The Classifications of Signs (II): 1903

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Abstract:

The paper tracks the major changes Peirce brought to the classifications of signs in the Harvard Lectures on Pragmaticism, and the Lowell Lectures, both of 1903. These changes turn on the discovery of the need to include in the theory of signs an account of the thinghood and the eventhood of signs. This discovery becomes the "First Trichotomy" of the classification into three trichotomies and ten classes. It investigates the significance of these changes, both for the scope of sign theory, and for the function sign theory has to play in the mature pragmatism.

Keywords: Fiction, Replica, Type, Signs in actu, Pragmatism

In 1903, Peirce wrote two major pieces of work. The first, the Harvard Lectures on Pragmatism, delivered from March to May, and the second, the Lowell Lectures, delivered at the Lowell Institute in October of the same year.[1] This later series was accompanied by a "syllabus", a brochure for which was published. In both, we find major revisions to the theory of signs, but the differences between them are significant. The Harvard Lectures are Peirce's major contribution to a pragmatic metaphysics; the Lowell Lectures are devoted to logic. In part, the differences between the two versions of the sign hypothesis are attributable to this difference. But the *Syllabus* is eccentric to this dichotomy, and it brings to the theory a feature that is particular to its own genre, and that will not recur. It is here that we find the shift to what I have called elsewhere Peirce's "second classification" of signs, in which the rules for division and the derivation of classes are quite new in relation with the familiar model (see Freadman, 1996; part of the argument of that paper is reproduced below). This could have effected a radical change in the detail as well as in the global form of the sign hypothesis, but it remains a hypothesis whose practical utility is never put to the test. What is retained from the work of 1903 is a pragmatic account of signs *in actu*.

Prior to these important texts, in 1898, Peirce had delivered a series of lectures, at William James' invitation, for the Cambridge Conferences.[2] The recent editors wished to call their volume "the consequences of mathematics", meaning in particular the "[mathematical] ways of studying consequences". They point out that, partly because James wanted Peirce to use the lectures to give a popular introduction to his work, the lectures "apply the ideas of mathematics in philosophy". The editors explain that they did not have their way, but all the proposed titles are felicitous. Peirce had wanted this series to explore "the logic of events"; as we read the title it has finally received, we

should allow the intonational stress to fall on "the logic of things". "The Sign, in general, is the third member of a triad; first a thing as thing, second a thing as reacting with another thing; and third a thing as representing another to a third" (RLT 146). The 1898 series prepares the philosophical way for the work Peirce was to do five years later, again in Harvard, where the issue of the eventhood and the thinghood of signs becomes a special focus.

The Harvard Lectures of 1903

The Harvard series of 1903 was a thorough-going revision of Peirce's system and is given the status, by Karl-Otto Apel, of the "final revision" (Apel, 1981). Patricia Turrisi (PPM, Introduction) links the organisation of these lectures with the events following Peirce's application for funds to the Carnegie Institution the previous year. Peirce had written to William James lamenting his failure, and explaining the extent to which he had been depending on a successful outcome to solve his financial difficulties. James arranged for the lecture series, with a handsome fee, in response to this information. The grant application had included an ambitious plan to complete a work in logic consisting of "three dozen memoirs" in which his logic and his philosophy would be articulated into a unitary system (Brent, 1993, p.280). The Harvard Lectures are what we have instead. Their ambition to present a unified architectonic is re-oriented in line with the focus on pragmatism (designed, it is usually presumed, as a way of pursuing his debate with James himself): Peirce would present topics which would allow him to discuss 'the "foundation, definition and limitation" of pragmatism, as well as its "application to philosophy, to the sciences, and to the conduct of life" (PPM 8). Part of the difficulty of these lectures derives from the compression of the argument; part derives from the topical arrangement, which seeks to present a whole philosophical system under the head of pragmatism.[3]

What, then, is the "place" of semiotic in this design? Apel responds to this question by seeing it as quasi-foundational, as it had been in the "New List", but as it had ceased to be during the period in which Peirce worked most intensively on formal logic, and in which he developed and applied the pragmatic maxim to the particular context of the logic of inquiry. But what sort of foundation is this? Is it transcendental, as Apel supposes, or is it merely the "formal basis" of empirical science in general, as Oehler would have it? (Oehler, 1986, p.59) "Peirce's foundation of pragmatism", writes Oehler, "relates the problem of sign-function to the problem of sign use, in other words, the action produced by the sign" thus obviating the need to have "recourse to higher, final

truths such as 'reason,' 'language', or 'society'" (Oehler, 1986, p.56). As against this, Apel grants to the phenomenology a quasi-transcendental status. He claims that the system of 1903 solves the problem created for Peirce by the assumed discontinuity between the pre-cognitive and the cognitive realm. He argues that the Harvard Lectures establish an "iconic contact between nature and cognition - understood in semiotic terms, between unconscious and conscious argumentation" (Apel, 1981, p.104). This iconic contact is the foundation. Apel sees Peirce as moving from a *symbolic* account of cognition, in 1868, which focusses on inference, to an *indexical* account, in 1885, focussing on denotation, and finally to this *iconic* account of 1903, which focusses on "the decisive connection between the qualitative features of nature and the predicates of human perceptual judgment." Where the metaphysics of 1867 is based on the three categories, but only one of these categories, thirdness, is used to account for the logic of cognition, the metaphysics of 1903 requires a full integration of the three classes of sign to account for the deep continuity of mind with the world. As Apel (1981, p.96) puts the objective of the system:

> [Peirce] aims for a philosophy of continuity in which perception and its objects are to be conceived on the one hand, as the limiting case of rationality (5.181-185), while rationality itself is to be conceived, on the other hand, as an object of sensory perception (CP 5.194; CP 5.205; CP 5.209) (Apel's references)

What it means for rationality to be available to sensory perception is explained by the use Peirce makes of the icon, which holds together the icon as abstract mental schema with the icon as real thing on a page, available for manipulation and indeed observation by the work of reason. I shall refer to these, respectively, as the "phenomenological icon" and the "mathematical icon". The latter is expounded in the following passage:

> All necessary reasoning without exception is diagrammatic. That is, we construct an icon of our hypothetical state of things and proceed to observe it. This observation leads us to suspect that something is true, which we may or may not be able to formulate with precision, and we proceed to inquire whether it is true or not. For this purpose it is necessary to form a plan of investigation and this is the most difficult part of the whole operation. We not only have to select the features of the diagram which it will be pertinent to pay attention to, but it is also of great importance to return again and again to certain features. Otherwise, although our conclusions may be correct, they will not be the particular conclusions at which we are aiming. But the greatest point of the art consists in the introduction of suitable *abstractions*. By this I mean such a transformation of our diagrams that characters of one diagram may appear in another as things. A familiar example is where in analysis we treat operations as themselves the subjects of operations. (EP 2:212-3; CP 5.162)

On Apel's argument the three classes of signs are now fully integrated into philosophy. Not only can it use them all from time to time; they are structurally integrated into its very foundation. Apel considers that this is the end of the story. This is where the sign hypothesis ends up, in Peirce, so integrated into the foundations of the system that it would have no special place elsewhere, so presupposed that it could no longer be an object for scientific investigation. Yet phenomenology *is not* the foundation in the Harvard Lectures or elsewhere: "if it is to be properly grounded, [it must] be made to depend upon the conditional or Hypothetical Science of Pure *Mathematics* [...]. A Phenomenology which does not reckon with pure mathematics ... will be the same pitiful club-footed affair that Hegel produced." (EP 2:144; CP 5.40). Hence we should distinguish between the mathematical icon and the phenomenological icon. The best account of the relation the two bear to one another would no doubt take the form of a dialectic. It is not possible to elaborate further on this issue in the space of this article.

However we might decide that issue, one thing is clear: the phenomenology of the Harvard Lectures has the function of providing the categorial foundation for pragmatism's concerns with the special, or positive sciences. It follows that we must take the phenomenological icon as a hypothesis concerning empirical objects, and fallible for this reason. Mathematics is not empirical; its truths, once proven, stand, and have universal validity (CP 3.426ff.). It is for this reason that it counts as theoretically prior to phenomenology, but in Peirce's practice it has the function of elucidating the form of concepts. If this is a "foundation", it is procedural and technical, not transcendental. It is developed through the real deployment of signs in real situations: it is not derived from a transcendental deduction. As such, real mathematical signs are no different from other real signs in real operations of inquiry; for all of these, the logic of inquiry has to describe their "grammar" (the conditions under which they act as signs); it has to describe their "logic" (their truth-claims); and it has to describe their potentialities, their use in further inquiry, their interpretations, that is, their rhetoric.[4]

The Lowell Lectures situate their topics on the formal side of the distinction between the formal and the positive sciences, the Harvard Lectures on the positive side. Hence, these latter start from phenomenology, which must be -

> ... a science that does not draw any distinction of good and bad ... but just contemplates phenomena as they are, simply opens its eyes and describes what it sees; not what it sees in the real as distinguished from any figment - not regarding any such dichotomy - but simply describing the object, as a phenomenon, and stating what it finds in all phenomena alike. [...] I will so far follow Hegel as to call this science *Phenomenology* although I will not restrict it to the observation and

> analysis of *experience* but extend it to describing 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. (EP 2:143; CP 5.37)

It is this phenomenology that gives the *ratio* for the categories, which are now considered to be conceptual hypotheses concerning the nature of experience. If they fulfil the role of a metaphysics, this role is not ultimate; it rests on mathematics, alone among the sciences to deal with abstract formal universals. The categories are reformulated, but are not radically changed. They are "presentness", "struggle", and "law" or representation, and the hypotheses formulating them are *thereafter* submitted to a mathematical analysis. This principle of division will produce hypothetical sub-classes within each of the categories. It follows the model set out in the "Algebra of Logic": sub-divisions are found by means of the principle, that "Category the First owing to its Extremely Rudimentary character is not susceptible of any degenerate or weakened form" (EP 2:160; CP 5.68), whereas Category the Second has one Degenerate Form (EP 2:160; CP 5.69), and Category the Third, two (EP 2:161; CP 5.70). Then Peirce uses the representamen as the exemplar of a subdivision by trichotomy:

> The representamen, for example, divides by trichotomy into the general sign or *symbol*, the *index*, and the *icon*. An *icon* is a representamen by virtue of a character which it possesses in itself, and would possess just the same though its object did not exist. Thus, the statue of a centaur is not, it is true, a representamen if there be no such thing as a centaur. Still, if it represents a centaur, it is by virtue of its shape; and this shape it will have, just as much, whether there be a centaur or not. (EP 2:163; CP 5.73)

The centaur is a new example, and Peirce is unsure whether he should admit it into the domain of genuine representamens, because its object is a fiction.

In respect of the debate concerning the "foundation" of Peirce's system, we should note that whether we locate this foundation in mathematics or in phenomenology, or, as I have suggested, in a dialectic between them that reduces that foundation to a mere starting-point, it cannot have the status of an ultimate truth. The objects of both mathematical and phenomenological signs are hypothetical and hence fictional. Neither mathematics nor phenomenology can distinguish between "figments" and the real. If Peirce's system is foundationalist, then it rests on a principled and *technical* suspension of truth-values, enabled by the construction of icons. This leads us to reject Apel's argument in favour of Oehler's. Icons are not "the icon", the transcendental continuity of nature with the mind; they are the products of semiotic practices, in Oehler's words "technical and procedural".

It follows that the place of fictional examples is of particular interest. The centaur is not the first time in these lectures, nor indeed the last, where Peirce uses a fiction in order to argue a point: "Imagine," he writes, "that upon the soil of a country, that has a single boundary line … there lies a map of that same country… I shall suppose that it represents every part of that country … Let us further suppose … " (EP 2:161; CP 5.71). Indeed, not only is the map a useful fiction, it is used to illustrate a notion of "self-consciousness" that he has introduced through a bit of "Buffoonery" (ibid.):

> I remember a lady's averring that her father had heard a minister, of what complexion she did not say, open a prayer as follows: "O Thou, All-Sufficient, Self-sufficient, Insufficient God." Now pure self-consciousness is self-sufficient, and if it is also regarded as All-sufficient, it would seem to follow that it must be Insufficient. I ought to apologize for introducing such Buffoonery into serious lectures. I do so because I seriously believe that a bit of fun helps thought and tends to keep it pragmatical. (ibid.)

"Pragmatical" here means alertness to the fictional status of the starting-point, and "a bit of fun" to the techniques of philosophical self-consciousness as they remind an audience of philosophy students that metaphysical postulates are insufficient for inquiry. Peirce may, or may not have been, self-conscious about his deferred narrator here, but we can suppose that he was: it is a familiar joke for the passing off of fiction as an authorised report. But pragmatism is about the "logical goodness, or truth" (EP 2:204; CP 5.142) of a belief or judgment, and Peirce insists throughout the lectures that such things are of the nature of assertions (or at least assertibles) (EP 2:141; CP 5.29 ff; Brock, 1981). Deferred narration, or more generally, deferred authority, is precisely a device for not taking responsibility for the truth of one's statements; belief, which is suspended in the case of fiction, depends upon such taking of responsibility (ibid.). Nothing can be asserted of a fictional entity, and Peirce raises the problem of fiction explicitly *in order to be able to include* apparently fictional signs within the broad domain of semiotic. The example again involves a chain of deferred narration:

> All propositions relate to the same ever-reacting singular; namely, to the totality of all real objects. It is true that when the Arabian romancer tells us that there was a lady named Scheherazade, he does not mean to be understood as speaking of the world of outward realities, and there is a good deal of fiction in what he is talking about. For the *fictive* is that whose characters depend upon what characters somebody attributes to it; and the story is, of course, the mere creation of the poet's thought. Nevertheless, once he has imagined Scheherazade and made her young, beautiful, and endowed with a gift for spinning stories, it becomes a real fact that he has so imagined her, which fact he cannot destroy by pretending to imagine her otherwise. What he wishes us to understand is what he might have expressed in plain prose by saying, "I have imagined a lady, Scheherazade, and

> made her young, beautiful and a tireless teller of tales, and I am going on to imagine what tales she told." This would seem to be a plain expression of professed fact relating to the sum total of realities. (EP 2:209; CP 5.152)

The solution Peirce proposes has become standard in analytic philosophy for dissolving the problem of fiction; its merits or otherwise will not detain me here. For the thing that interests me in juxtaposing this account with the centaur example, and the lady who averred that her father had told her of an unidentifiable minister who said … is just that the centaur example relies on a reversal, a trajectory up-stream so to say, of the device of deferred authority. A similar reversal is evident in one further example:

> … analogy suggests that the laws of nature are ideas or resolutions in the mind of some vast consciousness …" (EP 2:184; CP 5.107)

> .. the universe is a vast representamen, a great symbol of God's purpose, working out its conclusions in living realities. […]" (EP 2:193-4; CP 5.119)

> the Universe as an argument is necessarily a great work of art, a great poem - for every fine argument is a poem and a symphony - just as every true poem is a sound argument. But let us compare it rather with a painting …" (ibid.)

This analogy finds the Author at the end of the chain, but since Peirce distrusts it as scientific procedure, so may we. Philosophy finds it reassuring, to reduce all fictions to some form of true event in some consciousness, but this manoeuvre does not solve the problem from which he started with the centaur. For if it is the case, that some sculptor imagined and then executed the shape of the centaur, this does not bestow on the centaur the status of object that Peirce appears to need, in order for the statue to count as a representamen.

The lectures propose a far more satisfactory solution to the problem of fiction than the postulate of authority at the end of the chain. Fictional objects have the same status as the objects of hypotheses, and indeed, this status is explained by the fact that the whole point about the icon is that it can say nothing at all about their ontology. The distinction between fictional objects and assertible objects is made by the index, or more substantively, by submitting the results of abductions to the test of the pragmatic maxim: what are the real consequences of the sign? The issue for Peirce will be to establish a rule whereby he can distinguish one from the other those hypotheses that do, and those that do not, deserve admission as hypotheses into the particular kind of semiosic chain that is scientific inquiry (EP 2:234-55,196). The argument is introduced in Lecture VI, following the Scheherazade example:

> In deduction … we set out from a hypothetical state of things which we define in certain abstracted respects. Among the characters to which we pay *no attention* in this mode of argument is whether or not the hypothesis of our premisses conforms more or less to the state of things in the outward world. […]
>
> … we construct an icon of our hypothetical state of things and proceed to observe it … we proceed to inquire whether it is true or not." (EP 2:212; 5,161-2)

Peirce's hesitation about fiction, whether or not the statue of a centaur is a genuine representamen, is a hesitation concerning the boundary of the domain to which logic viewed as semiotic will apply. Whether or not the representation of an object can be asserted is the domain of logic proper, or "critic". This is the part of logic that considers the truth-values of representations. But logic "considered as semiotic" is broader than critic, it includes "grammar", which treats of the properties of signs themselves, whether or not those signs represent assertible facts or even hypotheses regarding assertible facts. Semiotic must be able to consider signs such as the centaur, and the self-reflecting map, and the stories of Scheherazade, if only to supply them for any account of how we make the distinction between fiction and fact in the first place. This kind of test depends on the index, the principle of not-ness, and in general, the category of secondness that distinguishes between the "inner" and the "outer" worlds (cf. "The Classifications of Signs I: 1867-1885, q.v.). The centaur example serves the purpose of exemplifying an icon that is not anchored by an index to some *centaur other than another "statue-of-a-centaur" (or a painting, etc.). The world of culture is pervaded by such things - poems, symphonies, stories, paintings - and the philosopher must know about them, have descriptions of their grammar available, in order to know under what conditions they do, and do not, enter his domain of business. But that is all that he will do with them.

Peirce goes on with his kinds of signs, the next one being, as we might expect, the index:

> An *index* is a representamen which fulfills the function of a representamen by virtue of a character which it could not have if its object did not exist, but which it will continue to have just the same, whether it be interpreted as a representamen or not. For instance, an old-fashioned hygrometer is an *index*. For it is so contrived as to have a physical reaction with dryness and moisture in the air, so that the little man will come out if it is wet, and this will happen just the same if the use of the instrument should be entirely forgotten, so that it ceased actually to convey any information. (EP 2:163; CP 5.73)

The definition is contrived so as to be the exact opposite of the icon, and the example is, albeit primitive, a scientific instrument. The hygrometer is of the same nature as the weathercock: it points to, and is determined by, some fact of meteorology. Notice that it is of a quite different order from the examples drawn from algebraic and geometrical notations, but that it has the same sort of status as "physical symptoms", that is, it is an index by causality. This is what Peirce will identify as the "relatively genuine form of Index" (EP 2:163; CP 5.74); following the rule of subdivision by degeneracy, he will set alongside it a relatively degenerate form: "any mere land-mark by which a particular thing may be recognized because it is as a matter of fact associated with that thing, a proper name without signification, a pointing finger, is a degenerate index" (ibid.). The finger has been used before; it inheres in the name of the class itself; the land-mark is new, as are proper names, which have become a standard and much debated topic in logic. Peirce's classification of them in the class of the index indicates that their emptiness is what matters in his account of them as signs. They behave in all respects, he claims, like pronouns; their denotative value depends on their context of utterance.[5]

The examples deployed in the Harvard Lectures continue to play out the distinction between assertible and non-assertible signs, for where the key example of the icon, the centaur, represents an object that exists only as a product of the imagination, in the "inner world" - all the examples of the index participate not only in "reality" but in *existence*: as things in themselves, they exist in time and space, as do their objects. This is what Peirce means by "factual connection", and his examples of the index are perspicuous for this criterion. As the superscript letters to the diagram, the subject to the propositional form and the quantifiers to the universe of discourse, so is the landmark to the map. It orients infinite semiosis, anchors it to existential experience, prevents it from collapsing into the abyss of self-reflection.

The new account of the functional complementarity of the icon and the index completes the analysis of the proposition that was begun in 1885. Peirce takes the proposition as the key example of the symbol, then analyses this as follows:

> The *Symbol*, or relatively genuine form of Representamen, divides by Trichotomy into the Term, the Proposition, and the Argument. The Term corresponds to the Icon and to the degenerate Index. It does excite an icon in the imagination. The proposition conveys definite information like the genuine index, by having two parts of which the function of the one is to indicate the object meant, while that of the other is to represent the representamen by exciting an icon of its quality. The argument is a representamen which does not leave the interpretant to be determined as it may by the person to whom the symbol is addressed, but separately represents what is the interpreting representation

> that it is intended to determine. This interpreting representation is, of course, the conclusion. (EP 2:164; CP 5.76)

Notice that the symbol is now analysed by means of the icon and the index, which are here integrated into the symbolic function, rather than standing outside of it. This allows me to return to the issue of how inclusive semiotic is under the system developed in the Harvard Lectures. We have seen examples of pure indices and icons that, in their simplicity, are quite distinct from the class of symbols. These examples are adduced for didactic purposes, to illustrate the definitions. When Peirce goes on to *use* his sign hypothesis in the further stages of his argument, all the signs will be complex, and mixed. They will be the kind of things that produce beliefs. These are of the general nature of propositions; they join indices to "general symbols" whose content is sometimes represented to be an icon. This icon is a vague, schematic mental content, having little in common with the technical precision of "diagrams".

The practical restriction of the class of signs to the scope of the class of propositions is amply demonstrated by the "Logical Goodness" section of Lecture V, where Peirce announces rather surprisingly that "A representamen is either a rhema, a proposition, or an argument" (EP 2:204). The surprise is registered by the original editors of the *Collected Papers*, who supply in parentheses an explanation: "A representamen [as symbol]..." (CP 5.139); but the supply, though correct in its assumptions, deflects attention away from what is really going on here. Peirce writes: "Esthetic goodness... may ... be possessed, by any kind of representamen: rhema, proposition, or argument, [...]",[6] as if the whole field of representation were occupied by a familiar, quite particular, class of symbols, defined entirely in traditional terms. I suggest that Peirce's attention to the field of signs has been captured by, and confined to, the signs of particular relevance to particular demands of the topic at hand, which does not need to consider such things as centaurs or the tales of Scherherazade, and would prefer to consider the documents of history to its commemoration by a monument. There are several occasions in his writing where a similar confinement takes place, and I shall point them out as they arise in my discussion. On this basis, I conclude that the boundary is now no longer drawn between classes of signs, as in the "New List", but that it is drawn between those representations that integrate the properties of the three classes of signs, and those that do not. These are "the most perfect" signs (CP 4.448). In practice this will work out to correspond with the class of assertible or asserted propositions, broadened to include pictorial representations that join an index to an iconic form (e.g. portraits), as well as propositions of geometry and algebra. These are

the representations used in inquiry, many other sorts of signs are not.[7] At this stage, the vocation of pragmatism is to deal with this confined class; but we should take care to construe this confinement as the delineation of a sub-set of the class of signs.

The passage on the symbol is disappointing in two respects. Firstly, it is difficult to see in what Peirce is offering something new over and above the most classic definition of the proposition into subject and predicate. Secondly, the traditional triad of term, proposition and argument appears in this passage to be coextensive with a class that we know, from his other examples, is far broader than this. This is an effect of Peirce's move to an "applied" semiotic, the use of sign-theory to analyse the procedures and the propositions of inquiry. In these respects, Peirce's analysis is a regression to a very early version of the problematic which gave rise to the sign hypothesis in the first place. It is crucial for his readers not to confuse this move with the general scope of semiotic.

Is there nothing to say about symbols beyond the role of icons and indices in their constitution? Are there no new examples that might raise further interesting problems for "grammar"? Well, yes, to both questions, as it happens. While the definition given at CP 5.76 is indeed limited to the traditional terms, there are other points where Peirce gives instances rather than definitions, and where these instances have properties that are obscured by the name "proposition". At CP 5.73, in fact, he has written, instead of "term, proposition and argument", "word, sentence or book". Such things have a materiality quite different from that of the referents of the logical names: words are in sentences that are, for example, in books.[8] Not, presumably, the *Arabian Nights*, but books that make assertions. Unlike the proposition, which is merely a logical form, the assertion is an act with practical consequences: it entrains belief, or doubt, and from both, further action. It produces "physical effects":

> Nobody can deny that words do produce such effects. Take, for example, that sentence of Patrick Henry which, at the time of our Revolution, was repeated by every man to his neighbour:
> 'Three millions of people, armed in the holy cause of Liberty, and in such a country as we possess, are invincible against any force that the enemy can bring against us.'
>
> Those words present this character of the general law of nature. They might have produced effects indefinitely transcending any that circumstances allowed them to produce. It might, for example, have happened that some American schoolboy, sailing as a passenger in the Pacific Ocean, should have idly written down those words on a slip of paper. The paper might have been tossed overboard and might have been picked up by some Jagala on a beach on the island of Luzon; and if he had had them translated to him, they might easily have passed from mouth to mouth there as they did in this country, and with similar effect." (EP 2:184; CP 5.105)

When Peirce asks himself "But *how* do they produce their effects?" he gives what appears to be a lame response:

> they do not … *directly* react upon matter. Such action that they have is merely logical. It is not even psychological. It is merely that one symbol would justify another. However, suppose that first difficulty to have been surmounted -

which clearly, it has not been

> - and that they do act upon actual thoughts. That thoughts act on the physical world and *conversely,* is one of the most familiar of facts. (EP 2 ibid; CP 5.106)

Familiar it may be; explained it evidently is not. The significant word is "actual": symbols act upon actual thoughts. Events of thought. Symbolic events. These are not logical forms. Peirce cannot account for the power to produce interpretants if he cannot account for the *mode of action* of a sign.

The form of the problem is similar to the issue that he raises concerning the mode of action of a law; in both cases, the point at issue lies at the heart of the technical definition of pragmatism. No court can implement its decisions without a sheriff, just as no law can act in the absence of secondness. But what does this mean in the case of signs? As inquiry must do once it has formalised its hypotheses, Peirce will inquire into the empirical properties of signs themselves:

> The mode of being of a representamen is such that it is capable of repetition. Take, for example, any proverb. "Evil communications corrupt good manners." Every time this is written or spoken in English, Greek, or any other language, and every time it is thought of it is one and the same representamen. It is the same with a diagram or picture. It is the same with a physical sign or symptom. If two weathercocks are different signs, it is only in so far as they refer to different parts of the air. A representamen which should have a unique embodiment, incapable of repetition, would not be a representamen, but part of the very fact represented. (EP 2:203; CP 5.138)

Notice that this is true, and that the point is already implicit, in the example of the map of the map. Notice too, that proverbs are very unlike the propositions of inquiry. It is the saying of them in particular circumstances that has effects, rather than the truth of their propositional content. Notice, thirdly, that Peirce has started his lectures to these students of William James by *repeating* what is to all intents and purposes a *proverb* - the pragmatic *maxim* - which he *translates* from its original 1878 formulation, in French, into a near equivalent in English (CP 5.18), and then proceeds to explore, sometimes reformulating it, throughout the lectures, gradually transforming it as it is modified or

enriched through the effects of the topics to which he applies it. It ends up all but unrecognisable when he puts "the edge on the maxim of pragmatism" (Lecture VII, passim).

> The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those gates is to be arrested as unauthorized by reason. (CP 5.212)

Notice, fourthly, that the particular proverb that he chooses is a moralised version of the pragmatic maxim.

> Evil communications corrupt good manners. (CP 5.138)

Presuming that signs are events (or instruments) of communication, we can translate his proverb thus: all signs have effects, make sure that they are not corrupting ones. Repeating his maxim in this form reflects upon - in the same way as the map of the map - the ethical basis of the pragmatism he is expounding. This is no mere proverb idly cited: the lectures are intended to prove it. What follows for "good signs"? - that they be logically sound, certainly, but that their enunciation have consequences and that these consequences be desirable. This cannot be assessed without assessing their action in relation with their aim:

> … if the meaning of a symbol consists in *how* it might cause us to act, it is plain that this "how" cannot refer to the description of mechanical motions that it might cause, but must intend to refer to a description of the action as having this or that *aim*. (EP 2:202; CP 5.135)

The proverb Peirce cites suggests that this aim must be the maintenance and furtherance of "good manners", but what are the "good manners" that would be corrupted by bad communications? Hume could tell us. The good commerce, the joining, of the sociable and the learned worlds. And so could Montaigne, from whom the proverb may in fact be cited: "The first stroke in the corruption of morals is the banishment of truth."[9] Peirce would add his gloss: that the conversations of men should further the aims of inquiry, that they should seek truth.

Peirce's account of "how" the proverb acts on occasion is unsatisfactory and inconclusive: "The repetitory character of the representamen involves as a consequence that it is essential to a representamen that it should contribute to the determination of another representamen distinct from itself" he would have us believe (EP 2:203; CP 5.138); "every representamen must be capable of contributing to the determination of a representamen different from itself." (ibid.) He conflates here two issues that we know

him to have distinguished sharply in his later work. These are the significate effects of the sign - its interpretant - with the issue of the repetition of the sign itself. The interpretation of a sign cannot be limited to the repetition of the same sign: the interpretant is a *different, or second, sign* of the same object. Rather than dwell on the confusion of this passage now, I prefer to return to it when I consider how Peirce was to solve the problem. I shall also consider at that point why the solution was available only when he turned his attention again to the description of a formal language.

The Syllabus of Topics in Logic

Following the introduction of some key examples in the Harvard Lectures, the table of the three kinds of signs now looks like this:

Table 1

	1867	**1885**	**1903**
Index	weathercock	natural signs physical symptoms pointing finger *demonstrative and relative pronouns *letters on a geometrical diagram *subscript numbers in algebra	hygrometer pointing finger *landmark *proper names
Icon	portrait	painting *diagrams of geometry *general formulae	*statue of centaur
Symbol	word proposition	general words the main body of speech any mode of conveying a judgment	general word sentence book *Patrick Henry’s call *the proverb

This table is based on the standard classification.

Table 2

Signs	Icons Indices Symbols	 Terms Propositions Arguments

If the standard classification cannot be said to preclude *a priori* mixed kinds, it does have a tendency to illustrate its definitions as if pure examples of each case were the norm. But if the “most perfect signs” are now perfect blends of the three classes (CP 4.448), then the task facing Peirce is to account for such blending. This is achieved in what I shall call the “second classification”, which is based on three trichotomies, and results in ten classes. I give this classification in the terminology of the Syllabus:

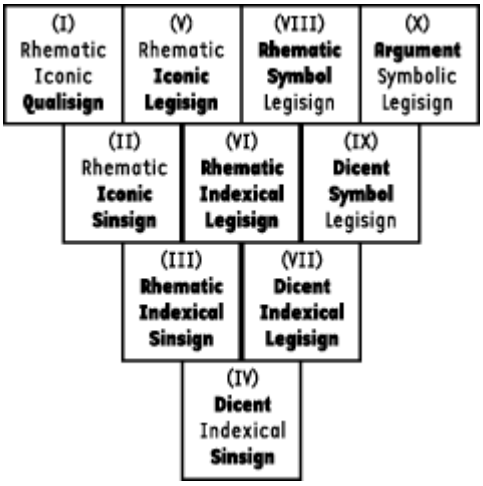
Table 3: The three trichotomies (Note that the terminology that is most familiar. “Tone”, “token” and “type” were introduced by Peirce some years after this first attempt at a combinatorial scheme.)

	I	**II**	**III**
I	qualisign	icon	term (rheme)
II	sinsign	index	proposition (dicent)
III	legisign	symbol	argument

The second classification of signs, and the theory that it implies, is different from the first in some crucial particulars. Firstly, and most obviously, the third trichotomy is no longer posited as a subdivision of the class of symbols: it is the trichotomy of signs according to their mode of determining their interpretants. Secondly - and this may be the most significant difference - the second classification comprises a new trichotomy, which becomes the first. This is the trichotomy of the sign taken as a thing and an event. Note that this is not a sign “in itself”, but the sign as *object* of a theoretical representation under the protocol of “grammar”; its task is to analyse the formal and material conditions for something to act as a sign. Under the standard theory, Peirce displays considerably reluctance to take these conditions of signhood seriously. That is to say that under the standard theory, there is not, nor could there be, a theory of what the continental tradition of semiotics has called the “signifier”. While it is discernibly a presupposition of the representamen in Peirce’s early work, and notably, a condition *sine qua non* of the icon (e.g. CP 2.304), it is sometimes overlooked entirely, (e.g. CP 2.228) and sometimes counted as “superficial” (4,535) or as secondary to the mental content (e.g. CP 2.303). More frequently, it is noted, but set aside as not being part of the significant character of the sign (e.g. CP 7.360). The second classification is remarkable for asserting, on the contrary, that the material and formal properties of the sign taken as a thing are as much a part of the signhood of the sign as the representation relation and the interpretant relation. While this is implied in the relational analysis of the triad - the sign itself is the first correlate - the new

classification proposes an analysis of the properties of the first correlate that is entirely unprecedented in Peirce's work.

The third difference between the first and the second classifications is that in the latter, the subdivisions thrown up by the trichotomies have a changed status. Under the standard theory, it is the terms of the trichotomy that are the classes, or "genera" of signs; under the second classification, they are components of signs. Signs are formed by combining these components with one another:



Unlike the combinations of icon, index, and symbol whereby Peirce sometimes analyses the structure of propositions (e.g. 2,295), combinations within the one trichotomy do not appear, and the system of the ten classes also implies other preclusions (Irwin Lieb, in Hardwick, App.B).

In order to produce the ten classes, the categorial analysis is applied three times. (Steps one and two produce figure 3; step three produces figure 4). The first time, it is applied to the general notion of the sign relation, to produce the three relata; the second time, it is applied to each of these in turn, to produce the three trichotomies. In each of these applications, division into three is achieved through the procedure of precission, the point of which is to state the presuppositions of each definition. By contrast, the third application of the categories reverses the procedure: it *adds* secondness to firstness, and thirdness to the product, such that each of the ten classes conforms to the general triadic structure of signhood from which the analysis starts. This is an analysis that is vastly more supple than a simple taxonomy on the model of genus and species. I suggest that it provides the basis for a descriptive analysis of signs in action; in any event, this is the criterion on which it should be assessed.

The second classification is first formulated in some late pages of the draft *Syllabus of Some Topics in Logic*, under a section headed "Nomenclature and Divisions of Triadic

Relations, so far as they have been determined" (MS 540; CP 2.233 ff.) The *Syllabus* was to have accompanied Peirce's Lowell Institute Lectures of 1903. The Lowell Lectures allude to the standard form of the sign hypothesis, and to the analysis by "degeneracy" of the categories. This is also the case for the early parts of the *Syllabus* (ms 478). In the chapter devoted to the classification of the sciences, in the section headed "Speculative Rhetoric", Peirce presents the familiar two trichotomies, stating that speculative grammar is concerned with the "physiology" of signs (ms. 478, p. 42), and giving to the icon the status of "firstness of thirdness" (MS 478, p. 45). Somewhere between this part of the *Syllabus* and that part contained in ms 540, *Something* seems to have *Happened*. There is some indication in the Logic Notebook (MS 339) that this event can be dated to late July or early August 1903, since in that notebook, between a page dated July 10 and one dated August 4, we find an undated page of jottings concerning the standard divisions of signs. At the bottom of this page, unannounced and undescribed, there is a scribbled tabular array of the *three* trichotomies. I think this is the first such occurrence in the notebooks.

Previous work on Peirce's classifications of signs has focussed either on the number of classes and the rules for yielding them (cf. Burks & Weiss, 1970, pp. 3-16), or on the theoretical adequacy of those classes (cf. Greenlee, 1973). I shall not go over the terrain of those questions here. I am interested in the changes, in the conditions of their emergence, and in their consequences. In large measure, the broad conditions have been established in the foregoing argument, but the picture can be filled out by attending to some further features of the changes.

The manuscript text of the *Syllabus* itself is instructive. It is a remarkable fact about the passage in which speculative rhetoric is expounded (MS 478:40-51) that the theory of signs is somewhat less stable than the repetition, or recitation, of its habitual form would seem to suggest. The first indication of this instability is in the following sentence:

> "Representamens are divided by two trichotomies." (MS 478:00045)

On the face of it, this is a mere variation on the formula according to which "the representamen … divides by trichotomy into the general sign, or *symbol,* the *index*, and the *icon*" (5, 73) and "the symbol divides by Trichotomy into the Term, the Proposition, and the Argument" (5, 76). But the claim that there are "two" trichotomies of signs appears to be inconsistent with Peirce's normal "triadomy". The strangeness of this formulation becomes explicit a little further on (MS 478:00051), where Peirce refers to the trichotomy of the term, proposition and argument as the "second" trichotomy. This

is entirely consistent with there being two trichotomies, but it is inconsistent with its theoretical status as an elaboration of the symbol, which is a "genuine" triad. Indeed, the original editors of the *Collected Papers* found it so strange that they amended it, first, by writing over "second" on the manuscript page with a pencilled "third", like teachers with a mistake in a student's essay, and second, by providing the amended version in the published text: "Of the three classes of the [third] trichotomy of representamens ..." (CP 2.309). But "two" was, although problematical, truer of the standard classification than "three"; and "three" was about to be, but *was not yet*, true of the revisions effected in the Syllabus. There were not "three trichotomies" until ms.540, p.5.

The second indication of instability comes in the passage defining the icon in the same part of the manuscript. Peirce faces a dilemma regarding whether the icon is "a thing" or a "mere possibility" (MS 478:45-6). Note that this dilemma corresponds to the problem pointed out above, according to which the concept of "icon" is ambiguous over the mathematical and the phenomenological construals: is it a schematic mental content or a diagram composed from the conventions of some formal language? Peirce apparently fails to grasp his own very paradoxical notion of a "firstness of thirdness", construing the firstness of the icon in the same way as he construes category the first. What he needed was to distinguish *material possibility* from "an idea" (2,276), which he does in this passage by distinguishing an "iconic sign" from "an icon", and exemplifying the former by "any material image, [such] as a painting" (MS 478:45-6). Note that the reappearance of "ideas" in Peirce's work can only be attributed to the introduction of the phenomenology. When Peirce turns to the technicalities of logic, the sort of thing an idea might be becomes a problem. The solution rests on two moves, each of which points towards the creation of the first trichotomy: the first is to acknowledge that the very notion of an iconic sign implies that "*quâ* thing", an iconic sign has material qualities that "render [...] it fit to act as a sign" (ibid.), and the second is to give to these iconic qualities the status of components combinable with conventions that make them significant (ibid.). Together these moves help to discriminate "ideas" from "iconic signs". If hereafter the phenomenological Peirce needs to retain "ideas" in his system, and if the semiotic Peirce needs to construe them as "signs", then we need to understand his claim as follows. Ideas, like the predicates of the "New List", are synthetic generalisations over some subset of the "manifold of sensuous impressions"; they are also abstractions. They transform the manifold into a "form"; as such, they are something like an icon. This is an *analogy* that holds together the phenomenology with the semiotic. It allows the contents of the mind to count as signs; by the same token, the

requirement that signs have material qualities that fit them to act as they do must apply equally to the contents of the mind. If these contents are signs, then they act as they do because they are constituted as they are: their similarity with things such as diagrams and statues is counterbalanced by their grammatical — that is, conventional and material - dissimilarities. In a far-reaching phenomenological adaptation of Peirce’s semiotic to the requirements of an account of cinematic signs, Gilles Deleuze counts such things as different “regimes” of signs, and argues that a “mental image” becomes a “filmic image” through a process of translation (Gilles Deleuze, cinema).

The third point of instability in this passage is involved in the discussion of replicas of symbols. The replica is “only an embodiment” of a symbol which, in itself, has no existence. This discussion, reproduced at CP 2.292, gives two divergent definitions of the symbol. In the first place, it is “a rule that will determine its Interpretant”; in the second, this is found to require specification of the replica:

> The word [“man”] has no existence although it has a real being, *consisting in* the fact that existents will conform to it. It is a general mode of succession of three sounds or representamens of sounds, which becomes a sign only in the fact that a habit, or acquired law, will cause replicas of it to be interpreted as meaning a man or men. (CP 2.292)

Notice that the “succession of sounds” is a succession of material qualities rendered significant by convention. The word is just such a convention, and its replica is what enables it to “act as a sign” (my emphasis). All the ingredients of the first trichotomy are in place in the discussion, although they are not distinguished as such. The symbol is defined both as the symbol and as what will become the legisign or type, but Peirce hesitates as to whether these are distinct functions:

> The word and its meaning are both general rules; but the word alone of the two prescribes the qualities of its replicas in themselves. Otherwise the “word” and its “meaning” do not differ, unless some special sense be attached to “meaning. (ibid.)

What the first trichotomy eventually does is to attach a “special sense” not to “meaning” but to “word”.

Peirce writes elsewhere (MS 728) that a class is a solution to a problem (cf. CP 4.116); presumably, then, a system of classes is a solution to a systematic problem. My reading of this section of the Syllabus has sought to show that a systematic problem is exactly what we have: the difficulties Peirce has with the definitions of both the icon and the symbol will be resolved by specifying the functions of the first trichotomy. Likewise, the oddity involved in asserting that “Representamens are divided by two trichotomies” can

be read with hindsight, and in the light of the categories, as an incompleteness: the early part of the *Syllabus* leaves open the place that will be filled by the triad of qualisign, sinsign and legisign. Further, the task of this place is to state the presuppositions of the issue of assertion, here called the "dicent" sign.

Peirce does not appear to have solved his problem by pondering on his past mistakes, nor even to have identified them as such: he appears to discover the problem only when a lateral move into mathematics throws up the solution. The continuation of the draft *Syllabus* consists of two chapters, one (mss. 538 & 539) on the "Nomenclature and Divisions of Dyadic Relations …", and the other, on triadic relations (MS 540). Both are formalisations of the classes so named. Peirce works out several systems of divisions for dyadic relations, two of which are of particular interest for what he will afterwards propose for triadic relations. One of these is the matrix (CP 3.591 ff.). The other consists of eight parameters, "cross-classified" to produce nine classes (CP 3.581 & 584). It is a similar model of cross-classification that he uses to produce the ten classes of sign (cf. figs. 5 & 6).

Prior to this, in 1902, Peirce had distinguished two models of classification: the biological model of "hierarchical classification", which derives from the Aristotelian tradition, and the models of classification available from mathematics and chemistry (MS 427:142 ff.). "Why should the biologists impose upon nature a hierarchical classification as the only form?" he had asked (p. 142) - but not for the first time. In 1898, he had already drawn a sharp distinction between the "ordinary logic" and the "relative logic" in terms of what model of classification each implies:

> … [the ordinary logic] is tied down to the matter of a single special relation of similarity. […]
> Thus, the ordinary logic has a great deal to say about genera and species, or in our nineteenth century dialect, about classes. Now a class is a set of objects comprising all that stand to one another in a special relation of similarity. But where ordinary logic talks of classes the logic of relatives talks of systems. A system is a set of objects comprising all that stand to one another in a group of connected relations. (4,5)

The distinction is of some moment for the theory of signs, since what I have called the first classification is modelled on the logic of genera and species, while the second is modelled on the logic of systems. The analogy Peirce used for this new project was not biology, but chemistry. Concepts, he had been arguing since the late 1890s, had "valency", that is, were best analysed by a relational structure explicitly compared to that of an atom (e.g. CP 3.470ff.). The concept "sign" could be analysed in just this way, and is consequently found to be structurally triadic. In MS 482, dated by Robin as

ca.1896-8, he returns on more than one occasion to the problem of the validity of the analogy of chemistry with the logical graphs he was devising at the time. At times he pursues the analogy substantively, comparing monads with particular elements (alt. p. 11); at others, he gives it the status of mere metaphor, “simply used to fix the ideas.” (alt. p.8). Yet, “I confess that the comparison often recurs to my mind”, and even though he hesitates, he concludes that “the suggestions of chemical graphs have directly caused important advances in modern algebra.” (alt. p.11).

The problem seems to be definable as a question of levels. The analogy of logical graphs with the graphs of chemistry is unable to be generalised beyond the fact that they both are graphs. But if concepts have valency, then it can also be said that they are part of a larger system (cf. CP 3.454), and that the logical analysis of the concepts of a science for example, will not be an attempt to define their indecomposable abstractions, but rather, an attempt to define their systemic relations. It is in these terms that Peirce is eventually led to reconstrue the interpretant as an explanatory system (CP 4.116; CP 2.230). But it is also the case that the concepts whereby another concept is analysed are themselves systemically related. The three trichotomies that provide the basis for the second classification of signs are a system of terms in just this sense; their task is to give the analytic definition of the concept ‘sign’.

One of the achievements of chemistry that most fascinated Peirce was the periodic table, and his admiration for Mendeleef was very often expressed during the years immediately preceding and following the turn of the century. The table is interesting because it is an example of the very kind of system that Peirce proposes as an alternative to hierarchical classifications such as those of the “Aristotelian tradition”. It can also be analysed as a mathematical formalisation. Describing the workings of the table in undated MS 693, Peirce uses similar terms to those he had used to describe the matrix of dyadic relations (MS 593, op. cit.) and he goes on to construe the functions and arguments of the table as approximate mathematical relations. The important points to note are these: the classifications of chemistry and mathematics, though not necessarily the same, come together in his contestation of the predominance of the biological model, because both admit cross-classifications (MS 427:142-3). The principles of systems are explicated by mathematics, and exemplified empirically by the periodic table. The second classification of signs is Peirce’s contribution of a second example of this procedure.

The implications of this move to a mathematical construal of the class of signs are considerable. Firstly, it gives a system of triadic relations, rather than, as in 1885 for

example (CP 3.359 ff.) an ordered triplet of dual relations. The result of this formalisation is to explicate the conclusion, which operates as a hypothesis throughout the theory of signs. All classes of sign are formally and materially determined by this triadicity: all are defined with, and not to the exclusion of, the interpretant relation. Secondly, as a consequence of the previous point, the first relatum - the sign taken in itself - is accorded full status in the analysis of the structure of signhood. It is as a consequence of this move that questions of the “quality of the sign *quâ* thing”, of the material existence of the sign, and of the rule of the sign, as distinct from the rule of its object relation, are no longer out of bounds. This is the place of the first trichotomy. Nevertheless, despite the requirements of systematising the class of signs, it could not have been included had it not been, in some sense, ready to go. I have proposed a story of how it came to be ready to go in the preceding part of this article: it tells how Peirce came to treat the sign hypothesis as a hypothesis regarding empirical facts, requiring observation of real examples of signs at work. The convenient examples of real signs at work that were available to him were provided by the language he was constructing *de novo* (CP 2.290 n.)

Now notwithstanding Peirce’s commitment to analysing assertions concerning matters of fact, it is possible and indeed necessary to the description of a formal system that the issue of particular meanings be set aside, and that the signs of that system be defined purely in terms of the logical transformations that are possible on them (MS 455:16v; CP 4,530; MS 466:17; MS 693:278, etc.) This is what Peirce will identify as the “Pure Mathematical point of view” (MS 455:16v, 17; MS 478:151, etc.), and he confesses that it is “a point of view far from easy to a person as imbued with logical notions as I am.” (MS 455 ibid.). Indeed, to give an idea of what pure mathematics is, Peirce suggests we “imagine [the graphs] described without any allusion whatever to their interpretation, [and] defined as symbols subject to the fundamental rules of transformation,” (MS 466:9). Likewise, the “archegetic rules” of the system are also defined as examples of the purely mathematical (MS 478:151) and the question arises whether they are representamens at all (ibid.). We recall the centaur: is it a representamen if its object does not exist? This case is more radical: is it a representamen if it *has no object*? But just as “mathematics appears … to be a science as much as any science, although it may not contain all the ingredients of the complete idea of a science” (CP 7.186), so may the formal signs of any “algebra” count as “signs” (CP 3.418) regardless of whether they are meaningful or “meaningless” (MS 466:17). If formal, non-representational signs are signs, then so too can the formal, non-representational *condition* of all signs be part of their signhood. It is this decision that is represented by the first trichotomy, and in

particular, by the distinction between the legisign and the symbol.

For some time, Peirce maintains a formal distinction between his use of the term "sinsign" and the term "replica". This is because the sinsign is supposed to capture the possibility that there are absolute singulars, "peculiar occurrences that are regarded as significant". Replicas replicate something governed by a law:

> A Legisign is a law that is a Sign. This law is usually established by men. Every conventional sign is a legisign [but not conversely]. It is not a single object, but a general type which, it has been agreed, shall be significant. Every legisign signifies through an instance of its application, which may be termed a Replica of it. Thus, the word "the" will usually occur from fifteen to twenty-five times on a page. It is in all these occurrences one and the same word, the same legisign. Each single instance of it is a Replica. The Replica is a Sinsign. Thus, every Legisign requires Sinsigns. But these are not ordinary Sinsigns, such as are peculiar occurrences that are regarded as significant. Nor would the Replica be significant if it were not for the law which renders it so. (CP 2.246)

New examples, such as "the ring of a telephone-bell" (CP 2.261) are adduced to demonstrate the eventhood of a sinsign. Yet even this is not an absolute singular, since recognition of the kind of event it is requires the assumption of a class of similar events. In the later versions of the second classification, though the word "replica" and "instance" continue to be used, the distinction Peirce is seeking here appears to lapse.[10] Notwithstanding these terminological hesitations, the major breakthrough has been achieved: the eventhood and the thinghood of signs can now be integrated into the theory, without this in any way compromising the "representative office" of the sign, and in such a way as to clarify how a sign acts on occasion to produce real effects.

The qualisign is a necessary corollary of the relation between the legisign and the sinsign. This is made clear, for example, at CP 2.245:

> A *Sinsign* .... is an actual existent thing or event which is a sign. It can only be so through its qualities; so that it involves a qualisign, or rather, several qualisigns. But these qualisigns are of a peculiar kind and only form a sign through being actually embodied,

We need seek no further explanation of its emergence. Nevertheless, it is tempting to speculate that the "qualities of the sign quâ thing" became explicitly thinkable for Peirce also as a result of the existential graphs. This is because they are icons; as such, it is their *material* properties (ms. 491, pp. 1-2) that render them fit to represent whatever they do represent. Accordingly, Peirce dwells at some length on the conventions for "drawing" and "reading" them (CP 3.475) and on the material conditions of their

capacity to perform their task. We find, for example, that he attends to the dimensionality of the graphs (e.g. MS 484; MS 490; cf. also MS 455:10). We find considerations of line, of surface, and of position; we find colour, and other modes of qualitative distinction (MS 482). We find him developing the notion of the sheet of assertion, using it to represent the universe of discourse (e.g. CP 4.512-515; MS 280:30-31), and the book of sheets representing alternative possible universes. We also find him including in the interpretation rules questions concerning the material implications of reading the graphs in different sequences enabled and constrained by different spatial arrangements (CP 3.475). In all of this work, Peirce is behaving like a scrupulous craftsman, and in all of it, the details he attends to acquire the status of signs, both representational and operational. I suggest that it is this work that allows Peirce to understand what the qualities of a sign taken as thing might be in concrete fact, and it is this that will make the first trichotomy more than a mere list of items established by the rule of the categories. When the ambiguities of the sinsign are sorted out, the first trichotomy is a tightly organised system of relations according to which the legisign or type is the rule governing the qualities of replicas and their capacity to act as signs (CP 2.245-6; CP 2.292).[29]

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Endnotes

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1. There are now three editions of the Harvard Lectures, the first in the Collected Papers (CP 5.14 - 212), the second a variorum edition which publishes material from the several subsisting drafts of the lectures (PPM), and the third, published in volume 2 of the Essential Peirce. Since the Essential Peirce draws on the work in preparation for the Chronological Edition of the Writings, the version of the Lectures it publishes will become the standard version. In my analysis of the Lectures, I have worked from the Essential Peirce, including in brackets paragraph references to the Collected Papers where there is correlation between the two texts. Where appropriate, variants published in PPM will also be referred to. Note that the new scholarly editions do not use Peirce’s coinage “pragmaticism”, but use the standard “pragmatism” throughout. I shall follow them in this usage. ↩
2. The integral edition of these lectures has been published in RLT (1992). ↩
3. Apel (1981, p.81) writes that the new role as ‘founder of Pragmatism’, imposed on him by James, “forced Peirce to return to an approach that he himself had always regarded as a maxim in the larger context of the logic of inquiry, not as the positive foundation and *ratio sufficiens* of a philosophy or even of a world view.” ↩
4. It can be objected to this reading that it implies circularity. This is correct, but there are two substantial grounds for accepting this consequence: (i) Peirce argues persuasively that mathematical languages have specific properties designed for particular tasks. Accordingly, there is no such thing as a “general question”, hence no answer has scope beyond the question that elicits it (CP 3.514-516); (ii) signs — languages — are instruments, designed for particular purposes. True, Peirce claims generality for his phenomenology, but insofar as this rests on mathematics, which requires the manipulation of a special notation to yield particular forms of icons, the claimed generality of “ordinary language” is restricted. For the argument concerning instrumentality, see Skagestad (forthcoming). Note that Peirce argues for a principle of what we may call “ontological agnosticism” concerning the objects of icons (see below); this principle necessarily extends to the objects of mathematics. Any construal of Peirce’s work of this period as foundationalist must therefore acknowledge that the foundation for which he argues is a fiction. ↩
5. Peirce does not take into account the fact that the history of utterances of any proper name

does endow them with some sort of signification, and that the social base of personal names in kinship systems does so also. I shall return to the difficulties associated with the diversity of the class of the index in Chapter 10. ↩

6. Moral goodness … may be possessed by a proposition or by an argument, but cannot be possessed by a rhema. Logical truth is the property of arguments (PPM 216-217). This claim concerning logical truth is accompanied by an argument to the effect that Peirce rejects the distinction between material and logical truth, or between the truth of a proposition (material) and the soundness or validity of an argument. His argument rests on this: “the only difference between material truth and the logical correctness of argumentation is that the *latter* refers to a single line of argument and the *former* to all the arguments which could have a given proposition or its denial as their conclusion.” ↩
7. It would be difficult to sustain an argument to the effect that genres are distinguished according to whether they use mixed or pure signs. Rather, what I am suggesting is that Peirce is drawn towards a criterion that other more recent philosophy of language has relied on: assertible will mean “seriously assertible”, as distinct from fictions, play-acting, jokes, parody, irony and so on. ↩
8. The materiality of the book is of particular interest to Peirce during this period. As J. Jay Zeman points out, “in 4.510ff., he discusses a graphical system which will have not just one, but a *book* of sheets of assertion; each of these will represent a different possible universe of discourse”; this counts as a serious anticipation of possible world semantics. (p.9). ↩
9. Montaigne, Essais, “Du démentir” Essays I:9. I owe the remarking of this quote to Bill Everdell, who sent it to the Peirce-List, and whom I thank. The link I make between the Montaigne and the Peirce relies on understanding “moeurs” as being translatable both as “manners” and as “morals”. ↩
10. In a marginal note printed with CP 4.395, dated 1910, Peirce writes: “I abandon this inappropriate term, replica, Mr. Kempe having already (‘Memoir on the Theory of Mathematical Form’ [Philosophical Transactions, Royal Society (1886)], §170) given it another meaning. I now call it an instance.” ↩