false, there is nonetheless "in every field of thought whatsoever […] an intermediate ground between positive assertion and positive negation which is just as Real as they" (NEM 3:851 [1909]). According to Lane (1999, p. 296), Peirce introduces this "triadic" point of view to accommodate such propositions as "the boundary between an ink blot and the clean portion of

the page is black", of which the principle of excluded middle is applicable but is false.

[73] Peirce also defines the term "sorites" in the *Dictionary of Philosophy and Psychology*, but only as "a chain of syllogisms, the conclusion of each forming a premise of the next" (p. 557). James Baldwin complements the entry by giving the other acceptation, referring to the Megarian sophism of the "heap".

[74] These variant pages, on which Brock (1969; 1979; 1981) largely bases his reconstruction of Peirce's logic of vagueness, include several unfinished attempts to delineate a more detailed theory of indeterminacy. Moreover, many of the relevant pages carry the same number, which shows that Peirce was actively struggling to present an adequate account of the concepts involved. In spite of their fragmentary character, these efforts give valuable hints as to the structure of the theory Peirce had in mind.

[75] In another discarded variant page of the same manuscript, Peirce uses "equivocation" as a synonym for "ambiguity".

[76] Peirce also considers the term "particularity" for indefiniteness in breadth, a rather poor alternative.

[77] This move has also been hailed as a premonition of contemporary game-theoretical semantics (see Hilpinen, 1983; 1995; Hintikka, 1997).

[78] In most of his writings, Peirce uses "vague" as a synonym for "indefinite". Here, the term "indefinite" will be used in order to mark the difference to contemporary usage. In direct quotations from Peirce's writings, it may be helpful to read "indefinite" rather than "vague".

[79] "Meaning" is here understood in the colloquial acceptation of intended meaning, rather than in any of the technical semeiotic senses.

[80] "Subjective" and "objective" are here used in the "German" acceptation, which Peirce otherwise finds problematic.

[81] This portrayal of determination should naturally not be seen as a full account of semiotic action. Arguably, the more important aspect of semiosis, at least in the case of developed forms of communication in society, is the production of interpretants.

[82] This requirement might be construed as a kind of transcendental argument. However, Peirce does not present the question in such a manner. Furthermore, he is notably critical of this aspect of Kantian philosophy (see sect. 3.1.1). At least, it would seem that Peirce would not accept any kind of foundational role for transcendental conditions; but it is conceivable that the common ground could be reconstructed in terms of a weaker kind of transcendental argument (cf. Pihlström, 1998).

[83] One could indeed argue that Peirce's theory of indeterminacy is intimately related with his synechism (see Nadin, 1983). Generality can be interpreted as the mode of indeterminacy characteristic of continuity.

[84] In one passage (MS 530:17$_v$ [c. 1903]), Peirce states that every proposition must refer to something singular, and that indefiniteness ensues only when the utterer speaks of an object with which the interpreter is not familiar. This would limit indefiniteness to the actual interaction between utterer and interpreter; but as has been noted, a sign that is sufficiently determinate to serve certain communicative purposes is inevitably vague in countless other respects. It seems, then, that Peirce's requirement of singularity must be tempered; the subject needs to be singular only in respect to a certain discursive context and to certain purposes. The requirement of a perfectly singular reference would in effect make communication impossible; it could never properly begin, as then parties would be involved in a virtually never-ending process of referential determination. The most important function of communication, that of exchange of experience and information, does not require such precision.

6 Conclusion

The world of Peirce's theory of signs can be bewildering; it is easy to get lost in its masses of fragmentary manuscripts, peculiar concepts, and unusual ideas. At the same time, semeiotic is an undertaking of considerable appeal; although rarely recommendable for novices in philosophy, Peirce's writings reward the reader amply with numerous insights and fruitful suggestions. To modify Russell's metaphor: quite a few of the rocks spewed out by the Peircean volcano turn out to be nuggets of gold.

This study has been primarily motivated by the ambition to find new pathways into semeiotic. More specifically, I have tried to show in what sense and to what extent Peirce's theory of signs can be said to rest on communicative foundations – or, to use a slightly less contentious expression, to find what the communicative underpinnings of semeiotic may be. In pursuing this task, I have deliberately stayed close to the sources; although this study is admittedly a selective interpretation of Peirce's theory of signs, I have taken pains to ensure that all claims attributed to Peirce can be backed up with textual evidence. I have strived, to the best of my abilities, to remain true to what I feel is best reading of his often indefinite and general propositions. A part of the puzzle has been put together. I believe that it has been achieved without forcing the pieces together; but of course, some bits are almost inevitably in the wrong place. The interpretation of Peirce's signs is a highly fallible process.

At the outset, I announced that my exploration would have two central aims: the first was to demonstrate that the primary hypothesis of communicative underpinnings is plausible, and the second to show that Peirce's strong emphasis on the semiotic point of view does not entail a debilitating form of radical idealism or hermeticism. I believe that these tasks have been completed successfully. However, this does by no means imply that the work would be finished; in fact, this study is best seen as a preliminary

undertaking, providing the groundwork for future investigations. Before ending this journey into semeiotic, it may therefore be useful briefly to recollect the central findings of each chapter, consider some of the strengths and weaknesses of the positions taken, and to outline some possibilities for supplementary or new inquiries.

6.1 Results and Prospects

Looking at the progress made chapter by chapter, the most important findings of chapter 2 pertain to the elaboration of the social conception of science and the clarification of the relationship between logic and semeiotic. In addition, I think I have showed why Peirce's description of semeiotic as a science is to be preferred over the appellation "doctrine of signs", in spite of the fact that many contemporary philosophers will baulk at the idea of philosophy as scientific inquiry. Although Peirce does refer to semeiotic (and to other philosophical theories) using the term "doctrine", a proper understanding of the depth of his commitment to a social point of view in science ought to alleviate some of the most serious misgivings. Of course, there may be reasons to reject the Peircean notion that philosophy examines common sense; often, Peirce's own reflections seem rather detached from the ideas and actions of ordinary life. As we have seen, his view of theory and practice as distinct life forms serves as a qualification of the pragmatistic position, according to which science emerges naturally from an interplay between belief and doubt. Moreover, Peirce's espousal of *critical* common-sensism can be taken as a recognition of the insufficiency of mere observation and classification; philosophical semeiotic also includes a normative element.

The most important upshot of the discussion of Peirce's theory of categories was the explication of the phaneroscopic approach, and the clarification of the differences between the frameworks of his early and late philosophy. Lest this division should appear too severe, it should be conceded that there is also a continuity between these phases of thought. However, if the arguments presented in chapter 3 are valid, then it is clear that one must relate Peirce's sign-

theoretical claims to the period from which they originate. This contention receives support from the examination of presentationism and representationism that was undertaken in chapter 4. This discussion, in conjunction with the reflections on the scope of semiosis and the process of interpretation, can be seen as tolerably conclusive proof of the fact that Peirce's semeiotic does not lead to semiotic hermeticism.

As noted, I believe I have shown that the main hypothesis of the study – that it is possible to interpret Peirce's basic sign relation in communicative terms – is sufficiently supported by his writings. Moreover, I have argued that this point of view, adequately understood, does not constitute a reduction of semeiotic to a simplistic transmission model. We have also found a number of indications of how the communicative standpoint may open up Peirce's theory of signs to further inquiries and developments. Admittedly, these questions have not been pursued to their limits, which would hardly be feasible within the confines of single study. Nonetheless, I think that the approaches to the interpretant and semiotic meaning outlined in chapter 5, in combination with the emphasis on the relevance of collateral experience, indeterminacy, and communicative determination, constitute valuable steps in our attempts to appreciate the possibilities of the Peircean project.

Now, perhaps the most obvious omission in this study has been the relative neglect of Peirce's work on the classification of signs. As I have indicated, this has been a conscious choice on my part; the purpose of this inquiry has been to investigate the broader philosophical streams of semeiotic. Moreover, I think there are some excellent in-depth studies of Peirce's classification of signs (see, e.g., Liszka, 1996; Müller, 1994; Savan, 1987-8); I would not have had much to contribute to the discussions pertaining to this intricate matter. However, as a future prospect, it could be of interest to see how the communicative approach presented here would affect our perception of Peirce's complex classificatory project. At least one relatively neglected trichotomy of signs – that of indefinite, singular, and general signs – would seem to grow in relevance if the findings of chapter 5 are on the right track (see sect. 5.3.3).

It would be futile to list all of the Peircean topics I have not discussed – there are simply too many to mention – but it may be appropriate to acknowledge another major exclusion. Namely, Peirce's work in formal logic has been passed by, with only cursory mentions and summaries. This is a substantial omission, indeed, considering that Peirce saw himself primarily as a logician. On the other hand, I have investigated Peircean logic in the extended sense (cf. sect. 2.3.3). To my knowledge, no one has managed to present a comprehensive account of the broader and narrower aspects of Peircean logic – or, at least, no full-scale reconstruction of their relationships seems to have been attempted. In fact, one of the major challenges for future Peirce scholarship is to explicate this connection, and to evaluate whether Peirce's framework for logical inquiry is viable; as things stand, the theory of signs and formal logic remain two distinct if not separate concerns, both in Peirce's writings and in most of the secondary literature. However, in spite of not having examined Peirce's achievements in formal logic in any detail, I think my study could be of some small assistance in endeavours to form a comprehensive picture of his logical project. I think the most important connecting points are to be found in the way the development of Peirce's logic of relations affects his semeiotic outlook and in his work on the existential graphs – in particular the dialogical understanding of logical conceptions they entail. Thus, adopting an explicitly communicative approach to the theory of signs, we might be better equipped to pursue a rapprochement of the kind envisaged.

As my explorations have been keenly focused on Peirce's philosophy, I have obviously ignored many opportunities for comparative studies. This, too, was a deliberate choice, in part for the reason that Peirce's writings provide us with more than enough to contemplate, but also because I felt that it was important to try to pursue semeiotic on its own terms. True, not all comparisons would have been distractions; but on balance, doing justice to several radically different perspectives was not feasible within this study. On the other hand, the communicative reading of semeiotic should open up new perspectives for comparative analyses. For instance, there are interesting, but little explored, similarities

between the Peircean point of view and the naturalistic philosophy of the later pragmatist George H. Mead (but see Kilpinen, 2000, and Wiley, 1994, for important steps toward such a comparison). It would also be of interest to consider Royce's (1913/1968; 1998) Peirce-inspired theory of interpretational communities in light of our altered understanding of semeiotic. Although Peirce's theory of signs has been compared to the approaches of speech-act theorists on several occasions, the fundamental communicative character of semeiotic that has been uncovered here should open up new possibilities for analysis. Other philosophers, who could productively be contrasted to Peirce on these grounds, include Davidson, Goodman, and Quine; and naturally, there is the open question of how the interpretation put forth in this study would relate to the labours of semioticians of various schools.

However, perhaps more important than such possible comparative expansions are the potentials for further developing the Peircean theory of signs based on the communicative approach. I would like to suggest that it is the most promising path for future work in semeiotic, both for our understanding of the theory as left by Peirce and for original work that builds on the Peircean framework. I have several reasons for holding this opinion, but let me just indicate two that I find especially weighty. Firstly, I think that the grasp of the depth of the communicative nature of semeiotic will allow us to see the true philosophical purport of Peirce's technical discussions of signs (cf. Ransdell, 1976, p. 101). This will also help us to move forward in the direction of an explication of the dynamics of sign action; as things stand, studies of semeiotic often pay lip service to the alleged primacy of semiosis, while the principal focus remains on the admittedly important questions of sign classification. Secondly, placing Peirce's abstract theories in the kind of communicative context that has been suggested in this study can make them more approachable for other lines of inquiry than philosophy and theoretical semiotics. Admittedly, there is much work to be done before this can be fully realised; however, I hope that my attempts to clear up certain paths in the thickets of semeiotic will one day contribute in some way to the opening up of new fields of signification.

6.2 The Potential of Rhetoric

To conclude our discussion, we may reflect briefly upon a question that has not been properly addressed in this study. Namely, given Peirce's elaborate scheme of science, where do the issues that have been considered belong? Of course, the simple answer is that their proper place is phaneroscopy (the categories) and semeiotic (the rest). However, in view of the fact that Peirce distinguishes three modes of logical inquiry – grammar, critic, and rhetoric – some specifications might be in order.

In some respects, the drift of this study could be described as rhetorical in Peirce's sense, even if many – if not most – of the questions we have examined are clearly parts of grammar; at least, problems pertaining to the definition of the signs are primarily grammatical. On the other hand, the communicative derivation of the components of the signs would seem to blur the lines of the first and third semeiotic discipline. If this is indeed happening, I do not consider it a cause for worry; in my opinion, semeiotic could benefit from a less rigid conception of its domains. This is not to say that there would not be a meaningful distinction to be upheld between grammar and rhetoric; rather, I merely hold that grammar should not be perceived as wholly separated from rhetoric. Moreover, I think that there is untapped potential in the third semeiotic discipline, the "liveliest branch" of logic. In particular, I believe that it could provide the natural setting for an elaborated Peircean philosophy of communication.

Of course, here it should be immediately added that it is difficult to say exactly what this discipline of rhetoric is supposed to contain (see sect. 2.3.4). In chapters 2 and 5, I indicated some grounds for holding that the most natural place for philosophical studies of communication in Peirce's system would be within rhetoric. Yet, there are reasons for doubting this placement. Semeiotic is supposedly a strictly philosophical mode of inquiry, while the investigation of communication seems to entail empirical investigations of social facts. Thus, it would involve psychological and sociological considerations – the kind of elements that Peirce banned from his semeiotic logic. Indeed, Peirce specifically states

that rhetoric is not a matter of psychology (CP 4.116 [1893]). However, keeping in mind Peirce's conception of philosophy as a heuristic science based on common experience, there would still seem to be room for a philosophical study of communication, as long as we accept that there are communicative phenomena among our persistent everyday experiences; and in my opinion, there certainly are. In fact, it may be one of semeiotic's most important functions to analyse such communicative and social aspects of our seemingly private experiences – traits which are so omnipresent that they would otherwise escape our attention. Furthermore, if the arguments presented earlier in this study were not entirely erroneous, it would seem only natural to develop rhetoric in the communicative direction, and to allot it a more prominent role in the sign-theoretical enterprise.

I think it would be wise to follow Peirce in keeping the study of rhetoric more flexible than the other branches of semeiotic. In fact, Peirce even indicates that it is acceptable to consider some psychological facts in rhetoric (CP 2.107 [1902]); and we could perhaps broaden its scope further by allowing a limited number of sociological insights to enter the proceedings. Of course, such an augmentation must be pursued with great care, if we want to stay true to Peirce's spirit; semeiotic rhetoric is, after all, a theoretical mode of inquiry, and not a tool for social engineering or coercion – although it could perhaps be so used. Indeed, at this point one advantage of placing methodeutic at the heart of rhetoric becomes evident; it highlights the distinctively engaged character of rhetoric. Since scientific inquiry is directed toward an ideal social goal of truth and reasonableness, the rhetoric of science cannot be absolutely value neutral. Its objects of study are inherently purposive, as are those of the rhetoric of art and the rhetoric of persuasion. Moreover, Peirce claims that methodeutic – which is concerned with the methods that ought to be pursued in investigation, exposition, and application of truth (EP 2:260 [1903]; cf. CP 4.240 [1902]) – should be based on a more general doctrine of the nature of teleological action (CP 2.108 [1902]). Although Peirce may here refer to his general logic of evolution, this statement suggests a sense in which the study of communicative action can

contribute to methodeutic; for certainly, it is relevant for a sophisticated methodology to be aware of various kinds of teleological or quasi-teleological modes of communication, of destructive as well as productive forms, so that it may be possible to identify the types of communication best suited for the ideal purposes. Furthermore, it would be wise to take human limitations and frailties into consideration. After all, inquiry is a social mode of conduct.

In sum, the philosophical study of communication ought to be an integral part of rhetoric. On the one hand, it is of relevance for methodeutic, understood as the rhetoric of science; but on the other hand, it may also entail a broadening of the scope of semeiotic to involve other modes of rhetorical behaviour. Peirce undeniably characterises his theory of signs as a scientific undertaking, but that does not mean that semeiotic would study nothing but science. Hence, I would like to advocate a broad conception of rhetoric, in which general studies of communicative phenomena can be pursued. This would not only serve to assemble Peirce's fragmentary reflections on communication, but might also reveal untapped critical potential in his semeiotic. Namely, his conception of communication, suitably complemented, could find new applications in critical examinations of our communicative practices. Of course, that would mean moving beyond semeiotic rhetoric into the arena of social criticism; but rhetoric might provide the theoretical basis for such an undertaking. In particular, semeiotic analysis could serve to show that certain communicative habits that we take for granted – that have become transparent for us – are in fact complex modes of sign action that can be criticised and perhaps even intelligently reformed. However, such amelioration ought to be carefully considered and gradual; there is simply no feasible way of performing a total revolution of our established practices. Neither should we take communicative transparency to be an evil that must be fought to the bitter end; if our modes of conduct would not be highly habitualised, they would require too much effort to be able to function properly. Our communicative habits, no matter how they come into being, display a tendency toward transparency. Hence, it is imperative that we

recognise the limited but real possibility of self-control in view of such social ideals as reasonableness, truth, and communal understanding. Toward this end, semeiotic may even serve us in our lives.

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