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## Antecedents and Alternatives

The purpose of this chapter is to put Peirce's semeiotic into context. What are its antecedents and alternatives? What is the type of question it is meant to answer? It might seem that we should begin with the theory itself, so that we can know what it is that we are talking about. But that theory is complex, and a preliminary statement of it would only raise objections before they can be answered. Sketching in the background leaves an empty space for the foreground objects. My hope is that this will allow you to see the shape of things to come and that it will provide some motive for enduring those rigors that lie grimly in wait.

### 1. Peirce

Charles Sanders Peirce (1839–1914), whose surname is pronounced 'purse', was a son of Benjamin Peirce, a Harvard professor of mathematics and astronomy and, at the time, America's foremost mathematician. Benjamin Peirce was also a major figure in, or, more accurately, one of the creators of, the American scientific establishment. With others, he founded the National Academy of Sciences and had a hand in much else of that kind. He recognized Charles' genius and raised him accordingly, with the consequence that the latter developed an extraordinary degree of intellectual discipline and almost no moral discipline. Although trained in chemistry, Charles Peirce made a number of profoundly original contributions of the first importance to mathematical logic, meanwhile earning his living making exacting empirical measurements in astronomy and geodesy (he made several important contributions to the theory and practice of measurement, as well). Formal logic

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and experimental work had each its impact on his philosophy. But what is perhaps most remarkable in Peirce's vast output is the number of fertile fields of investigation that he opened up and the startling originality of his ideas.

Pragmatism, for which Peirce is now best known, is the only major philosophical movement, barring the religious philosophies of the East, to have originated outside Europe. His work on the logic of relations, following Augustus De Morgan's and developed in turn by Ernst Schröder, contributed to Russell and Whitehead's epoch-making Principia Mathematica (1910-13). Slightly prior to Edmund Husserl, Peirce invented a phenomenology, or 'phaneroscopy', as he came to call it, that is comparable to Husserl's yet fundamentally different; we shall rely on it extensively in this book. He anticipated later developments, by such philosophers as Hans Reichenbach, Karl Popper, and Stephan Toulmin, in probability theory and in the theory of the natural sciences and their methods. I argue, in chapter 12, that he is still in advance of contemporary philosophy of science with respect to the issues raised in the 1960s by Paul Feyerabend and Thomas Kuhn. Moreover, he was the first of modern philosophers to recognize chance as being a basic feature of existence; at the same time, and deliberately against the modern temper, he revived Duns Scotus' realism as opposed to William of Ockham's nominalism. And so on.

All of this was accomplished even while his professional career and personal life fell into disarray. In the end, Peirce was impoverished and isolated, endlessly revising essays that he never finished. He never succeeded in bringing his ideas into systematic unity; he never published a philosophical book. The incompleteness, digressiveness, and profusion of technical detail of his writings accounts for the educated public's ignorance of his life and work and for the relative neglect of his philosophy even by professional philosophers.

## 2. Sources of Peirce's Semeiotic in Locke and Kant

Peirce's theory of signs had its origin in Kant's theory of knowledge. However, the term 'semeiotic' is almost certainly a transliteration of the Greek word that Locke used, at the end of his 1690 *Essay*, to name a new 'doctrine of signs'. That doctrine, Locke said, will be 'another sort of logic...than what we have been hitherto acquainted with' (Bk. IV, Ch. XII). This is a problematic legacy.

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Among signs, Locke included both words and ideas, words being 'signs of ideas' by which we convey ideas to one another, and ideas being 'signs the mind makes use of for the understanding of things'. Locke's reason for treating ideas as signs was that

since the things the mind contemplates are none of them, besides itself, present to the understanding, it is necessary that something else, as a sign or representation of the thing it considers, should be present to it; and these are *ideas*.

Does that make sense? It seems correct to distinguish ideas from things. My idea of an elephant is not the elephant itself. My idea may embody some error and is in any case incomplete; nor does it weigh as much. But is not my idea, for all of its defects, precisely how the elephant *is* 'present to [my] understanding'? Locke wrote as if I contemplated my idea, and not the elephant, and then inferred the elephant from it, much as I might infer an elephant from its footprint. But that is not how we employ ideas.

And is it not startling to be told that ideas are signs? A sign, in ordinary parlance, is something that makes us think of something else. Thus the footprint is a sign of the elephant: I see it in my garden and think, 'Elephant!' But an idea is not one thing that makes us think of another. It *is* the thought of that other. How, then, can it be a sign?

Locke explained, in the earlier and better-known parts of his *Essay*, that ideas are derived from particular experiences of sense or of reflection and that they are related to their objects or 'archetypes' as effect to cause and, in some cases, by resembling their causes. Presumably, it is through these two relationships, of causality and resemblance, that ideas are signs. For, in ordinary usage, we call the footprint a sign of the beast that produced it, and we infer which beast that was from the resemblance of print to foot. As causal relations and resemblances ground signification in that sort of case, one might suppose that they do also in the case of ideas.

But that lands us in the same difficulty over again. For the ground of signification is one thing, and signification itself is another. Causal relations and resemblances make something, X, a sign of something else, Y, only because they cause us to think of Y once we apprehend X. Whatever the ground of its power to cause us to think of Y, X signifies Y only because it has that power. Now, if X itself is a thought of Y, then Y *is* being thought of. Another step is not required to make Y an object of thought. Hence, X does not have to produce a thought – a further thought – of Y. But, then, it is not a sign of Y. It is of no relevance in that case, that X is either caused by its object, Y, or that it resembles Y. Those relations,

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even if they obtain and even if they are somehow involved in X's being a thought of Y, do not make X a sign.

These reflections are sufficient to justify serious doubt about any attempt to analyze thought as being a species of sign. Of course, thoughts sometimes are signs. If you notice that thoughts of food keep recurring to you, you might take that as a sign that you are hungry. If I notice that you are thinking a great deal about death, I might take that as a sign that you are depressed. But what these thoughts signify is something other than what they are thoughts of.

Locke's semeiotic theory of mind faced another difficulty as well. Since he held that all ideas derive from particular experiences, as if they were lingering images thereof, he had difficulty accounting for general ideas, for example, of triangularity in general rather than of this or that particular triangle. Below (chapter 3, section 5), we distinguish a sense of generality in which an image, its cause being ignored, is general; but that is still not the generality of a common noun or of a concept, which comprises a continuum of possible variations. The concepts in which we think are always general - gray in general, elephant in general - even when they are applied, through perception, to particular objects. To think, 'This elephant is gray', is to conceive of it as one of the varied class of elephants and as having some particular shade of the color, gray; but that thought does not distinguish this elephant from all the others, nor its shade of gray from other shades. So far as we think of it as 'an elephant' and as 'gray', we are not thinking of it *in* its particularity. To be sure, we think of it as being particular; but nothing is more general than being particular. Being particular is a property that every particular shares.

Kant, unlike Locke, supposed ideas to be general, but he did not say what ideas are. As a term for any mental content, Kant followed Christian Wolff in using *Vorstellung*, or presentation; but he did not say what *Vorstellungen* in themselves are. Peirce developed the Kantian doctrine in a contemporary (though also Platonic) way, by identifying thought as internalized discourse: we think in the words of the language we have learned. Peirce did not limit thinking to the verbal – it can be diagrammatic and otherwise in images – but we think mostly in words, and thus our capacity to think is dependent on our having learned a language. With a different language to think in, we would think somewhat differently. (Peirce did not entertain the very speculative hypothesis, now in vogue, that there is a language common to all minds – 'mentalese' – distinct from the languages people speak.) But common nouns, verbs, adjectives, and adverbs are general, and we cannot say anything without using some

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of those general terms. There is no meaningful sentence (unless elliptical) wholly couched in proper names and demonstrative pronouns. That holds for any language (but not for diagrams or images, except so far as, by verbal commentary, they are made to stand for variations they do not themselves comprise). Hence, thought is inherently general.

Now, words no more than ideas are normally called 'signs'. Nevertheless, words, when spoken or written, do conform to the general idea of signs as being that which leads one to think of something else. One hears or reads the word 'elephant' and thinks, not of that sound or inscription, but of a large, gray mammal. And there is a philosophical tradition, going back to Aristotle, of talking about words as being signs. But if thought is essentially verbal and if words are signs, then thoughts are signs. Thus we may reconstruct Peirce's return to Locke's implausible doctrine, albeit on a new basis and modified.

But how do words signify? Equivalently, how do they acquire their meanings? Locke and many others have supposed that the answer is that words express ideas, by convention. Recall our earlier distinction, between significance and its ground. The conventional relation of word to thought is a third ground of significance, alternative to causality and resemblance. As grounding the significance of a word, the idea must exist already (not necessarily in the mind of the speaker, and never only in his mind, but within the stock of ideas possessed by that community to which speaker and hearer belong). It is expressed, not produced, by the word spoken. Thus, linguistic meaning is accounted for by assuming an independent realm of thought. First there is thought, and then there is language, the primary function of which is to express thought. The first statement of this view was by Aristotle:

Now spoken sounds are symbols of affections in the soul, and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But what these are in the first place signs of – affections in the soul – are the same for all; and what these affections are likenesses of – actual things – are also the same. (*De Int.* 1, Ackrill trans.)

For 'affections in the soul' we may read thoughts and sensations. As they are likenesses of their objects, the relationship is natural and universal; words, being conventional, vary from nation to nation. Words obtain objects only by standing, by convention, for affections in the soul.

Peirce could not adopt that view. For him, we learn to think in learning to speak. Thought therefore depends on words having a meaning. Meaning therefore cannot depend on thought. But if the meaning of

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a word is not the thought that it expresses, then how do words mean? On what is their significance based? Possibly, neither thoughts nor words exist without the other; possibly, they are significant together or not at all. But even if so, whence is their significance?

We have, now, two questions and two problems. First, what is significance? Is it for one thing to produce a thought of something else? If so, then if a thought is a sign, we have an infinite *progressus*: each thought must produce another, *ad infinitum*. Second, what is the ground of significance? If a word signifies by expressing a thought and thoughts are words, then we have an infinite *regressus*: each thought-word must express a preceding thought-word, *ad infinitum*.

### 3. Brentano on Intentionality

What makes one thing to be of or about another? Being of or about is a peculiar property, hard to explicate. It is also a property that thoughts and signs share. We need a name for it. Peirce, since he held that thoughts are signs, could rely on the word 'significance' to cover all cases of being 'of' or 'about'. If we wish to hold the question open, whether thoughts are signs, we shall need another term. 'Intentionality' is the best candidate. It has come to be commonly used in lieu of the term 'intentional inexistence', which was introduced in this connection by a contemporary of Peirce's, the Austrian philosopher Franz Brentano (1838–1917), in his 1874 book, *Psychologie vom empirischen Standpunkt*. Peirce appears never to have read that book; he never referred to Brentano and never used 'intentional' or its cognates in Brentano's sense, though he did occasion-ally refer to the Scholastic doctrine of first and second intentions, from which Brentano derived the term.

Intentionality in this sense, at least so far as Brentano saw, does not imply a purpose, as does the English word 'intend'. They have the same root, however: *intendo*, the Latin for stretching or straining toward something. Thus Brentano:

Every mental phenomenon is characterized by what the Scholastics of the Middle Ages called the intentional (or mental) inexistence of an object, and what we might call...reference to a content, direction toward an object (which is not to be understood here as meaning a thing), or immanent objectivity....

This intentional inexistence is characteristic exclusively of mental phenomena. No physical phenomenon exhibits anything like it. We can, therefore, define mental phenomena by saying they are those phenomena which contain an object intentionally within themselves. (Brentano 1973[1874], pp. 88–9)

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There are three things to notice in this passage: Brentano took intentionality to be coëxtensive with the mind; he understood intentionality as involving an 'inexistent' object; and he supposed that that object is somehow contained in the thought or other mental act in which it is, as we shall say, intended. We will return to the first and third propositions anon. For the present, let us try to understand what is meant by 'intentional inexistence'.

To think is to think of something, which is the object of that thought. 'Object' is here being used in a broad sense, for anything about which one can think, and not for physical objects only. The point is, one cannot say what a thought is without mentioning its object. Two thoughts are distinguished from one another by having different objects. And so also for desires, which are for this or that; fears, which are of this or that; and so on. Each has an object (normally; though there are also nameless dreads and restless yearnings for one-knows-not-what). And yet these objects need not exist; one fears the unreal and desires the impossible. Consider unicorns and griffins. Neither is real, neither exists at all, yet the concept of the one is distinguished from the concept of the other by the fact, and only by the fact, that a unicorn is one thing and a griffin is something else. One has a horn, the other has wings. These objects are 'inexistent' in this sense: existence is immaterial to their being objects of thoughts, fears, desires.

But how can something be an object without existing? That is the sort of question, it would seem, that led Brentano to declare that the inexistent object is 'in' a thought or other intention, as its 'content'. It exists after all, only not where it was thought to exist. But that is clearly wrong. A unicorn is not the sort of thing that could be in a thought; what would it find there to eat?

A way to avoid attributing existence to the inexistent is to shift from the 'material mode' of talk about things to the 'formal mode' of talk about talk. Very roughly: something has an inexistent object if (a) it cannot be fully described without mentioning that object and (b) that object need not exist in order for the description to be true. More on this in the next section. On the assumption that some such explication can succeed, we proceed to speak freely of the intentionally inexistent.

In addition to his conception of intentionality, we can distinguish two theses that Brentano propounded about intentionality. The first is his claim that intentionality is distinctive of the mental. Physical things and events do not have objects of or about which they are. According to Brentano, everything mental possesses intentionality, and nothing that is

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not mental does. The second thesis is the one he was primarily concerned to establish in his book, that the mental is so fundamentally different from the physical that it eludes any attempt at naturalistic explanation: it must be made the subject of a science, descriptive psychology, that is not explanatory and that differs in method from the natural sciences. Let us examine both theses, beginning with the second.

In the natural world, relational properties, such as fatherhood or sitting, require real objects. One is not really a father if there is not a real child that he fathered, and one is not really sitting if there is not something real on which he sits. But one can really be thinking of unicorns. Brentano concluded that the mind is inexplicable by the natural sciences. At what point in a physical explanation can something that does not exist be introduced? If at no point, then physics cannot account for intentionality. Nor, thought Brentano, can intentional states be observed in accordance with the canons of observation in the natural sciences. We can see, locate, and measure only what does exist. Therefore, we could never detect mental states by such means, as they have inexistent objects. The dichotomy Brentano discerned between the psychical and the physical is a methodological variant of Descartes' ontological dualism of mind and body.

Some of Brentano's students, but most importantly Husserl, replaced his idea of psychology with that of a new science, of phenomenology, in which the identification of intentionality with the mental is a fundamental principle, and in which the exclusion of naturalistic explanation is developed and strengthened. In all its variants, even Peirce's, phenomenology is merely descriptive, not explanatory. But in Continental phenomenology it is usually maintained that intentionality can only be grasped in a self-reflective consciousness (the phenomenologists reject Brentano's reference to mental *phenomena*), and never explained. These additional assertions are omitted from Peirce's phenomenology.

I take the philosophy of Brentano, Husserl, and Continental phenomenology generally to be a major alternative to Peirce's mature semeiotic. The former denies the very possibility of a naturalistic explanation of intentionality, whereas a central thrust of Peirce's mature semeiotic is that intentionality may be explained naturalistically. Peirce rejected all dualisms, on the principle that, by positing inexplicables, they block the road of inquiry. As a corollary of that principle, he in later years proposed a doctrine of 'synechism', of the continuity of all things. The principles, of synechism and of not blocking the road to inquiry, are grand pronouncements. Of more moment would be the concrete development of

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a theory that does exhibit mind's continuity with nature. And that is what I shall argue Peirce's mature semeiotic does.

As between Peirce and the phenomenologists, the *crux criticorum* is Brentano's first thesis, of which one part is that intentionality is not to be found outside of the mind. For if there were extra-mental examples of intentionality, they would provide that element of continuity, satisfying Peirce's synechism, by which the natural and the mental, the observable and the introspectable can be bridged.

The identification of intentionality with the mental is often treated as if it were a tautology. That was not Brentano's view. He began with a rough enumeration of mental phenomena *not* overtly identified by their intentionality. And his account of intentional inexistence makes no allusion to the mind. The definition of the mental, as 'those phenomena which contain an object intentionally within themselves', is a conclusion for which Brentano argued. Hence, it presupposes that we understand what intentionality is without reference to the mind. Thus it is conceivable that one might find mental phenomena lacking intentionality and/or nonmental phenomena possessing intentionality. And, indeed, apparent examples of both sorts – apparent counterexamples to Brentano's thesis – have been discussed in the literature, and to some extent by Brentano himself.

There are types of phenomena Brentano counted as mental that seem to lack intentionally inexistent objects and some that lack any object at all. For example, seeing is mental, but if something does not exist we cannot see it (though we may think we see it). And pains, though they have locations, have no objects at all; we simply suffer them. Brentano dealt with seeing easily: it involves having an image of, or thinking of, an object, and the objects of images and thinking are inexistent. The mental, then, can be said to be either that which has an inexistent object or that which has a part that has an inexistent object. That way, intentional inexistence is still part of anything mental. Pains require a further stretch. To accommodate them, Brentano denied that there is a sharp boundary line between feeling and striving (1973 [1874], pp. 235ff.). Pain is hardly separable from the desire to be rid of it, and desire has intentionally inexistent objects.

We have no need to form an opinion about those topics. Of more importance to us are the examples of nonpsychical phenomena that seem to possess intentionality. They fall into two groups. First, spoken or written words, as well as natural signs such as smoke or a falling barometer, are physical, and yet they have objects that, in typical cases, need not exist.

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Words can lie, not all smoke is caused by fire, and so on. Such examples clearly conform to Brentano's definition of intentionality and yet they are not thoughts or other mental acts or states. They may nevertheless be accommodated to Brentano's thesis easily, if it can be shown that their intentionality is derivative from that of the thoughts that words and other signs either express or elicit. That is the line that Roderick Chisholm (1952) took, and it is implicit in Husserl.<sup>1</sup> It leads straight back to the view shared by Aristotle and Locke, that significance derives from thought. By its means, Brentano's thesis is amended, but its underlying idea is preserved intact: there is intentionality outside of the mind, it can be said, but that sort of intentionality is utterly dependent on the mind.

The other candidate for extra-mental intentionality is animal behavior, which seems always to be goal-directed. Dogs look for bones they have buried and salmon swim upstream toward the beds from which they were spawned. But a bone might be gone and a spawning bed destroyed. Can the behavior of the dog and the salmon be adequately described without referring to the objects sought, which might not exist? If not, then those actions would seem to be intentional, since they have inexistent objects. Suppose that is so. Brentano's thesis survives nonetheless if we can plausibly attribute something like thought to the lower animals.<sup>2</sup> The idea here may be that goal-directed behavior is always directed by some thought or image, and so on, of the goal. However, that stratagem becomes increasingly implausible as we work down the animal kingdom, from dogs to salmon to lice to paramecia. For paramecia, too, exhibit goal-directedness, for example, swimming up chemical gradients toward a food source. But is it plausible to attribute ideas of their goals even to salmon, much less to paramecia?

An alternative strategy, proceeding from the same assumption, that goal-directedness always requires direction by something mental, is to deny that animal behavior, at least beneath a certain level, roughly mammalian, is genuinely goal-directed. On that view, what appears to be goaldirectedness is purely mechanical, the operation of mechanisms indifferent to consequences. The description of those operations will be a complete account of the animal's behavior, and in that description there will be no reference to anything that does not exist or that need not exist.

<sup>&</sup>lt;sup>1</sup> E.g., 'A thing is only properly an indication if and where it in fact serves to indicate something to some *thinking* being'. Husserl 1970 [1900–1], p. 270, emphasis added.

<sup>&</sup>lt;sup>2</sup> Brentano does that forthrightly (1973 [1874], pp. 40–1); for a more recent statement of the same, see Searle 1983, p. 5.