

# Indexicality as Perceptual Mediation

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When terms like “index” and “indexicality” are invoked, authors tend to take one out of two, equally strange, points of view: either they simply ignore the fact that, historically, Peirce is responsible for introducing at least the former term (and perhaps some corresponding concept) into our vernacular; or, like some old Talmud scholar reading the Scriptures, or a Marxist adept of the sixties, they are exclusively intent upon finding out what Peirce “really meant”, without making any distinction between the internal philological truth, and that which is true in the world.

Here, I will not be content with finding out “what Peirce really said”, nor will I just extract out of the entire body of the text that which I happen to need, but I will try to reconstruct Peirce’s conception with a view to fairness, and then go on to criticise it, from the standpoint of what appears relevant to present-day semiotics. In so doing, however, I will suggest a distinction between “index” and “indexicality” which is not directly justified in Peirce’s writing, though it may be derived from the latter. This will have the effect of making indexicality into a property of perception generally.

## The index in its triadic home

In Peirce’s work, the index appears, together with the icon and the symbol, as a member of one of the numerous triads profusing the world of our experience. In this particular case, the division is made on account of the particular character of the relation joining expression and content (“representamen” and “object” in Peircean parlance). As far as I have been able to tell, Peirce’s formulations are compatible with two quite different conceptions: on one hand, there may be three properties, iconicity, indexicality, and symbolicity, which, by themselves and without any further requirement, trigger off the recognition of something as a sign, and at the same time as a particular kind of sign. On the other hand, something that is already, for some other reason, recognized as being a sign, could be discovered to be an indexical sign, rather than an iconic or symbolic one, by means of tracing it back to the indexical ground. In the case of iconic signs, it should be clear that the counter-arguments which have been formulated can only apply to the former case; yet we have argued elsewhere that, in least in the case of iconicity, both conceptions are valid and serve to distinguish different types of iconicity (Sonesson 1989a; 1996ab, to be published)

In the following, I will take the latter conceptions for granted: thus, indexicality can be conceived as a property which makes something which is a sign into an index. However, by a slight shift of emphasis, it could be construed as a property which, when added to the sign function, creates an index, but which, in addition, may have other parts to play in the constitution of meaning. Such a conception might account for the ambiguities of the Peircean notion, as well as for some of the uses to which it has been put subsequently.

Given the long period through which Peirce's thinking evolved, and the state in which it came down to the public, it is not surprising that indexicality, like so many Peircean notions, should be so variously, and inconsistently, defined, and that many of the examples given hardly fit in with the definitions (cf. Goudge 1965; Sonesson 1989a; 1996abcd).

In this context, it is important to show a certain "fairness" to Peirce: however contradictory his various definitions may appear, in between themselves, and in relation to the examples given, we should at least try to make sense of the implicit structural argument contained in Peirce's theory: indexicality must be understood in such a way that, together with two other relationship, viz. iconicity and symbolicity, it will exhaust the domain of signs. In order to make sense, the division must depend on the same criteria in all cases, viz. on the nature of the relationship between expression and content, and more precisely, that which serves as a motive for our joining them together (contrary to what is the case with the extended lists proposed by Sebeok and Helbo). Thus we should interpret indexicality, as well as iconicity and symbolicity, in such a way that no fourth sign type appears to be needed, at least until the whole enterprise has been shown to be unfeasible.

### **Iconic and indexical grounds**

For those who are no true believers, it may be difficult to make sense of Firstness, Secondness, and Thirdness. And yet it will be necessary to start out from these logical rudiments of Peircean metaphysics. Indexicality pertains to the general category of Secondness, which means that it concerns two items and/or the relation between them. The sign being a Third, there is every reason to think that it cannot be constituted by indexicality alone. Perhaps Peirce is really considering "potential sign-vehicles" in order to investigate their "capacity to serve as signs" (Bruss 1978:87). More substantial arguments for this may be derived from a consideration of the Peircean concept of "ground", which is useful for understanding the nature of indexicality, although it seems to disappear in later texts.

In one of his well-known definitions of the sign, or rather the sign-vehicle, Peirce (2:228) describes it as something which "stands for that object not in all respects, but in reference to a sort of idea, which I sometimes called the ground of the representation". According to one of his commentators, Greenlee (1975:64), the ground is that aspect of the referent which is referred to by the expression, for instance, the direction of the wind, which is the only property of the referential object "the wind" of which the weathercock informs us. On the other hand, Savan (1976:10) considers the ground to consist of the features picked out from the thing serving as expression, which, to extend Greenlee's example, would include those properties of the weathercock permitting it to react to the wind, not, for instance, its having the characteristic shape of a cock made out of iron and being placed on a church steeple. In one passage, however, Peirce himself identifies "ground" with "abstraction" exemplifying it with the blackness of two black things (1.293). That, of course, would be an iconic ground (such as the similarity of the weathercock to a real cock); an indexical ground, in a parallel fashion, would then be whatever it is that connects the properties of the wea-

thercock as a physical thing to the direction in which the wind is blowing. The ground, it appears, is a part of the sign having the function to pick out the relevant elements of expression and content. Therefore, the ground is really a principle of relevance, or, as a Saussurean would say, the “form”, connecting expression and content (cf. Sonesson 1989a:205ff).

Generally put, an indexical ground, or indexicality, would then involve two “things” that are apt to enter, in the capacity of being its expression and content (i.e. “representamen” and “object”), into a semiotic relation forming an indexical sign, due to a set of properties which are intrinsic to the relationship between them, such as it is independently of the sign relation. This kind of ground, which is a relation, is best conceived in opposition to an iconic ground, which really consists of two sets of properties which happen to be of the same kind, and the symbolic ground, which is a non-entity, since the motivation of the sign has no existence independently of the sign itself. This is the sense in which indexicality is Secondness, iconicity Firstness, and symbolicity Thirdness.

To be more precise, it would appear that, in Peirce’s view, two items share an iconic ground, being thus apt to enter, in the capacity of being its expression and content, into a semiotic function forming an iconic sign, to the extent that there are some or other set of properties which these items possess independently of each other, which are identical or similar when considered from a particular point of view, or which may be perceived or, more broadly, experienced as being identical or similar, where similarity is taken to be an identity perceived on the background of fundamental difference (cf. Sonesson 1989a,III.1-3.).

Contrary to the indexical ground, which is a relation, the iconic ground thus consists of a set of two classes of properties ascribed to two different “things”, which are taken to possess the properties in question independently, not only of the sign relation, but of each other. Indexicality as such involves two “things”, and may therefore be conceived independently of the sign function. Since iconicity is Firstness, however, it only concerns one “thing”. Indeed, as Peirce (3.1.; 3.362; 4.447) never tires of repeating, a pure icon cannot even exist: it is a disembodied quality which we may experience for a floating instant when contemplating a painting out of awareness. Perhaps, then, to use some of Peirce’s own examples, the blackness of a blackbird, or the fact of Franklin being American, can be considered iconicities; when we compare two black things or Franklin and Rumford from the point of view of their being Americans, we establish an iconic ground; but only when one of the black things is taken to stand for the other, or when Rumford is made to represent Franklin, do they become iconic signs (or hypo-icons, as Peirce sometimes said). Just as indexicality is conceivable, but is not a sign, until it enters the sign relation, iconicity has some kind of being, but does not exist, until a comparison takes place. In this sense, if indexicality is a potential sign, iconicity is only a potential ground.

In sum, then, iconicity begins with the single object; indexicality starts out as a relation. The problem, therefore, consists in determining what kind of relation it is.

### **Contiguity as opposed to causality**

Such a view of indexicality as the one reconstructed above best fits in with the most general formulations given by Peirce, according to which it depends on there being a “real connection”, an “existential relation”, a “dynamical (including spatial) connection” and even, in one of its many conceivable senses, a “physical connection” between the items involved (Peirce 1.558; 1.196; 2:305; 3.361; 8.335). From this point, it seems natural to go on to argue that indexicality is involved

with “spatiotemporal location” (Burks 1949:683ff), which underlies the “indices” of such logicians as Bar-Hillel and Montague, the “egocentric particulars” of Russell and the “shifters” of Jespersen and Jakobson. In fact, however, as Savan (1976:25ff) observes, location in time and space will only result, to the extent that some system of co-ordinates has been conveyed by other types of signs – or, as I would add, to the extent that it can be presupposed by the ongoing practice of the ordinary world of our experience, the world taken for granted, our common Lifeworld.

More generally, many of the examples adduced by Peirce would justify us in going along with Jakobson (1979), when he claims that indexicality is based on “real contiguity”, and is connected with the syntagmatic axis of language, and the rhetorical figures of metonymy. To Jakobson, however, metonymy actually involves, not only the relation of contiguity of traditional rhetoric, but also that of part to whole, known in rhetoric as synecdoche. This distinction may be reestablished inside the category of indexicality (cf. Nöth 1975:20f), and could be described more generally in terms of contiguity and factorality (cf. Sonesson 1989a:40ff).

There is, however, another series of definitions which suggest that indexicality is, in some way, dependant on there being a relation of causality between the expression and content of the potential sign: that is, the index supposedly “denotes by virtue of being really affected by that object” (2.248). Apart from this, Peirce also makes a number of other claims about indices, many of which are repeated by Dubois (1983: 48f, 60ff) when trying to demonstrate that photographs are indices: that they refer to unique, singular objects (2.283); that they testify to the existence of its object (2.316); that they show up the object without asserting anything about it (3.361); and that they point, by “blind compulsion”, to the object of reference (2.306).

Although the definition by causality is probably the most commonly quoted of all the definitions Peirce offers of indexicality, it has come in for serious criticism. Some commentators would reject the relation between causality and indexicality altogether, while others would see it as merely coincidental. Burks (1949:649ff) takes Peirce to task for confusing the semiotic relation with mere causality, when treating, for instance, the weathercock, which is causally affected by the wind, as an instance of indexical signs: it is not clear, however, why causality should preclude indexicality, since the fact of the wind causing the weathercock to turn must be seen by the observer to be a contiguity in order for it to receive an interpretation.

More to the point, Goudge (1965:55) claims that not all examples of indexical signs given by Peirce are susceptible of receiving a causal explanation: the Pole Star, for instance, may be an index of the north celestial pole, but it is in no way caused by that astronomical location. Nor is a personal pronoun, or even a pointing finger, as I have argued elsewhere (Sonesson 1989a:39, actually caused by the person or thing for which it stands; and if they may be said to motivate it, then this is also true of all other signs. Moreover, it could be added that even some cases which are often taken to confirm the causal explanation are actually doubtful: the causal agent may not be that which is signified, or may not signify in the same respect in which it is the cause. Of all the innumerable causes that have to concur in order for a rap on the door to occur at a particular moment, the door and the material of which it is made, and a particular person and his moving hand may seem to be the most important. However, if, at this moment, no person in particular is expected, the sign will only carry some very general meaning such as “there is somebody (probably a human being) outside the door who wants me to open it and let him in”. Neither the particular person, nor his hand or the door, which are the causal agencies, are here parts of the meaning of the sign (Sonesson 1989a:39).

The idea that indices must point to their object by “blind compulsion” could be taken as a special case of causality, this time applied to the interpreter, and thus more properly described as motivation. Greenlee (1973:86) believes this to constitute a contradiction on the part of Peirce, since the interpreting mind is on the level of Thirdness, and thus lies outside the definition of indices, which derives from Secondness. It seems, however, that the contradiction, if there is one, should be located at another point, for already the “immediate object” must (perhaps contrary to the “dynamical object”) be a mental unit. There is certainly an extremely Pickwickian sense in which all indices force us to attend to their objects, but in that sense the observation applies to all signs, and even to other kinds of meaning).

## **Indices and indicators**

This brings us to another, rather common, confusion: that between indices and indicators. The term chosen by Peirce certainly suggests that all indices, like the pointing index finger, or an arrow, serve to pinpoint a particular object, to isolate it and bring it out of the, typically spatial, context into which it is ordinarily enmeshed; and this is indeed what Peirce affirms (3.361; 4.56).

However, if we use the term indicator to describe signs which are employed to single out an object or a portion of space for our particular attention, it may be argued that they are not necessarily indices in Peirce’s sense, and that they are not, in any event, sufficiently characterised by being so classified (cf. Sonesson 1989b:50ff, 60f, Goudge 1965: 65ff). Thus, certain indicators, such as pointing fingers and arrows, do suppose a relation of contiguity with that which they point to; but this is not necessary, or even possible, in the case of many verbal indicators, most maps, and the photographic options depending on film, lighting, and frame described as indexical in the semiotics of photography; for, in these cases, the indicative gesture is merely recreated at the level of content. At least some of these examples would also be described by Peirce as not being “genuine” indices.

On the other hand, real indicators, such as fingers and arrows, are equally contiguous to a number of objects which they do not indicate, for instance to the things which are at the opposite side of the arrow-head, in the direction to which it does not point (Sonesson 1989a:47). Therefore, something beyond mere indexicality is required, in the case of the arrow, for instance, the forward thrust of the arrow-head as imagined in water, or the sentiment of its slipping from our hands, as Thom (1973) has suggested. To term certain signs “indicators” is, obviously, to make a categorisation of signs on the basis of their functions, as seen in relationship to the over-all scenes in which signs are produced. We should not expect this categorisation to coincide with the one stemming from Peirce’s classification, which depends on the nature of the relationship between the expression and the referent or content of the sign. Of course, from this point of view, the term “index” is a misnomer, for although the finger so termed may function as an index, its specific function goes beyond that.

Another sense of index current in semiotical literature, which has no obvious relation to that of Peirce, is the one employed by Prieto (1966:15ff; in French “indication”). In order to describe how signs come into being, he imagines an elementary situation in which a set of hoof-prints made by a horse may be observed. Something which Prieto calls the “significative indication” tells us that there is a horse around. There is not, in this case, as there would be in a linguistic sign, any “notificative indication”, which would convey to us the idea corresponding to the phrase “attention! this is intended to contain a message”. In this particular case, the hoof-prints would be indices also in

Peirce's sense, but not for the same reason: not because they are non-intentional, but because of being markings on a surface. In the case of a linguistic sign, however, the significative indication, which corresponds to the perception of the sound, would not ordinarily be indexical.

### **The singularity of perception**

Indicators normally concern singular objects, as I noted above. Indeed, it is also part of the claim made by Peirce (2.306) that all indices refer to a singular instance, not to some general category. Objections to this generalisation easily present themselves. From the size of an imprint left on the ground it may be possible for the interpreter to determine that the animal which has passed by is a horse, rather than a donkey, but normally there would be nothing in the expression of this index itself permitting him to determine the identity of the horse in question, although, if he knows that there is only one horse and one donkey inside the fence, he can draw a plausible conclusion as to which individual animal is involved. It might be argued, of course, that in any case, only one, particular, animal left the imprint; but the case is quite similar to the knock at the door, where, although a particular person must be doing the knocking, the knock itself merely means "there is someone on the door", unless we possess some additional information. The same argument may be applied to the photograph, in particular to the photogram, in which the referent would not normally be recognisable (cf. Sonesson 1989b:59ff).

Goudge (1965: 60f) also argues against this generalisation, quoting the case in which a demonstrative pronoun ("that") refers to Newton's First Law, which as such, is not a singularity. Outside the linguistic domain, other interesting examples can be found. According to Peirce, the rolling gait of a man is an index of his being a sailor: but being a sailor is a social role, not a singularity. More importantly, however, the gait is part of a social habitus defining this role, which makes it into a part of a whole (a factorality). But if the relationship of a property to that of which it is a part is indexical, then it is reasonable to think that indexicality will also account for the relation between an item and the class of which it is a member. Such examples are apparently not among those mentioned by Peirce, but they are often cited by later semioticians: thus, for instance, if a pretzel is an index of a bakery (cf. Norrick 1983:230f), then that must be in virtue of its being a member of the class of products sold in the bakery. A class is of course not a singular object, but it may be considered a collection of objects. Often, however, such a class is itself determined by abstract properties. A tailor's swatch, for instance, is a sign of a class of cloth having the same quality and pattern, but not the same shape or size. Some samples, for instance colour samples, may even be indices of abstract properties themselves (Sonesson 1989a:43ff, 137ff; 1989b: 60f).

Here the importance of what we called the structural argument comes to the fore: if we are going exhaust the domain of signs admitting only three kinds of relationships, neither causality nor singularity can be defining characters of indexicality. This also applies, as we shall see, to several other properties usually ascribed to indices.

In order to consider whether indices demonstrates the existence of their object, it might be necessary first to discuss the meaning of existence (cf. Goudge 1965:58ff). However, if existence is taken to imply the physical occurrence in the ordinary world of our experience, it does not seem to apply to all indices, not, for instance, to the cases considered above, in connection with singularity. A person having the rolling gait of a sailor may, in fact, not be a sailor; and the pretzel hung out above the bakery (admittedly an icon of an index) is still to be seen when the bakery is closed, and no bakery products are for sale. Plausible indices of a unicorn may be produced using a set of

horseshoes and a bull's horn, and do not testify to the existence of unicorns. A faked photograph of a unicorn, or whatever, may be assembled, using pieces of real photographs, processing them in a computer, or even creating them entirely by means of a computer program. Of course, the latter pictures are no photographs, and so no indices, but there is no way we can discover that from looking at them (cf. Sonesson 1989b:61f). For all practical purposes, then, indices cannot testify to the existence of their objects.

As discussed above, indexicality emerges as a potential sign, or, better, as a particular kind of ground characterising indexical signs, but which may also be found outside signs. Perception would seem to be profused with indexicality. Indeed, proximity is a basic factor of perception according to Gestalt psychology, and is also one of the relationships included in topological space perception. The relation of part to whole is fundamental to Gestalt relations themselves. All indexical relations involve either contiguity or factorality. Those indexicalities which are not as yet signs, being based on items which are not situated on different levels of directness or thematisation, or not clearly differentiated, may be described as contexts (or 'pairings', in Husserl's sense). Any experience of two elements being related by proximity, conceived as a primordial perceptual fact, may be considered an actual perceptual context involving contiguity. A actual perceptual context involving factorality is any experience of something as being a part of a whole, or as being a whole having parts (cf. Sonesson 1989a,I.2.5).

When only one of the items is directly given, and the other precedes it in time, or follows it, we may speak of an abductive context (protention and retention, respectively). The term abduction is employed here in Peirce's sense, to signify a general rule or regularity which is taken for granted and which links one singular fact with another. As opposed to deduction and induction, abduction (or "hypothesis" as Peirce first called it) "is where we find some very curious circumstance, which would be explained by the supposition that it was a case of a certain general rule, and therefore adopt that supposition" (2.624). All experience taking place in time is of this kind, for instance our expectancy, when seeing the wood-cutter with the axe raised over his head, that on the following moment, he is going to hit the piece of wood (contiguity protention), and that on the moment just preceding he lifted the axe to its present position (contiguity retention). Indeed, Peirce's principle is known quite independently in perceptual psychology as the theory that perception consists in hypothesis-testing (cf. Sonesson 1989a, 30ff, 251ff).

Abductive contexts involving factorality would be, using some Peircean examples, the gait of the sailor, the symptom as part of the disease, part and whole in a picture, the partly destroyed Minoan fresco, a jig-saw puzzle, a piece of torn paper (the last three examples combine factorality and contiguity). We may use the term proto-index for an indexicality which is only momentarily a sign, as would be the "tableau vivant" of the wood-cutter, the photographic pose (which is a limitation in time), that what is seen in the view-finder (with spatial limits), and indeed many of the examples given above, to the extent that the flow of indexicalities is momentarily halted.

All perception is profused with indexicalities. From this point of view, the archaeologist's craft consists in transforming indexicalities of decayed cultures into proto-indices and indices accessible to us. The signs which he reads out aloud for us were merely indexical grounds in the ongoing practice of a bygone world.

## From indexicality to index

This is a propitious moment to recall the very different use of the term “index” made by Piaget (1967) when introducing his idea of the semiotic function (which, in the early writings, was less adequately termed the symbolic function), which is a capacity acquired by the child at around 18 to 24 months of age, enabling him to imitate something outside the direct presence of the model, to use language, make drawings, play “symbolically”, and have access to mental imagery and memory. The common factor underlying all these phenomena, according to Piaget, is the ability to represent reality by means of a signifier which is distinct, or differentiated, from the signified. Even before that age, however, Piaget believes that the child is able to “connect significations” by means of “indices” and “signals”, which do not suppose any such differentiation between expression and content. The signifier of the index is, Piaget says, “an objective aspect of the signified”; thus, for instance, the visible butt of an almost entirely hidden object is the signifier of the object for the baby; and the tracks in the snow stand for the prey to the hunter, just as any effect stands for its cause. But when the child uses a pebble to signify candy, he is well aware of the difference between the two, which implies, as Piaget tells us, “a differentiation, from the subject’s own point of view, between the signifier and the signified”.

It is important to note that, while the signifier of the index is said to be an objective aspect of the signifier, we are told that in the sign, expression and content are differentiated from the point of view of the subject. We could actually imagine this same child that in Piaget’s example uses a pebble to stand for a piece of candy having recourse instead to a feather in order to represent a bird, without therefore confusing the feather and the bird: then the child would be using the feature, which is objectively a part of the bird, while differentiating the former from the latter from his point of view. Only then would he be using an index, not in the sense of Piaget, but in that of Peirce and most semioticians, rather than a mere indexicality; and obviously the hunter, who uses the tracks to identify the animal, and to find out which direction it has followed, and who does this in order to catch the animal, does not, in his construal of the sign, confuse the tracks with the animal itself, in which case he would be satisfied with the former (Sonesson 1989a:50f).

As the term is employed by Piaget, the index is thus not a sign: it may therefore better be termed an indexicality, or an indexical ground, which as yet has not attained the status of sign. When suitably defined, however, Piaget’s notion of differentiation may be used, together with other criteria, to distinguish signs from other meanings, and thus to tell indices and other indexicalities apart. The other criteria could be adopted from Husserlean phenomenology. In fact, while both Saussure and Peirce simply take the notions of expression and content (no matter what they call them) for granted, Piaget sees that their distinction must emerge in time: and only Husserl has described their difference in terms of directness and focality. Following Husserl, the expression may be said to be directly given but not in focus, whereas the content, which is the focal member, is given only indirectly (cf. Sonesson 1989a:50f).

The lack of definitions may explain that Peirce tended to over-extend the notion of sign. In his later days, however, he realised that all his notions were too narrow: instead of sign, he should have talked of mediation, and the latter should be understood as branching, that is, as a crutch (Cf. Parmentier 1994). We could perhaps take the third part of this crutch to be the point of view of the subject, of which Piaget talks (the place prepared for him in the sign is of course the famous “interpretant”), and although the two other parts cannot be said to be clearly differentiated, the perspective of the subject certainly spans them both. In this sense, the ground is already mediation, although it is not a sign; and it starts out as perceptual mediation.

## On several kinds of indices

Apart from being a sign, an index, in the Peircean sense, must, as we have seen, contain an indexical ground. The fact that such a ground could exist independently of the sign relation should not be taken to mean that the indexical relation necessarily has to precede the sign relation in real time. Indeed, some indexical relations must come into being at the same time as the sign is produced, as is the case, for instance, of verbal “shifters”: the person indexically related to the sign “I” is the one which at a particular moment pronounces the sound /ai/, which is to say that the indexical ground is produced at the very same moment in which the sign is put to use. Similarly, there is no class of “pointed-out objects” known to exist, but a member of such a class is created each time an act of pointing takes place (see Sonesson 1989a, I.2.5.).

Many of Peirce’s own examples of indexical signs are of the kind which acquire their meaning thanks to a regularity which is known to obtain between different facts. Since a kind of reasoning which connects two facts by means of supposed regularity is called an abduction by Peirce, we might perhaps call this group of signs abductive indices. They can involve contiguity, as in the case of footprints, fingerprints, the cross as a sign of the crucified, the weather-cock (contiguity to the direction of the wind); or factorality, when an anchor is used to stand for navigation, the clock to designate the watch-maker’s (as part of the sum total of clocks), or a painting to indicate the painter’s workshop.

Some of Peirce’s examples, and many of those suggested later, are however of another kind, for, instead of presupposing a regularity known to obtain between the “thing” which serves as expression of the sign, and another “thing” which is taken to be its content, they transform something which is contiguous, or in a relation of factorality, to the expression, into its content. These signs may therefore be termed performative indices. With contiguity, they give rise to such phenomena as the pronoun “you”, the finger pointing to an object, the weathercock (as marking the here-and-now of the wind), the clock of the watch-maker’s (as marking the emplacement of the shop); and with factorality, they may produce the pronouns “I”, “here”, “now”, the finger pointing out a direction, etc.

Finally, many secondary signs, or signs standing for other signs, are often said to be indexical. Secondary indexical signs are signs, the dominant sign relation of which is pictorial or otherwise iconical, conventional, or whatever, but which involve a secondary sign function, which is a relation between several signs, or parts of several signs, which is indexical. The most obvious case of such signs are the rhetorical figures of metonymy and synecdoche, in which the entire primary sign is related to another sign by means of the respective contents. More trivial are such examples in which the primary sign content is related to a secondary content outside the sign (implication, “connotation” in Eco’s sense, metonymy and synecdoche in a loose sense, etc.), some examples of which are dead rhetorical figures such as the sword for the army, a picture of a cross for the crucified, the traditional “symbols” of iconography (all with contiguity); dead rhetorical figures such as the sail for the ship, a picture of a clock for the watch-maker’s, iconography generally (all with factorality).

Another variety, which is often parasitic on pictorial signs, appears when the entire primary sign, which is related to another sign via their respective expressions, form an actual perceptual context. This type is often found in publicity and in surrealist painting (cf. Nöth 1975; 1977; Williamson 1978). Some examples, with contiguity, would be two figures seen against a common ground, for instance an advertisement for a brand of whisky with a glass and a bottle; a bottle of gin and a

crown; a jetty and a tyre; or pictures placed side by side as in collages, montages, etc. With factorality, examples would be a pile of fruits forming a crown; Magritte's drawing of a face which is also a female trunk; slices of orange forming a jam bottle; Arcimboldo's portraits, etc. Other varieties may also be distinguished (cf. Sonesson 1989a,49ff).

Peirce himself introduces a distinction between different kinds of indexical signs, but in terms which are not easy to interpret: thus, he claims that there are designations, which stand for "things or quasi-things with which the interpreting mind is already acquainted", and reagents, which serve "to ascertain certain facts", based on our knowledge of the "connection with the phenomena it indicates" (8.368n). Examples of the first kind are personal, demonstrative and relative pronouns, as well as proper names; an instance of the second kind, however, is when "water placed in a vessel with a shaving of camphor thrown upon it will show whether the vessel is clean or not.". Goudge (1965:55f) and Greenlee (1973:86f) interpret this as a distinction between genuine, causal indices and degenerates cases, but there could also be a suggestion of the distinction, formulated above, between abductive and performative indices. If so, however, Peirce's wordings are somewhat unfortunate: for while we may have to be acquainted beforehand with the person to which we apply the term "you" a perceptual object, we do not need to know anything about his "youness": it is produced in the act of talking about him (Sonesson 1989a:54).

We do have to know beforehand about the relations to be expected between water, camphor, and uncleanness, just as we have to know about the relation between the clock and the watchmaker's. But the case considered by Peirce also contains information that this particular vessel is unclean. Thus, there is causality, as well as singularity, and a message is produced at the very same moment at which the sign is produced. However, there could be a class of "unclean vessels", unlike a class of "yous", independently of the sign referring to them. Both classes appear to be limited in time, but only the second is limited by the workings of the sign function itself. Therefore, we may conclude, at least, that the example given by Peirce is too complex to offer any useful division of indices into sub-types.

## Conclusion

In this essay, I have tried to liberate the notion of ground from its absorption into the notion of sign, and put it to other uses permitting us to understand the more elementary practice of interpretation in the our common-sense Lifeworld. In preparation for my argument, I have observed that Peirce's famous trichotomy of icons, symbols and indices may be understood either as listing three properties which singly define something as a sign, or as properties ascribed to something which is for other reasons known to be a sign. I have also had recourse to what I have called a structural argument, according to which the definition of, for instance, the index, must be sufficiently broad for it to exhaust, together with the two other properties, the domain of all conceivable signs.

On these premises, I have demonstrated that indexicality cannot be defined by causality, but must depend on some more general property of real connection. I have also voiced doubts on some other properties commonly associated with indices, such as singularity and testimonial power. The resulting notion of indexicality was then shown to be so general in import as to underlie all our doings in the ordinary Lifeworld, which is first and foremost a world of perception. Finally, I have argued that the independence of the indexical ground from the sign function does not imply that the former must precede the latter in time. Indeed, two kinds of indices may be distinguished on the basis of the temporal relation to the sign function: the abductive index, which presupposes an

earlier connection, and the performative index, which causes the connection to which it refers to obtain in the universe of our interpretations.

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