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Is Phaneroscopy as a Pre-Semiotic Science Possible?

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ABSTRACT

Peirce thought that, after mathematics, the most fundamental of all sciences was phenomenology, or phaneroscopy as he dubbed it to escape from Hegel. But phaneroscopy as a research activity isn't practiced anywhere and hasn't attracted any wide following; its results are neither taught nor disseminated; and no scientist has begged for its conclusions with any urgency. Peirce scholars are divided about what that science is supposed to be and to do, and about how exactly it relates to semiotics. Some have even questioned its scientificity. The fact that it hasn't become a major field of research raises the question of whether there is any actual need for it, whatever it is, and of whether it has any future, assuming it ever had a past. This paper attempts to address some of these questions candidly. It tries to determine what it is that Peirce held phaneroscopy to be, what type of discourse it is bound to produce, and whether its activity can be said to be scientific by Peirce's own standards. It examines its place between mathematics and the normative sciences, especially semiotics, and takes stock of both the type and the method of analysis Peirce associated with it. Also studied are the peculiar qualities required from anyone who wants to become a phaneroscopist, and the reason why Peirce thought that everyone was capable of doing original work in it. The connection between phaneroscopy and the existential graphs is also addressed.

Let us begin by taking stock of a rough paradox.[1] Peirce's classification of the sciences stipulates that mathematics is the most fundamental of all sciences for the reason that it is the only one that is completely groundless, unsupported by any other science, and independent of worldly experience. That mathematics has become the queen of all sciences, no one nowadays will dispute, and Peirce assigns it the first place in his classification. But the moment inquiry turns the barest of attention to the conditions that give experience its earthly flavor, the moment inquiry acquires a vested interest in a realm of being purely detached mathematicians are not concerned with, that of positive experience. The first science to be preoccupied with such positiveness is philosophy, which occupies the second place in Peirce's classification. Among its sub-branches, we would expect that the first one would be an inquiry into the most elementary conditions that allow experience to emerge and appear the way it does. Peirce indeed conceived of such a science and called it phenomenology for a brief while before giving it the name, in late 1904, of *phaneroscopy*. Since it is the first of the philosophical sciences, phaneroscopy in the

[1] It is with great pleasure that I want to express my gratitude to Giovanni Maddalena for arranging the conference on "Sign and Reality" in Turin and inviting me to deliver this paper which without his patient prodding would not have been written. In the active world of Italian Peirce scholarship, Maddalena is a precious treasure.

classification comes just after mathematics. It precedes the three normative sciences and metaphysics, and even if one were not familiar with what Peirce understood by esthetics, ethics, and logic, one would at least acknowledge that these branches of philosophy have a long and quite reputable history. On that token one might expect that a science more fundamental than those would also be one of paramount importance, endowed with a long history, and with thousands of practitioners worldwide, with entire academic departments devoted to its pursuit, with dozens of journals devoted to its exposition—a science whose rudiments would be taught if not already in grade school, at least in all secondary schools. Phaneroscopy is that science, according to Peirce, and yet one may ask where is the evidence of its paramount importance. I haven't encountered professional Peircean phaneroscopists anywhere. And I haven't met any specialist of the other sub-branches of philosophy, let alone any psychologist or physicist, etc., clamoring impatiently for the latest results of phaneroscopy. It is thus not as though the scientific community at large felt a great need for it. And yet, theoretically speaking, all sciences except mathematics depend directly or indirectly on the findings of phaneroscopy to some extent. Why then is it that no one ever asks whether there is a phaneroscopist in the room or on board?

The considerations I am presenting in this paper build on a study I began many years ago of Peirce's conception of the phaneron, and of the connection between phaneron and representation or semiosis, specifically of how the continuum of representation actually emerges out of the continuum of the phaneron.[2] My present purpose is to explore whether phaneroscopy can be taken seriously as the science of the phaneron. Peirce gave many definitions of the phaneron, all of which show that he clearly wanted to distinguish it from the notion of representation. The most basic definition of the phaneron is undoubtedly that which Peirce derived from the Greek etymology of the word, which means "manifest." Thus Peirce wanted the word *phaneron* to "denote whatever is throughout its entirety open to assured observation" (R 337: 4–5 & 7, 1904). The manifest is fully apparent, plainly exhibited, evident, and it is so because within the phan-

[2] Much of that research was condensed into the paper "Quand l'apparence (se) fait signe: la genèse de la représentation chez Peirce," in *RS/SI* 20 (2000): 95–144.

eron subject and object are utterly conflated: there is no mind seeing, nor any object being seen; all there is, is *seeming*, period. The kind of observation that contributes to the evidence or manifestness of the phaneron is one Peirce called "direct awareness" (as opposed to indirect consciousness). To be directly aware of the phaneron is to be "aware not merely before a Sign of it, or Substitute for it, or any sort of proxy, vicar, attorney, succedaneum, dummy, or representative of it," but to be "put *facie ad faciem* before the very Phaneron itself" (R 645: 3 & 5, 1909). Appearance and mind are thus conflated, meaning that there is nothing to mediate between the two—there is no sign activity, strictly speaking. Direct awareness is a face-to-face encounter, not a semiotic one.

Given this kind of definition, there are several reasons that tend to challenge the possibility of a science of the phaneron. Quite a number of Peirce specialists have raised questions about this possibility, as well as about the nature and purpose of phaneroscopy. The only point all scholars seem to agree upon is that phaneroscopy appears to be another name for the theory of the categories, and barely anything more. Beyond that, there are deep disagreements either about the usefulness and necessity of phaneroscopy as a science, or about its relation to other sciences in Peirce's classification, particularly mathematics and semeiotic. To simply mention a few examples without going into details, let me first point out that in his formidable book on *The Development of Peirce's Philosophy,* Murray Murphey found very little to say about phaneroscopy, since he devoted no more than three pages to this topic (pp. 367–369), and his assessment was quite negative: "It is impossible to regard Peirce's phenomenological treatment of the categories as anything more than a quite unsuccessful sleight of hand."[3] Others, such as Nathan Houser,[4] see no sleight of hand in Peirce's categoriology, and insist on the sufficiency of the mathematical

[3]Murphey 1961: 368. The sleight of hand, or magic trick, according to Murphey, consisted in placing phenomenology between mathematics and the normative sciences, a move that prevented the categories from being grounded logically, since logic depends on the categorial theory. Murphey concluded that Peirce's argument was circular, and that the theory of the categories was purely contingent.

[4]This quotation is from the original English version of a paper published in French, "La structure formelle de l'expérience selon Peirce" (Houser 1989: 107–108).

grounding of the categories. For Houser, there are clearly "respects in which mathematics inform phenomenology, just as there are ways in which phenomenology confirms and extends mathematical claims."[5] From his standpoint, it is a chief advantage of Peirce's phenomenology to be at the juncture of the ideal world of mathematics and the material world of experience.

Be that as it may, the real test of a theory should come out from its practice. *C'est là que le bât blesse,* or so would it seem for most scholars who feel uneasy about Peirce's phenomenology. Christopher Hookway in his (also formidable) book on *Peirce* has expressed his dissatisfaction in clear terms:

> There is a difficulty about coming to grips with Peirce's phenomenological writings which reflects a fundamental feature of the discipline itself. He stresses that phenomenology does not issue in a body of accepted propositions; there is not a community of phenomenologists adding to the stock of shared knowledge, publishing reasoned conclusions, and so on. Each individual must be his own phenomenologist . . . In line with this, Peirce's own discussions are extremely allusive. . . . In the end, the reader must decide for himself whether these hints enable him successfully to carry out a phenomenological inquiry and agree with Peirce's categorial doctrine.[6]

The difficulty is that one of the conditions that make a science possible is the equal availability of its object to a body of researchers; otherwise the comparison of different results could not be done validly, and no conclusion could be drawn claiming universality. Now, the phaneron, one might think, is purely individual inasmuch as the mind is individual.[7] No one can observe the phaneron I live but I, and so everyone must be his own phenomenologist. But in this case, there can be no certainty as to the results of one's analysis of the phaneron. Hookway's objection is that the categorial theory seems to rest on questionable inductions that at best may provide testi-

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[5]Houser 1989: 100, 108, 110.

[6]Hookway 1985: 104–105.

[7]The phaneron is a continuum permeated with generality, and its individuality stems only from its being the conflation of a particular mind with the objective world. Each individual mind lives *one* phaneron, and there are as many phanera as there are individual minds (be they human or otherwise: animals, for instance, are also "phaneral beings," even though their capacity to pass from self-presentation to other-representation appears more limited than ours).

mony in favor of the pervasiveness of the categories, but not of their universality. Hence, for Hookway too, Peirce's phaneroscopy is too contingent.

Another challenging opinion is that of Joseph Ransdell. It is important to note that Ransdell sees no difference between the two concepts of appearance and representation, since he holds that whatever is manifest is so through signs. He sees the phaneron as part of the sign process, specifically as the immediate object of the semiotic relation. I have opposed several *caveats* to this view and shall not repeat them here, but will only remark that such an obliteration of the specificity of the phaneron must have direct consequences on our understanding of what phaneroscopy is about. Indeed Ransdell claims:

> [T]he essence of [Peirce's phenomenology proper] is found in the 1867 paper on the categories, and . . . if Peirce is to be regarded as a phenomenologist it should be understood that most of Peirce's analyses should be looked for under the heading of semiotic. For his phenomenology proper is really quite simple: the paper in question is quite short, and there is not a whole lot more to be done in phenomenology proper than what he does therein . . .[8]

It is because he believes that manifestation and sign are equivalent conceptions that Ransdell claims that the science of the phaneron is the same as the science of the sign, so that for him Peirce's phaneroscopy is really part of Peirce's semeiotic, and the theory of categories is but a preliminary or a foreword to semeiotic. Since there is not much more to be done in phenomenology than what Peirce had done in the "New List," phaneroscopy is not a *science,* but a settled doctrine. We may want to improve it, but otherwise we had better turn to semeiotic. Yet such a position is troublesome when we recall what Peirce said toward the end of 1909, well after having written most of his important papers on the subject. He stated that "phaneroscopy is still in the condition of a science-egg, hardly any details of it being as yet distinguishable, though enough to assure the student of it that . . . it surely will in the future become a strong and beneficent science" (R 645: 2). With such a claim he could not have meant that not much more than what had been done in the "New List" had to be accomplished in phaneroscopy. But if that is the

[8]This quotation is from the original English version of a paper published in French, "Peirce est-il un phénoménologue?" (Ransdell 1989: 67–68).

case, what is phaneroscopy really all about? What did Peirce really mean, what could have been his vision?

To begin with, the fact Peirce did not call the science of the phaneron by the name of "phanero-logy" (except in one fleeting instance), but by that of "phanero-scopy," is certainly significant. The suffix -scopy introduces the idea of observation, while the suffix -logy introduces the idea of discourse, a corpus of systematized arguments. This distinction is crucial to understand the rôle of phaneroscopy, and is found in many different guises throughout the writings. For instance, Peirce says that "in Phenomenology there is no assertion except that there are certain seemings; . . . Phenomenology can only tell the reader which way to look and to see what he shall see" (CP 2.197, 1902). Elsewhere he writes that phaneroscopy "does not undertake, but sedulously avoids, hypothetical explanations of any sort. It simply scrutinizes the direct appearances. . . . The student's great effort is . . . to confine himself to honest, single-minded observation of the appearances" (CP 1.287, 1905).

Phaneroscopy is a work of observation: it "studies" what seems but does not "state" what appears, does not make assertions. Assertions are judgments "about" something, and they usually attribute to that something different qualities, such as reality or unreality, and truth or falsity. The phaneroscopist refrains from making such judgments. He only acknowledges the manifest *qua* manifest. The auxiliary verb of his assertions is not *to be* but *to seem*. There is "little reasoning," for reasoning is a matter of reaching conclusions from premisses, and observation of the phaneron does not start from premisses. Peirce insists on the purity of that observation, which stems from the fact that phaneroscopists must make sure not to incorporate in their observation anything foreign to it, such as preconceived interpretations. Phanero-"scopy" must be "honest" and "single-minded," as well as direct and keen. This might sound pretty much Husserlian if it was not for the important difference that phaneroscopy has no interest in defining the intentional characteristics of different modes of consciousness, since for the phaneroscopist "there is no difference in the presentations themselves" (CP 7.644, 1903). Anything can be part of the phaneron, "in any sense or in any way," because whatever the sense or the way, they are not the

phaneroscopists' business. They do not speculate about what self-presents: they *merely* observe it.

Peirce often marks this limitation to observation with restrictive adverbs such as *just, only, simply,* and *merely*. Those adverbs may convey the false idea that phaneroscopic work is easy to carry out; it is on the contrary quite difficult, precisely because of the observational demand, the compliance with which is a "great effort" and a matter of constant self-control. For Peirce, phaneroscopy is "perhaps the most difficult, of [philosophical] tasks, demanding 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, 1902). Observation is not passive looking but active scrutiny. It is a "rare faculty," that of the artist, Peirce adds, supposedly because the artist is trained to contemplate appearances as they are, apart from any preconceived theory.

Since assertions and reasoning are prohibited, the only thing the observer can do is *describe* the phaneron. This verb recurs all the time in Peirce's discussions. Now, as a matter of principle and of fact, the observer cannot possibly describe directly the *lived* phaneron, since he is completely embroiled in it. The only possibility, as Peirce argues consistently, is to form a diagrammatic representation of it. One may therefore suppose that the work of description starts in the very formation of that representation, a formation that depends on the faculty of imagination. Now, phaneroscopists have no interest in describing any and every formal property of the phaneron. What they strive to unveil is those few properties that are to be found in every appearance, whatever its origin. Before those few properties are discovered, no proper description can be done. It appears, consequently, that phaneroscopy begins with *observation* and ends with *description*. Since observation must be single-minded and pure, description will be devoid of speculations of any sort, and will *only* be an honest account of whatever was observed. The ethical demand made on phaneroscopists is twofold: they should not lie when reporting their observation, and they should make sure that their report states only what actually "seemed," without speculating on what it was that seemed or might have seemed. Phaneroscopists do not frame

hypotheses, and do not theorize. As far as they are concerned, the phaneron is something they report without reporting *on.*

But the question arises whether such a description or reporting activity is possible. As a matter of fact, there is a passage in the texts (CP 2.197, 1902) where Peirce blatantly contradicts himself. He first states that phenomenology "describes the essentially different elements which seem to present themselves in what seems," and two sentences later he claims that 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." Now, how can phenomenology describe that which cannot be described? The answer to that treacherous question is the answer to this other question: what is describable within the phaneron? Or again: what is it that the phaneroscopist has to observe exactly?

As far as this is concerned, Peirce is clear enough. "Phaneroscopy . . . is occupied with the formal elements of the phaneron" (CP 1.284, 1905). The phaneron itself, in its continuous manifestation, cannot be described. Description involves objectification, and thus the loss of phanerality (Peirce did coin the adjective "phaneral" in one place). Such a loss, however, is the price to pay for unveiling its mystery. Peirce is thus right to say that seemings cannot be described. What can be described, however, is the structure revealed through the observation of the diagram, a structure that exhibits the "essentially different formal elements" of the phaneron. It is the elements of the phaneron that are the object of phaneroscopic inquiry, *not the ingredient*s (which are particular slices of experience—anything that could become a "represented fact"). The elements are the most fundamental components that condition the possibility of every appearance. And it is these constitutive elements that need to be detected beneath all their disguises.[9] How is

[9] Peirce uses a variety of phrases to refer to those elements; here is a small sampler:
— "the kinds of elements universally present in the phenomenon" (CP 1.186, 1903);
— "the features that are common to whatever is experienced or might conceivably be experienced" (CP 5.37, 1903);
— "the ubiquitous elements [of the Universal Phenomenon], Firstness, Secondness, and Thirdness, together perhaps with other series of categories" (CP 5.121, EP2: 196–97, 1903);
— "the universal Qualities of Phenomena in their immediate phenomenal character, in themselves as phenomena" (CP 5.122, EP2: 197, 1903);

this supposed to be done? Through several operations that can be listed as follows (not in any strict order), once they have been extracted from the manuscripts: distinction, abstraction, analysis, comparison, repetition, generalization, and classification.[10]

— "[the] different forms of [i]ndecomposable elements [the Phaneron] contains" (R 908:4, EP2: 362, 1905);
— "the different kinds of consciousness, which I rank under . . . three headings. . . . *First,* 'Qualisense'. . . . *Second Heading:* what I call *Molition.* . . . *Third Heading:* the recognition of Habit of any kind in consciousness" (CP 8.303, 1909).

The diversity of those formulations may puzzle. What they have in common is the idea that the elements are the most fundamental components that condition the possibility of every appearance. Beyond this commonality, Peirce's approaches seem to be coming from different directions. The epistemological standpoint he adopts when speaking of "possibilities of consciousness" is certainly different from the one taken in the discussion of "indecomposable elements," while the reference to all-pervasive "features" or "qualities" reminds us of a more traditional understanding of the categories as ultimate predicates. Why does Peirce not speak of the categories more univocally? The reason can be traced back to the infinite diversity of the phaneral ingredients themselves. Although phaneroscopy does not pay heed to the origin of what gets self-presented in the phaneron, it remains that what it observes has been "lived" in some fashion, and thereby keeps certain traits characteristic of the way it emerged. Now, phaneroscopists, through successive operations of abstractions, should always be able to reach the ultimate categories, those that are the most prescinded, namely firstness, secondness, and thirdness. However, along the way down the path of abstraction, a number of "preliminary" categorial trichotomies will be met that still retain vestiges of their particular phaneral origin. Those trichotomies are in one respect more significant than the most abstract one, because they display the many garments put on by the categories in different segments of the phaneron. Sometimes they will have logical connotations, sometimes psychological, sometimes again mathematical, depending on which portion of experience phaneroscopists are interested in. It is thus not surprising that we find in Peirce various classifications of the elements of phaneral experience. For instance: one, two, three; first, second, third (hypostatized into firstness, secondness, thirdness); monad, dyad, triad; quality, (brute) fact, thought; feeling, effort, conception; qualities of feeling, reaction (or volition, or experience), habit-taking (or mediation, or learning, or representation); primisense, altersense, medisense; qualisense, molition, habit-recognition; original, opponent, branching.

[10] Witness these two quotations:

> What phenomenology does is to distinguish certain very general elements of phenomena, render them distinct, and study their possible modes.... The work of discovery . . . consists in disentangling, or drawing out, from human thought, certain threads that run through it, and in showing what marks each has that distinguishes it from every other. (R 693: 62–64, 1904; also in *NEM* IV: 196)

> [T]he results of phenoscopy are obtained by the mere observation, generalization, and analyses, of matters of common experience, always present to us. These are as capable of repetition, comparison, etc. as are the operations of mathematics. (RL 427: 10, CSP–C. A. Strong, 25 July 1904)

These operations can only be conducted through the medium of a diagram. This is exceedingly important, as far as phaneroscopy is concerned. Observing a phaneron is not a matter of introspection. It needs to be projected, as it were, in a form that is least likely to disrupt or betray it. Such a form can only be iconic, but iconic in a sophisticated fashion. Peirce's work on *existential graphs* convinced him that these graphs furnished the best conceivable model of diagrammatization. He was so convinced of this that at times he spoke as though existential graphs as he defined them were the very diagrams needed to analyze and describe the constituents of the phaneron. It appears to me, however, that what Peirce really meant was that phaneroscopy had to come up with diagrams that mimicked the existential graphs while remaining distinct from them. His argument to that effect was by analogy. Just as the Sheet of Assertion can be used by the logician to diagram the contents of the logical Quasi-Mind, in the same way a Sheet of Description can be used to diagram the contents of the Phaneron, the Phaneron being defined as the "collective whole of all that could ever be present to the mind in any way or in any sense" (R 293: 23, 1906).

> Now Existential Graphs furnish us the best diagram of thought that has ever yet been invented. And do not forget that I have only developed one Department of it. There are countless Objects of consciousness that words cannot express; such as the feelings a symphony inspires or that which is in the soul of a furiously angry man in presence of his enemy. But all these can perfectly be expressed in Graphs. . . . And therefore there can be no better instrument for thinking about Constituents of the Phaneron—which is itself too evanescent for definite comprehension—than to think about Existential Graphs. (R 499s: 17, 1906).

What Peirce is inviting us to do in phaneroscopy is to learn a lesson in the art of representation from his work in Existential Graphs. Diagrams have all sorts of powerful virtues that make them perfectly suitable for phaneroscopy. In the first place they are "tokens of types." They are singular objects used as signs, which allow them to be readily perceived and observed. At the same time they are "general signs," since they are constructed with the intention of representing general objects. What are these objects? They are "definite forms of relations," that is, relations abstracted from anything that is not essential to them, in particular anything that has to do with the "way" or "sense" in which they become present to the mind. The role of diagrams is to in-

crease the intelligibility of those relations. This they can do thanks to what Peirce calls their "truly extraordinary feature," which is that "they *show,*—literally *show,*—not only that a necessary consequence *does* follow, but that it *would* follow under all circumstances whatsoever" (R 293: 75–76, 1906). Diagrams not only display forms, but in so doing they actually help bring out features of these forms that were not observable before. This diagrammatic revelation is brought about not by simply looking passively at the diagram, but by making it work, putting it "through its exercises." This is done by transforming the diagram, i.e., by subjecting some of its forms to a number of rule-governed operations, such as subtraction, insertion, iteration, displacement, and then by comparing the result with previous states of the diagram, and detecting the invariant properties that emerge from these transformations. For this to work most effectively, however, one has to learn, as Peirce says, to prescind from all accidental characters that have no significance. It is only when such characters have been made to disappear that the diagram becomes a "schema" and can then be subjected to the scrutiny of observation. Removing the insignificant features allow the phaneroscopist (or anyone else who works with diagrams, since this is a feature of all diagrams) to perceive the features that would always belong to the diagram no matter how it is transformed. The results that are thus obtained happen not to be arbitrary nor subjective, but universalizable. This was essential for Peirce, also for another crucial reason: the only way phaneroscopy could be turned into "a really scientific research" was for its work to be one "of diagrammatic thinking, first and last" (R 293: 35, 1906). Peirce indeed understood diagrammatization as an essential condition for scientificity.

Indeed, what is given to seeing in a diagram is of a *general nature* (CP 5.148, EP2: 207, 1903). Whatever is singular, accidental, ephemeral, in the phaneron is dropped out. Only the permanent, that which stays the same from diagram to diagram, is the object of investigation. Through comparison of different parts of the diagram, certain threads that form the warp and woof of the phaneron are drawn out, and those that share some resemblance are brought together, the ground of their resemblance being the ground of their classification. Generalization goes on a par with classification, and classification has an important part to play in phanero-

scopy, as Peirce confirms when he writes that the business of phenomenology is "to draw up an inventory of appearances" (CP 2.120, 1903).

Classifying is a difficult task both because separating significant from non-significant features requires in itself great powers of discrimination, but also because of the intricate entanglement of these essential features. Unraveling the snarl would be quite impossible, however, if phaneroscopists had no idea of what to look for. Although they are unprejudiced toward the appearance they observe, there is one type of presupposition which they are allowed to nurture, namely the mathematical type. Mathematics precedes phaneroscopy in the classification of the sciences not in vain, as Houser has rightly shown: phaneroscopy is not a science that discovers the categories *unexpectedly* or *unsuspectedly,* without clues, for the categories are bound to have a mathematical grounding. Mathematics provides us with a classification of the fundamental sorts of relations based on what Peirce ended up calling either their "valency" or their "adicity." Since the phaneron is a continuous entanglement of an infinity of relations, the phaneroscopist has the right to expect that the mathematician's classification will prove valuable in suggesting directions in which to look. This, I think, is what Peirce called the "preparation of thought" that was necessary for a work of observation to "bring in any considerable harvest" (R 908: 4, EP2: 362).

The "preparation of thought" consists in determining in advance what are the kinds of formal properties that we might expect would emerge. In this regard Peirce had a hypothesis that he found irresistible. To the question "how do diagrams represent the structure of the Constituents of the Phaneron to be like, once we've learned to modify existential graphs for that particular purpose?" Peirce answered with an analogy, a "flight of fancy," "an innocent and helpful figure" as he prudently called it (R 499s: 17, 1906). Peirce held that the constitution of any ingredient of the phaneron was like that of a chemical molecule, in being composed of atoms each with a definite valency. The phaneroscopic diagram thus "represents the structure of the phaneron to be quite like that of a chemical compound" (R 293: 24, 1906). Peirce frequently compares the search for the "indecomposable elements" to Mendeleyev's finding of the periodic classification

of chemical elements.[11] Just as chemical elements are characterized by their valency, or the number of chemical bonds they can engage in with other elements in a combination, conceptual elements are also characterized by the number of their possible bonds with other elements. For example, predicates such as "is green" or "is good" are univalent (or monadic) for they combine with one subject at a time; predicates such as "eats" or "hits" are bivalent (or dyadic) for they combine with two subjects at a time; and predicates such as "receives . . . from" or "gives . . . to" are trivalent (or triadic) for they combine with three subjects at a time. Now, this valency analysis of predicates is in fact an application of a mathematical theory to logic. The same mathematical theory can be applied to phaneroscopy. Valency analysis in mathematics is the study of the *forms* of graphs, and thus is part of graph theory, which itself is an offshoot of topology. In several texts Peirce for instance brought Listing's census theorem to bear about his phaneroscopic speculations, particularly to demonstrate the law of the combinations of relations of different adicity. I will not expand here on Peirce's valency analysis, as other scholars have done so ably enough. Let us simply bear in mind the importance of the chemical analogy, which explains why Peirce was for a while tempted to call his new science by the name of "phanerochemy." It was with the eyes of the trained chemist and mathematician that he wanted to observe the phaneron.

An important step in the passage from observation to description is that of analysis. Once the general elements of the phaneron have been made out, they must be rendered distinct, and

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[11] See for instance CP 3.469–71 (1897); CP 4.309 (1902); *NEM* IV: 155–56 (1903); CP 5.469 (1903); R 908:5–8 or EP2: 362–65 (1905); R 1338:29–31 (1905–06); CP 1.288–292 (1906); *NEM* IV: 320–22 (c. 1906). In R 284:83–84 (1905), Peirce writes: "If we exclude from the phaneron certain elements that can barely be discriminated from others, all concepts that can be prescissively isolated and I may go so far as to say much the greater part of the most refined products of logical and metaphysical subtlety, taking them as they occur in the deepest books, are blends of priman, secundan, and tertian elements. An absolutely sharp and clean division,—a quantitative separation, as the chemists call it,—is an ideal that can hardly ever be realized in the chemistry of thought, which in this respect is quite analogous to the chemistry of matter. We can only expect to obtain relatively pure products." In R 908:7 or EP2: 363, Peirce adds: "[I]t is certainly true that all physical science involves (I do not say, *depends upon*) the postulate of a resemblance between nature's law and what it is natural for a man to think . . . ; and consequently, sound logic does distinctly recommend that the hypothesis of the indecomposable elements of the Phaneron being in their general constitution like the chemical atoms be taken up as a hypothesis with a view to its being subjected to the test of an inductive inquiry."

this requires that their "features" or "marks" be brought to light. Removing the various disguises under which those elements hide demands highly discriminative powers, and for Peirce this is clearly the most difficult part of the task, as difficult as isolating and describing the properties of a chemical element—some elements are indeed extremely unstable when isolated.[12] Analysis of the diagram is equivalent in fact to its description. As soon as the phaneron is iconically represented in a diagram, its ingredients having been separated and classified according to their categorial distribution, the observer can begin to scrutinize with "minute accuracy" (CP 1.287, 1905) the interplay and agency of the categories within the diagram, displaying the part(s) played by each, the effects created through their commingling, and the types of experience that each of their guises actualize. Peirce provides the algorithm of the procedure:

> We begin by asking what is the mode of being of the subject of inquiry, that is, what is its absolute and most universal Firstness? The answer comes, that it is either the Firstness of Firstness, the Firstness of Secondness, or the Firstness of Thirdness.
>
> We then ask what is the universal Secondness, and what the universal Thirdness, of the subject in hand.
>
> Next we say that Firstness of Firstness, that Firstness of Secondness and that Firstness of Thirdness, that have been described, have been the Firstness of Firstness in each case. But what is the Secondness that is involved in it and what is the Thirdness?
>
> So the Secondnesses as they have been first given are the Firstnesses of those Secondnesses. We ask what Secondness they involve and what Thirdness. And so we have endless questions, of which I have only given you small scraps. (CP 1.543, 1903)

Now, categorial analysis or "prescissive abstraction" is only one portion of phaneroscopic work. One cannot simply reduce phaneroscopy to the determination of the valency of different portions of the diagram; this is useful, but there is much more to do in phaneroscopy (or molecular analysis) than that, much more than keeping "rediscovering" the three categories, as it were. The phaneroscopist would also want to exhibit how these categories actually combine and cooperate to shape experience, or the emergence of the manifest. He asks: "How are the elements

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[12]Thus we find the following relatively early statement: "Finally, 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." (W5: 238, CP 1.353, or R 895: 36, 1885)

concurring to form this or that particular portion of the phaneron?" He no longer looks for unknown categories but strives to find out where and how they come into play within the phaneron. A deeper and deeper analysis requires that those questions be repeated over and over again, hence Peirce's recurrent method of inquiry.

One has just to catch a glimpse of Peirce's many descriptions of the categories to realize the scope of the work. So, Ransdell might well be wrong when he contends that there is not much more to do in phaneroscopy and Peirce might be right when he writes that phaneroscopy is still in the condition of a science-egg. Indeed, phaneroscopy is less a theory that establishes the nature of the categories and states the conditions of their interdependency than a science that studies whatever is manifest *according to* the categories. More than the categories as such, what it has to show is the agency of those categories within the appearances. The description of this agency must be acritical, for phaneroscopy, we remember, is not only prepsychological, but also prelogical, and thus has no right to appeal to either science. In particular, phaneroscopy may not appeal to semiotics, while the reverse is called for.

Like mathematics, phaneroscopy is an acritical science, in the sense that it does not make assertions: the results of its observations are recorded in descriptive propositions, the truth of which is not its business to assess. Peirce goes even further and says that the propositions of phaneroscopy are not subject to genuine doubt precisely because they are not assertions. Whatever is described by an honest and single-minded observer can be described in concordant terms by every other observer. The reason seems to be that each individual experiencing is a *replica* of experiencing in general. "Replica" must be understood in Peirce's technical sense of the word as the instantiation of a general sign. Whatever fundamental traits will be found to characterize individual experiencing can be extrapolated to experiencing in general, and so the assumption that those traits belong to every other individual actualization of experience is warranted. As a corollary of this, the descriptive propositions of the phaneroscopist do not bear on individual cases of experience, even though they result from the observation of individual cases, but they claim to say something of experiencing in general, of the Phaneron in general. They do so by merely rep-

licating or expressing general propositions, without seasoning them with subjective comments or "extraneous accompaniments," and such a kind of phaneroscopic expression can only be iconic (hence diagrammatic). Assertions, on the other hand, do not merely replicate propositions iconically. They also introduce those propositions in a different discourse, one that does not aim at describing the structure of the seemings, but one that assesses their reality or unreality, or their truth or falsity, for instance. Assertions thus replicate the general propositions, but not the descriptive discourse in which they are stated. Phaneroscopists, however, strive to replicate merely the body of descriptive propositions without attempting to inscribe it in another discourse (or argument). In so doing, they have the double advantage of keeping their description iconically faithful to what they observe single-mindedly (assertions are not single-minded), and of being able to claim that what they observe and describe can be equally observed and described by any other phaneroscopist. Peirce is confident that everybody will find the same general elements in the phaneron as his; and if phaneroscopists do not have to insist on the universality of those elements, it is precisely because everybody's individual experience is a replica of the same general experience, and each individual description will be a replica of the same general description attached to the general Phaneron.

A contradictor might object that the propositions of phaneroscopy are affirmations, and thus assertions. But it is not so: phaneroscopic propositions are not categorical; they do not state that something *is* the case, but that something *seems* to be the case. It happens that "we cannot doubt that that really *seems* which *seems to seem*" (CP 7.36n13, c.1907). Phaneroscopic propositions cannot be doubted — but only by the phaneroscopists! They are unable to express a doubt since they cannot make assertions. They can only record the seeming honestly. Can a phaneroscopist doubt the seeming that appears to a colleague of his? No, he cannot either, both because his colleague is equally honest and single-minded, and because the latter cannot doubt what seems to himself. This is why Peirce contends that "all those reflections about possible doubts originate rather with the logician when it is a question of appealing to phenomenology than in any emphatic assertions of the phenomenologist himself" (*NEM* IV: 196). Logicians make asser-

tions, so they may doubt the phaneroscopist's propositions, but only as logicians, not as phaneroscopists. The latter discipline themselves not to interpret the appearances they report, beyond the iconic replication, since any interpretation would destroy the seeming's innocence by trying to pierce it and make it say something it could not have intended to be confined or reduced to.

If phaneroscopy is a science, the least that can be said is that it is rather peculiar. It is a very humble science, for it cannot make assertions, formulate hypotheses, express doubts, hold reasonings, or offer interpretations. Now, Peirce repeatedly says that a true man of science must possess two qualities: the devouring passion of finding out the truth in some department, and a natural gift for reasoning, for severely critical thought (CP 7.605, 1903). Yet, the phaneroscopist is not concerned with matters of truth, and resorts very little to reasoning: therefore, he is not a man of science, and phaneroscopy is not a genuine science either. In addition, Peirce always insists on the fallibility of the scientist, while the phaneroscopist is infallible, since his honest description of the phaneral parts cannot be doubted. However, Peirce does not define science as a body of certified truths, but rather in terms of an activity single-mindedly dedicated to the growth of knowledge and the pursuit of truth. Phaneroscopy is not concerned with truth or falsity, but in unveiling the agency of the categories it heavily contributes to grounding objectively the scientific possibility of making truth-assertions. The practice of phaneroscopy is thus not separated from truth-reaching activities; it is in fact one of the many steps to be taken on the road of inquiry. The descriptive propositions formulated in phaneroscopy are neither true nor false: they state what *seems,* not what *is,* nor what *could be* the case. Phaneroscopy is at the juncture; between the *what could be* of the mathematics, and the *what is* of the other sciences. In addition, if phaneroscopy were not a science, then a fortiori mathematics would not be either. Both are acritical since both refrain from making assertions about the object of their investigation; mathematics only draw consequences out of initial hypotheses, while phaneroscopy only describes what self-presents. To do so, however, both need extremely acute powers of thought, albeit "peculiar," and are thus critical in another sense.[13] Finally, phaneroscopists are neither falli-

[13]We remember that for Peirce, the phaneroscopic operations of observation, generalization, and

ble nor infallible, since again they do not speculate nor claim anything. In this connection, phaneroscopy cannot diminish ignorance, but can only increase the possibility of advancing knowledge: "Phenomenology can only tell the reader which way to look and to see what he shall see" (CP 2.197, 1902). It suggests directions of investigation, points out those parts of experience that deserve particular attention for some heuristic purpose. In many ways, it may serve as the semiotician's preparation of thought.

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analysis, "are as capable of repetition, comparison, etc. as are the operations of mathematics. Therefore, although the certainty may not be as high as that of mathematics, it is of the same kind" (RL 427:10, CSP–C. A. Strong, 25 July 1904). The certainty is not "as high" because phaneroscopy does not work with pure idealities but with empirical manifestations; but it is "of the same kind" because phaneroscopy does not take the risk of judging what it is that it describes.

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