

Iconicity strikes back: the third generation — or why Eco *still* is wrong

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The theory of iconicity is at the core of all visual semiotics — even, though, as I have been the first to insist, iconicity is much broader than pictoriality, and there is more to the pictorial sign function than mere iconicity. At present, in any case, I want to take stock of the situation within the study of iconicity — which itself cannot be studied apart from the other possible sign functions.

Until recently, the situation could roughly be described as follows: most semioticians accepted some or other version of Eco's critique of iconicity, according to which iconic (and thus pictorial) signs are as conventional as linguistic ones and, in the early version, as readily divisible into features. Philosophers, as well as some philosophically inspired semioticians, were convinced by Goodman's arguments (earlier formulated by Bierman) according to which iconic signs, in Peirce's sense, were impossible, since similarity, unlike the sign, is not asymmetrical, while it is, on the other hand, too widely distributed (the arguments of *symmetry* and *regression*, respectively). Orthodox Peirceans, on the other hand, took iconicity as such for granted, without making any effort to add something to Peirce's own presentation or amend it to answer such criticism. Some of us, however, have been trying for the last ten or twenty years to show that iconicity, suitably reformulated, is indeed viable, and at least in some respects different from the "symbolic" mode of signification predominantly found in verbal language.

In his recent book, *Kant and the platypus*, Umberto Eco (1997; 1999) retreats from the position on iconicity which he has defended in earlier works, explicitly citing the criticism voiced by, among others, the present author, more abundantly so in the Italian version. Without hoping for a similar retraction on the part of Goodman and his followers, we can already say that there are at

present two possible ways of proceeding: either we conclude that there is now a common ground to stand on, so that we can go on to discuss the even more trickier questions concerning the types and varieties of iconicity, and what it can be used for; or we may feel that the position formulated by Eco (which is certain to be influential) is still not adequate and must now be criticised for different reasons.

My own stand must unfortunately be of the second kind. Eco's new conception is, I submit, wrong for reasons that could be said to be largely the opposite of the ones formulated in his earlier theories. Most notably, Eco is wrong, I believe, in taking the Peircean icon to be at the same time immediate and a sign; and he errs very seriously in comparing some latter day technical devices with mirrors, and in denying any suggestion of a sign character to the latter. In fact, it is a pity, I submit, that Eco ignores the positive part of my critique of iconicity (or at least most of it), which should have afforded some clarifications. And while it may surprise nobody that I would say so, I hope to demonstrate in the following that there are reasons to take my contention seriously. Thus, I must start by summarising my reasons for disagreeing with Eco's first two accounts.

In the looking-glass, somewhat darkly. The first two conceptions

Contrary to Bierman, Goodman, and others, Umberto Eco remains untroubled by similarity being neither a sufficient nor a necessary criterion for something being a (pictorial) sign. The different versions of Eco's critique of iconicity are too numerous ever to be fully discussed, but we can distinguish three essential periods: at the first stage, Eco (1968; 1970; 1972) is basically concerned to show that iconic signs (the basic example being pictures) are similar to linguistic signs in being conventional and analysable into features; at the second stage (1976; 1978; 1984a, b), he abandons the idea of feature analysis but wants to dislocate the required similarity sideward, into some kind of proportionality. In the final stage, however (1997; 1998; 1999), he seems to give up almost everything he has so far believed in, and, while retaining a tiny

part for convention, basically goes to the other extreme, making all icons into mirrors affording a direct view onto reality.

The Annigoni portrait: from pictoriality to primary iconicity

In the first version of his critique of iconicity, Eco makes the important observation that there is a sense in which the picture and its referent may be seen, on closer inspection, to have *no properties* in common. For, what can it mean to say that Annigoni's portrait of Queen Elizabeth has the same properties as the queen herself? Perhaps we could agree that, for instance, the shape of the nose is the same. But the nose of the real queen has three dimensions, and that of her portrait must remain satisfied with just two; the surface of the real nose is full of pores and other irregularities, but that of the painting is smooth; and corresponding to the nostrils of the queenly nose, there are no apertures in the canvas, but only two black dots. Nonetheless, Eco seems to end up presenting as his own the very same theory of pictures resembling their object *in a few selected properties* that he rejects in Morris. To say that a resemblance exists between the picture and the model of perception of the object is hardly to add anything new. Both when arguing that pictures depend on a code, and that this code is “weak”, Eco relies on erroneous conceptions of verbal language, which are contradicted by modern linguistics (cf. Sonesson 1989a; 1992a, c, d; 1998b; 2000).

Eco would have been better advised to use his insights in order to criticise the Peircean division of icons into three types: the *images*, which relies on simple qualities, the *diagrams*, which concern similarities between relationships, and *metaphors*, which involve relationships between relationships. For if we take this categorisation seriously, ordinary pictures are not images, but rather some curious case of diagrams or, rather, metaphors. Indeed, perceptual psychology has shown us that what is similar between the expression plane of a picture and reality as depicted can only be found on the level of relations between relations between relations (cf. Gibson 1982; Sonesson 1989a). The Annigoni portrait is a perfect illustration of this point.ⁱ Indeed, this is exactly the point (never considered by Eco) where pictoriality becomes something more, and more specific, than iconicity.

The only candidate for an image in Peirce's sense would seem to be a colour sample, of the kind you bring home to verify whether a particular shade of paint will go together with the rest of the furnishing of your apartment: here the simple quality of colour is supposed to be the same. Yet a picture is of course different from a diagram in the ordinary language sense of the term, which is included among the Peircean diagrams: perhaps we could say that the picture, as well as the diagram and the metaphor, are caused by the perception of relations between relations of some or other degree, but that pictures are experienced as statements about similarities of simple qualities, while diagrams and metaphors are seen as statements about relationships. Thus, the similarity which serves as a condition upon the perception of the picture signs, is not of the same order as the similarity which is part of the meaning of the self-same sign

Most elements of Eco's earlier critique of iconicity recur in the iconicity chapter of *A Theory of Semiotics* (1976:325ff), but the main point now is different. First, Eco tells us that there is no mutual implication between “digital”, “arbitrary”, and “conventional”, nor between “analogue”, “motivated” and “natural” (1976:323f; cf. 1968:208ff; and Sonesson 1989a,III.1.4.). And then he argues that it is naive, not only to think that iconic signs have the same properties as their objects, or are similar to them, analogous to them, or motivated by them, but also to claim that they are arbitrarily coded, and that they can be analysed into pertinent units forming more than one articulation.

On the other hand, Eco (1976: 327) still believes that iconic signs are *culturally*, or *conventionally coded*, without however being arbitrary, nor discrete. In the case of the dimension conventional vs. natural, however, Eco clearly opts for the first term: iconic signs are *not natural*, whatever that means. So far, we only seem to have a more explicit expression for the rather limited kind of conventionality propounded by Eco in his first critique of iconicity. However, the same premises, which have previously (in Eco 1968) been used to demonstrate that iconic signs depend on weak codes, now serve to show that there can be no iconic signs, nor any *figurae* of iconicity, but only “iconic

texts”, which cannot be no further analysed (1976:354ff). These reasons continue to be invalid, even though the thrust of the argument has now been changed.

This time, it seems that Eco seriously rejects Morris's selection model: for although some of the earlier examples and formulations reappear, they have lost their central position in the argument. In their place, new elements come to the fore. For instance, common sense tells us, says Eco (1976:329f), that sugar and saccharin are similar, in fact, their chemical formulae share no properties, and in its visual appearance, saccharin should rather remind us of salt. It is only the effects produced on our papillae by sugar and saccharin that resemble each other, and this they do, because the distinction between sweet and salty things is taken to be fundamental in our culture.

Thus, at the very moment that Eco rejects distinctive features, he argues for the existence of *constitutive* oppositions *in absentia*, which are, at least in part, responsible for the impression of similarity. This is no contradiction, however, for these oppositions must be *abductive* rather than *structural*, i.e. they are not sufficient in themselves to interdefine the elements, but depends on our observations of the regularities appertaining to certain elements of the Lifeworld (cf. Sonesson 1989a,I.3.3.). Unfortunately, Eco gives no pictorial examples of this constitution process: but such examples are easily discovered in the Bakairi version of the difference between a bird and a man, and in our own pictograms for ladies' and gentlemen's lavatories (Fig. 1). Nevertheless, it seems intuitively clear, that the more important such abductive oppositions are for the constitution of a sign, the less iconic it is felt to be. And if a number of such oppositions tend to form a structure, or something vaguely structure-like, iconicity further decreases.

In Eco's view, however, all similarity is based on precise rules, which have to be learned, and which stipulate which aspects of the object are pertinent. Only when we are familiar with the rules, Eco believes, will we be able to discover the motivation of the signs. However, what Eco is here talking about is what I have elsewhere (Sonesson 1992a; 1993a; 1994b; 1998b) called *secondary iconicity*, which is found in some gestures (what that pioneer of

semiotics, Garrick Mallery 1972 called “reasonable” similarity which is only discovered after the sign function), in identity signs (the car representing a car model at the car salon, the art work representing itself at the exhibition, etc.), and a kind of limiting-case of pictures which Arnheim has called “doodles”. In Arnheim’s terms (1969:92f), a “doodle” is different from a picture in requiring a key, as Carracci’s mason behind a wall (cf. Fig. 2b), or in “Olive dropping into martini glass or Close-up of girl in scanty bathing suit” (cf. Fig. 2a). None of this is true of pictures, which can be interpreted by a child when first confronted with them at 19 months of age (as demonstrated in a famous experiment by Hochberg).

The relative part played by iconicity and conventionality in a sign may be used to distinguish *primary* and *secondary iconicity*. A *primary iconic sign* is a sign in the case of which the perception of a similarity between an expression E and a content C is at least a partial reason for E being taken to be the expression of a sign the content of which is C. That is, iconicity is really the motivation (the ground), or rather, one of the motivations, for positing the sign function. A *secondary iconic sign*, on the other hand, is a sign in the case of which our knowledge that E is the expression of a sign the content of which is C, in some particular system of interpretation, is at least a partial reason for perceiving the similarity of E and C. Here, then, it is the sign relation that partially motivates the relationship of iconicity.ⁱⁱ

As I have suggested elsewhere, primary iconicity is possible because certain things are taken to be lower on the value scale of the Lifeworld than others. Thus, there is every reason to suppose that a three-dimensional object, rather than some lines on a surface, would count as a natural standard of comparison. While this relationship between three-dimensional and two-dimensional objects may well be a universal, it is easier to show the principle at work in cases that vary cross-culturally. Among numerous apocryphal stories of tribes failing to recognise pictures as such, there is one verified case in which the group (the Me’ studied by Deregowski) had never seen paper, and was therefore led to focus on the material *per se*. When pictures were instead printed on cloth, the Me’ immediately recognised their sign function and

perceived the pictures as such. To these people paper, being an unknown material, acquired such a prominence that it was impossible for them to see it as a vehicle for something else; on the other hand, it is precisely because paper is so trivial a material to us that we have no trouble construing instances of it as pictorial signifiers (cf. Sonesson 1989a: 251ff).ⁱⁱⁱ

Categories and the preservation of structure

If “analogy” is not just another term for similarity, it means proportionality, Eco (p 337 f) claims; but then, he thinks, it must be a rule that establishes a relation between at least three (?) terms. This rule may state that, if 10 corresponds to 1, then 20 corresponds to 2; or it may just as well stipulate that as 3 corresponds to 9, 6 shall correspond to 18; therefore, Eco concludes, no similarity is required between the first and the second term but it is itself created by the rule (cf. 1976:335, 346, etc.). Eco is of course right in thinking that the first two terms of a proportionality do not have to be similar in any way; although, in his first example they are (cf. Sonesson 1989a,III.1.2.). But even in Eco's second example, similarity is presupposed: not, of course, a similarity of the first two terms, but of the relation between these terms and the relation between the second pair of the proportionality. In fact, there are a number of relations between 3 and 9; therefore, given Eco's three terms (i. e. $3:9::6:x$, if that is what he means), we could neither fix the fourth term, nor determine the relation. But we could still predict the few possible ones: if the rule is to multiply the first term of each pair by three, the second term of the second pair will be 18, as in Eco's example; if the rule says we should add 6 to the first term, the term searched for is 12; and if the rule requires us to multiply the first term of the pair with itself, the term to be mentioned is 36. If we are presented with all four terms, however, they will make up a simple *structure in praesentia*, which only serves to select one among the possibilities given by a *structure in absentia* (cf. Sonesson 1989a,I.3.4.). Similarity is defined by the latter, not by the former, that is, it is defined by the structure of mathematics.

And yet, even if Eco's mathematical parallel proves wrong, he might be right in his claim about pictures, so now let us consider this thesis independently. Suppose we want to know the length of some marks: in a

system describing a continuous world, there will be different expressions for the mark which is $\frac{3}{4}$ cm, and for the mark which is $1\frac{1}{4}$ cm, but in what Eco would call a “digital” system, they might both come out identical (cf. Roupas 1977:69ff).^{iv} The former example is a particular case of a *structure-preserving* mapping (cf. Janlert 1985:184), and this raises the question which other organisations may be preserved. First, it is possible that reality, i. e. our particular Lifeworld, is not continuous or at least that some parts of it are not; indeed, we have argued that reality is *categorised* (cf. Sonesson 1989a,I.2.1.), that is, discontinuous. In this case, organisation is preserved if the semiotic system uses the same categories as the Lifeworld and relates them to each other in the same way; but if Lifeworld categories are abolished and/or the members are redistributed among the categories, the system modifies the organisation (as in Matisse’s “Nu bleu”, analysed in Sonesson 1989a). Although Eco claims “iconic texts” can be no further analysed, his notion of analogy plainly supposes both expression and content (or referents) to be segmentable and differentiated. Neither continuity nor the precise categories need to be preserved, but the relations between the categories have to be kept up; and this would seem to presuppose the separability of the categories.

The only example considered by Eco (1976:33ff) is Peirce's existential graphs, where the relations between the propositions of a syllogism are rendered by concentric circles. For instance, reasoning like “All men are subject to the passions – All saints are men – All saints are subject to the passions” is expressed as the inclusion of the circle of men in that of the passions, and the inclusion of the circle of saints in that of men. Eco censures Peirce for claiming this to be a completely analogical, iconical sign, for that which is represented is not even spatial. Instead, he thinks there is a convention which establishes that space *a* is to be taken to be related to space *b*, just like the element *a'* is related to the element *b'* (p 335). To begin with, such an operation clearly requires both the spaces and the elements to be segmentable and differentiated. In the second place, while there may be conventional elements in such a specialised representation as an existential graph (better known as a Venn diagram), this proportionality is essentially based on an

iconical representation of the topological property of *inclusion*, a very abstract property, whose representation is in no sense less iconic than that of visual appearance. As so often, Eco's critique of iconicity (and that of many others) is based on the misconception that iconicity is somehow essentially visual.

In any case, the only property preserved here as such is inclusion. In a typical picture, however, a great number of relations obtain between each two units, or even between every two elements of the pattern. A convention specifying all these relationships would have to be very complex indeed, and would probably have to be made separately for each picture. As a general theory of iconicity, or even of pictures, this conception is not feasible. But suppose instead that the relations correlated in iconicity are prior to their relations, i. e. that they are relational properties. Something of this kind seems to be suggested by the theories of perceptual psychologists such as Gibson, Kennedy, and Hochberg (cf. Sonesson 1989a,III.).

While still claiming pictures to be *conventional*, Eco now denies the possibility of analysing them into *features*. He fails to realise that his own examples suppose there to be a basic motivation in the relationship between the picture and its referent, as well as some kind of segmentation of both reality and its signs. Interestingly, to many psychologists engaged in the study of perception, pictures are *motivated* and resolvable into *features*!

The case for iconic mediation

Many semioticians, in particular those who deny the existence of iconic signs, apparently believe pictures to be typical instances of this category. There are several reasons to think that this was not Peirce's view. Pure icons, he states (1.157), only appear in thinking, if ever. According to Peirce's conception, a painting is in fact largely conventional, or "symbolic". Indeed, it is only for a fleeting instant, "when we lose the consciousness that it is not the thing, the distinction of the real and the copy", that a painting may appear to be a pure icon (3.362; cf. Sonesson 1989a;III.1.). It will be noted, then, that a pure icon is thus not a sign, in the sense that the latter term is commonly understood (although Peirce will sometimes state the contrary). Before we can explain why the icon is no sign, we have to spell out those criteria for something being a

sign that are usually taken for granted, both in the Peircean and in the Saussurean tradition. This can be done by combining what Husserl says about appresentation (something which is *directly present* but not *thematic* refers to something which is *indirectly present* but *not thematic*) and what Piaget says about the semiotic function (there is a *differentiation* between the latter two instance, in the double sense, I take it, that they *do not go over into each other in time and/or space*, and that they are perceived to be *of different nature*; cf. Sonesson 1989a,I.2.5.; 1992b).

In one of his well-known definitions of the sign, a term which he here, as so often, uses to mean 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 have sometimes called the *ground* of the representation”. As applied to signs, I will here suppose, iconicity is one of the three relationships in which a representamen (expression) may stand to its object (content or referent) and which can be taken as the “ground” for their forming a sign^v: more precisely, it is the first kind of these relationships, termed Firstness, “the idea of that which is such as it is regardless of anything else” (5.66), as it applies to the relation in question.

In another passage, Peirce himself identifies “ground” with “abstraction” exemplifying it with the blackness of two black things (1.293). It therefore seems that the term *ground* must stand for those properties of the two things entering into the sign function by means of which they get connected. i.e. both some properties of the thing serving as expression and some properties of the thing serving as content. In case of the weathercock, for instance, which serves to indicate the direction of the wind, the content ground merely consists in this direction, to the exclusion of all other properties of the wind, and its expression ground is only those properties which makes it turn in the direction of the wind, not, for instance, the fact of its being made of iron and resembling a cock (the latter is a property by means of which it enters an iconic ground, different from the indexical ground making it signify the wind). If so, the ground is really a *principle of relevance*, or, as a Saussurean would say, the “form” connecting expression and content: that which must necessarily be present in the

expression for it to be related to a particular content rather than another, and vice-versa (cf. Sonesson 1989a:III.1).

If the ground is a form of abstraction, as Peirce explicitly says, then it is a procedure for engendering *types*, at least in the general sense of ignoring some properties of things and emphasising others, for the purpose of placing them into the same class of things.^{vi} And if it serves to relate two things (“two black things” for example, or “the agreement of two things” in general), it is a *relation*, and it is thus of the order of Secondness, i.e. “the conception of being relative to, the conception of reaction with, something else” (6.32). All this serves to underline the parallel with the principle of relevance, or pertinence, which is at the basis of structural linguistics, and much of semiotics inspired by it (Hjelmslev and Prieto, notably; cf. Sonesson 1988,I.3.1, 1989a,II.4.2.).

Given this preliminaries, it might be said that an *indexical ground*, or an indexicality, involves two “things” that are apt to enter, in the parts of expression and content (“representamen” and “object” in Peircean parlance), into a semiotic relation forming an indexical sign, due to a set of properties which are *intrinsic to the relationship between them*, such as is the case independently of the sign relation. Indexicality, which is a ground, and therefore a relation, is thus basically different from *iconicity*, which 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, although, when considered from a particular point of view, these two sets of properties will appear to be identical or similar to each other. This is the sense in which indexicality is Secondness, and iconicity Firstness. As for the Peircean symbol, or generic sign, it is literally groundless, as least until it becomes a sign: there is nothing in the thing serving as expression, nor the thing serving as content which explains the sign relation. The principle of relevance obtaining between the two parts of the signs is produced merely by the sign relation, which is why it is Thirdness.

If iconicity is Firstness, but the ground is a relation, then the only solution, it seems to me, is to admit that, contrary to indexicality, iconicity is not in itself a ground. Perhaps, 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, they become *iconic signs* (or *hypo-icons*). 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 (Cf. Fig. 3.).

In some ways, our critique (first formulated in Sonesson 1989a) is similar to that suggested by Groupe μ (1992:135ff) when they claim that the iconic sign is constituted out of three elements: the signifier, the referent, and the type. The status of the “type” as a third element of the sign is certainly curious, as I have pointed out elsewhere (cf. Sonesson 1996a), but at least it has the merit of positing a categorical level which Eco fails to recognise. Perhaps the referent and the type of the μ model should really be related as Peirce’s “immediate” and “dynamical object”, that is, as a part to the corresponding whole, or as Husserl’s “noema” and “object”, where the first is the standpoint taken on the second. As I pointed out above, the ground seems to account for the division between the immediate and the dynamical object on the side of content; but we then proceeded to argue that there must be a similar division on the side on expression. Indeed, if the ground is tantamount to abstraction, as Peirce says, and if abstraction is the generation of types, then we should readily accept the distinction, suggested by Groupe μ , between the referent and the type; but we should add to it the parallel distinction between the signifier and its type.

Polishing the mirror. Eco’s third conception.

In his most recent work on iconicity, Eco’s (1997; 1998; 1999) sometimes seems to give in completely to his critics, such as the present author, Groupe μ , etc., and then taking the “motivated” nature of icons to a further extreme. At other times, however, Eco (1998: 10; 1999:241f) reaffirms the conventionality of picturehood, now taken to be compatible with a basic iconicity (which is exactly what Eco’s critics such as myself said). The most remarkable part of

Eco's latest critique, however, is his extension of the mirror model to some phenomena that most semioticians, including the earlier Eco, should have considered to be iconic signs, and, in a way, it seems, to all iconic signs.

The mirror as Secondness and Thirdness

In earlier texts, Eco (1984a:216f) has repeatedly denied that the mirror is a sign: instead of standing *for* something it stands *before* something: the mirror image is not present in the absence of its referent, is causally produced by its object, is not independent of the medium or channel by which it is conveyed, cannot be used for lying, does not establish a relationship between tokens by the intermediary of types and does not suggest a content (or only a general one such as human being), and cannot be interpreted further (only the object to which it refers can). In fact, Eco (1984a:210) does not deny that the mirror is an icon: rather, he claims that it is an absolute icon, and would thus would have been a perfect iconic sign, if it had been a sign (cf. Eco 1998: 21). On the other hand, Eco (p 211) is busy showing that the mirror is no index, citing the fact that, unlike a letter containing personal pronouns like "I", which continues to refer to the writer, a mirror sent by post ceases to indicate the sender and will now point to the receiver (cf. Eco 1998: 19ff; 1999: 363ff)

In his more recent writings, Eco (1997: 322; 1999: 367) curiously goes on to say that the mirror "is *not even* a Firstness in the Peircean sense" (my italics), because it is already a relation, and thus a Secondness — which is exactly what I said about the iconic ground, not only above, but in earlier publications (Sonesson 1989a; 1993a). However, it would have been more proper to say that the mirror is *already more* than a Firstness. In any case, this does not impede Eco from treating the mirror as pure iconicity, and thus pure as Firstness, in other contexts. As we will see, he goes a long way to demonstrate that mirrors are not indexical, which leaves us wondering in which way they then involve Secondness. And even here, he only admits that the mirror is Secondness, in order to emphasise that it is not Thirdness, and thus no sign.

According to Eco (1997 : 321f ; 1999 : 361f, 366f), we confide in mirrors as in reality itself: mirrors are, so to speak, "pre-semiotic". Instead of being a type of sign, the mirror is a peculiar kind of prosthesis, that is, something that

extends the range of action of a part of our body. Indeed, it is not a *substitutive prosthesis*, such as those we most ordinarily think about, e.g. walking sticks, artificial legs, spectacles, and so on, but an *extensive* one, which does not substitute for a bodily organ, but adds to it. Moreover, it is *intrusive*: it permits us to see things that we would not be able to experience with our unaided eyes (similar to a third eye situated on the tip of the index finger, Eco suggests). What makes the mirror unique, even as a prosthesis, is that it cannot deceive us, unlike shoes, which gives us very limited information about the terrain, or clothes, which does not permit us to judge the external temperature. Not only Lacan's mirror stage, but also the ordinary use of the mirror to determine our age and looks, are situated on a posterior level of interpretation, which does not have anything to do with the mirror as such. And, of course, when in a Marx Brothers film, one of the brothers pretend to be the mirror image of the other, this has no consequences at all for determining the nature of the real mirror.

Like Saussure and Peirce, Eco simply presupposes the definition of sign. Given our more precise concept of sign, I see really no reason to deny the sign character of the mirror: something which is comparatively *more direct* and *less thematic*, the mirror image, stands for something which is *less direct* and *more thematic*, the object in front of the mirror; and the person or thing in front of the mirror is clearly *differentiated* from the image in the mirror. Of course, animals and small children may have difficulty making this differentiation, but that is exactly what happens in the case of signs, as Piaget has indicated. The kind of differentiation that does not obtain for animals and children is apparently not the one involving a discontinuity in time and/or space (they do not think the mirror image is part of themselves) but rather that concerned with the different nature of the two correlates (the cat takes the image of a cat to be another cat).

It is curious that Eco should take the fact that mirror images are causally produced to be an argument against their sign-character; for it is well-known that one of Peirce's most currently quoted definitions of the index is that it depends on a causal relation between expression and content.^{vii} In fact, a lot of indices depend on causality, from the knock on the door (caused by the hand) to the cast shadow, the death mask and — something that is definitely also a

picture — the photograph. Of course, these facts explain why Eco feels the need to demonstrate, not that the mirror is not an icon, but that it is not an index.

But his argument is connected to another feature that he takes to be characteristic of signs: that they imply the possibility of lying (cf. Eco 1976:339f; 1984a:202ff). Employing one of the more classical instances of indexical signs, Eco (1984a: 214) claims that one may use certain kinds of chemical substances to produce smoke, thus giving the appearance of there being a fire somewhere in the neighbourhood. On the other hand, he maintains, we cannot lie with a mirror image, as opposed to making something that is not a mirror image pass as such.

But what exactly does this mean? The human species has been accustomed for a very long time to interpret smoke as a signifier of fire; but if chemical substances become common causes for producing smoke, we will have to revise this judgement. For the sign, in this kind of case, is based on our observations of common Lifeworld regularities (in other words, on *abductions*). Or to take a more topical example: we have been accustomed for the last centuries to believe that pictures which have a peculiar granular appearance, which we call photographs, have been produced by means of a more or less indirect contact between the surface of the image and the objects represented; but computer pictures are already forcing us to reconsider this interpretation. It is not clear if this means that those computer images are meant to pass as photographs; or whether they are still the same kind of image, produced in another way. So, if something which looks to us like a mirror image turns out to be capable of appearing without a person being in front of the mirror surface, should we conclude that it is something else trying to pass as a mirror image, or that mirror images are not what they used to be?

There is a more immediate retort: there are indeed mirrors that practice constantly the art of lying. As Vilches (1983:21) points out, the very business of the mirrors in the Fun House is to do that. Indeed, it could be added that they lie in a systematic way: there is always the same distance between the referent and the picture object, at least from a given position in front of the mirror, so

there is actually a content (and since it is an abstract predicate, we could say there is a type), which mediates between the subject and the mirror image. In fact, Eco (1984a: 217ff) considers the case of “distorting mirrors” but rejects them as counter-proofs for very obscure reasons. But this is not all: if distorting mirrors are possible, then all mirrors are no doubt somewhat distorting (as are all photographs; cf. Sonesson 1989b; 1999), although we are too accustomed to them to realise it. So the mirror image is also conveyed to us with the fidelity permitted by the particular channel. This all amounts to saying that, like the picture, the mirror has its “ground”, its principle of abstractive relevancies.

Indeed, when I first rejected Eco’s argument about the mirror in a general sense (in Sonesson 1989), I still shared a basic naivety with the subject of my criticism: I thought that there was such a thing as a zero degree mirror (without admitting that that made it into anything different from a sign). However, when you discuss the matter with people who use mirrors professionally, from dentists to sales clerks at the dressmakers, you realise that all mirrors are adapted to particular uses. Actually all mirrors lie, or, more precisely, they interpret: they are adapted to different professional uses, the “channel” having a particle fraction in the case of the dentist, a particular tint for the dressmakers, etc.

When rejecting the indexicality of mirrors, Eco takes on a particularly challenging example: personal pronouns like “I” which change their meaning each time they are used, yet retain the meaning once they are written down (or, one might add, when the speech is recorded on tape). However, the weathercock, one of Peirce’s favourite examples of an index, behaves in all these respects more like the mirror than like the pronoun: if sent as a message from the seasonal resort, it will indicate the direction of the wind at the place where the receiver lives. .

The difference really depends on how far the constant elements of signification (Eco’s “content”) go in a sign: we know that “I” refers to the speaker or writer using a particular instance of the sign, and there are usually other ways of discovering who the speaker or writer is, or at least that he is not identical to ourselves. The constant element of the weathercock is the

indication of the direction of the wind in the here and now; and that of the mirror is the rendering of something visible placed presently in front of it. The variable elements are too many ever to be retrievable; but it may yet be maintained that they all share a number of predicates, such as being visible, present in the here and now, and so on

Eco's problem seems to be that he thinks something that once is a sign must then always be one.^{viii} If we exclude all signs that are only momentarily signs of something, most of the examples adduced by Peirce and others will not be eligible as signs. You don't have to cut off a finger and send it off by the post for it to change completely its meaning; even in its natural position, it is continuously changing the content to which it points. Once again, it will only function as a sign, and an index, in front of the object to which it refers (although there are cases in which it will point to a town many miles ahead, though presupposing the conventional tracing of the road). Of course, you may make a video of the pointing finger, but the finger functioned as an index well before the film was invented, and we may suppose that the pronouns also functioned as indices before writing was invented. In fact, weather-cocks, pointing fingers, and pronouns, seem to have functioned (and functioned as signs) much like the mirror, before different techniques for preserving tokens (as opposed to types) of signs were invented, a process which perhaps begun with writing and now has reached the state of computer memory.

Actually many signs function as they function only in presence of their referent: this is the case with the pictures of the birds with their names written below them which are attached to the bird case in the zoo; indeed it is the case with much of our language use. Of course, bird pictures, and much of verbal language, function also in the absence of their referent, although they function differently. Other signs, however, are more radically dependant on their referents. Indeed, weathercocks, pointing fingers, cast shadows, and a lot of other signs cannot mean what they mean, if not in the presence of the object they refer to. Their sign character only endures as long as the object is in their presence, and such was no doubt originally the case also with personal pronouns such as "I". Just as in the case of the mirror, these phenomena are

signs, because although they must be more or less in the presence of their referent, they are not identical with it: they stand close to it, but they are different from it.

The mirror is entirely distinct from what it stands for, it is not continuous with it, nor does it pertain to the same category. In these respects, it is exactly like the pointing finger, the cast shadow, and many other signs. Co-presence should not be confused with lack of differentiation. Thus, we can reject Eco's (1997: 322ff; 1999 : 368ff) first criterion on a sign, according to which it must function in the absence of its object; and we should affirm that, contrary to what Eco claims, the mirror image complies with the second requirement: it is materially distinct from what it is an image of. Indeed, the image in the mirror does not continuously shade into the object mirrored, neither in time nor in space; and it is of a different nature from the object, as Eco himself admits, when talking about it as being a "virtual image".

According to Eco's third criterion, signs, but not mirrors, can be transposed into another substance. I am not sure exactly what he wants to say by this. Historically, mirrors have been made out of different "substances", that is, different materials: once upon a time, they were made from metal sheets, which explains that Saint Paul could talk of us seeing now "obscurely, as in a mirror". On the other hand, if Eco means to say that a particular instance of mirroring is not transferable from one mirror to another, then something equivalent is true of many signs. If so, this criterion is hardly possible to distinguish from the fourth one: that for there to be a sign, there must be a difference between a type and its various tokens. We may certainly agree that mirrors do not comply with this criterion — but neither do paintings existing in one single copy (if we do not admit the reproductions as tokens, as most art historians would claim); nor do any of those momentary signs which we have considered above, from pointing fingers to weather cocks or cast shadows. For though the finger may endure, as does the mirror, the particular act of pointing, just as that of mirroring, does not repeat itself, nor does it admit a change of "substance".

Enough has already been said above about the possibility, indeed the necessity, of lying with mirrors, for the fifth criterion to be seen to be vacuous. Contrary to Eco, I think there is every reason to consider the mirror to be a sign, an index and an icon: indeed, because it combines the functions of index and icon, it is (as observed in Sonesson 1989a;III.3.6.) what Maldonado has called a *hard icon*, comparable to X-ray pictures, thermograms, hand impressions on cave walls, “acoustic pictures” obtained by means of ultrasound, silhouettes, the configuration left on the ground by a man out walking in Hiroshima at the moment of the nuclear blast, and pictures made with “invisible light” to discover persons hiding in the woods. It is true, as Eco (1997: 323f; 1999: 369) points out against me, that these latter signs leave something enduring which serves as the expression plane: but if observed at the exact moment when a shadow is cast, or an image appear in a mirror, these latter phenomena may give the same scientific assurance of existence which Maldonado ascribed to the hard icons.

The mirror image is not an index for the person being in front of the mirror, because we do not need it in order to know this fact, Eco claims; only the lack of an image when the Invisible Man or an vampire passes in front of the mirror could perhaps be admitted as a symptom. Nor is a mark on the nose observed in a mirror an index, he continues, because it is no different from the mark we observe directly on our hand. Unfortunately, all these observations are completely irrelevant: the fact that we may see an object, and know that it is there, without it having been pointed out to us, does not make the pointing finger less of a sign and indeed an index. Nor does the weathercock cease being an index just because we may be able to discover the direction of the wind already from the impact it has on our body. But Eco’s observations are not only irrelevant, they are also seriously incomplete. It is a curious fact that, all along, he talks *as if mirrors were mainly used to look at ourselves*. In fact, mirrors are not only used for seeing oneself but for seeing others and other things. The rear mirror of a car is used to discover other cars coming from behind. And a dentist uses a mirror to investigate the status of our teeth. Indeed, a woman may

know very well that she has lips, and still use a mirror to ascertain that she is putting the lipstick on to her best advantage.

This brings us to a final opposition, which, again, we must reject. Signs, but not mirrors, signify individuals only by means of general contents, Eco claims: When Robinson sees a footprint on the sand, he does not conclude that Friday has passed there, but only that a human being was present. Of course, Eco has a point, although once Robinson has discovered that there is only one other person on the island beside himself, he will be able to conclude that Friday has been at a particular place. Actually, while it may only be possible to tell the very general difference between a horse and a donkey from the traces, the person who has lost his horse and who lives in a region where all the other inhabitants else possess donkeys will have no trouble discovering the whereabouts of his particular horse. Still, let us admit that individual facts here can only be seized over the determination of general contents. Then the opposition that Eco here construes between mirrors and signs is exactly the same one as other thinkers (Gombrich, for one) have always postulated as a difference between pictorial and verbal signs. As I pointed out long ago (in Sonesson 1989a), not only is it possible to construct very abstract or schematic pictures (children's drawings or logograms, for instance), which only conveys very general facts, but even a photograph with an abundance of individual detail will only signify to me something like "a young woman dressed in 1920ies apparel", if I do not happen to know the person in question. But exactly the same reasoning applies to mirrors: while looking at myself in the mirror (Eco-style), I may suddenly see some configuration that I interpret as "a man appearing behind my back". I don't have to recognise him as Frankenstein's monster to be frightened.^{ix}

Television as a chain of mirrors

Nothing which I have said so far is meant to imply that the mirror is identical in its functioning to the picture. Unlike the picture, the mirror will really permit us to see new things in its surface, as it (or that which is in front of it) is moved, and none of these is more "true" than the others. There is really nothing that corresponds to the expression, for there are no lines, or anything that may be

observed as such, independently of the depth projection to which they give rise. Moreover, the mirror, unlike the picture, will render all kinds of objects with the same ease: the hierarchy of most Lifeworld things may be brought to bear on the mirror too, but the mirror does not change its way of representing these things. Nor can the mirror choose to render the world at different intensional levels, as the picture does (except perhaps in distorting mirrors).

Curiously, in the end it is Eco who ends up claiming a similarity between mirrors and pictures, starting out from television. In this part of his argument, Eco (1997: 325ff; 1998: 22ff; 1999: 371ff) starts out saying that television is not like pictures at all, but like a chain of mirrors reproducing each other, with the proviso that instead of mirror reflections, there is an electronical signal. In this sense, television does not involve signs, but only a channel, just as the mirror, or, more generally, a prosthesis, which does not magnify, as the telescope, but gives access to places where we are not present. There is no expression plane separate from the content, just as was the case of the mirror, according to Eco's analysis. Just like a telescope or a mirror, the television image is experienced as a direct view of reality, which may be trusted to be true.

Of course, there are limitations: because of the low definition, it is a very cloudy mirror indeed. And the analogy with the chain of mirrors will only hold good as long as the camera is fixed and shows everything which goes on at a particular place, at the moment of occurrence, for as soon as we move away from this ideal, we are bordering on film and theatre. Again, the television image is smaller than the real objects reproduced, and it is not possible to peek sideways into it to discover new objects, as we can do with the mirror. Therefore, Eco concludes, the television image is only paraspecular. But these limitations can be overcome: the picture may be made bigger, and the definition higher, as is already the case with the intestinal probe. And as the probe moves around, we can also see obliquely, as in the mirror

Now, this is a quite extraordinary theory. To begin with, Eco is talking about an ideal case, which is ideal to the point of having almost no existence. Even as he describes the television image, its very cloudiness and the risk of a

mise-en-scène all the time places it at the point of fading into the film picture. In fact, today a very tiny part of what is seen on television is really transmitted directly. Quite apart from the fact that modern computer techniques makes it possible to manipulate also that which is directly transmitted, the television signal is already as such different from the reality it reproduces, for the same reasons that this can be said about photography (cf. Sonesson 1988; 1999): everything, from the light conditions, the nature of the camera and other equipment, the transmission signal, etc, introduce modifications between the referent and its image, quite comparable to those which exist in other pictures; indeed, we have seen, against Eco, that this is to some extent also true of the mirror.^x

As for the modifications of the television images, which Eco contemplates, higher definition would make it more similar to ordinary pictures, and bigger size does nothing to distinguish it from pictures. As far as I understand, the intestinal probe does not in any way permit us to peek into the image sideways, as the mirror does; it simply gives rise to new images, as it moves around, as would any camera, whether it is a television camera or an ordinary one. Actually, the hologram, which Eco apparently still counts as a picture, does make it possible, to a limited extent, to change perspectives within the picture, and so does, in a more impressing manner, the computer devices connected with “virtual reality”.

Nor do I believe it is true that people think television is a peep-hole onto reality, as they may possibly think about mirrors or telescopes: if they believe in what they see on television, that is because it has a certain authority, just like the radio, or certain trusted newspapers. To the extent that Eco is right in his musings, this would merely be a fact of sociosemiotics.

But now Eco (1997: 24; 1999: 375) takes a further step: he images the film, the photograph, the hyperrealistic painting as “frozen” mirror images. The difference here is simply that now expression is separate from the content and thus can survive the disappearance of the latter. Very little seems to be left for the conventionalist theory of pictures that, in other passages, Eco seems willing to maintain, in spite of certain modifications. We are back where the started,

before Eco's first critique, at Barthes' "message without a code". And once again, iconicity appears as a complete mystery.

The "ground" within the Peircean trinity

At this point, it will be necessary to backtrack. As absurd as Eco's theory is in itself, it seems to gain some justification from the curious interpretation of Peirce's concept of Firstness propounded at the beginning of *Kant and the Platypus*. Here, Eco (1997 : 48f, 1999 : 63f) claims "ground" to be a synonym of Firstness. However, several quotes from Peirce which we have given earlier show that "ground" must be taken as some kind of Secondness (a relation) leading to Thirdness (an abstraction). The problem is that Eco also finds some quotes from Peirce, which seem to suggest he is right in his interpretation. As Eco himself points out, Peirce talks about "ground" in his early texts, then forgets about it for 30 years, only to return to it in his late texts. But, after all, "ground" is an ordinary word of the English language. Why should we take it for granted that Peirce uses the term for the same concept in the later passages as in the early ones?

Inspired by these disquisitions, Eco introduces a curious distinction between "likeness" and "similarity" ("Somiglianza e similarità ; cf. Eco 1997 : 301ff ; 1999 : 344ff).^{xi} In a note, he explains that "likeness" is a dyadic relation between something and itself, while "similarity" is a predicate with multiple arguments: A is similar to B from the point of view of C. Several things seem unclear here: first, the formula for "similarity" sounds almost exactly like one of Peirce's definitions of the (iconic and other kinds of) sign. Perhaps, then, what Eco wants to do here is to distinguish iconicity itself from the iconic sign. But then it should not be forgotten that, in Peirce's version, it is exactly the "ground" which makes up the point of view — and which thus already, before the sign, introduces a difference to iconicity as such — which in itself, according to Peirce, can hardly be grasped.

In the second place, one may wonder what it means for something to be similar to itself. Is Eco talking about identity? Then it is very curious that he refers to Goodman for support, who does not only deny the feasibility of using similarity for any definitional purposes, but who fails to see the distinction

between identity and similarity, as testified by his argument that all pictures are more similar to other pictures than to that which they depict. It is true that this is a question of categorical identity (one picture being of the same general category as another picture), which Eco later seems to consider to be of the second general kind, that is, in his terms, similarity rather than likeness. However, when he goes on to discuss examples, he seems unable to maintain this analysis.

For later on, we are told (Eco 1997 : 304f ; 1999 : 347f) that “This is a boll” is based on primary iconicity, that is, I take it, on “likeness”.^{xii} However, Eco also says that is a case of similarity with other objects of the same category. If so, the similarity perceived is of the categorical kind, and thus it is Thirdness in Peirce’s sense. Indeed, this remains true, even though the “cognitive type”, in Eco’s sense, does not form part of any system of classification. As Eco himself admitted in another passages of his book quoted above (speaking of mirrors), to see a similarity is a relation — and thus already a Secondness, which means it is no pure icon. Indeed, as soon as a category is involved, we are on the further level of Thirdness.^{xiii}

To Eco “likeness” seems to be immediate (pure iconicity ?), “similarity” mediated (iconic sign). But from a Peircean point of view there can be no “innate experience of likeness”. It is only the impression of certain properties that is immediate — and as soon as the connection between the immediate properties of two objects is made, there is a relation, and no pure iconicity, whether this happens in mirrors or in television images and other pictorial signs. Going from the mirror to the picture, we do not have to “shift likeness wholly into similarity”, since even in the mirror, and in indeed in perceptual reality, there is only similarity from the point of view of a ground. Thus, again, there is no “passage from the primary iconism of perception (that is, from the evidence that relations of likeness exist perceptually) to an established theory of similarity” (Eco 1997: 308f; 1999: 352f) — because a perceived similarity is already a relation, that is, a ground.

In the end, however, the interesting thing is not what Peirce wanted to say. It is what makes sense. And, if any thing, perception is more profused with

relations than Peirce might have thought. As we now know from the perceptual psychology of Gibson and Hochberg, and from cognitive psychology, experience is immediately relational, mounted into frames, and categorised. There is probably no “fleeting moment” in which we experience pure iconicity, even within a hallucination.

Conclusion: From primary and secondary iconicity to alpha and beta mode

In the final pages of *Kant and the Platypus*, Eco (1997 : 336ff ; 1999 : 382ff) introduces a distinction between what he calls the Alpha and Beta modes of signification: in the first case, “we could perceive them as signs even if we decided that we were not dealing with the expression of a sign function”; and the second case, however, we can only “perceive as substance as form” once we “presume that it is an expression of a sign function”. These definitions are remarkable for being almost completely identical to my own distinction between primary and secondary iconicity, to which Eco does not refer, although the relevant article is listed in the references. Interestingly, he even uses the same kind of examples, the doodles (although in a different version, the Mexican on a bicycle) to illustrate the meaning of the beta mode. I will not speculate further on these similarities. In the end, it is much more interesting to dwell on the differences.

There is at least one respect in which Eco’s version may be more interesting than mine, but let me first attend to the differences that I believe to be in my favour. Eco concludes (in note 35) that the existence of an Alpha mode (primary iconicity) justifies in the end Barthes’ old claim that there can be such a thing as “a message without a code”. That, of course, depends on what you take the little word “code” to mean — but, as it was meant by Barthes, the expression is in no way justified by primary iconicity. Actually, the main defect of Eco’s distinction, as of Barthes’ earlier characterisation, is that they fail to explain how such a thing is possible. On the contrary, primary iconicity is explained, in my work, from very general rules and regularities, which are not peculiar to pictures or other signs, but are valid in all possible human Lifeworlds, such as the prevalence of threedimensionality over

twodimensionality. None of this goes to say that we know more than a fragment of these rules and regularities at present.

Indeed, when Eco goes on to suggest that Alpha modus (my primary iconicity) consists in a confusion of the picture and the scene, and that it thus somehow justifies the reaction of the audience in front of Lumière's train, he even seems to misunderstand his own definitions. Quite to the contrary, primary iconicity (and thus Alpha mode) supposes the sign function, and thus the division into expression and content, to be given in the very form of the part that is directly perceived, that is what, given the sign function, becomes the expression. Primary iconicity is precisely the case in which a confusion of expression and content is the least likely to occur.^{xiv}

What is interesting about Eco's opposition between the Alpha and the Beta modes, is that, as they are formulated, they constitute a generalisation of my distinction between primary and secondary iconicity, outside of the domain of iconicity. On the other hand, Eco does not seem to give any examples that do not involve iconic signs. Still, it is interesting to ask whether such a distinction as this is feasible outside of iconicity. To begin with, it does not make sense for the kind of signs which Peirce's calls "symbolic", at least if we make the traditional identification with conventional, or arbitrary, signs. By definition, all "symbolic" signs results from Eco's Beta mode; in other words, there is no "primary", but only a "secondary", symbolicity. Indeed, it might be said that secondary iconicity is the incidence of symbolicity on iconicity.

The case of indexicality is much more interesting. In fact, indexicality shares with iconicity the feature of being a property of objects that pertains to them independently of the sign function. Thus, it would not be surprising to find that there were indices that seem to result already from general rules and regularities of the Lifeworld, as well as indexical relationships that only become apparent, and indeed "reasonable", once we learn that they participate in a relationship of an expression to a content. It does not follow that, in the domain of indexicality, there is something equivalent to the important division that separates a category of icons of particular importance to human beings,

pictures, from all the others. Only further investigations could show whether there is any point in separating primary and secondary indexicality.

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ⁱ Another illustration could be the story Eco (1998: 16f; 1999: 355f) tells us about Diderot observing a painting by Chardin and speaking first as if he was seeing the real objects, and then stepping closer to note the layers of paint on the canvas.

ⁱⁱ Eco (1998: 27ff; 1999: 382ff) apparently changes the names of my two iconicities into *mode Alpha* and *Beta*, respectively, using the same definitions and similar examples; and although he fails to refer to me in this passage, the article were I first made the distinction is in his bibliography (Sonesson 1993a, though given as 1994). See discussion at the end of this article.

ⁱⁱⁱ Interestingly, Eco (1999: 425, note 6) quotes this story without indication of sources, but he may very well have taken it from Sonesson 1989a. In any case, he fails to grasp that which, from my point of view, is its essential point. There are a number of other reasons for introducing the distinction between primary and secondary iconicity, which I have discussed in other publications (Sonesson 1989a; 1993a, 1994a, 1997b, 1998b, 2000), notably the necessity of countering the arguments of symmetry and regression, suggested by Bierman and Goodman.

My critique of the first argument relies heavily on the articles by the psychologists Rosch and Tversky given in the bibliography.

^{iv} Roupas is really discussing Goodman's distinction between "dense" and "finitely differentiated" systems. Cf. Sonesson 1989a and 1995. Although he uses a figure taken from Palmer, instead of my example from Roupas, Eco (1998: 12f; 1999:344ff) now makes the same argument for the necessity of postulating general categories.

^v It should be noted that I will be avoiding peculiarly Peircean terms in the following, as long as no harm is done by that procedure: I will use "expression" for what Peirce calls "representamen" and "content" for his "object": more precisely, I will roughly identify "immediate object" with "content" and "dynamical object" with "referent", though it might have been better to say that the former is what is picked out of the latter by the ground. For the purpose of this article, I will completely ignore the "interpretant", which is clearly also a part of meaning, though not in the simple way suggested by Ogden's and Richard's all too familiar triangle. In many of my earlier works, I have argued for a relationship between the ground and the interpretant, and Johansen (1993: 90ff) even claims the latter was historically substituted for the former, but I now think the relationship cannot be that straightforward, for reasons which will partially appear below.

^{vi} In this sense, the model presented here (and already in Sonesson 1989a), is similar to that independently proposed by Groupe μ (1992: 124-156; 1995), since both are based on the notion of types mediating between similar predicates. But, as Blanke (1998) has clearly recognised, the difference between the models consists in the fact that Groupe μ postulates a type only on the side of content.

^{vii} However, if we choose to define indices in terms of causality, then (following the structural argument given at the beginning of this text) it will be impossible to exhaust the domain of signs by means of the three sign types: indeed, many examples of indices given by Peirce are certainly not causal (cf. Sonesson 1989a, I.2.), nor are many other examples often given (e.g. the frame given as an example by Groupe μ 1992:378).

^{viii} As testified by his curious rejection in Eco 1999: 369 of my description of the mirror as a "hard icon", for which see below.

^{ix} Interestingly, the difference between my view here and that of Eco is not that I believe reality itself, as well as pictures and mirrors, to be susceptible of categorisation while he would deny that: for the thrust of Eco's (1997; 1999) arguments is not that there are no categories, but that these are somehow unordered in relation to each other. I believe Eco to be wrong also on this count, but I must reserve the discussion to another paper.

^x It is no doubt common practice to register also directly transmitted material on video tapes, because we often get to see the same news reels again, this time as "archive material", so even if we accept Eco's argument, the expression plane is not abolished as a separate entity.

^{xi} In the following, I will use square quotes for "similarity" and "likeness" in Eco's peculiar senses, while continuing to use at least "similarity", without quotes, in the more general, ordinary language, sense.

^{xii} It should be noted that, although Eco quotes my article on primary and secondary iconicity in the bibliography, he here uses the very similar term "primary iconism" in a quite different sense.

^{xiii} Actually, Eco 1997: 333f; 1999: 380ff) identifies "primary iconism" with Petitot's "categorical perception" — which would be sufficient to make it into a Peircean Thirdness.

^{xiv} Eco (1997: 337; 1999: 384) says that that "in Alpha mode a substance is perceived as from even before this form is recognised as the form of an expression". This is ambiguous between the earlier definition and the kind of examples given here.